

Catalogue 1 STAUFF Clamps

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STAUFF products and services are globally available through wholly-owned subsidiaries and a tight network of authorised distributors and representatives in all major industrial regions of the world.

You can find detailed contact information on the last two pages of this product catalogue or at www.stauff.com.

Please note: Unless otherwise stated, all data and figures in this product catalogue are approximate values and are only valid as references, which are not binding (also in respect to any third parties' rights of protection) and thus do not release the customer / user from checking and testing the suitability of the products for the foreseen purposes. Therefore, data and figures can only be used in a limited sense for construction purposes.

The application of the products is beyond the control possibilities of the manufacturer and, therefore, is exclusively subject to the responsibility of the customer / user.

In the event that a liability is nevertheless considered, any compensation will be limited to the value of the goods supplied by the manufacturer and used by the customer / user. As a matter of course, the manufacturer guarantees the perfect quality of all products in accordance with the General Terms and Conditions of Business and Sale.

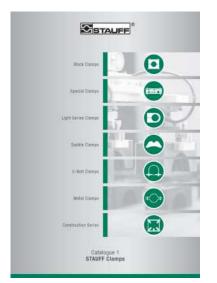
Subject to modifications due to the ongoing development and improvement of the products.

With the publication of this product catalogue, previous editions are no longer valid.

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<u></u>	STAUFF	

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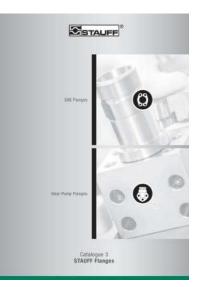
Catalogue 1 **STAUFF Clamps**

- Block Clamps
- Special Clamps
- Light Series Clamps Saddle Clamps
- U-Bolt Clamps
- Metal Clamps
- Construction Series



Catalogue 2 **STAUFF Connect**

- Tube Connectors
- Assembly Tools and Devices



Catalogue 3 **STAUFF Flanges**

 SAE Flanges Gear Pump Flanges



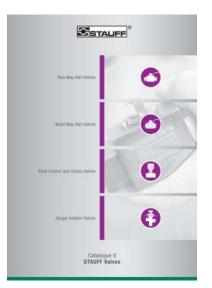
Catalogue 4 STAUFF **Hose Connectors**

- Hose Connectors
- High-Pressure Hose Connectors



Catalogue 5 STAUFF **Quick Release Couplings**

- Push-to-Connect Couplings
- Multi Couplings
- Screw-to-Connect Couplings

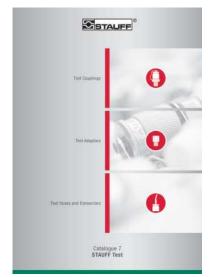


Catalogue 6 **STAUFF Valves**

- Two-Way Ball Valves
- Multi-Way Ball Valves
- Flow Control and Check Valves
- Gauge Isolator Valves







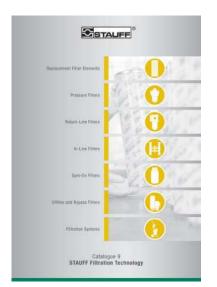
Catalogue 7 STAUFF Test

- Test Couplings
- Test Adaptors
- Test Hoses and Connectors



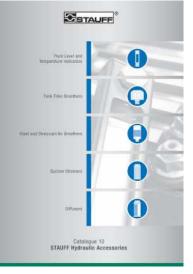
Catalogue 8 **STAUFF Diagtronics**

- Pressure Gauges
- Hydraulic Testers
- Oil Analysis Equipment



Catalogue 9 **STAUFF Filtration Technology**

- Replacement Filter Elements
- Pressure Filters
- Return-Line Filters
- In-Line Filters
- Spin-On Filters
- Offline and Bypass Filters
- Filtration Systems



Catalogue 10 STAUFF Hydraulic Accessories

- Fluid Level and Temperature Indicators
- Tank Filler Breathers
- Giant and Desiccant Air Breathers
- Suction Strainers
- Diffusors





For more than 50 years, the companies of STAUFF Group have been developing, manufacturing and distributing pipework equipment and hydraulic components for mechanical and plant engineering and for service and industrial maintenance.

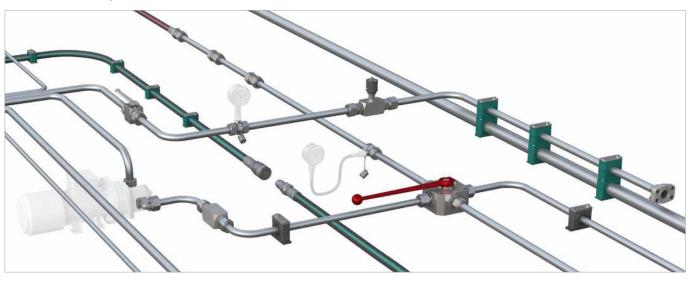
In addition to mobile and industrial hydraulic machinery, typical applications also include commercial and special purpose vehicles, rail transportation and energy technology. Likewise, STAUFF products are used in marine, oil and gas applications and in the process, food and chemical industries. The overall range currently includes about 40000 standard products as well as numerous special and system solutions according to customer's specifications or based on our in-house development.

All STAUFF products undergo relevant testing in accordance with international regulations and are governed by the high standards of the in-house quality management system. Furthermore, many items have received certifications and approvals from various international institutes, organisations and authorities who have independently confirmed the quality and performance of the products. Wholly-owned manufacturing, sales and service facilities in 18 countries and a tight global network of authorised distribution partners ensure high presence and service paired with a maximum of availability.



Quality Management – ISO 9001:2015 Environmental Management – ISO 14001:2015 Safety Management OHSAS – 18001:2007

STAUFF LINE Components



With the seven dedicated STAUFF Line product groups

- STAUFF Clamps
- STAUFF Connect
- STAUFF Flanges
- STAUFF Hose Connectors
- STAUFF Quick Release Couplings
- STAUFF Valves
- STAUFF Valve
 STAUFF Test

from own, in-house development and manufacturing, the companies of the STAUFF Group provide a comprehensive range of components for fastening and connecting pipes, tubes and hoses for mobile and industrial hydraulic applications and many other industries.

The portfolio is completed by components for shutting-off, regulating, throttling and measuring fluid media.

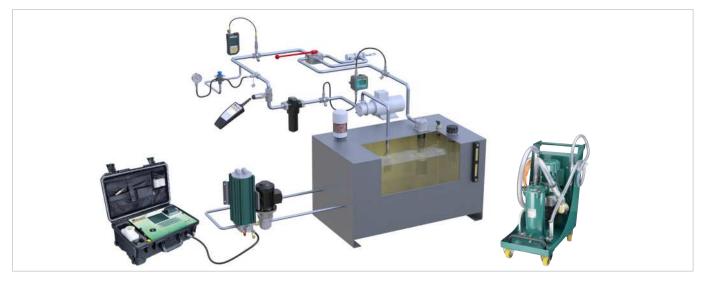
In order to perfectly match each other, STAUFF Line products are designed and offered on a high, uniform level of quality. A large proportion of the range made from steel comes as standard with the premium STAUFF Zinc/Nickel surface coating, which is also optionally available for many of the other components.

This coating offers the most reliable surface protection far beyond the previous market standards – even after transport, handling and assembly of the components – and meets all current legal requirements.

If desired, Original Equipment Manufacturers can be supported with value-added services, from **technical consultation** to **pre-assembly, assembly and kitting** as well as **logistics services**:

- Support with the selection of suitable standard components and ordering options; provision of customised solutions according to customer's specifications or based on our in-house development – from prototyping to large scale production
- Analysis and optimization of existing and design and developments of new systems aimed at increasing the efficiency and performance of machines and equipment and creating value for customers by reducing the total cost
- Pre-assembly, assembly and kitting of individual components to customer-specific system modules
- Individually coordinated procurement solutions (e.g. web shop and electronic data interchange) and supply models (e.g. from warehousing of customised components to Kanban logistics and just-in-time delivery of pre-fabricated system modules to the assembly lines of the customers) aimed at optimising material flows





Aligned with the needs of the market, the product groups

- STAUFF Test
- STAUFF Diagtronics
- STAUFF Filtration Technology
- STAUFF Hydraulic Accessories

include a comprehensive range of analogue and digital measuring equipment and devices, filtration systems and replacement filter elements as well as accessories for the construction of tanks, reservoirs, power packs and gear boxes in mobile and industrial hydraulics. The offer is completed by relevant value-added services:

- Support with the selection of suitable components and ordering options; provision of customised solutions according to customer's specifications or based on our in-house development – from prototyping to large scale production
- Analysis of existing hydraulic circuits aimed at filtration systems, tank components and monitoring devices that perfectly match to the specific requirements, and developing integrated concepts to increase the efficiency and performance of machines and equipment
- Individually coordinated procurement solutions and supply models







STAUFF Clamps

For more than 50 years, STAUFF Clamps symbolise quick and easy as well as secure installation of pipes, tubes, hoses, cables and other flexible and rigid components with outside diameters up to 1016 mm / 40.00 inch.

Their vibration and noise reducing features are appreciated as being an important contribution to environmental protection and occupational health and safety.

The processing of fire-proof clamp body materials, tested and approved according to several international fire-protection standards (such as BS 6853, EN 45545-2, UL 94) is only one of the many particular strengths of STAUFF.

STAUFF guarantees prompt service, even for customised solutions according to customer's specifications or based on our in-house development. For selected types and series, independent certificates and approvals can be provided:

- American Bureau of Shipping
- Bureau Veritas
- Department of the Navy, New York
- Germanischer Lloyd
- Lloyd's Register of Shipping
- Registro Italiano Navale
- Russian Maritime Register of ShippingTechnischer Überwachungsverein
- United States Coast Guard

For the finishing of the range of pipe, tube, hose and cable clamps as well as metal hardware in carbon steel, STAUFF relies on the STAUFF Zinc/Nickel surface coating which has proven successful for many years. It provides reliable surface protection – even after transport, handling and assembly – and meets all current legal requirements.

Versions in stainless steel V2A and V4A are generally available from stock. Alternative materials and surfaces are available on request.





STAUFF Zinc/Nickel Coating



Layers Sealing Passivation

Zinc/Nickel Steel

With at least 1200 hours resistance against red rust, the STAUFF Zinc/Nickel surface coating offers excellent surface protection – even after transport, handling and assembly. This was confirmed by testing in the salt-spray chamber according to DIN EN ISO 9227.

Users across all industries and applications benefit from sophisticated technology, which has been developed for and used by the very demanding automotive industry for many years now and that is already the proven standard for a large proportion of STAUFF components since 2007.

- At least 1200 hours resistance to red rust / base metal corrosion under practical conditions in the salt-spray chamber according to DIN EN ISO 9227
- · White rust occurs only by way of a slight grey haze
- Surpassing the requirements of the corrosion protection class K5 as defined by the VDMA, the German Engineering Association (360 hours resistance to white rust / 720 hours resistance to red rust)
- Free of hexavalent chrome Cr(VI)
- ELV compliant according to 2000/53/EC (End of Life Vehicles Directive)
- REACH compliant according to 1907/2006/EC (Registration, Evaluation, Authorisation and Restriction of Chemicals)
- RoHS compliant according to 2002/95/EC (Restrictions of the Use of Hazardous Substances)

- Appealing colour scheme with a bright semi-gloss surface finish – comparable to Stainless Steel
- Significantly reduced tendency to corrosion by contact with other metals (such as Aluminium and Stainless Steel)
- Improved abrasion resistance due to the ductility / plastic deformability of the coating
- Little to no risk of triggering allergies nickel release is down to only a fraction of the statutory limits relating to objects which come into direct and prolonged contact with the skin (independent results of the reference test method according DIN EN 1811 are available on request)
- Good paint adhesion properties
- · Resistance against all commonly used hydraulic media

www.stauff.com/1/en/#9



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* may require a suitable app

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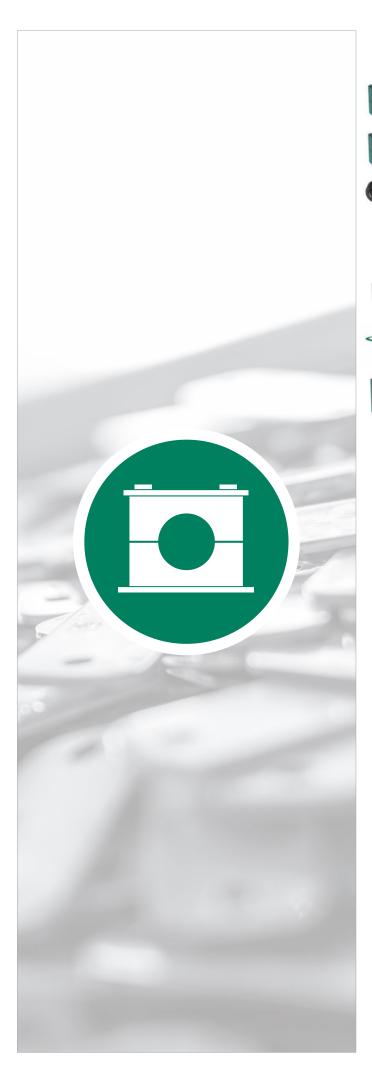
www.stauff.com/cad

Immediate access to and free download of 3D models and 2D drawings for a growing number of STAUFF products

www.filterinterchange.com

Online database for the quick and easy identification and interchange of almost all common brands and types of replacement filter elements





	Clamp Body Profiled Inside Surface with Tension Clearance	14
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	Weld Plate	20		Cover Plate
0	SP	20		DP
	Elongated Weld Plate		4	Hexagon Head Bolt for use with Cover Plate DP
- 10 01	SPV	20		AS
	Twin Weld Plate	21		Safety Washer (DIN 93)
	DSP			SI
20	Group Weld Plate		0	Safety Washer (DIN 463)
P. J.	RAP	21		SI
0-0	Angled Weld Plate			Socket Cap Screw
	WSP	22		IS
10 10	Bridge Weld Plate	22	1	Slotted Head Screw
	BSP		N N	Ш
			٩	Hexagon Head Bolt for use with Insert ES / EP
	Clamp Body for Multi-Group Weld Plates	23		AS
	Multi-Group Weld Plate			Insert
(000000		23		
	RAP-MGR			ES / EP
	Hexagon Rail Nut	24		Safety Locking Plate
	SM / SMG		-	SIG
	Mounting Rail		•	Stacking Bolt
	TS	24		AF
289	Channel Rail Adaptor	25		Clamp Assemblies
10	CRA			

STAUFF[®]

Clamp Body - Profiled Design

Profiled Inside Surface with Tension Clearance



Orde	ring Codes							
Clamp Body *1*06-*PP Clamp Body, STAUFF Group 1A *1*06A-*PP								
One cla	mp body is consisting of two clam	p halves.						
* STAUFF Group 1 * Exact outside diameter Ø D1 (mm) 06 * Material code (see below) PP								
Standa	rd Materials							
	Polypropylene Colour: Green Material code: PP							
	Polypropylene Colour: Black Material code: PP-BK							
	Polyamide Colour: Black Material code: PA							
	Thermoplastic Elastomer (87 S Colour: Black Material code: SA	Shore-A)						

1

Aluminium Colour: Self-Colour Material code: AL (STAUFF Group 1A to 6)

See pages 154 / 155 for material properties and technical information.

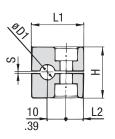
Special Materials

Please contact STAUFF for further details on fire-proof clamp body materials, tested and approved according to several international fire-protection standards (such as BS 6853, EN 45545-2, UL 94 and many more).

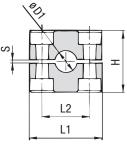
See pages 156 / 157 for material properties and technical information.

Product Features

- Proven, tested and trusted product in various markets
- Recommended for the safe installation of rigid pipes and tubes
- Available for all commonly used pipe and tube outside diameters
- Environmental protection due to vibration/noise reducing design
- Excellent weathering resistance, even under extreme conditions



STAUFF Group 1



STAUFF Group 1A to 8

PioePioePioeCopper fuse ASTM B88Camp Hades (**= Matrina) (m)	Group		Outside Diameter		Nominal	Nominal Bore Ordering Codes								
A A				be		Copper Tube	(2 Clamp Halves)	(^{mm} /in)						
A A	IAU	z	Ø D1		Pipe	ASTM B88								
1 6,4 1/4 1/4 1/4 1/6.4.** 28 9,5 27 0,4 30 10 5/6 1/4 108.** 1/4 108.** 1/4<	S	D	. ,	(in)	(in)	(in)	. ,	L1	L2	Н	S min.	Width		
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1 9,5 3/8 1/4 109,5 ** 1.10 3/7 1.06 02 1.18 10 1/8 100 ** 1/8 100 ** 1/8 100 ** 1/8 100 ** 1/8 100 ** 1/8 100 ** 1/8 100 ** 1/8 100 ** 1/8 100 ** 1/8 100 ** 1/8 100 ** 1/8 100 ** 1/8 <td< th=""><th rowspan="2">1</th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th></td<>	1													
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3 3 22 7/8 3/4 322-** 1.97 1.30 1.42 .02 1.18 25 0 3/4 325-** 325.** 325.** 325.** 325.** 325.** 325.** 325.** 325.** 325.** 325.** 325.** 325.** 325.** 325.** 325.** 325.** 326.** 325.** 326.** 326.** 326.** 326.** 326.** 326.** 326.** 326.** 326.** 326.** 327.** 337.** 35.* 1.16.* 327.** 337.** 337.** 337.** 336.** 336.** 336.** 336.** 336.** 336.** 336.** 336.** 336.** 336.** 337.** 339.** 339.** 32.** 339.** 339.** 339.** 339.** 339.** 339.** 339.** 339.** 339.** 339.** 339.** 339.** 339.** 339.** 339.** 339.** 339.** 339.** 339.*** 337.** 339.** <th></th> <th></th> <th></th> <th></th> <th>1/2</th> <th></th> <th></th> <th>50</th> <th>33</th> <th>36</th> <th>0.6</th> <th>30</th>					1/2			50	33	36	0.6	30		
25 1 1 325-** 1 325.** 25,4 1 0 325.4-** 0	3	3		7/8	1/2	3/4								
25,4113325,4**1333				110		0/7		1.37	1.00	1.42	.02	1.10		
4 26,9 3/4 426.9-** 5 6,0 3/4 426.9-** 5 6,0 42 0,6 30 28,6 1 428.6-** 30 430-** 2.32 1.57 1.65 .02 1.18 30 2 1 430-** 2.32 1.57 1.65 .02 1.18 32 1.1/4 532.** 33.7 1 533.7** 71 52 58 0.8 30 38 1-1/2 538.** 71 52 58 0.8 30 40 1 1.1/2 541.3-** 71 52 58 0.8 30 41,3 1 1.1/2 541.3-** 71 52 58 0.8 30 50.8 2 1.1/4 542.** 2.05 2.28 .03 1.18 60 6.8 2 650.8-** 3.39 2.60 2.60 .03 1.18 61.3				1										
4 28					3/4									
4 28,6 1 428,6-** 59 40 42 0,6 30 30 430-** 2.32 1.57 1.65 .02 1.18 32 1 532-** 3.7 1 533.7-** 7 1.57 1.65 .02 1.18 33,7 1 1 533.7-** 7 1 533.7-** 7					5/1									
30 430-** 2.32 1.57 1.65 02 1.18 32 1 432-** 1.57 1.65 02 1.18 32 1 1 532-** 532-** 533.7 1 533.7 1 533.7 8 8 1-1/4 533.7 8 8 1.18 8 9	4	4				1			-		- 1 -			
32 32 32 33 32 33<								2.32	1.57	1.65	.02	1.18		
5 32 1-1/4 532-** 71 52 58 0,8 30 5 33,7 1 1 533.7-** 533.7-** 53 54 71 52 58 0,8 30 5 38 1-1/2 538-** 2.80 2.80 2.05 2.28 .03 1.18 40 1 1-1/2 541.3-** 2.80 2.05 2.28 .03 1.18 41,3 1-1/2 542-** 648.3-** 86 66 66 0,8 30 6 48,3 1-1/2 648.3-** 86 66 66 0,8 30 54 2 654-** 3.39 2.60 2.60 .03 1.18 60,3 2 760.3-** 3.39 2.60 2.60 .03 1.18 70 2-3/4 770-** 4.76 3.70 3.66 .03 1.18 73 2-1/2 (DIN EN 10220) 7761.** <th></th>														
5 33,7 1 533,7-** </th <th></th> <th></th> <th>32</th> <th>1-1/4</th> <th></th> <th></th> <th></th> <th></th> <th></th> <th></th> <th></th> <th></th>			32	1-1/4										
5 35 1-1/2 535-** 71 52 58 0,8 30 5 38 1-1/2 540-** 540-** 2.80			33,7		1									
3 38 1-1/2 538-** 2.80 2.05 2.28 .03 1.18 40						1-1/4		74	50	50	0.0	00		
40 1 540 + * 540 + * 1	5	5	38	1-1/2										
42 1-1/4 542-** Image: second sec			40				540- **	2.00	2.05	2.28	.03	1.18		
6 44,5 1-3/4 0 644.5-** 86 66 66 0,8 30 60 48,3 1-1/2 648.3-** 86 66 66 0,8 30 50,8 2 650.8-** 3.39 2.60 2.60 .03 1.18 54 2 654-** 757.2-** 60,3 2.60 .03 1.18 60,3 2 760.3-** 121 94 93 0,8 30 70 2.3/4 770-** 4.76 3.70 3.66 .03 1.18 73 2-1/2 (ANSI B 36-10) 773-** 4.76 3.70 3.66 .03 1.18 76,1 3 2-1/2 (DIN EN 10220) 776.1-** 147 120 118 0,8 30 8 8 88,9 8 68.9 3 68.9-** 147 120 118 0.8 30			41,3			1-1/2	541.3- **							
6 48,3 1-1/2 648.3-** 86 66 66 0,8 30 50,8 2 650.8-** 3.39 2.60 2.60 .03 1.18 54 2 654-** 757.2-** 3.39 2.60 2.60 .03 1.18 60,3 2 760.3-** 121 94 93 0,8 30 70 2.3/4 770-** 4.76 3.70 3.66 .03 1.18 73 2-1/2 (ANSI B 36-10) 773-** 4.76 3.70 3.66 .03 1.18 76,1 3 2-1/2 (DIN EN 10220) 776.1-** 4.76 3.70 3.66 .03 1.18 8 8.8,9 8.8,9 3.6 3.6 3.6 .03 1.18					1-1/4		542- **							
6 50,8 2 0 650,8-** 3.39 2.60 2.60 .03 1.18 54 2 654-** 757.2-** 60,3 2 757.2-** 8 8 88.9 93 0,8 30 30 7 70 2-3/4 770-** 121 94 93 0,8 30 70 2-3/4 770-** 4.76 3.70 3.66 .03 1.18 73 2-1/2 (ANSI B 36-10) 773-** 4.76 3.70 3.66 .03 1.18 8 8 88.9 30 30 308.9-** 147 120 118 0.8 30			44,5	1-3/4			644.5- **							
50,8 2 650,8-** 3.39 2.60 2.60 .03 1.18 54 2 654+** 2 654+** 2.60 2.	6	6	48,3		1-1/2		648.3- **		66	66	0,8			
57,2 2-1/4 0 757.2-** 760,3-** 760,3-** 760,3-** 760,3-** 760,3-** 760,3-** 760,3-** 760,3-** 760,3-** 760,3-** 760,3-** 760,3-** 760,3-** 760,3-** 760,3-** 760,3-** 760,3-** 770-** 4.76 3.70 3.66 .03 1.18 78 76,1-** 888.9-** 147 120 118 0.8 30 119 76 147 120 118 0.8 30 119	0	0	50,8	2			650.8- **	3.39	2.60	2.60	.03	1.18		
60,3 2 760.3-** 121 94 93 0,8 30 63,5 2-1/2 763.5-** 121 94 93 0,8 30 70 2-3/4 770-** 4.76 3.70 3.66 .03 1.18 73 2-1/2 (ANSI B 36-10) 773-** 76.1-** 3.70 3.66 .03 1.18 76,1 3 2-1/2 (DIN EN 10220) 776.1-** 147 120 118 0.8 30 8 8 3 888.9-** 147 120 118 0.8 30						2	654- **							
63,5 2-1/2 763,5-** 121 94 93 0,8 30 70 2-3/4 770-** 4.76 3.70 3.66 .03 1.18 73 2-1/2 (ANSI B 36-10) 773-** 76.1-** 4.76 3.70 3.66 .03 1.18 8 8 8.9 3.0 3.68 .03 1.18			57,2	2-1/4			757.2-**							
70 2-3/4 70 70 2-3/4 73 2-1/2 (ANSI B 36-10) 773-** 76,1 3 2-1/2 (DIN EN 10220) 776.1-** 8 88,9 3 888.9-** 147 120 118 0.8 30 119 119 119 119					2									
70 2-3/4 770-** 4.76 3.70 3.66 .03 1.18 73 2-1/2 (ANSI B 36-10) 773-** 76.1 3 2-1/2 (DIN EN 10220) 776.1-** 76 3 2-1/2 (DIN EN 10220) 776.1-** 147 120 118 0.8 30 8 8 8 68.9 3 888.9-** 147 120 118 0.8 30	7	7					763.5-**							
76,1 3 2-1/2 (DN EN 10220) 776.1-** 776.1-** 8 88,9 3 888.9-** 147 120 118 0.8 30	'	1		2-3/4				4.76	3.70	3.66	.03	1.18		
8 8 88.9 3 3 888.9-** 147 120 118 0.8 30						,	773-**							
8 8			76,1	3	2-1/2 (DIN	EN 10220)	776.1- **							
	0	0	88,9		3		888.9-**	147	120	118	0,8	30		
	8	8	102	4	3-1/2		8102L- **			-				

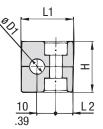
Additional outside diameters are available upon request. Please contact STAUFF for further information.

A



Clamp Body = Type H

Smooth Inside Surface without Tension Clearance



STAUFF Group 1

STAUFF Group 1A to 8

Group JIN NIQ		Hose			Dimens (^{mm} / _{in})	Dimensions (^{mm} / _{in})					
IAU	DIN	Ø D1									
S	ā	(mm)	(in)	(** -H = Material)	L1	L2	H	Width			
		6		106- ** -H							
		6,4	1/4	106.4- ** -H							
1	0	8	5/16	108- ** -H	28	9,5	26	30			
'	0	9,5	3/8	109.5- ** -H	1.10	.37	1.02	1.18			
		10		110- ** -H							
		12		112- ** -H							
		6		106A- ** -H							
1A		6,4	1/4	106.4A- ** -H							
	4	8	5/16	108A- ** -H	37	20	26	30			
	1	9,5	3/8	109.5A- ** -H	1.46	.79	1.02	1.18			
		10		110A- ** -H							
		12		112A- ** -H							
		12,7	1/2	212.7- ** -H							
		13,5		213.5- ** -H							
		14		214- ** -H	10						
2	2	15		215- ** -H	42	26	32	30			
		16	5/8	216- ** -H	1.65	1.02	1.26	1.18			
		17,2		217.2- ** -H							
		18		218- ** -H							
		19	3/4	319- ** -H							
		20	0,1	320- ** -H							
3		21,3		321.3- ** -H	50	33	35,5	30			
	3	22	7/8	322- ** -H	1.97	1.30	1.40	1.18			
		25	110	325- ** -H	1.07	1.00	1.10	1.10			
		25,4	1	325.4- ** -H							
		26,9	1	426.9- ** -H							
		20,9		428- ** -H	59	40	41,5	30			
ļ.	4	30		430- ** -H	2.32	1.57	1.63	1.18			
		30		430- ** -H	2.52	1.37	1.05	1.10			
		32	1-1/4	532- ** -H							
		32,7	1-1/4								
		35,7		533.7- ** -H	71	50	EC E	20			
5	5	35	1-1/2	535- ** -H	71 2.80	52 2.05	56,5 2.22	30			
		40	1-1/2	538- ** -H	2.00	2.00	2.22	1.10			
		40		540- ** -H 542- ** -H							
		44,5	1-3/4								
			1-3/4	644.5- ** -H	00	<u></u>	045	00			
6	6	48,3	0	648.3- ** -H	86 3.39	66 2.60	64,5	30			
		50,8	2	650.8- ** -H	3.39	2.00	2.54	1.10			
		54	0.1/1	654- ** -H							
		57,2	2-1/4	757.2- ** -H							
		60,3	0.1/0	760.3- ** -H							
7	7	63,5	2-1/2	763.5- ** -H	121	94	92	30			
		70	2-3/4	770- ** -H	4.76	3.70	3.62	1.18			
		73	-	773- ** -H							
		76,1	3	776.1- ** -H	_						
3	8	88,9		888.9- ** -H	147	120	116	30			
-		102	4	8102L- ** -H	5.79	4.72	4.57	1.18			

Additional outside diameters are available upon request. Please contact STAUFF for further information.



rdering Codes										
	p Body Body, STAUFF Group 1A	* 1*06-*PP-H *1*06A-*PP-H								
ne cla	mp body is consisting of two c	lamp halves.								
Exact	FF Group : outside diameter Ø D1 (mm) rial code (see below)	1 06 PP-H								
inda	rd Materials									
	Polypropylene Colour: Green									
	Material code: PP-H									
	Polypropylene									
	Colour: Black Material code: PP-H-BK									
	Polyamide									
	Colour: Black									



Thermoplastic Elastomer (87 Shore-A) Colour: Black Material code: SA-H

See pages 154 / 155 for material properties and technical information.

Special Materials

Please contact STAUFF for further details on fire-proof clamp body materials, tested and approved according to several international fire-protection standards (such as BS 6853, EN 45545-2, UL 94 and many more).

See pages 156 / 157 for material properties and technical information.

Product Features

- Proven, tested and trusted product in various markets
- Recommended for the safe installation of hoses and cables
- Chamfered edges avoid damaging of the hoses and cables
- Available for all commonly used hose and cable outside diameters
- Excellent weathering resistance, even under extreme conditions

Α

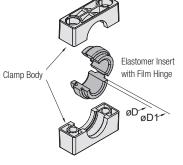
Dimensional drawings: All dimensions in mm (in).

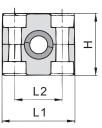


R

Clamp Body with Elastomer Insert Type RI







Ordering Codes
Clamp Assembly *4*06-*PP-R
One assembly is consisting of one clamp body and one insert.
* STAUFF Group 4 * Exact outside diameter Ø D (mm) 06 * Material code (see below) PP-R
Clamp Body *4-*PP-R
One clamp body is consisting of two clamp halves.
* STAUFF Group 4 * Material code (see below) PP-R
Elastomer Insert *RI-*06-*4/4S
* Elastomer Insert RI * Exact outside diameter Ø D (mm) 06 * STAUFF Group 4 (Standard) and 4S (Heavy) 4/4S 6 (Standard) and 5S (Heavy) 6/5S

Standard Materials

Colour: Black Material code: PP-R

Polyamide Colour: Black

Material code: PA-R



Elastomer Insert Thermoplastic Elastomer (73 Shore-A)

Colour: Black

See pages 154 / 155 for material properties and technical information.

Special Materials

Please contact STAUFF for further details on fire-proof clamp body materials, tested and approved according to several international fire-protection standards (such as BS 6853, EN 45545-2, UL 94 and many more).

See pages 156 / 157 for material properties and technical information.

Product Features

- Proven, tested and trusted product in various markets
- Either for the extra vibration/noise reducing installation of pipes and tubes or the extra gentle installation of hoses and cables
- Available for all commonly used outside diameters
- Excellent weathering resistance, even under extreme conditions

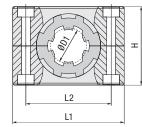
Group Outside Diam			Ũ	Dimensions								
STAUFF	Pipe / Tube / Hose		Clamp Assembly Clamp Body Insert * (Clamp Body +			(^{mm} /in)						
STA	DIN	(mm)	(in)	Insert)	(2 Clamp Halves)		Ø D1	L1	L2	н	Width	
		6		406- ** -R		RI-06-4/4S						
		8	5/16	408- ** -R		RI-08-4/4S						
		10		410- ** -R		RI-10-4/4S]					
		12		412- ** -R		RI-12-4/4S			40 1.57	41,2		
		12,7	1/2	412.7- ** -R		RI-12.7-4/4S	1					
4	4	14		414- ** -R	4- ** -R	RI-14-4/4S	25 .98	<u>59</u> 2.32			30 1.18	
		15		415- ** -R		RI-15-4/4S	.00				1.10	
		16	5/8	416- ** -R		RI-16-4/4S						
		17,2		417.2- ** -R		RI-17.2-4/4S						
		18		418- ** -R		RI-18-4/4S						
		19	3/4	419- ** -R		RI-19-4/4S						
		20		620- ** -R		RI-20-6/5S						
		21,3		621.3- ** -R		RI-21.3-6/5S						
		22	7/8	622- ** -R		RI-22-6/5S						
6	0	25		625- ** -R	0.1.1.0	RI-25-6/5S	38	86	66	64,5	30	
6	6	26,9		626.9- ** -R	6- ** -R	RI-26.9-6/5S	1.50	3.39	2.60	2.54	1.18	
		28		628- ** -R		RI-28-6/5S						
		30		630- ** -R		RI-30-6/5S						
		32	1-1/4	632- ** -R		RI-32-6/5S						

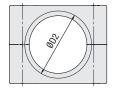
* Elastomer Inserts for Standard Series clamp bodies, STAUFF Group 4 also fit into Heavy Series clamp bodies, STAUFF Group 4S. Elastomer Inserts for Standard Series clamp bodies, STAUFF Group 6 also fit into Heavy Series clamp bodies, STAUFF Group 5S.

Additional outside diameters are available upon request. Please contact STAUFF for further information.

Catalogue 1 - Edition 08/2019

Noise Reduction Clamp Type NRC









Group HINATS	DIN	Outside Pipe / Tu Ø D1 (mm)	Diameter be (in)	Ordering Codes Clamp Assembly (Clamp Body + NRC Insert)	Clamp Body (2 Clamp Halves)				5 L1	L2	Ordering Code			
	2	6		206-PP-NRC		RI-NRC-6-2								
		8	5/16	208-PP-NRC		RI-NRC-8-2							One assembly is consisting	
2		10		210-PP-NRC	2-PP-NRC	RI-NRC-10-2	25 .98	26 1.02	42 1.65	26 1.02	32 1.26	30 1.18	* STAUFF Group	
		12		212-PP-NRC		RI-NRC-12-2							 Exact outside diamete Material code (see bel 	
		12,7	1/2	212.7-PP-NRC		RI-NRC-12.7-2								
		14		314-PP-NRC		RI-NRC-14-3							NRC Clamp Body	
3	3	15		315-PP-NRC		RI-NRC-15-3	28	29 1.14	50 1.97	33 1.30	35,5 1.40		One NRC clamp body is	
		16	5/8	316-PP-NRC		RI-NRC-16-3							* STAUFF Group	
4	4	18		418-PP-NRC	4-PP-NRC	RI-NRC-18-4	34	35	59	40	41,5	30	* Material code (see bel	
		20		420-PP-NRC		RI-NRC-20-4	1.34	1.38	2.32	1.57	1.63	1.18	NRC Elastomer Ins	
		21,3		521.3-PP-NRC		RI-NRC-21.3-5								
		22	7/8	522-PP-NRC		5-PP-NRC RI-NRC-26 0-5	RI-NRC-22-5							One NRC elastomer inse
		25		525-PP-NRC			RI-NRC-25-5							* NRC Elastomer Insert
5	5	26,9		526.9-PP-NRC			49	50 3 1.97		52 30 2.05	56,5 2 22		 Exact outside diamete STAUFF Group 	
		28		528-PP-NRC		RI-NRC-28-5								
		30		530-PP-NRC		RI-NRC-30-5							Standard Materials	
		32	1-1/4	532-PP-NRC		RI-NRC-32-5								
		33,7		633.7-PP-NRC		RI-NRC-33.7-6							Colour: Black	
		35		635-PP-NRC		RI-NRC-35-6							Material code:	
6	6	38	1-1/2	638-PP-NRC	6-PP-NRC	RI-NRC-38-6	60 2.36	61 2.40	86 3.39	66 2.60	64,5 2,54		Elastomer Inse	
0		40		640-PP-NRC		RI-NRC-40-6		2.0 1		Thermoplastic				
		42		642-PP-NRC		RI-NRC-42-6							Colour: Black	

Additional outside diameters are available upon request. Please contact STAUFF for further information.

Product Features

- . Designed for the noise and vibration reducing installation of pipes and tubes
- Suitable for the most common outside diameters from 6 to 42 mm and from ¼ to 1 ½ inch respectively · Working principle based on a specially shaped, two-part elastomer insert, which mechanically absorbs vibration in the pipe or tube and as a result reduces noises arising to a minimum
- · Elastomer insert is in particular distinguished by how little of its surface is in contact with the pipe or tube as well as with the clamp body
- · Light tension of the elastomer insert in mounted condition provides the necessary clamping force
- Tongue-groove contour of the elastomer insert and the clamp body (which is reversed and thus diverges from standard DIN 3015 clamps with elastomer insert) enables the system to be used for the maximum range of outside diameters per clamp size, which contributes to flexibility, versatility and optimisation of the required installation space

Ordering	Codes
----------	-------

Clamp Assembly	*2*12-*PP-NRC
One assembly is consisting of o	ne clamp body and one insert.

* STAUFF Group	2
* Exact outside diameter Ø D1 ((mm) 12
* Material code (see below)	PP-NRC
NRC Clamp Body	*2-*PP-NRC
One NRC clamp body is consisti	ng of two clamp halves.
* STAUFF Group	2
* Material code (see below)	PP-NRC
NRC Elastomer Insert	*RI-NRC-*12-*2
One NRC elastomer insert is cor	nsisting of two insert halves.

* NRC Elastomer Insert	RI-NRC
* Exact outside diameter ØD1 (mm)	12
* STAUFF Group	2

tandard Materials



Colour: Black Material code: PP-NRC



Elastomer Insert Thermoplastic Elastomer (73 Shore-A) Colour: Black

See pages 154 / 155 for material properties and technical information.

Alternative materials are available upon request. Please contact STAUFF for further information.

Special Materials

Please contact STAUFF for further details on fire-proof clamp body materials, tested and approved according to several international fire-protection standards (such as BS 6853, EN 45545-2, UL 94 and many more).

See pages 156 / 157 for material properties and technical information.

Clamp Body for Conduit Hoses and Cable Inserts Type CHC



*3*17-*10/14-*PA-CHC*SA-VO

One assembly is consisting of one clamp body and one insert.

One CHC Clamp Body is consisting of two clamp halves.

One CHC Elastomer Insert is consisting of two insert halves.

Ordering Codes

Clamp Assembly

(consisting of two halves).

CHC Clamp Body *3*17-*PA-CHC

* STAUFF Group

* Nominal Size of the Conduit Hose

* Diameter Range Cable ØD (mm)

* Material code insert (see below)

* Nominal Size of the Conduit Hose

CHC Elastomer Insert

* CHC Elastomer insert

* STAUFF Group

* Diameter Range Cable ØD (mm)

* Material code insert (see below)

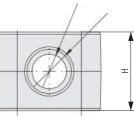
Polvamide Colour: Black Material code: PA-CHC

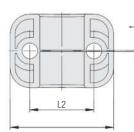
* Material code clamp body (see below)

*RI-CHC-*10/14*3*SA-V0

* Material code clamp body (see below)

* STAUFF Group







Gro	oup	Nominal	ØD (^{mm} / _{in})	Ordering Codes (*	= Material)		Dime	ensior	IS						
STAUFF	DIN	Size Conduit	Cable	Clamp Assembly (Clamp Body +	Clamp Body	CHC-Insert	isert (^{mm} / _{in})								
ST	ō	Hose		Insert)	(2 Halves)	(2 Halves)	ØD1	ØD2	t	L1	L2	Н	Width		
2	2	10	6 8 .2431		210- *		13 .51	11 .43	0,5 .02	42 1.65	26 1.02	32 1.26	30 1.18		
2	2	12	8 10 .3139		212-*		16 .63	13,5 .53	0,5 .02	42 1.65	26 1.02	32 1.26	30 1.18		
3	3	17	7 10 .2839	317-7/10- * - *	317- *	RI-CHC-7/10-3-*	21,5	18	0,7	50	33	35,5	30		
3	5	17	10 14 .3955	317-10/14- *-*	317- *	RI-CHC-10/14-3-*	.85	.71	.03	1.97	1.30	1.40	1.18		
4	4	23	14 18 .5571	423-14/18- *-*	423- *	RI-CHC-14/18-4-*	29	24,5	0,7	59	40	41,5	30		
4	4	20	18 20 .7179		423- *		1.14	.96	.03	2.32	1.57	1.63	1.18		
		29	2026,9		529- *		35	30,5	,	71	52	56,5			
5	5		.79 1.06 26,9 33,7				1.38 43	1.20 38,5		2.80 71	2.05 94	2.22 92	30		
		36	1.06 1.33		536- *		1.69	1.52		2.80	2.05	2.22			
6	6	48	33,7 42		648-*		55	49,5	1,0	86	66	64,5	30		
0	0	40	1.33 1.65		040-4		2.17	1.95	.51	3.39	2.60	2.54	1.18		

Additional outside diameters are available upon request. Please contact STAUFF for further information.

Product Features

3

17

3

17

PA-CHC

RI-CHC

10/14

SA-VO

3

10/14

PA-CHC

SA-VO

- . Design of the inside surface of the clamp body prevents corrugated conduit hoses from sliding
- · Elastomer Insert for the safe and damage-free installation of single cables as an option
- Chamfered edges avoid damaging of the conduit hoses
- · Available for all commonly used nominal sizes
- · Excellent weathering resistance, even under extreme conditions

Recommended Bolt Lengths (Socket Cap Screw IS)

for use without Cover Plate DP, assembly with Weld Plate SP, Hexagon Rail Nut SM and Channel Rail Adaptor CRA.

Group STAUFF	DIN	Metric ISO thread	Unified coarse (UNC) thread
2	2	M6 x 25	1/4–20 UNC x 1
3	3	M6 x 30	1/4-20 UNC x 1-1/8
4	4	M6 x 35	1/4-20 UNC x 1-3/8
5	5	M6 x 50	1/4–20 UNC x 2
6	6	M6 x 60	1/4–20 UNC x 2-1/2

See page 30 for further information on ordering.

Colour: Black Material code: SA



Elastomer Insert

fire-proof clamp body material made of Thermoplastic Elastomer (86 Shore-A) Colour: White Material code: SA-VO

See pages 154 - 157 for material properties and technical information.

Alternative materials are available upon request. Please contact STAUFF for further information.





Materials

fire-proof clamp body material made of Polyamide Colour: Black Material code: PA-VO-CHC-BK



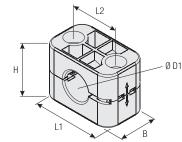




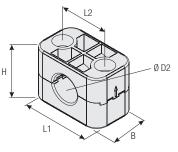
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For Use with Regular Hose



For Use with Compact Hose (Upper Clamp Half rotated by 180°)

Group STAUFF	_	Outside D Regular H Ø D1		Outside D Compact Ø D2		Ordering Codes (2 Clamp Halves)	Dimensions (mm/in)					
ST/	DIN	(mm)	(in)	(mm)	(in)	(**-* = Material)	L1	L2	Regular Hose	Compact Hose	В	
		19	.75	17,4	.69	319- **-* -CC-BK						
3	3	22.2	.87	20.6	.81	200.0 444 46 CC DV	50	33	35,5	34	30	
3	3	22,2	.07	20,0	.01	322.2- ** - * -CC-BK	1.97	1.30	1.40	1.34	1.18	
		25,4	1.00	23,7	.93	325.4- **-* -CC-BK						

Additional outside diameters are available upon request. Please contact STAUFF for further information.

Product Features

- Only one clamp body required for two different hose diameters (compact hose + regular hose)
- Rotate upper clamp half by 180° and use clamp body to fasten compact hoses instead of regular hoses
- · Available for three different combinations of outside hose diamaters
- Outer dimensions according to DIN 3015, Part 1
- · Effective cost reduction due to lower inventories

Special Materials

Please contact STAUFF for further details on fire-proof clamp body materials, tested and approved according to several international fire-protection standards (such as BS 6853, EN 45545-2, UL 94 and many more).

See pages 156 / 157 for material properties and technical information.



Ordering Codes Clamp Body *3*19-*PP-H-CC-BK One clamp body is consisting of two clamp halves. 3

- * STAUFF Group
- * Outside diameter Ø D1 (mm) of regular hose 19
- * Material code (see below) PP-H-CC-BK

Standard Materials



Polypropylene Colour: Black Material code: PP-H-CC-BK

See pages 154 / 155 for material properties and technical information

Ordering Codes

One clamp body is consisting of two clamp halves.

540-40-PP-VK **Clamp Body** Rectangular design with a square of 40 mm x 40 mm / 1.57 in x 1.57 in

540-36-PP-VK **Clamp Body** Rectangular design with a square of 40 mm x 36 mm / 1.57 in x 1.42 in

Please replace PP by PA to order a clamp body made of Polyamide instead of Polypropylene.

Product Features

- Outer dimensions of clamp body according to Standard Series, STAUFF Group 5
- · For proximity switches according to DIN EN 60947-5-2 or similar, rectangular construction, with a square of 40 mm x 40 mm / 1.57 in x 1.57 in or 40 mm x 36 mm / 1.57 in x 1.42 in
- For proximity switches according to DIN EN 60947-5-2 or similar, round construction, please use Standard Series clamp body, STAUFF Group 4, with the diameter required (e.g. 430-PP)
- Use with Hexagon Rail Nut SM and Mounting Rail TS to provide axial and horizontal position adjustment by loosening the bolts

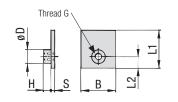
Clamp Body - Rectangular Design Type VK

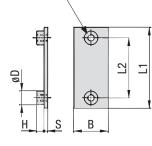


Single Weld Plate Type SP









Thread G

STAUFF Group 1

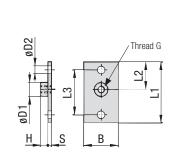
STAUFF Group 1A to 8

Ordering C	odes	Group STAUFF	DIN	Dimensions (^m Thread G	^m /in) L1	L2	В	Ordering Codes (Standard Options)			
or dorining o	0400	1	0	M6	31,5	10	30	3	6,5	12	SP-1-M-W2
Weld Plate *SP-*1-*M-		2	0	1/4-20 UNC	1.24	0.39	1.18	.12	.26	.47	SP-1-U-W2
		1A	4	M6	36	20	30	3	6,5	12	SP-1A-M-W2
Single Weld Plate SP			1	1/4-20 UNC	1.42	0.79	1.18	.12	.26	.47	SP-1A-U-W2
U	1 2	2	M6	42	26	30	3	6,5	12	SP-2-M-W2	
* STAUFF Group		1 2	2	1/4-20 UNC	1.65	1.02	1.18	.12	.26	.47	SP-2-U-W2
* Thread code Metric ISO thread Unified coarse (UNC	Metric ISO thread	M 3	3	M6	50	33	30	3	6,5	12	SP-3-M-W2
	Unified coarse (UNC) thread	U	3	1/4-20 UNC	1.97	1.30	1.18	.12	.26	.47	SP-3-U-W2
	, , , , , , , , , , , , , , , , , , ,		4	M6	60	40	30	3	6,5	12	SP-4-M-W2
Material code		V2 4	4	1/4-20 UNC	2.36	1.57	1.18	.12	.26	.47	SP-4-U-W2
	Carbon Steel, zinc/nickel-plated	V3	-	M6	71	52	30	3	6,5	12	SP-5-M-W2
	Stainless Steel V2A	5	5	1/4-20 UNC	2.80	2.05	1.18	.12	.26	.47	SP-5-U-W2
	1.4301 / 1.4305 (AISI 304 / 303)	V4	0	M6	88	66	30	3	6,5	12	SP-6-M-W2
	Stainless Steel V4A	6	6	1/4-20 UNC	3.46	2.60	1.18	.12	.26	.47	SP-6-U-W2
	1.4401 / 1.4571 (AISI 316 / 316 Ti)	V5 7	7	M6	122	94	30	5	6,5	12	SP-7-M-W2
	````	1	1	1/4-20 UNC	4.80	3.70	1.18	.20	.26	.47	SP-7-U-W2
	Aluminium EN AW-6060	85 .	0	M6	148	120	30	5	6,5	12	SP-8-M-W2
	(Dimension S: 5 mm / .20 in)	8	8	1/4-20 UNC	5.83	4.72	1.18	.20	.26	.47	SP-8-U-W2

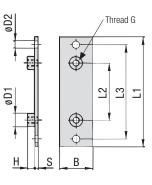
All threaded parts are available with Metric ISO thread or unified coarse (UNC) thread according to dimension table. Alternative materials and surface finishings are available upon request. Contact STAUFF for further information.

## **Elongated Weld Plate Type SPV**









STAUFF Group 1A to 8

		Group		Dimensions ( ^m	^m /in)					Ordering Codes			
		STAUFF	DIN	Thread G	L1	L2	L3	В	S	Н	ØD1	ØD2	(Standard Options)
		1	0	M6	58	24,5	44	30	3	6,5	12	6,5	SPV-1-M-W2
SPV-*1-*M-*	W2	1	0	1/4-20 UNC	2.28	.96	1.73	1.18	.12	.26	.47	.26	SPV-1-U-W2
		1A	4	M6	64	20	50	30	3	6,5	12	6,5	SPV-1A-M-W2
	SPV		1	1/4-20 UNC	2.52	.79	1.97	1.18	.12	.26	.47	.26	SPV-1A-U-W2
		2	2	M6	70	26	56	30	3	6,5	12	6,5	SPV-2-M-W2
	1	-	4	1/4-20 UNC	2.76	1.02	2.20	1.18	.12	.26	.47	.26	SPV-2-U-W2
ad	М	3	3	M6	78	33	64	30	3	6,5	12	6,5	SPV-3-M-W2
(UNC) thread	U	3	0	1/4-20 UNC	3.07	1.30	2.52	1.18	.12	.26	.47	.26	SPV-3-U-W2
· · /			4	M6	87	40	73	30	3	6,5	12	6,5	SPV-4-M-W2
phosphated	W2		4	1/4-20 UNC	3.43	1.57	2.87	1.18	.12	.26	.47	.26	SPV-4-U-W2
inc/nickel-plated	W3	5	5	M6	100	52	86	30	3	6,5	12	6,5	SPV-5-M-W2
V2A		3		1/4-20 UNC	3.94	2.05	3.39	1.18	.12	.26	.47	.26	SPV-5-U-W2
5 (AISI 304 / 303)	W4	6	6	M6	115	66	100	30	3	6,5	12	6,5	SPV-6-M-W2
V4A		U	0	1/4-20 UNC	4.53	2.60	3.94	1.18	.12	.26	.47	.26	SPV-6-U-W2
'1 (AISI 316 / 316 Ti)	W5	7	7	M6	150	94	136	30	5	6,5	12	6,5	SPV-7-M-W2
, , , ,		1	1	1/4-20 UNC	5.91	3.70	5.35	1.18	.20	.26	.47	.26	SPV-7-U-W2
		8	8	M6	178	120	162	30	5	6,5	12	6,5	SPV-8-M-W2
		0	0	1/4-20 UNC	7.01	4.72	6.38	1.18	.20	.26	.47	.26	SPV-8-U-W2

All threaded parts are available with Metric ISO thread or unified coarse (UNC) thread according to dimension table. Alternative materials and surface finishings are available upon request. Contact STAUFF for further information.

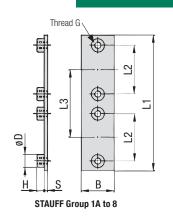


odes	
*SPV-*1-*M-*\	W2
Plate	SPV
	1
Metric ISO thread Unified coarse (UNC) thread	M U
Carbon Steel, phosphated Carbon Steel, zinc/nickel-plated	W2 W3
Stainless Steel V2A 1.4301 / 1.4305 (AISI 304 / 303)	W4
Stainless Steel V4A 1.4401 / 1.4571 (AISI 316 / 316 Ti)	W5
	*SPV-*1-*M-* Plate Metric ISO thread Unified coarse (UNC) thread Carbon Steel, phosphated Carbon Steel, zinc/nickel-plated Stainless Steel V2A 1.4301 / 1.4305 (AISI 304 / 303) Stainless Steel V4A



#### R

#### Thread G $\odot$ പ Ч ð Ξ $\odot$ 23,5 В Н S STAUFF Group 1



**Twin Weld Plate** for 2 Clamp Bodies **Type DSP** 



Standard Series according to DIN 3015, Part 1

Group		Dimensions (mr	ⁿ /in)							Ordering Codes	
STAUFF	DIN	Thread G	L1	L2	L3	В	S	Н	ØD	(Standard Options)	
1	0	M6	87	40	40	30	3	6.5	12	DSP-1-40-M-W2	
1 0	0	1/4-20 UNC	3.43	1.57	1.57	1.18	.12	.26	.47	DSP-1-40-U-W2	
1A	-	M6	77	20	37	30	3	6.5	12	DSP-1A-37-M-W2	
IA	1	1/4-20 UNC	3.03	.79	1.46	1.18	.12	.26	.47	DSP-1A-37-U-W2	
<b>2</b> 2	0	M6	86	26	44	30	3	6.5	12	DSP-2-44-M-W2	1
	2	1/4-20 UNC	3.39	1.02	1.73	1.18	.12	.26	.47	DSP-2-44-U-W2	
0	3	M6	102	33	52	30	3	6.5	12	DSP-3-52-M-W2	
3	3	1/4-20 UNC	4.02	1.30	2.05	1.18	.12	.26	.47	DSP-3-52-U-W2	
		M6	120	40	60	30	3	6.5	12	DSP-4-60-M-W2	
4	4	1/4-20 UNC	4.72	1.57	2.36	1.18	.12	.26	.47	DSP-4-60-U-W2	1
-	-	M6	145	52	75	30	3	6.5	12	DSP-5-75-M-W2	
5	5	1/4-20 UNC	5.71	2.05	2.95	1.18	.12	.26	.47	DSP-5-75-U-W2	
•	0	M6	178	66	90	30	3	6.5	12	DSP-6-90-M-W2	1
6	6	1/4-20 UNC	7.01	2.60	3.54	1.18	.12	.26	.47	DSP-6-90-U-W2	1

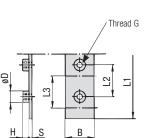
All threaded parts are available with Metric ISO thread or unified coarse (UNC) thread according to dimension table. Alternative materials and surface finishings are available upon request. Contact STAUFF for further information.

Ordering Co Weld Plate	Ordering Codes Weld Plate *DSP-*1-*40-*M-*W2									
* Twin Weld Plate	for 2 Clamp Bodies	DSP								
* STAUFF Group		1								
* Pipe center spacing L3 (mm) 40										
* Thread code	Metric ISO thread Unified coarse (UNC) thread	M U								
* Material code	Carbon Steel, phosphated Carbon Steel, zinc/nickel-plated	W2 W3								
	Stainless Steel V2A 1.4301 / 1.4305 (AISI 304 / 303)	W4								
	Stainless Steel V4A 1.4401 / 1.4571 (AISI 316 / 316 Ti)	W5								

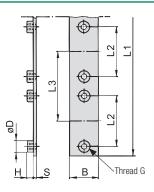
**Group Weld Plate** 

**Type RAP** 

for 5 or 10 Clamp Bodies



STAUFF Group 1



#### STAUFF Group 1A to 8

Group		Dimensions (mm)	/in)							Ordering Codes
STAUFF	DIN	Thread G	L1	L2	L3	В	S	Н	ØD	(Standard Options)
1	0	M6	314	31	31	30	4	6,5	12	RAP-1-31-10-M-W1
1	0	1/4-20 UNC	12.36	1.22	1.22	1.18	.16	.26	.47	RAP-1-31-10-U-W1
1A	1	M6	373	20	37	30	4	6,5	12	RAP-1A-37-10-M-W1
IA		1/4-20 UNC	14.69	.79	1.46	1.18	.16	.26	.47	RAP-1A-37-10-U-W1
2	2	M6	442	26	44	30	4	6,5	12	RAP-2-44-10-M-W1
2	2	1/4-20 UNC	17.40	1.02	1.73	1.18	.16	.26	.47	RAP-2-44-10-U-W1
3	3	M6	521	33	52	30	4	6,5	12	RAP-3-52-10-M-W1
3	3	1/4-20 UNC	20.51	1.30	2.05	1.18	.16	.26	.47	RAP-3-52-10-U-W1
4	4	M6	300	40	60	30	4	6,5	12	RAP-4-60-5-M-W1
4	4	1/4-20 UNC	11.81	1.57	2.36	1.18	.16	.26	.47	RAP-4-60-5-U-W1
5	5	M6	378	52	75	30	4	6,5	12	RAP-5-75-5-M-W1
5	5	1/4-20 UNC	14.88	2.05	2.95	1.18	.16	.26	.47	RAP-5-75-5-U-W1
6	6	M6	450	66	90	30	4	6,5	12	RAP-6-90-5-M-W1
U	U	1/4-20 UNC	17.72	2.60	3.54	1.18	.16	.26	.47	RAP-6-90-5-U-W1

All threaded parts are available with Metric ISO thread or unified coarse (UNC) thread according to dimension table. Alternative materials and surface finishings are available upon request. Contact STAUFF for further information.



## **Ordering Codes**

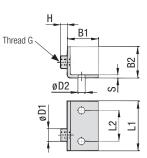
Weld Plate	*RAP-*1-*31-*10-*M-*	W1							
* Group Weld Plate for 5 or 10 Clamp Bodies									
* STAUFF Group									
* Pipe center spa	* Pipe center spacing L3 (mm) 31								
* Number of clamps									
* Thread code	Metric ISO thread Unified coarse (UNC) thread	M U							
* Material code	Carbon Steel, phosphated Carbon Steel, zinc/nickel-plated	W2 W3							
	Stainless Steel V2A 1.4301 / 1.4305 (AISI 304 / 303)	W4							
	Stainless Steel V4A 1.4401 / 1.4571 (AISI 316 / 316 Ti)	W5							

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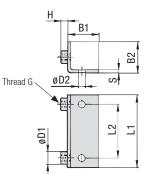


## Angled Weld Plate Type WSP





STAUFF Group 1



STAUFF Group 1A to 6

			Group		Dimensions ("	^{nm} /in)								Ordering Codes
<b>Ordering C</b>	odes		STAUFF	DIN	Thread G	L1	L2	B1	B2	S	Н	ØD1	ØD2	(Standard Options)
<b>J</b>			1	0	M6	30	14	30	30	3	6,5	12	6,5	WSP-1-M-W1
Weld Plate	*WSP-*1-*M-*	•*W1	1	0	1/4-20 UNC	1.18	.55	1.18	1.18	.12	.26	.47	.26	WSP-1-U-W1
		1A	1	M6	36	20	30	30	3	6,5	12	6,5	WSP-1A-M-W1	
* Angled Weld Pla	ate	WSP	17	1	1/4-20 UNC	1.26	.79	1.18	1.18	.12	.26	.47	.26	WSP-1A-U-W1
+ oTUE5 0			1 2	2	M6	42	26	30	30	3	6,5	12	6,5	WSP-2-M-W1
* STAUFF Group		1		2	1/4-20 UNC	1.65	1.02	1.18	1.18	.12	.26	.47	.26	WSP-2-U-W1
* Thread code	Metric ISO thread	м	3	3	M6	50	33	30	30	3	6,5	12	6,5	WSP-3-M-W1
	Unified coarse (UNC) thread	U	3	5	1/4-20 UNC	1.97	1.30	1.18	1.18	.12	.26	.47	.26	WSP-3-U-W1
	· · · · · · · · · · · · · · · · · · ·		4	4	M6	60	40	30	30	3	6,5	12	6,5	WSP-4-M-W1
* Material code	Carbon Steel, zinc/nickel-plated	W3	4	4	1/4-20 UNC	2.36	1.57	1.18	1.18	.12	.26	.47	.26	WSP-4-U-W1
	Stainless Steel V2A		5	5	M6	70	52	30	30	3	6,5	12	6,5	WSP-5-M-W1
	1.4301 / 1.4305 (AISI 304 / 303)	W4	4 5	5	1/4-20 UNC	2.76	2.05	1.18	1.18	.12	.26	.47	.26	WSP-5-U-W1
	Stainless Steel V4A		6	6	M6	88	66	30	30	3	6,5	12	6,5	WSP-6-M-W1
	1.4401 / 1.4571 (AISI 316 / 316 Ti	<b>W5</b>	U	U	1/4-20 UNC	3.46	2.60	1.18	1.18	.12	.26	.47	.26	WSP-6-U-W1

All threaded parts are available with Metric ISO thread or unified coarse (UNC) thread according to dimension table. Alternative materials and surface finishings are available upon request. Contact STAUFF for further information.

## Bridge Weld Plate Type BSP



W5

1.4401 / 1.4571 (AISI 316 / 316 Ti)

Thread G 🔪		
		4
	$\Theta$	1
Q		L1
	A	
	Ψ.	
	в	
<u>H2 H</u> 1	В	

		Group Dimensions ( ^{mm} / _{in} )					Ordering Codes									
Ordering C	odes		STAUFF	DIN	Thread G	L1	L2	В	S	H1	H2	ØD	(Standard Options)			
<b>J</b>			1A	4	M6	48	20	30	3	13	6,5	12	BSP-1A-M-W1			
Weld Plate	*BSP-*1A-*M-*V	V1	IA	1	1/4-20 UNC	1.89	.79	1.18	.12	.52	.26	.47	BSP-1A-U-W1			
			2	2	M6	54	26	30	3	13	6,5	12	BSP-2-M-W1			
* Bridge Weld Pla	te	BSP	2	2	1/4-20 UNC	2.13	1.02	1.18	.12	.52	.26	.47	BSP-2-U-W1			
•				2	2	2	3	M6	62	33	30	3	13	6,5	12	BSP-3-M-W1
* STAUFF Group	* STAUFF Group 1A			J	1/4-20 UNC	2.44	1.30	1.18	.12	.52	.26	.47	BSP-3-U-W1			
* Thread code	Metric ISO thread	М	4	4	M6	71	40	30	3	13	6,5	12	BSP-4-M-W1			
	Unified coarse (UNC) thread	U	4	4	1/4-20 UNC	2.80	1.57	1.18	.12	.52	.26	.47	BSP-4-U-W1			
	· · /		5	5	M6	85	52	30	3	13	6,5	12	BSP-5-M-W1			
* Material code	Carbon Steel, phosphated	VVZ	5	5	1/4-20 UNC	3.35	2.05	1.18	.12	.52	.26	.47	BSP-5-U-W1			
	Carbon Steel, zinc/nickel-plated	W3	6	6	M6	98	66	30	3	13	6,5	12	BSP-6-M-W1			
	Stainless Steel V2A 1.4301 / 1.4305 (AISI 304 / 303) W4		0	0	1/4-20 UNC	3.86	2.60	1.18	.12	.52	.26	.47	BSP-6-U-W1			
	Stainless Steel V4A	W5 A	All threaded parts are available with Metric ISO thread or unified coarse (UNC) thread according to dimension table.													

All threaded parts are available with Metric ISO thread or unified coarse (UNC) thread according to dimension table. Alternative materials and surface finishings are available upon request. Contact STAUFF for further information.





## **Clamp Body for Multi-Group Weld Plate** Type MGR



## **Ordering Codes**

S min. Width

30

1.18

Clamp Body *5*20-*PP-MGR								
One clamp body is consisting of two clamp halves.								
* STAUFF Group       5         * Exact outside diameter Ø D1 (mm)       20         * Material code (see below)       PP-MGR								
Standard Materials								
Colour: Green Material code: PP-MGR								
Polyamide								

Colour: Black Material code: PA-MGR

See pages 154 / 155 for properties and technical information.

Multi-Group Weld Plates (type RAP-MGR) are designed to be used in combination with Standard Series clamp bodies, STAUFF Group 2 (regular types, see pages 14 ff.) covering a diamater range from 8 mm / .31 in to 18 mm / .71 in, as well as Standard Series clamp bodies, STAUFF Group 5 (type MGR, see above) covering a diamater range from 20 mm / .79 in to 42 mm / 1.65 in. Thus, all Standard Series metal parts (bolts, cover plates) of these groups can be used.

R

Outside Diameter

(in)

1-1/4

1-1/2

Pipe / Tube

ØD

(mm)

21,3

20

22

23 25

26.9 28

30

32

33,7

35 38

40

42

L1

L2

**STAUFF Group 5** 

Copper Tube

ASTM B88

(in)

3/4

1-1/4

Nominal Bore

Pipe

(in)

1/2

3/4

1-1/4

Additional outside diameters are available upon request. Please contact STAUFF for further information.

Ordering Codes

520-**-MGR

521.3-**-MGR

522-**-MGR 523-******-MGR

525-******-MGR

526.9-**-MGR

528-******-MGR

530-******-MGR

532-******-MGR

533.7-**-MGR

535-******-MGR

538-******-MGR

540-******-MGR

542-******-MGR

(2 Clamp

Halves) (** = Material) Dimensions

52 26 58 0,8

2.80 2.05 1.02 2.28 .03

(^{mm}/_{in})

L1 L2 L3 Н

L3

L3

TALIE

Group

5

STAUFF DIN

5

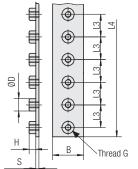


Multi-Group Weld Plate RAP-MGR-25-312-M-W1

Number of	Dimensions ("	^m /in)						Ordering Codes
Weld Nuts	Thread G	L3	L4	В	S	Н	ØD	(Standard Options)
6	M6	26	156	30	4	6,5	12	RAP-MGR-25-156-M-W1
0	1/4-20 UNC	1.02	6.14	1.18	.16	.26	.47	RAP-MGR-25-156-U-W1
9	M6	26	234	30	4	6,5	12	RAP-MGR-25-234-M-W1
9	1/4-20 UNC	1.02	9.21	1.18	.16	.26	.47	RAP-MGR-25-234-U-W1
12	M6	26	312	30	4	6,5	12	RAP-MGR-25-312-M-W1
12	1/4-20 UNC	1.02	12.28	1.18	.16	.26	.47	RAP-MGR-25-312-U-W1
15	M6	26	390	30	4	6,5	12	RAP-MGR-25-390-M-W1
15	1/4-20 UNC	1.02	15.35	1.18	.16	.26	.47	RAP-MGR-25-390-U-W1
20	M6	26	520	30	4	6,5	12	RAP-MGR-25-520-M-W1
20	1/4-20 UNC	1.02	20.47	1.18	.16	.26	.47	RAP-MGR-25-520-U-W1
27	M6	26	700	30	4	6,5	12	RAP-MGR-25-700-M-W1
21	1/4-20 UNC	1.02	27.55	1.18	.16	.26	.47	RAP-MGR-25-700-U-W1

Cover a diamater range from 8 mm (.31 in) to 42 mm (1.65 in) with only one Group Weld Plate!

All threaded parts are available with Metric ISO thread or unified coarse (UNC) thread according to dimension table. Alternative materials and surface finishings are available upon request. Contact STAUFF for further information.



## **Multi-Group Weld Plate** for Clamp Body Sizes 2 and 5 (Type MGR) **Type RAP-MGR**



## **Ordering Codes**

Weld Plate	*RAP-MGR-*25-*156-*M	-*W1
* Multi Group Weld	d Plate RA	P-MGR
* Suitable for STA	UFF Group 2 and 5 (only type MGR	25
* Length L4 (mm)	156 (with 6 weld nuts) 234 (with 9 weld nuts) 312 (with 12 weld nuts) 390 (with 15 weld nuts) 520 (with 20 weld nuts) 700 (with 27 weld nuts)	156 234 312 390 520 700
* Thread code	Metric ISO thread Unified coarse (UNC) thread	M U
* Material code	Carbon Steel, uncoated	W1
	Stainless Steel V4A 1.4401 / 1.4571 (AISI 316 / 316 1	(i) <b>W5</b>



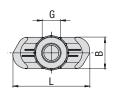


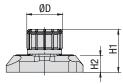
## **Hexagon Rail Nut**

(for Use with Mounting Rail TS)

Type SM / SMG







Ordering Codes	Group STAUFF	DIN	Dimensions (" Thread G	^{ım} /in) L	В	H1	H2	ØD	Ordering Codes (Standard Options)
Hexagon Rail Nut *SM-*1-8/1D-*M-*W3	1	0							
* Hexagon Rail Nut	1A	1							
Carbon Steel SM Stainless Steel SMC	2	2							
* STAUFF Group 1 to 8 (DIN Group 0 to 8) 1-8/10	3	3							
* Thread code Metric ISO thread M Unified coarse (UNC) thread L	4	4	M6 1/4-20 UNC	25,5 1.00	10,4 .41	14,2 .56	5,5 .22	12 .47	SM-1-8/1D-M-W3 SM-1-8/1D-U-W3
* Material code Carbon Steel, zinc/nickel-plated W3	5	5							
Stainless Steel V2A 1.4301 / 1.4305 (AISI 304 / 303)	6	6							
Stainless Steel V4A	7	7							
1.4401 / 1.4571 (AISI 316 / 316 Ti)	8	8							

Hexagon Rail Nuts, type SM-1-8/1D are also suitable for Twin Series, STAUFF Group 1D.

All threaded parts are available with Metric ISO thread or unified coarse (UNC) thread according to dimension table. Alternative materials and surface finishings are available upon request. Contact STAUFF for further information.

## **Mounting Rail**

(for Use with Hexagon Rail Nut SM / SMG) Type TS









Mounting Rail TS-11

Mounting Rail TS-14

Mounting Rail TS-30

Ordering Codes								
Mounting Rai	il *TS-*11-*1M-*	W1						
* Mounting Rail		TS						
* Height of rail	11 mm / .43 in 14 mm / .55 in 30 mm / 1.18 in	11 14 30						
* Length of rail	1 m / 3.28ft 2 m / 6.56ft	1M 2M						
	Alternative lengths available upon req Contact STAUFF for further informa							
* Material code	Carbon Steel, uncoated Carbon Steel, hot-dip galvanised	W1 W98						
	Stainless Steel V2A 1.4301 / 1.4305 (AISI 304 / 303) Stainless Steel V4A	W4 W5						
	1.4401 / 1.4571 (AISI 316 / 316 Ti)	W5						

Group		Dimensions (m	^m /in)		Ordering Codes (Standard Options)			
STAUFF	DIN	B1	B2	S	Length of Rail: 1 m / 3.28 ft	Length of Rail: 2m / 6.56ft		
1	0					Height 11 mm / .43 in <b>TS-11-2M-W1</b>		
1A	1				Height 11 mm / .43 in TS-11-1M-W1			
2	2							
3	3							
4	4	28 1.10	11 .43	2 .08	Height 14 mm / .55 in TS-14-1M-W1	Height 14 mm / .55 in TS-14-2M-W1		
5	5							
6	6							
7	7				Height 30 mm / 1.18 in TS-30-1M-W1	Height 30 mm / 1.18 in TS-30-2M-W1		
8	8							
					<u> </u>			

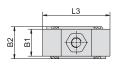
Mounting Rails, type TS-11/14/30 are suitable for all Standard Series and Twin Series group sizes. Alternative materials and surface finishings are available upon request. Contact STAUFF for further information.

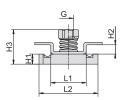
## **Channel Rail Adaptor**

(for Use with Various Channel Rails)

**Type CRA** 

A







Group STAUFF	DIN	Dimensions ( ^{mm} Thread G	/in) L1	L2	L3	B1	B2	H1	H2	H3	Ordering Codes (Standard Options)
1	0										
1A	1										
2	2										
3	3										
4	4	M6 1/4-20 UNC	21 .83	35 1.38	40 1.57	16 .63	19 .75	6 .24	5,5 .22	20,5 .81	CRA-1-8/1D-M-W3 CRA-1-8/1D-U-W3
5	5	174 20 0110	1/4-20 0110 .03				.10				
6	6										
7	7										
8	8										

Ordering Codes							
Adaptor	*CRA-*1-8/1D-*M-*	W3					
* Channel Rail Ada	aptor	CRA					
* STAUFF Group	1 to 8 (DIN Group 0 to 8) 1	-8/1D					
* Thread code	Metric ISO thread Unified coarse (UNC) thread	M U					
* Material code	Carbon Steel, zinc/nickel-plated	W3					
	Stainless Steel V4A 1.4401 / 1.4571 (AISI 316 / 316 Ti	<b>W5</b>					

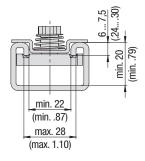
The Channel Rail Adaptor, type CRA 1-8/1D is also suitable for Twin Series, STAUFF Group 1D.

All threaded parts are available with Metric ISO thread or unified coarse (UNC) thread according to dimension table. Alternative materials and surface finishings are available upon request. Contact STAUFF for further information.

#### **Compatibility with Channel Rails**

The STAUFF Channel Rail Adaptor, type CRA, is suitable for various channel rails, including the following types:								
HALFEN	HILTI	UNISTRUT®	STAUFF (Cushion Clamp Series)					
HM 41/41	MQ-21, MQ-41, MQ-52, MQ-72	P1000, P1000T, P1000V, P1000VT, P1001	SCS-048-1-PL, SCS-048-1-GR					
HZA 41/22	MQ-21U, MQ-41U, MQ-72U	P2000, P2000T	SCS-120-1-PL, SCS-120-1-GR					
HZM 41/41	MQ-21D, MQ-41D, MQ-52-72D	P3003, P3003T, P3300V, P3300VT, P3301	See page 149 for technical information.					
HZM 41/22		P4000, P4000T						
HL 41/41, HL 41/B2		P5000, P5000T, P5001, P5500, P5500T, P5501						

To check the compatibility with additional types of channel rail, please compare the dimensions with the following drawing before use.

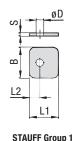


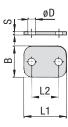
Basic dimensional requirements for channel rails to be used with STAUFF Channel Rail Adaptors, type CRA

Dimensional drawings: All dimensions in mm (in).

## **Cover Plate Type DP**







STAUFF Group 1A to 8

R

STALIEF

Ordering Codes		Group STAUFF	DIN	Dimensio L1	ns ( ^{mm} /in) L2	В	S	ØD	Ordering Codes (Standard Options)
ordering o	0005		0	28	9,5	30	3	7	,
<b>Cover Plate</b>	*DP-*1-*W3	1	0	1.10	.37	1.18	.12	.28	DP-1-W3
		1A	4	34	20	30	3	7	DP-1A-W3
* Cover Plate	DP	IA		1.34	.79	1.18	.12	.28	DF-IA-W3
	-	2	2	40,5	26	30	3	7	DP-2-W3
* STAUFF Group	1	2	2	1.59	1.02	1.18	.12	.28	DF-2-W3
* Material code	Carbon Steel, zinc/nickel-plated W3	3	3	48	33	30	3	7	DP-3-W3
	· ·	3	0	1.89	1.30	1.18	.12	.28	51 0 110
	Stainless Steel V2A W4	4	4	57	40	30	3	7	DP-4-W3
	1.4301 / 1.4305 (AISI 304 / 303)	4	4	2.24	1.57	1.18	.12	.28	DF-4-W3
	Stainless Steel V4A W5	5	5	70	52	30	3	7	DP-5-W3
	1.4401 / 1.4571 (AISI 316 / 316 Ti)	5	5	2.76	2.05	1.18	.12	.28	DF-0-W0
	Aluminium EN AW-6060 W85	6	6	86	66	30	3	7	DP-6-W3
		U	U	3.39	2.60	1.18	.12	.28	DF-0-W3
		7	7	118	94	30	5	7	DP-7-W3
		1	/	4.65	3.70	1.18	.20	.28	DF-7-W3
		8	8	144	120	30	5	7	DP-8-W3
		0	0	5.67	4.72	1.18	.20	.28	DL-0-M3

Alternative materials and surface finishings are available upon request. Contact STAUFF for further information.

## **Hexagon Head Bolt**

(for Use with Cover Plate DP) **Type AS** 





Hexagon Head Bolt AS (according to DIN 931 / 933 or ANSI / ASME B18.2.1.) Dimensions applicable only when used with Cover Plate DP

	Group STAUFF	DIN	Dimensions ( ^{mm} / _{in} ) Thread G x L	Ordering Codes (Standard Options)
			M6 x 30	AS-M6x30-W3
*W3	1	0	1/4-20 UNC x 1-1/4	AS-1/4-20UNCx1-1/4-W3
no			M6 x 30	AS-M6x30-W3
	1A	1	1/4-20 UNC x 1-1/4	AS-1/4-20UNCx1-1/4-W3
AS	2	2	M6 x 35	AS-M6x35-W3
10	2	2	1/4-20 UNC x 1-3/8	AS-1/4-20UNCx1-3/8-W3
	3	3	M6 x 40	AS-M6x40-W3
M6x30	3	3	1/4-20 UNC x 1-1/2	AS-1/4-20UNCx1-1/2-W3
W3	4	4	M6 x 45	AS-M6x45-W3
	4	4	1/4-20 UNC x 1-7/8	AS-1/4-20UNCx1-7/8-W3
W4	5	5	M6 x 60	AS-M6x60-W3
	5	Э	1/4-20 UNC x 2-3/8	AS-1/4-20UNCx2-3/8-W3
	6	6	M6 x 70	AS-M6x70-W3
Ti)	0	O	1/4-20 UNC x 2-3/4	AS-1/4-20UNCx2-3/4-W3
	7	7	M6 x 100	AS-M6x100-W3
	1	7	1/4–20 UNC x 4	AS-1/4-20UNCx4-W3
	8	0	M6 x 125	AS-M6x125-W3
	o	8	1/4-20 UNC x 4-7/8	AS-1/4-20UNCx4-7/8-W3

All threaded parts are available with Metric ISO thread or unified coarse (UNC) thread according to dimension table. Alternative materials and surface finishings are available upon request. Contact STAUFF for further information.

Ordering Codes										
Hexagon Head	l Bolt	*AS-*M6x30-	*							
* Type of bolt	(accordi	n Head Bolt ng to DIN 931 / 933 / ASME B18.2.1.)								
Thread type and	size acc	to dimension table	N							
* Material code		Steel, zinc/nickel-plated								

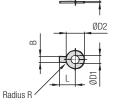
1.4301 / 1.4305 (AISI 304 / 303) Stainless Steel V4A

1.4401 / 1.4571 (AISI 316 / 316 Ti)

## **Safety Washer**

(for Use with Hexagon Head Bolt AS) Type SI (DIN 93)

## 93)



Safety Washer SI (Bend longer tab down towards the side of the clamp body and one side up towards one of the flats of the hexagon head bolt)

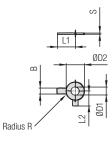
Group Dimensions ( ^{mm} / _{in} )								Ordering Codes
STAUFF	DIN	ØD1	В	ØD2	L	R	S	(Standard Options)
1 to 0	0 to 9	6,4	7	19	18	4	0,5	SI-6.4-DIN93-W3
1 to 8	0 to 8	.25	.28	.75	.71	.16	.02	SI-0.4-DIN93-W3

Safety Washers, type SI are used as locking devices to prevent Hexagon Head Bolts, type AS from loosening. Safety Washers, type SI are suitable for all Standard Series group sizes.

Alternative materials and surface finishings are available upon request. Contact STAUFF for further information.



Ordering Codes							
er *SI-*6.4-*DIN93-*W3							
Safety washer with 1 tab (according to DIN 93) SI-6.4-DIN93							
Carbon Steel, zinc/nickel-plated W3							
Stainless Steel V4A 1.4401 / 1.4571 (AISI 316 / 316 Ti) <b>W5</b>							



Safety Washer SI (Bend longer tab down towards the side of the clamp body and shorter tab up towards one of the flats of the hexagon head bolt)

Group		Dimensio	ns ( ^{mm} /in)	Ordering Codes					
STAUFF	DIN	ØD1	В	ØD2	L1	L2	R	S	(Standard Options)
1 to 8	0 to 8	6,4 .25	7 .28	12 .47	18 .71	9 .35	4	0,5 .02	SI-6.4-DIN463-W3

Safety Washers, type SI are used as locking devices to prevent Hexagon Head Bolts, type AS from loosening. Safety Washers, type SI are suitable for all Standard Series group sizes.

Alternative materials and surface finishings are available upon request. Contact STAUFF for further information.

Safety Washer (for Use with Hexagon Head Bolt AS) Type SI (DIN 463)



Ordering Codes								
Safety Washe	r *SI-*6.4-*DIN463-*W3							
* Type of washer	Safety washer with 2 tabs (according to DIN 463) SI-6.4-DIN463							
* Material code	Carbon Steel, zinc/nickel-plated W3							
	Stainless Steel V4A 1.4401 / 1.4571 (AISI 316 / 316 Ti) <b>W5</b>							

**Slotted Head Screw** 

Type LI

Socket Cap Screw

Type IS







Г	1	ר	
1	$\mathbf{h}$		
	! 		_
	1	G	



Socket Cap Screw IS (according to ISO 4762 or ANSI / ASME B18.3) Dimensions applicable only when used without Cover Plate DP Dimensions applicable only when used without Cover Plate DP

#### **Slotted Head Screw LI**

(according to ISO 1207 or ANSI / ASME B18.6.3)

Ordering C	odes			Group STAUFF
Socket Cap S	crew	*IS-*M6x30	-*W3	1
Slotted Head		*LI-*M6x30	-*W3	1A
* Type of bolt	Socket Ca	) IS	2	
	ISO 4762 o Slotted Hea	)	3	
Please note:		or ANSI / ASME B18.6	.3)	4
Flease Hole.	screws LI I	) screws IS and slotte nave to be used in co ers US, which are ava	njunction	5
	separately.	· ·	liidule	6
* Thread type and			M6x30	7
* Material code	Stainless S		W4	8
	Stainless S	.4305 (AISI 304 / 303 iteel V4A .4571 (AISI 316 / 316	W5	All threa

Group		Dimensions (mm/in)	Ordering Codes (Standard Options)	
STAUFF	DIN	Thread G x L	Socket Cap Screws	Slotted Head Screws
1	0	M6 x 20	IS-M6x20-W3	LI-M6x20-W3
I	0	1/4-20 UNC x 3/4	IS-1/4-20UNCx3/4-W3	LI-1/4-20UNCx3/4-W3
1A	1	M6 x 20	IS-M6x20-W3	LI-M6x20-W3
IA	1	1/4-20 UNC x 3/4	IS-1/4-20UNCx3/4-W3	LI-1/4-20UNCx3/4-W3
2	2	M6 x 25	IS-M6x25-W3	LI-M6x25-W3
2	2	1/4-20 UNC x 1	IS-1/4-20UNCx1-W3	LI-1/4-20UNCx1-W3
3	3	M6 x 30	IS-M6x30-W3	LI-M6x30-W3
	3	1/4-20 UNC x 1-1/8	IS-1/4-20UNCx1-1/8-W3	LI-1/4-20UNCx1-1/8-W3
4	4	M6 x 35	IS-M6x35-W3	LI-M6x35-W3
4	4	1/4-20 UNC x 1-3/8	IS-1/4-20UNCx1-3/8-W3	LI-1/4-20UNCx1-3/8-W3
5	5	M6 x 50	IS-M6x50-W3	LI-M6x50-W3
5	0	1/4-20 UNC x 2	IS-1/4-20UNCx2-W3	LI-1/4-20UNCx2-W3
6	6	M6 x 60	IS-M6x60-W3	LI-M6x60-W3
0	0	1/4-20 UNC x 2-1/2	IS-1/4-20UNCx2-1/2-W3	LI-1/4-20UNCx2-1/2-W3
7	7	M6 x 90	IS-M6x90-W3	ON REQUEST ONLY
1	/	1/4-20 UNC x 3-3/8	IS-1/4-20UNCx3-3/8-W3	UN REQUEST UNLY
0	8	M6 x 110	IS-M6x110-W3	
8	0	1/4-20 UNC x 4-3/8	IS-1/4-20UNCx4-3/8-W3	ON REQUEST ONLY

aded parts are available with Metric ISO thread or unified coarse (UNC) thread according to dimension table. Alternative materials and surface finishings are available upon request. Contact STAUFF for further information.

## **Hexagon Head Bolt** Type AS

#### Insert Type ES / EP



*AS-*M6x27-*W3

AS



**Hexagon Head Bolt AS** (according to DIN 931 / 933 or ANSI / ASME B18.2.1.) Dimensions applicable only when used with Inserts EP / ES

Group		Dimensions (mm/in)	Ordering Codes
STAUFF	DIN	Thread G x L	(Standard Options)
1	0	M6 x 27	AS-M6x27-W3
1	0	1/4-20 UNC x 1-1/8	AS-1/4-20UNCx1-1/8-W3
1A	1	M6 x 27	AS-M6x27-W3
IA	1	1/4-20 UNC x 1-1/8	AS-1/4-20UNCx1-1/8-W3
2	2	M6 x 32	AS-M6x32-W3
2	2	1/4-20 UNC x 1-3/8	AS-1/4-20UNCx1-3/8-W3
3	3	M6 x 35	AS-M6x35-W3
3	3	1/4-20 UNC x 1-3/8	AS-1/4-20UNCx1-3/8-W3
4	4	M6 x 42	AS-M6x42-W3
4	4	1/4-20 UNC x 1-5/8	AS-1/4-20UNCx1-5/8-W3
5	5	M6 x 57	AS-M6x57-W3
5	5	1/4-20 UNC x 2-3/8	AS-1/4-20UNC-2-3/8-W3
6	6	M6 x 65	AS-M6x65-W3
U	U	1/4-20 UNC x 2-3/4	AS-1/4-20UNCx2-3/4-W3
7	7	M6 x 95	AS-M6x95-W3
1	/	1/4-20 UNC x 4	AS-1/4-20UNCx4-W3
8	0	M6 x 118	AS-M6x118-W3
0	8	1/4-20 UNC x 4-3/4	AS-1/4-20UNCx4-3/4-W3



Insert EP (Polypropylene) Insert ES-W3 (Steel, zinc/nickel-plated) Insert ES-W5 (Stainless Steel V4A)

Group		Dime	imensions ( ^{mm} /in)			Ordering Codes		
STAUFF	DIN	D1	D2	H ES	H EP	(Standar	d Options)	
1 to 8	0 to 8		6,5		8,6	ES-W3	FP	
1100	0100	.46	.26	.31	.34			

All threaded parts are available with Metric ISO thread or unified coarse (UNC) thread according to dimension table. Alternative materials and surface finishings are available upon request. Contact STAUFF for further information.



* Type of bolt

**Ordering Codes** 

**Hexagon Head Bolt** 

 $\star$  Thread type and size acc. to dimension table M6x27 * Material code Carbon Steel, zinc/nickel-plated W3 Stainless Steel V2A W4 1.4301 / 1.4305 (AISI 304 / 303) Stainless Steel V4A W5 1.4401 / 1.4571 (AISI 316 / 316 Ti)

Hexagon Head Bolt (according to DIN 931 / 933

or ANSI / ASME B18.2.1.)

## Safety Locking Plate

Α

(for Use with Stacking Bolt AF) Type SIG



STAUFF Group 1



STAUFF Group 1A to 8

Group		Dimensions	; ( ^{mm} /in)			Ordering Codes
STAUFF	DIN	L	B1	B2	S	(Standard Options)
1	0	16	32	11,2	1	SIG-1-W3
1	0	.63	1.26	.44	.04	310-1-W3
1A	1	33	28	11,2	1	SIG-1A-W3
1A	1	1.30	1.10	.44	.04	310-1A-W3
2	2	39	28	11,2	1	SIG-2-W3
2	2	1.54	1.10	.44	.04	310-2-113
3	3	47	28	11,2	1	SIG-3-W3
3	3	1.85	1.10	.44	.04	310-3-W3
4	4	56	28	11,2	1	SIG-4-W3
4	4	2.20	1.10	.44	.04	310-4-W3
5	5	69	28	11,2	1	SIG-5-W3
5	5	2.72	1.10	.44	.04	510-5-W3
6	6	85	28	11,2	1	SIG-6-W3
0	U	3.35	1.10	.44	.04	310-0-113
7	7	117	28	11,2	1	CIC 7 W2
/	1	4.61	1.10	.44	.04	SIG-7-W3
0	0	143	28	11,2	1	
8	8	5.63	1.10	.44	.04	SIG-8-W3

W3
SIG
1
W3
W4
W5

Alternative materials and surface finishings are available upon request. Contact STAUFF for further information.

Thread G

**Stacking Bolt** 

(for Use with Safety Locking Plate SIG) Type AF



Group		Dimensions ( ^{mm} / _{in} )					Ordering Codes
STAUFF	DIN	Thread G	L1	L2	L3 min.	Hex	(Standard Options)
1	0	M6	34	20	12	11	AF-1/1A/1D-M-W3
1	0	1/4-20 UNC	1.34	.79	.47	.43	AF-1/1A/1D-U-W3
1A	1	M6	34	20	12	11	AF-1/1A/1D-M-W3
IA	1	1/4-20 UNC	1.34	.79	.47	.43	AF-1/1A/1D-U-W3
2	2	M6	40	25	12	11	AF-2-M-W3
2	2	1/4-20 UNC	1.57	.98	.47	.43	AF-2-U-W3
3	3	M6	44	30	12	11	AF-3-M-W3
3	3	1/4-20 UNC	1.73	1.18	.47	.43	AF-3-U-W3
4	4	M6	49	35	12	11	AF-4-M-W3
4	4	1/4-20 UNC	1.93	1.38	.47	.43	AF-4-U-W3
5	5	M6	64	50	12	11	AF-5-M-W3
5	5	1/4-20 UNC	2.52	1.97	.47	.43	AF-5-U-W3
6	6	M6	74	60	12	11	AF-6-M-W3
U	U	1/4-20 UNC	2.91	2.36	.47	.43	AF-6-U-W3
7	7	M6	99	85	12	11	AF-7-M-W3
/	1	1/4-20 UNC	3.90	3.35	.47	.43	AF-7-U-W3
0	0	M6	124	110	12	11	AF-8-M-W3
8	8	1/4-20 UNC	4.88	4.33	.47	.43	AF-8-U-W3

**Ordering Codes** Stacking Bolt *AF-*1/1A/1D-*M-*W3 * Type of bolt Stacking Bolt (according to STAUFF Standard) AF * STAUFF Group 1 * Thread code Metric ISO thread М Unified coarse (UNC) thread U * Material code Carbon Steel, zinc/nickel-plated W3 Stainless Steel V2A W4 1.4301 / 1.4305 (AISI 304 / 303) Stainless Steel V4A W5

1.4401 / 1.4571 (AISI 316 / 316 Ti)

All threaded parts are available with Metric ISO thread or unified coarse (UNC) thread according to dimension table. Alternative materials and surface finishings are available upon request. Contact STAUFF for further information.







## ① Type of Installation

Please select the type of installation (e.g. Weld Plates, Rail Nuts etc.) and add the corresponding Code to position (1) of the order code for your clamp assembly.



#### Installation on Weld Plate

-	Single Weld Plate Code: <b>SP</b>
-	Elongated Weld Plate Code: <b>SPV</b>
Contraction of the local division of the loc	Twin Weld Plate (for STAUFF Group 1 to 6 only) Code: <b>DSP</b>
10 - 20m	Group Weld Plate (for STAUFF Group 1 to 6 only) Code: <b>RAP</b>
1	Angled Weld Plate (for STAUFF Group 1 to 6 only) Code: <b>WSP</b>
40-04	Bridge Weld Plate (for STAUFF Group 1A to 6 only) Code: <b>BSP</b>
Instal	lation on Mounting / Channel Rail
	Hexagon Rail Nut
	Code: SM (Carbon Steel)
	Code: SMG (Stainless Steel)

Channel Rail Adaptor

Code: CRA

## 2 Group Size & Diameter

Please select the required group size and diameter and add the corresponding Code to position (2) of the order code for your clamp assembly.

Group	Outside Diameter	Availabi Body Ma			
STAUFF	P/T/H	Profiled	Turne Li	Turne Di	Orde
(DIN)	(mm)	Design	Туре Н	Type RI	Code
	6	•	•	0	106
	6,4	•	•	0	106.4
<b>1</b> (0)	8	•	•	0	108
(0)	9,5	•	•	0	109.5
	10	•	•	0	110
	12	•	•	0	112
	6	•	•	0	106A
	6,4	•	•	0	106.4A
1A	8	•	•	0	108A
(1)	9,5	•	•	0	109.5A
	10	•	•	0	110A
	12	•	•	0	112A
	12,7	•	•	0	212.7
	13,5	•	•	0	213.5
2	14	•	•	0	214
<b>2</b> (2)	15	•	•	0	215
(2)	16	•	•	0	216
	17,2	٠	٠	0	217.2
	18	•	•	0	218
	19	•	•	0	319
	20	•	•	0	320
3	21,3	•	•	0	321.3
(3)	22	•	•	0	322
	25	•	•	0	325
	25,4	•	•	0	325.4
	6	0	0	•	406
	8	0	0	•	408
	10	0	0	•	410
	12	0	0	•	412
	12,7	0	0	•	412.7
	14	0	0	•	414
	15	0	0	•	415
4	16	0	0	•	416
(4)	17,2	0	0	•	417.2
	18	0	0	•	418
	19	0	0	•	419
	26,9	•	•	0	426.9
	28	•	•	0	428
	28,6	•	0	0	428.6
	30	•	•	0	430
	32	•	•	0	432
	02	-	-	0	702

Group	Outside Diameter	Availability of Clamp Body Materials & Designs			
STAUFF	P/T/H	Profiled	alloniais d	Designs	
(DIN)	(mm)	Design	Туре Н	Type RI	Code
	32	٠	٠	0	532
	33,7	٠	٠	0	533.7
-	35	٠	•	0	535
5 (5)	38	•	•	0	538
(0)	40	٠	٠	0	540
	41,3	•	0	0	541.3
	42	•	•	0	542
	20	0	0	•	620
	21,3	0	0	•	621.3
	22	0	0	٠	622
	25	0	0	•	625
	26,9	0	0	•	626.9
6	28	0	0	•	628
(6)	30	0	0	•	630
	32	0	0	•	632
	44,5	•	•	0	644.5
	48,3	•	•	0	648.3
	50,8	•	•	0	650.8
	54	•	•	0	654
	57,2	•	٠	0	757.2
	60,3	•	•	0	760.3
7	63,5	•	•	0	763.5
(7)	70	•	•	0	770
	73	•	•	0	773
	76,1	•	•	0	776.1
8	88,9	•	•	0	888.9
(8)	102	•	•	0	8102L

Standard Option



Please see pages 32 and 33 with detailed order examples for some of the most popular Standard Series clamp assemblies.

## **3 Clamp Body Design & Material**

Please select the design and material of your clamp body and add the corresponding Code to position (3) of the order code for your clamp assembly.

Please check the availability of the selected clamp body design and material according to the matrix table in (2).

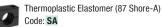
#### **Profiled Design**



Polypropylene (Colour: Black) Code: PP-BK



Code: PA



Aluminium Code: AL (for STAUFF Group 1A to 6 only)

#### Type H (Smooth)

Polypropylene Code: PP-H





Thermoplastic Elastomer (87 Shore-A) Code: SA-H

#### Type RI (with Elastomer Insert)



Polyamide

Code: PA-R (for STAUFF Group 4 and 6 only)

See pages 154 / 155 for material properties and technical information.

Please contact STAUFF for further details on fire-proof clamp body materials, tested and approved according to several international fire-protection standards

## (4) Mounting & Fitting Combination

Please select the mounting and fitting combination (e.g. bolts, screws, cover plates etc.) and add the corresponding Code to position ④ of the order code for your clamp assembly.

#### Installation with Cover Plate and Bolts

Cover Plate DP with Hexagon Head Bolts AS Code: DP-AS

Cover Plate DP with Socket Cap Screws IS* Code: DP-IS

#### Installation with Locking Plate and Bolts

Safety Locking Plate SIG with Stacking Bolts AF Code: SIG-AF

#### Installation with Inserts and Bolts

Inserts EP (Plastic) with Hexagon Head Bolts AS Code: EP-AS

Inserts ES (Steel) with Hexagon Head Bolts AS Code: ES-AS

#### Installation with Bolts only

Socket Cap Screws IS (Washers US included) Code: IS

Slotted Head Screws LI (Washers US included) Code: LI (for STAUFF Group 1 to 6 only)

Special lengths of Socket Cap Screws IS required. For exact lenghts, please see details of Hexagon Head Bolt, type AS (for use with Cover Plates DP) on page26.

### (5) Thread Type

Please select the required thread type and add the corresponding Code to position (5) of the order code for your clamp assembly.

Metric ISO thread Code: M

Unified coarse (UNC) thread Code: U

All threaded parts are available with Metric ISO thread or unified coarse (UNC) thread according to dimension table.

## 6 Material & Surface Finishing

Please select the required material & surface finishing of the metal parts and add the corresponding Code to position (6) of the order code for your clamp assembly.

Metal parts made of Carbon Steel, zinc/nickel-plated	W3

Metal parts made of Stainless Steel V2A 1.4301 / 1.4305 (AISI 304 / 303)	W4
Metal parts made of Stainless Steel V4A 1.4401 / 1.4571 (AISI 316 / 316 Ti)	W5

Weld Plate made of Carbon Steel, phosphated; Other W10 metal parts made of Carbon Steel, zinc/nickel-plated

Individual combinations of alternative materials and surface finishings are available upon request. Contact STAUFF for further information

## (7) Assembling & Kitting

If required, please select an additional assembling and kitting option and add the corresponding Code to the last position of the order code for your clamp assembly.

**Components supplied separately** Code: none (standard option)

**Components assembled** Code: A (special option)

Components packed in kits Code: K (special option)

2x Hexagon Head Bolt

Thread: Metric

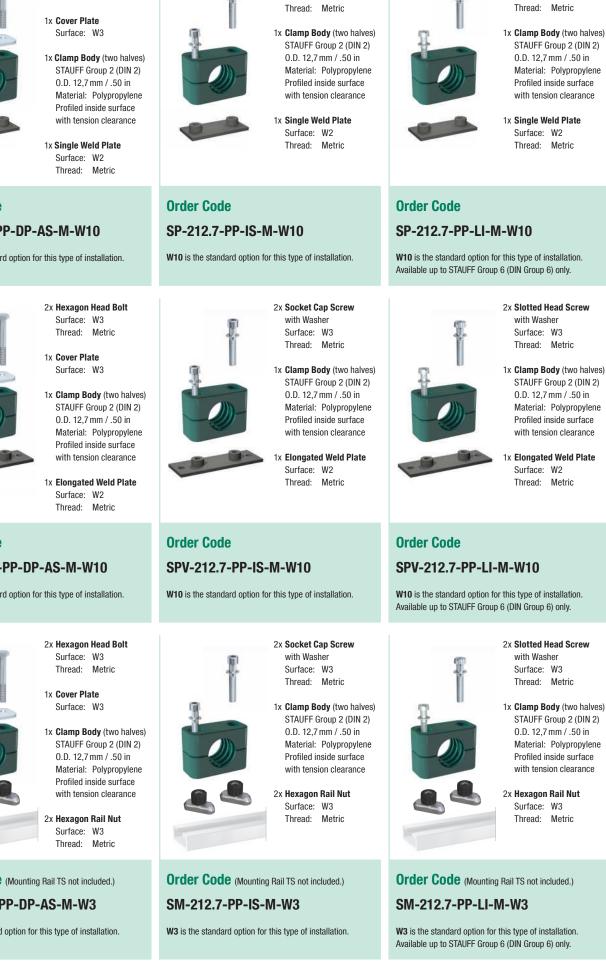
Surface: W3



2x Slotted Head Screw

with Washer

Surface: W3



2x Socket Cap Screw

with Washer

Surface: W3

A



## **Order Code**

#### SP-212.7-PP-DP-AS-M-W10

W10 is the standard option for this type of installation.



# **Order Code**

## SPV-212.7-PP-DP-AS-M-W10

W10 is the standard option for this type of installation.



## Order Code (Mounting Rail TS not included.)

## SM-212.7-PP-DP-AS-M-W3

W3 is the standard option for this type of installation.



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# STAUFF

## Standard Series according to DIN 3015, Part 1



2x Hexagon Head Bolt Surface: W3 Thread: Metric

1x Cover Plate Surface: W3

1x **Clamp Body** (two halves) STAUFF Group 2 (DIN 2) 0.D. 12,7 mm / .50 in Material: Polypropylene Profiled inside surface with tension clearance



2x Socket Cap Screw with Washer Surface: W3 Thread: Metric

1x Clamp Body (two halves) STAUFF Group 2 (DIN 2) 0.D. 12,7 mm / .50 in Material: Polypropylene Profiled inside surface with tension clearance

#### 2x Slotted Head Screw with Washer Surface: W3 Thread: Metric 1x Clamp Body (two hal



Profiled inside surface

with tension clearance

Order Code

## 212.7-PP-DP-AS-M-W3

 $\ensuremath{\textbf{W3}}$  is the standard option for this type of installation.



- 2x **Stacking Bolt** Surface: W3 Thread: Metric
- 1x Safety Locking Plate Surface: W3
- 1x Clamp Body (two halves) STAUFF Group 2 (DIN 2) 0.D. 12,7 mm / .50 in Material: Polypropylene Profiled inside surface with tension clearance

## **212.7-PP-IS-M-W3 W3** is the standard option for this type of installation.

**Order Code** 

- 1x Socket Cap Screw with Washer Surface: W3 Thread: Metric
- 1x **Clamp Body** (two halves) STAUFF Group 1 (DIN 0) 0.D. 6 mm / .24 in Material: Polypropylene Profiled inside surface with tension clearance Thread: Metric

1x Single Weld Plate Surface: W2 Thread: Metric

## Order Code 212.7-PP-SIG-AF-M-W3

**W3** is the standard option for this type of installation.



2x Hexagon Head Bolt Surface: W3 Thread: Metric

#### 2x Insert Material: Plastic

- 1x **Clamp Body** (two halves) STAUFF Group 2 (DIN 2) 0.D. 12,7 mm / .50 in Material: Polypropylene Profiled inside surface with tension clearance
- 1x Single Weld Plate Surface: W2 Thread: Metric

## Order Code SP-212.7-PP-EP-AS-M-W10

 $\boldsymbol{W10}$  is the standard option for this type of installation.

## Order Code* SP-106-PP-IS-M-W10

W10 is the standard option for this type of installation.

- 2x Hexagon Head Bolt Surface: W3 Thread: Metric
- 2x Insert Material: Plastic
- 1x **Clamp Body** (two halves) STAUFF Group 2 (DIN 2) 0.D. 12,7mm / .50 in Material: Polypropylene Profiled inside surface with tension clearance
- 1x Elongated Weld Plate Surface: W2 Thread: Metric

## Order Code SPV-212.7-PP-EP-AS-M-W10

W10 is the standard option for this type of installation.

## Order Code

## 212.7-PP-LI-M-W3

W3 is the standard option for this type of installation.

## Thread codes

All threaded parts are available with Metric ISO thread or	
unified coarse (UNC) thread according to dimension table.	
Metric ISO thread	м

euro iou uneau	IVI
nified coarse (UNC) thread	U

## **Material codes**

Un

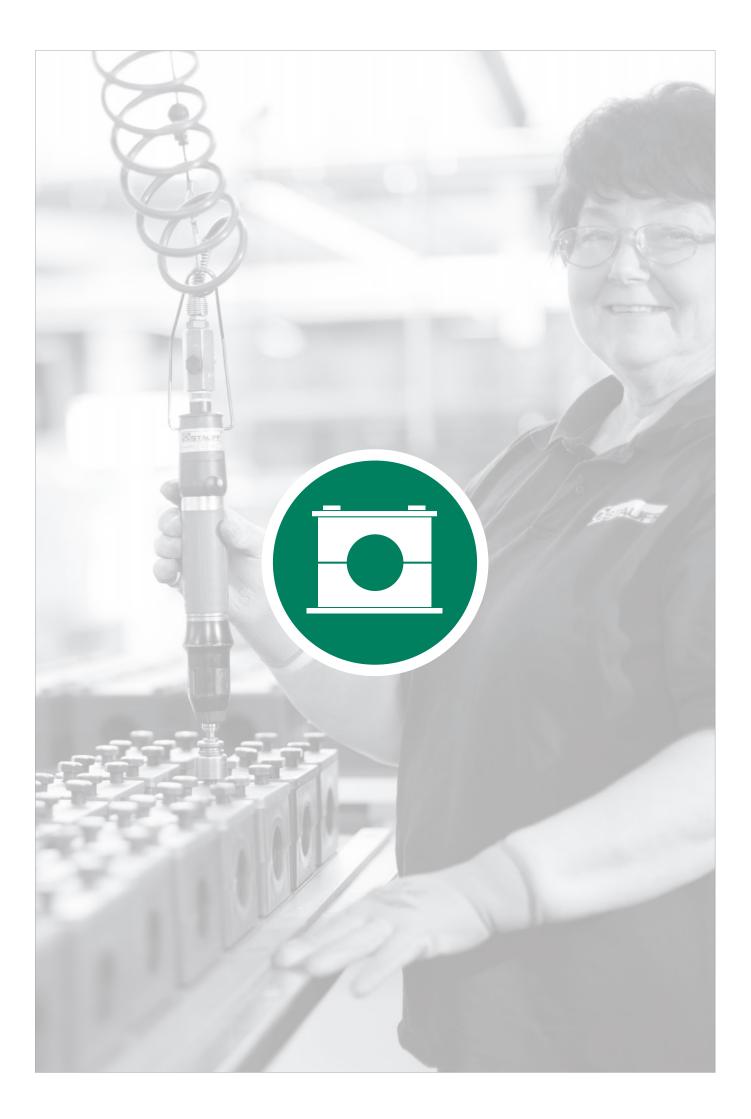
The below listed material codes describe the materials and surface finishings of metal parts that are most relevant for Standard Series clamp assemblies. Individual combinations of alternative materials and surface finishings are available upon request. Contact STAUFF for further information.

Metal parts made of Carbon Steel, zinc/nickel-plated	W3
Metal parts made of Stainless Steel V2A 1.4301 / 1.4305 (AISI 304 / 303)	W4
Metal parts made of Stainless Steel V4A 1.4401 / 1.4571 (AISI 316 / 316 Ti)	W5

Weld Plate made of Carbon Steel, phosphated; Other metal parts made of Carbon Steel, zinc/nickel-plated W10

### **Technical Notes**

* Because of their design, STAUFF Group 1 (DIN Group 0) clamp assemblies only include one single bolt / screw.



#### ®

-0	<b>Clamp Body</b> Profiled Inside Surface with Tension Clearance

Clamp Body Smooth Inside Surface without Tension Clearance
Clamp Rody with Elastomer Incert

36

38

39

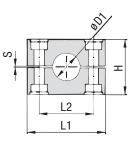
	Weld Plate for Single Clamps	40
	SPAL	
	Weld Plate for Double Clamps SPAS	40
	Elongated Weld Plate for Single Clamps	
	SPAL-DUEB	41
	Elongated Weld Plate for Double Clamps	
-00	SPAS-DUEB	41
-	Mounting Rail Nut	
5	GMV	42
	Mounting Rail	40
	STSV	42
See	Channel Rail Adaptor	43
AND STORES	CRA	43
N	Cover Plate for Single Clamps	44
	DPAL	
	Cover Plate for Double Clamps	
1	DPAL	44
٩	Hexagon Head Bolt	45
	AS	45
	Socket Cap Screw	45
	IS	45
	Safety Washer (DIN 93)	46
	SI	40
0	Safety Washer (DIN 463)	46
	SI	-0
	Safety Locking Plate	47
	SIP	-1
	Stacking Bolt	47
N	AF	41
	Clamp Assemblies	48

#### R STAUFF

## Clamp Body - Profiled Design

**Profiled Inside Surface with Tension Clearance** 





Ordering Codes		Group		Outside Diameter Nominal Bore Pipe / Tube Copper Tube		Ordering Codes (2 Clamp	Dimensions ( ^{mm} / _{in} )							
		E.		Ø D1		Pipe ASTM B88		(2 Glamp Halves)	L1 L1					
Clamp Dadu	*3*006-*PP	STAUFF	DIN	(mm)	(in)	(in)	(in)	( <b>**</b> = Material)			L2	н	S min.	Width
Clamp Body	3 000- FF		_	6	(11)	(11)	(11)	3006- <b>*</b> *		7.2	66		0	width
One down body is consisting of two of	amp balvaa			6,4	1/4			3006.4-**						
One clamp body is consisting of two clamp halves.         * 1st part of STAUFF Group       3         * Exact outside diameter Ø D1 (mm)       006         * Material code (see below)       PP				8	5/16			3008-**						
				9,5	3/8		1/4	3009.5-**						
				10		1/8		3010-**	55					
				12				3012-**						
				12,7	1/2		3/8	3012.7-**		56	33	32	0,6	30,5
		3S	1	13,5		1/4		3013.5-**	2.16	2.20	1.30	1.26	.02	1.20
tandard Materials				14				3014-**						
				15				3015-**						
Polypropylene				16	5/8		1/2	3016-**						
Colour: Green				17,2		3/8		3017.2-**						
Material code: PP				18				3018-**						
				20				3020-**						
Polypropylene				19	3/4			4019- <b>**</b>				48	0,6	30,5
Colour: Black				20				4020- <b>**</b>						
Material code: PP-BK				21,3		1/2		4021.3- <b>**</b>	70 70					
				22	7/8		3/4	4022- <b>**</b>		70	45			
Polyamide		4S	2	25				4025- <b>**</b>	2.76	2.76	1.77	1.89	.02	1.20
Colour: Black				25,4	1			4025.4- <b>**</b>	2.70	2.70	1.77	1.03	.02	1.20
Material code: PA				26,9		3/4		4026.9- <b>**</b>						
				28				4028- <b>**</b>						
Thermoplastic Elastomer (	87 Shore-A)			30				4030- <b>**</b>						
Colour: Black	,			30				5030- <b>**</b>						
Material code: SA				32	1-1/4			5032- <b>**</b>						
				33,7		1		5033.7- <b>**</b>						
Aluminium		5S	3	35			1-1/4	5035- <b>**</b>	85 3.35	85 3.35	60 2.36	60 2.36	0,6	30.5 1.20
Colour: Self-Colour		00	5	38	1-1/2			5038- <b>**</b>						
Material code: AL				40				5040- <b>**</b>						
				41,3			1-1/2	5041.3- <b>**</b>						
ee pages 154 / 155 for material propertie	es and technical			42		1-1/4		5042- <b>**</b>						
formation.				38	1-1/2			6038- <b>**</b>						
				42		1-1/4		6042- <b>**</b>						
pecial Materials				44,5	1-3/4			6044.5- <b>**</b>	115 120 4.53 4.72					
			4	48,3		1-1/2		6048.3- <b>**</b>						
ease contact STAUFF for further de	etails on fire-proof			50,8	2		-	6050.8- <b>**</b>						
amp body materials, tested and ap	proved according			54			2	6054- <b>**</b>		90	89	2	45	
several international fire-protection	on standards	6S		55				6055- <b>**</b>		3.54	3.50	.08	1.77	
(such as BS 6853, EN 45545-2, UL 94 and many more).				57	0.111			6057- <b>**</b>						
				57,2	2-1/4	0		6057.2-**						
See pages 156 / 157 for material properties and technical information.				60,3	0.1/0	2		6060.3-**						
				63,5	2-1/2			6063.5-**						
				65	0.0/4			6065- <b>**</b>						
Product Features				70	2-3/4			6070- <b>**</b>						

See page 37 for STAUFF Group 7S to 12S (DIN Group 5 to 10).

• Available for all commonly used pipe and tube outside diameters Additional outside diameters are available upon request. Please contact STAUFF for further information.

Proven, tested and trusted product in various markets

Recommended for the safe installation of rigid pipes and tubes

 Environmental protection due to vibration/noise reducing design - Excellent weathering resistance, even under extreme conditions

36

## Clamp Body - Profiled Design

## **Profiled Inside Surface with Tension Clearance**



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Group 生		Outside Diameter Nominal Pipe / Tube Bore Ø D1			Ordering Codes (2 Clamp			'/in)				
STAUFF	NIQ				Halves)	L1	L1					
Ś		(mm)	(in)	Pipe (in)	(** = Material)	PP/PA	AL	L2	Н	S min.	Width	
		60,3			7060.3-**							
		65			7065-**							
		70	2-3/4		7070-**							
	_	73		2-1/2 (ANSI B 36-10)	7073-**	154	152	122	120	2	60	
7S	5	75	-		7075-**	6.06	5.98	4.80	4.72		2.36	
		76,1	3	2-1/2 (DIN EN 10220)	7076.1-**							
		80			7080-**							
		82,5			7082.5-**							
		88,9	3-1/2	3	7088.9-**							
		88,9	3-1/2	3	8088.9- <b>**</b>							
		100			8100-**							
		102	4	3-1/2	8102- <b>**</b>	206	208	168	168	2	80	
8S	6	108			8108-**	8.11	8.19	6.61	6.61	.08	3.15	
		114	4-1/2	4	8114- <b>**</b>							
		127	5		8127- <b>**</b>							
		133			8133- <b>**</b>							
		127	5		9127- <b>**</b>							
		133			9133- <b>**</b>							
		140		5	9140- <b>**</b>	251	255	205	200	3	91	
9S	7	152	6		9152- <b>**</b>	9.88	10.04	8.07	7.87	.12	3.58	
		159			9159- <b>**</b>							
		165			9165- <b>**</b>							
		168		6	9168- <b>**</b>							
		168		6	10168- <b>**</b>							
		177,8			10177.8-**							
10S	8	193,7			10193.7- <b>**</b>	336	326	265	270	3	120	
	0	203	8		10203-**	13.22	12.83	10.43	10.63	.12	4.72	
		216			10216- <b>**</b>							
		219		8	10219-**							
		219		8	11219-**	470	470	395	410	8	162	
11S	9	273		10	11273-**	18.50	18.50	15.55	16.14	.31	6.38	
		324		12	11324- <b>**</b>						0.00	
12S	10	356		14	12356-**	630	630	534	530	20	182	
125	10	406		16	12406-**	24.80	24.80	21.02	20.87	.79	7.16	

L2 L1

## See page 36 for STAUFF Group 3S to 6S (DIN Group 1 to 4).

Additional outside diameters are available upon request. Please contact STAUFF for further information.

Ordering Codes	
Clamp Body	*7*060.3-*PP
One clamp body is consisting of the	wo clamp halves.
<ul> <li>* 1st part of STAUFF Group</li> <li>* Exact outside diameter Ø D1 (m</li> <li>* Material code (see below)</li> </ul>	m) 060.3 PP
Standard Materials	
Polypropylene Colour: Green Material code: PP	







Polyamide Colour: Black Material code: PA

Aluminium Colour: Self-Colour

Material code: AL

See pages 154 / 155 for material properties and technical information.

## **Special Materials**

Please contact STAUFF for further details on fire-proof clamp body materials, tested and approved according to several international fire-protection standards (such as BS 6853, EN 45545-2, UL 94 and many more).

See pages 156 / 157 for material properties and technical information.

## **Product Features**

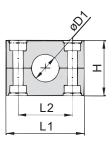
- Proven, tested and trusted product in various markets
- Recommended for the safe installation of rigid pipes and tubes
- Available for all commonly used pipe and tube outside diameters
- Environmental protection due to vibration/noise reducing design
- Excellent weathering resistance, even under extreme conditions

## R STAUF

# Clamp Body - Type H

**Smooth Inside Surface without Tension Clearance** 





Ordering Codes		D	Outside Dian Hose Ø D1	neter	Ordering Codes (2 Clamp Halves)	Dimensions ( ^{mm} / _{in} )						
Clamp Body *3*006-*PP-	RTAUFF	DIN	(mm)	(in)	(**-H = Material)	L1	L2	н	Width			
Clamp Body *3*006-*PP-	п "	_	6	(11)	3006- <b>**</b> -H		LZ		within			
One closer had is consisting of two closer had so			6,4	1/4	3006.4- <b>**</b> -H							
One clamp body is consisting of two clamp halves.			8	5/16	3008- <b>**</b> -H							
* 1 st part of STAUFF Group	3		9,5	3/8	3009.5- <b>**</b> -H							
	06		10		3010- <b>**</b> -H							
* Material code (see below)			12		3012- <b>**</b> -H							
	3S	1	12,7	1/2	3012.7- <b>**</b> -H	55	33	30,5	30,5			
			13,5		3013.5- <b>**</b> -H	2.16	1.30	1.20	1.20			
Standard Materials			14		3014- <b>**</b> -H	1						
			15		3015- <b>**</b> -H							
Polypropylene			16	5/8	3016- <b>**</b> -H	1						
Colour: Green			17,2		3017.2- <b>**</b> -H							
Material code: PP-H			18		3018- <b>**</b> -H	1						
			19	3/4	4019- <b>**</b> -H							
Polypropylene			20		4020- <b>**</b> -H							
Colour: Green			21,3		4021.3- <b>**</b> -H							
Material code: PP-H-BK			22	7/8	4022- <b>**</b> -H	70	45	46,5	30,5			
	4S	2	25		4025- <b>**</b> -H	2.76	1.77	1.83	1.20			
Polyamide			25,4	1	4025.4- <b>**</b> -H							
Colour: Black			26,9		4026.9- <b>**-</b> H							
Material code: PA-H			28		4028- <b>**</b> -H							
			30		4030- <b>**</b> -H							
Thermoplastic Elastomer (87 Shore-A)			30		5030- <b>**</b> -H							
Colour: Black						32	1-1/4	5032- <b>**</b> -H				
Material code: SA-H			33,7		5033.7- <b>**</b> -H							
	5S	3	35		5035- <b>**</b> -H	85	60	58	30,5			
ee pages 154 / 155 for material properties and technical	55	5	38	1-1/2	5038- <b>**</b> -H	3.35	2.36	2.28	1.20			
formation.			40		5040- <b>**</b> -H							
			41,3		5041.3- <b>**</b> -H							
pecial Materials			42		5042- <b>**</b> -H							
			38	1-1/2	6038- <b>**</b> -H							
lease contact STAUFF for further details on fire-proo	f		42		6042- <b>**</b> -H							
amp body materials, tested and approved according			44,5	1-3/4	6044.5- <b>**</b> -H							
several international fire-protection standards			48,3		6048.3- <b>**</b> -H							
such as BS 6853, EN 45545-2, UL 94 and many more).			50,8	2	6050.8- <b>**</b> -H	115	90	87	45			
	6S	4	55		6055- <b>**</b> -H	4.53	3.54	3.43	1.77			
See pages 156 / 157 for material properties and technical information.		Ŧ	57		6057- <b>**</b> -H							
			57,2	2-1/4	6057.2- <b>**</b> -H							
			60,3		6060.3- <b>**</b> -H							
Product Features			63,5	2-1/2	6063.5- <b>**</b> -H							
			65		6065- <b>**</b> -H							
Proven, tested and trusted product in various markets			70	2-3/4	6070- <b>**</b> -H							

- Proven, tested and trusted product in various markets
- · Recommended for the safe installation of hoses and cables
- Chamfered edges avoid damaging of the hose or cable Available for all commonly used hose and cable outside
- diameters

Excellent weathering resistance, even under extreme conditions

В

-	Polypropylene
1	Colour: Green
	Material code: PP

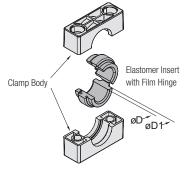
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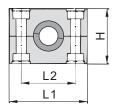
## **Product Fe**

- Additional outside diameters are available upon request. Please contact STAUFF for further information.



## **Clamp Body with Elastomer Insert Type RI**







Group Outside Diameter			Ordering Codes	( <b>**</b> R = Clamp	Body Material	Dime	nsions				
н-		Pipe / T	ube / Hose	Clamp Assembly	Clamp Body	Insert *	( ^{mm} /in)				
STAUFF	-	ØD		(Clamp Body +							
ST	DIN	(mm	(in	Insert	(2 Clamp Halves		Ø D1	L1	L2	Н	Widt
		6		4006- <b>**</b> -R		RI-06-4/4S					
		8	5/16	4008- <b>**</b> -R		RI-08-4/4S					
		10		4010- <b>**</b> -R		RI-10-4/4S					
		12		4012- <b>**</b> -R		RI-12-4/4S					
		12,7	1/2	4012.7- <b>**</b> -R		RI-12.7-4/4S	1.				
4S	2	14	-	4014- <b>**</b> -R	4S- <b>**</b> -R	RI-14-4/4S	25	70	45	46,5	30,5
		15		4015- <b>**</b> -R		RI-15-4/4S	.98	2.76	1.77	4.83	1.20
		16	5/8	4016- <b>**</b> -R		RI-16-4/4S					
		17,2	0,0	4017.2- <b>**</b> -R		RI-17.2-4/4S					
		18		4018- <b>**</b> -R		RI-18-4/4S					
		19	3/4	4019- <b>**</b> -R		RI-19-4/4S					
		20	0/ 4	5020- <b>**</b> -R		RI-20-6/5S					
		21,3		5020 ++ II 5021.3-**-R		RI-21.3-6/5S					
		22	7/8	5022- <b>**</b> -R		RI-22-6/5S					
		25	110	5022- <b>**</b> -R		RI-25-6/5S	38	85	60	58	30.5
5S	3	26,9		5025- <b>**</b> -R	5S- <b>**</b> -R	RI-26.9-6/5S	1.50	3.35	2.36	2.28	1.20
		28		5028- <b>**</b> -R		RI-28-6/5S	1.00	0.00	2.00	2.20	1.20
		30		5020- <b>**</b> -R		RI-30-6/5S					
		30	1-1/4	5030- <b>**</b> -R		RI-32-6/5S					
		32	1-1/4	6032- <b>**</b> -R		RI-32-6S					
		33,7	1-1/4	6033.7- <b>**</b> -R		RI-33.7-6S					
		35		6035- <b>**</b> -R		RI-35-6S					
		38.7		6038.7- <b>**</b> -R		RI-33-03					
		40		6040- <b>**</b> -R		RI-40-6S					
6S	4	40		6040- <b>**</b> -R	6S- <b>**</b> -R	RI-40-03	64	115	90	87	45
03	4	42		6042- <b>**</b> -R	03- <b>**</b> -n	RI-42-03	2.52	4.53	3.54	3.43	1.77
		45,5 48		6045.5- <b>**</b> -R		RI-45.5-65					
		40 51	2	6051- <b>**</b> -R		RI-40-05					
		-	2								
		53,4		6053.4- <b>**</b> -R		RI-53.4-6S					
		56,4		6056.4- <b>**</b> -R		RI-56.4-6S					
		55	2-1/4	7055- <b>**</b> -R		RI-55-7S					
		57	2-1/4	7057- <b>**</b> -R		RI-57-7S					
		60	0.1/0	7060- <b>**</b> -R		RI-60-7S	00	454	100	100	00
7S	5	63,5	2-1/2	7063.5- <b>**</b> -R	7S- <b>**</b> -R	RI-63.5-7S	88 3.56	154 6.06	122 4.80	120 4.72	60 2.36
		65	0.0/4	7065- <b>**</b> -R		RI-65-7S	3.00	0.00	4.60	4.7Z	2.30
		70	2-3/4	7070- <b>**</b> -R		RI-70-7S					
		72	0	7072- <b>**</b> -R		RI-72-7S					
		76	3	7076- <b>**</b> -R		RI-76-7S					
		80	0.4/0	8080- <b>**</b> -R		RI-80-8S	114	208	168	168	80
BS	6	88,9	3-1/2	8088.9- <b>**</b> -R	8S- <b>**</b> -R	RI-88.9-8S	4.49	8.11	6.61	6.61	3.15
		102		8102- <b>**</b> -R		RI-102-8S					
	-	114		9114- <b>**</b> -R		RI-114-9S	150	251	205	200	91
9S	7	133	5-1/4	9133- <b>**</b> -R	9S- <b>**</b> -R	RI-133-9S	5.91	9.88	8.07	7.87	3.58
		140		9140- <b>**</b> -R		RI-140-9S					
		150		10150- <b>**</b> -R		RI-150-10S					
10S	8	165		10165- <b>**</b> -R	10S- <b>**</b> -R	RI-165-10S	200	336	265	270	120
	Ĭ	168		10168- <b>**</b> -R		RI-168-10S	7.87	13.22	10.43	10.63	4.72
		172		10172- <b>**</b> -R		RI-172-10S					

* Elastomer Inserts for Heavy Series clamp bodies, STAUFF Group 4S also fit into Standard Series clamp bodies, STAUFF Group 4. Elastomer Inserts for Heavy Series clamp bodies, STAUFF Group 5S also fit into Standard Series clamp bodies, STAUFF Group 6.

Additional outside diameters are available upon request. Please contact STAUFF for further information.

#### **Ordering Codes** *4*006-*PP-R **Clamp Assembly** One assembly is consisting of one clamp body and one insert. * 1st part of STAUFF Group 4 * Exact outside diameter Ø D (mm) 006 * Material code (see below) PP-R *4S-*PP-R **Clamp Body** One clamp body is consisting of two clamp halves. * STAUFF Group 4S * Material code (see below) PP-R *RI-*06-*4/4S **Elastomer Insert** * Elastomer Insert RI * Exact outside diameter Ø D (mm) 06 * STAUFF Group 4S (Heavy) and 4 (Standard) 4/4S 5S (Heavy) and 6 (Standard) 6/5S 6S (Heavy) 6S 7S (Heavy) 7S 8S (Heavy) 8S 9S (Heavy) 9S 10S (Heavy) 10S

## **Standard Materials**



Colour: Black Material code: PP-R



Polyamide Colour: Black Material code: PA-R

Elastomer Insert

4S to 6S: Thermoplastic Elastomer (73 Shore-A) 7S to 10S: EPDM (70 Shore-A) Colour: Black

See pages 154 / 155 for material properties and technical information.

## **Special Materials**

Please contact STAUFF for further details on fire-proof clamp body materials, tested and approved according to several international fire-protection standards (such as BS 6853, EN 45545-2, UL 94 and many more).

See pages 156 / 157 for material properties and technical information.

## **Product Features**

- Proven, tested and trusted product in various markets
- · Either for the extra vibration/noise reducing installation of pipes and tubes or the extra gentle installation of hoses and cables
- · Available for all commonly used outside diameters
- · Excellent weathering resistance, even under extreme conditions

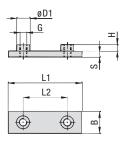
## R ISTAUFF

# Weld Plate for Single Clamps **Type SPAL**

0 W * * *

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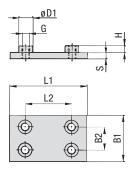


		Group	Group		Dimensions ( ^{mm} / _{in} )							
Ordering C	odes	STAUFF	DIN	L1	L2	В	S	Н	Thread G	ØD1	(Standard Options)	
		35	1	74	33	30	8	8	M10	18	SPAL-3S-M-W2	
Veld Plate	*SPAL-*3S-*M-*W2	33		2.91	1.30	1.18	.31	.31	3/8-16 UNC	.71	SPAL-3S-U-W2	
		4S	2	86	45	30	8	8	M10	18	SPAL-4S-M-W2	
Weld Plate for S	Single Clamps SPAL	40	2	3.39	1.77	1.18	.31	.31	3/8-16 UNC	.71	SPAL-4S-U-W2	
	<b>.</b>	5S	3	100	60	30	8	8	M10	18	SPAL-5S-M-W2	
STAUFF Group	35	55	5	3.94	2.36	1.18	.31	.31	3/8-16 UNC	.71	SPAL-5S-U-W2	
Thread code	Metric ISO thread M	6S	4	140	90	45	10	8	M12	20	SPAL-6S-M-W2	
	Unified coarse (UNC) thread U	03	4	5.51	3.54	1.77	.39	.31	7/16-14 UNC	.78	SPAL-6S-U-W2	
	· · /	7S	5	180	122	60	10	12	M16	24	SPAL-7S-M-W2	
Material code	Carbon Steel, uncoated W1	13	5	7.09	4.80	2.36	.39	.47	5/8-11 UNC	.94	SPAL-7S-U-W2	
	Carbon Steel, phosphated W2	8S	6	226	168	80	15	18	M20	30	SPAL-8S-M-W1	
	Carbon Steel, zinc/nickel-plated W3	03	0	8.90	6.61	3.15	.59	.71	3/4-10 UNC	1.18	SPAL-8S-U-W1	
	Stainless Steel V2A	95	7	270	205	90	15	21	M24	35	SPAL-9S-M-W1	
	1.4301 / 1.4305 (AISI 304 / 303) W4	93	1	10.63	8.07	3.54	.59	.83	7/8-9 UNC	1.38	SPAL-9S-U-W1	
	Stainless Steel V4A	10S	8	340	265	120	25	21	M30	45	SPAL-10S-M-W1	
	1.4401 / 1.4571 (AISI 316 / 316 Ti)	103	0	13.39	10.43	4.72	.98	.83	1-1/8-7 UNC	1.77	SPAL-10S-U-W1	
		115	9	520	395	160	30	38	M30	50	SPAL-11S-M-W1	
		115	9	20.47	15.55	6.30	1.18	1.50	1-1/4-7 UNC	1.97	SPAL-11S-U-W1	
		100	10	680	534	180	30	38	M30	50	SPAL-12S-M-W1	
		12S	10	27.16	21.02	7.09	1.18	1.50	1-1/4-7 UNC	1.97	SPAL-12S-U-W1	

All threaded parts are available with Metric ISO thread or unified coarse (UNC) thread according to dimension table. Alternative materials and surface finishings are available upon request. Contact STAUFF for further information.

# Weld Plate for Double Clamps **Type SPAS**





Ordering Codes			Group		Dimens	sions ( ^{mm} /	'in)						Ordering Codes
Ordering Codes			STAUFF	DIN	L1	L2	B1	B2	S	Н	Thread G	ØD1	(Standard Options)
<b>j</b> -			3S	4	74	33	60	30,5	8	8	M10	18	SPAS-3S-M-W2
Weld Plate	*SPAS-*3S-*M-*	N2	33	1	2.91	1.30	2.36	1.20	.31	.31	3/8-16 UNC	.71	SPAS-3S-U-W2
inora i rato			4S	2	86	45	60	30,5	8	8	M10	18	SPAS-4S-M-W2
* Wold Diata for D	ouble Clampa	PAS	43	2	3.39	1.77	2.36	1.20	.31	.31	3/8-16 UNC	.71	SPAS-4S-U-W2
* Weld Plate for Double Clamps		PAS	5S	3	100	60	60	30,5	8	8	M10	18	SPAS-5S-M-W2
* STAUFF Group		3S	55	5	3.94	2.36	2.36	1.20	.31	.31	3/8-16 UNC	.71	SPAS-5S-U-W2
			6S	4	140	90	90	46	10	8	M12	20	SPAS-6S-M-W2
* Thread code	e Metric ISO thread	М	00	4	5.51	3.54	3.54	1.81	.39	.31	7/16-14 UNC	.78	SPAS-6S-U-W2
	Unified coarse (UNC) thread	U 7S 5	5	180	122	120	61	10	12	M16	24	SPAS-7S-M-W2	
* Motorial ando	Carbon Staal unacated	14/4	10	5	7.09	4.80	4.72	2.40	.39	.47	5/8-11 UNC	.94	SPAS-7S-U-W2
* Material code	Carbon Steel, uncoated	W1	8S	6	226	168	160	81	15	18	M20	30	SPAS-8S-M-W1
	Carbon Steel, phosphated	W2	03	0	8.90	6.61	6.61	3.19	.59	.71	3/4-10 UNC	1.18	SPAS-8S-U-W1
	Carbon Steel, zinc/nickel-plated	W3	9S	7	270	205	180	91	15	21	M24	35	SPAS-9S-M-W1
	Stainless Steel V2A		50	1	10.63	8.07	7.09	3.58	.59	.83	7/8–9 UNC	1.38	SPAS-9S-U-W1
	1.4301 / 1.4305 (AISI 304 / 303)	W4	10S	8	340	265	240	121	25	21	M30	45	SPAS-10S-M-W1
			105	0	13.39	10.43	9.45	4.78	.98	.83	1-1/8-7 UNC	1.77	SPAS-10S-U-W1
	Stainless Steel V4A	W5	11S	9	520	395	324	166	30	38	M30	50	SPAS-11S-M-W1
	1.4401 / 1.4571 (AISI 316 / 316 Ti)	i) <b>110</b>	113	3	20.47	15.55	12.76	6.54	1.18	1.50	1-1/4-7 UNC	1.97	SPAS-11S-U-W1
			12S	10	680	534	364	186	30	38	M30	50	SPAS-12S-M-W1
			123	10	27.16	21.02	14.33	7.32	1.18	1.50	1-1/4-7 UNC	1.97	SPAS-12S-U-W1

All threaded parts are available with Metric ISO thread or unified coarse (UNC) thread according to dimension table. Alternative materials and surface finishings are available upon request. Contact STAUFF for further information.

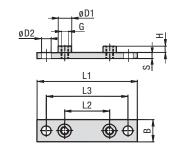
		2.

Weld Plate	*SPAS-*3S-*M-*	W
* Weld Plate for D	ouble Clamps S	SP/
* STAUFF Group		;
* Thread code	Metric ISO thread Unified coarse (UNC) thread	
* Material code	Carbon Steel, uncoated Carbon Steel, phosphated Carbon Steel, zinc/nickel-plated	V V V
	Stainless Steel V2A 1.4301 / 1.4305 (AISI 304 / 303) Stainless Steel V4A 1.4401 / 1.4571 (AISI 316 / 316 Ti)	v v



**Elongated Weld Plate for Single Clamps** 

## R STALIF





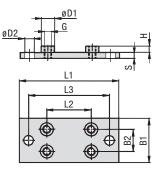


**Type SPAL-DUEB** 

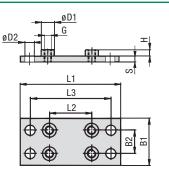
Group		Dimen	sions ("	^m /in)							Ordering Codes
STAUFF	DIN	L1	L2	L3	В	S	Н	Thread G	ØD1	ØD2	(Standard Options)
3S	1	113	33	85	30	8	8	M10	18	13	SPAL-DUEB-3S-M-W2
35	1	4.45	1.30	3.35	1.18	.31	.31	3/8-16 UNC	.71	.51	SPAL-DUEB-3S-U-W2
40	2	125	45	97	30	8	8	M10	18	13	SPAL-DUEB-4S-M-W2
4S	2	4.92	1.77	3.82	1.18	.31	.31	3/8-16 UNC	.71	.51	SPAL-DUEB-4S-U-W2
50	0	140	60	112	30	8	8	M10	18	13	SPAL-DUEB-5S-M-W2
5S	3	5.51	2.36	4.41	1.18	.31	.31	3/8-16 UNC	.71	.51	SPAL-DUEB-5S-U-W2
<u></u>	4	187	90	155	45	10	8	M12	20	16	SPAL-DUEB-6S-M-W2
6S	4	7.36	3.54	6.10	1.77	.39	.31	7/16-14 UNC	.78	.62	SPAL-DUEB-6S-U-W2
70	F	238	122	198	60	10	12	M16	24	21	SPAL-DUEB-7S-M-W2
7S	5	9.37	4.80	7.80	2.36	.39	.47	5/8-11 UNC	.94	.83	SPAL-DUEB-7S-U-W2
	6	309	168	259	80	15	18	M20	30	26	SPAL-DUEB-8S-M-W1
8S		12.17	6.61	10.20	3.15	.59	.71	3/4-10 UNC	1.18	1.02	SPAL-DUEB-8S-U-W1
00	7	370	205	310	90	15	21	M24	35	31	SPAL-DUEB-9S-M-W1
9S	1	14.57	8.07	12.20	3.54	.59	.83	7/8–9 UNC	1.38	1.22	SPAL-DUEB-9S-U-W1
10S	8	460	265	400	120	25	21	M30	45	31	SPAL-DUEB-10S-M-W
105	8	18.11	10.43	15.75	4.72	.98	.83	1-1/8-7 UNC	1.77	1.22	SPAL-DUEB-10S-U-W1
110	0	590	395	530	160	30	38	M30	50	31	SPAL-DUEB-11S-M-W
11S	9	23.23	15.55	20.87	6.30	1.18	1.50	1-1/4-7 UNC	1.97	1.22	SPAL-DUEB-11S-U-W1
100	10	750	534	690	180	30	38	M30	50	31	SPAL-DUEB-12S-M-W
12S	10	29.53	21.02	27.17	7.09	1.18	1.50	1-1/4-7 UNC	1.97	1.22	SPAL-DUEB-12S-U-W1

Ordering Co	Ordering Codes											
Weld Plate *	SPAL-DUEB-*3S-*M-*\	N2										
* Elongated Weld	Plate for Single Clamps SPAL-D	UEB										
* STAUFF Group		3S										
* Thread code	Metric ISO thread Unified coarse (UNC) thread	M U										
* Material code	Carbon Steel, uncoated Carbon Steel, phosphated Carbon Steel, zinc/nickel-plated	W1 W2 W3										
	Stainless Steel V2A 1.4301 / 1.4305 (AISI 304 / 303) Stainless Steel V4A	W4										
	1.4401 / 1.4571 (AISI 316 / 316 Ti)	W5										

All threaded parts are available with Metric ISO thread or unified coarse (UNC) thread according to dimension table. Alternative materials and surface finishings are available upon request. Contact STAUFF for further information.



## STAUFF Group 3S to 9S



## STAUFF Group 10S to 12S

Group		Dimer	sions	( ^{mm} /in)								Ordering Codes
STAUFF	DIN	L1	L2	L3	B1	B2	S	Н	Thread G	ØD1	ØD2	(Standard Options)
3S	1	113	33	85	60	30,5	8	8	M10	18	13	SPAS-DUEB-3S-M-W2
33	1	4.45	1.30	3.35	2.36	1.20	.31	.31	3/8-16 UNC	.71	.51	SPAS-DUEB-3S-U-W2
4S	2	125	45	97	60	30,5	8	8	M10	18	13	SPAS-DUEB-4S-M-W2
43	2	4.92	1.77	3.82	2.36	1.20	.31	.31	3/8-16 UNC	.71	.51	SPAS-DUEB-4S-U-W2
5S	3	140	60	112	60	30,5	8	8	M10	18	13	SPAS-DUEB-5S-M-W2
55	5	5.51	2.36	4.41	2.36	1.20	.31	.31	3/8-16 UNC	.71	.51	SPAS-DUEB-5S-U-W2
6S	4	187	90	155	90	46	10	8	M12	20	16	SPAS-DUEB-6S-M-W2
03	4	7.36	3.54	6.10	3.54	1.81	.39	.31	7/16-14 UNC	.78	.62	SPAS-DUEB-6S-U-W2
7S	5	238	122	198	120	61	10	12	M16	24	21	SPAS-DUEB-7S-M-W2
13	J	9.37	4.80	7.80	4.72	2.40	.39	.47	5/8-11 UNC	.94	.83	SPAS-DUEB-7S-U-W2
8S	6	309	168	259	160	81	15	18	M20	30	26	SPAS-DUEB-8S-M-W1
03	0	12.17	6.61	10.20	6.61	3.19	.59	.71	3/4-10 UNC	1.18	1.02	SPAS-DUEB-8S-U-W1
9S	7	370	205	310	180	91	15	21	M24	35	31	SPAS-DUEB-9S-M-W1
93	1	14.57	8.07	12.20	7.09	3.58	.59	.83	7/8–9 UNC	1.38	1.22	SPAS-DUEB-9S-U-W1
10S	8	460	265	400	240	121	25	21	M30	45	31	SPAS-DUEB-10S-M-W1
103	0	18.11	10.43	15.75	9.45	4.78	.98	.83	1-1/8-7 UNC	1.77	1.22	SPAS-DUEB-10S-U-W1
11S	9	590	395	530	324	166	30	38	M30	50	31	SPAS-DUEB-11S-M-W1
113	J	23.23	15.55	20.87	12.76	6.54	1.18	1.50	1-1/4-7 UNC	1.97	1.22	SPAS-DUEB-11S-U-W1
12S	10	750	534	690	364	186	30	38	M30	50	31	SPAS-DUEB-12S-M-W1
123	10	29.53	21.02	27.17	14.33	7.32	1.18	1.50	1-1/4-7 UNC	1.97	1.22	SPAS-DUEB-12S-U-W1

**Elongated Weld Plate for Double Clamps Type SPAS-DUEB** 



Design for	STAUFF	Group	105 10	123

# **Ordering Codes**

* Elongated Weld	Plate for Double Clamps SPAS-D	UEB
* STAUFF Group		3S
* Thread code	Metric ISO thread Unified coarse (UNC) thread	M U
* Material code	Carbon Steel, uncoated Carbon Steel, phosphated Carbon Steel, zinc/nickel-plated	W1 W2 W3
	Stainless Steel V2A 1.4301 / 1.4305 (AISI 304 / 303)	W4
	Stainless Steel V4A 1.4401 / 1.4571 (AISI 316 / 316 Ti)	W5

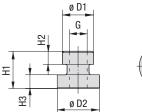
All threaded parts are available with Metric ISO thread or unified coarse (UNC) thread according to dimension table. Alternative materials and surface finishings are available upon request. Contact STAUFF for further information.



# **Mounting Rail Nut**

(for Use with Mounting Rail STSV) **Type GMV** 







Ordering C	odes		Group STAUFF	DIN	Dimensior ØD1	ns ( ^{mm} /in) ØD2	H1	H2	НЗ	Thread G	Ordering Codes (Standard Options)
Mounting Rail	Nut *GMV-*3-5S*M-*	W3	3S	1							
* Mounting Rail N	ut	GMV	4S	2	17,8	24	21	7,6	7,4	M10	GMV-3-5S-M-W3
* STAUFF Group	3S to 5S (DIN Group 1 to 3) 6S (DIN Group 4)	3-5S 6S	40	2	.70	.94	.83	.30	.29	3/8-16 UNC	GMV-3-5S-U-W3
* Thread code	Metric ISO thread Unified coarse (UNC) thread	MU	5S	3							
* Material code	Carbon Steel, zinc/nickel-plated	W3	6S	4	19,8	24	23	8,8	8,8	M12	GMV-6S-M-W3
	Stainless Steel V2A 1.4301 / 1.4305 (AISI 304 / 303)	W4		•	.78	.94	.91	.35	.35	7/16–14 UNC	GMV-6S-U-W3

All threaded parts are available with Metric ISO thread or unified coarse (UNC) thread according to dimension table. Alternative materials and surface finishings are available upon request. Contact STAUFF for further information.

# **Mounting Rail**

(for Use with Mounting Rail Nut GMV) **Type STSV** 



Stainless Steel V4A

1.4401 / 1.4571 (AISI 316 / 316 Ti)

W5

N N	

Ordering C	odes	STAUFF	DIN	B1
Mounting Ra	ii *STSV-*1M-*W1	3S	1	
<ul><li>Mounting Rail</li><li>Length of rail</li></ul>	<b>STSV</b> 1 m / 3.28 ft <b>1M</b>	4S	2	40
	2 m / 6.56 ft 2M Alternative lengths available upon request. Contact STAUFF for further information.	5S	3	1.57
* Material code	Carbon Steel, uncoated W1 Carbon Steel, zinc-plated, blue-chromated W32	6S	4	
	Stainless Steel V4A 1.4401 / 1.4571 (AISI 316 / 316 Ti) <b>W5</b>	Alternativ	e materia	ls and

Group		Dimension	S ( ^{mm} / _{in} )			Ordering Codes (Standard		
STAUFF	DIN	B1	B2	Н	S	Length of Rail: 1 m / 3.28 ft	Length of Rail: 2m / 6.56ft	
3S	1							
4S	2	40	13	22	5	STSV -1M-W1	STSV -2M-W1	
5S	3	1.57	.51	.86	.19	212A - IM-MI	STSV -2M-W1	
6S	4							

d surface finishings are available upon request. Contact STAUFF for further information.

В



# **Channel Rail Adaptor**

*CRA-*3-5S-*M-*W3

CRA

3-5S

6S

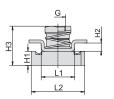
Μ U

W3

W5

В

(for Use with Various Channel Rails) **Type CRA** 



	-	-	0	
1	- 81			1
	1		POL	
			APR -	1
		-		

Group		Dimensions (m	n/in)								Ordering Codes	
STAUFF	DIN	Thread G	L1	L2	L3	B1	B2	H1	H2	H3	(Standard Options)	
3S	1											
4S	2	M10	22	35	38	22	20,5	9,2	5,5	27,5	CRA-3-5S-M-W3	
43	2	2 3/8-16 UNC	.87	1.38	1.50	.87	.81	.36	.22	1.08	CRA-3-5S-U-W3	
5S	3											
66	4	M12	21,5	35	45	25	19	9,2	5	27,5	CRA-6S-M-W3	
6S	4	7/16-14 UNC	.85	1.38	1.77	.98	.75	.36	.20	1.08	CRA-6S-U-W3	

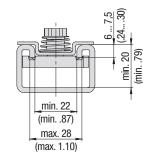
All threaded parts are available with Metric ISO thread or unified coarse (UNC) thread according to dimension table. Alternative materials and surface finishings are available upon request. Contact STAUFF for further information.

Compatibility with Channel Rails	Compatibility	with	Channel	Rails
----------------------------------	---------------	------	---------	-------

The STAUFF Channel Rail Adaptor, type CRA is suitable for various channel rails, including the following types:

HALFEN	HILTI	UNISTRUT®	STAUFF (Cushion Clamp Series)
HM 41/41	MQ-21, MQ-41, MQ-52, MQ-72	P1000, P1000T, P1000V, P1000VT, P1001	SCS-048-1-PL, SCS-048-1-GR
HZA 41/22	MQ-21U, MQ-41U, MQ-72U	P2000, P2000T	SCS-120-1-PL, SCS-120-1-GR
HZM 41/41	MQ-21D, MQ-41D, MQ-52-72D	P3003, P3003T, P3300V, P3300VT, P3301	See page 149 for technical information.
HZM 41/22		P4000, P4000T	
HL 41/41, HL 41/B2		P5000, P5000T, P5001, P5500, P5500T, P5501	

Contact STAUFF to check compatibility with additional types of channel rails.



**Basic dimensional** requirements for channel rails to be used with STAUFF Channel Rail Adaptors, type CRA

## Recommended Bolt Lengths when using the Channel Rail Adaptor, Type CRA

Group		Hexagon Head Bolts AS (used with Cove	r Plates DPAL or DPAS)	Socket Cap Screws IS (used without Cover Plates DPAL or DPAS)			
STAUFF	DIN	Metric ISO thread	Unified coarse (UNC) thread	Metric ISO thread	Unified coarse (UNC) thread		
35	1	M10 x 40	3/8-16 UNC x 1-1/2	M10 x 25	3/8–16 UNC x 1		
4S	2	M10 x 55	3/8-16 UNC x 2-1/4	M10 x 40	3/8-16 UNC x 1-1/2		
5S	3	M10 x 65	3/8–16 UNC x 2-3/4	M10 x 50	3/8–16 UNC x 2		
6S	4	M12 x100	7/16-14 UNC x 3-3/4	M12 x 75	7/16-14 UNC x 3		

Clamp assemblies including Channel Rail Adaptors, type CRA are supplied with the recommended bolt lengths by default. See page 48 for further information on ordering.



**Ordering Codes** 

* Channel Rail Adaptor

* STAUFF Group 3S to 5S (DIN Group 1 to 3)

6S (DIN Group 4)

Metric ISO thread

Stainless Steel V4A

Unified coarse (UNC) thread

Carbon Steel, zinc/nickel-plated

1.4401 / 1.4571 (AISI 316 / 316 Ti)

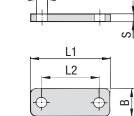
**Adaptor** 

* Thread code

* Material code

## R STAUFF

# **Cover Plate for Single Clamps Type DPAL**



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		Group		Dimensior	1S ( ^{mm} /in)				Ordering Codes
Ordering C	odes	STAUFF	DIN	L1	L2	В	S	ØD	(Standard Options)
	<b>3</b> • • • • • •			55	33	30	8	11	DPAL-3S-W2
<b>Cover Plate</b>	*DPAL-*3S-*W2	3S	1	2.16	1.30	1.18	.31	.43	DFAL-33-WZ
		4S	2	70	45	30	8	11	DPAL-4S-W2
* Cover Plate for	Single Clamps DPAL	43	2	2.76	1.77	1.18	.31	.43	DFAL-43-WZ
	5S	3	85	60	30	8	11	DPAL-5S-W2	
* STAUFF Group	35	55	5	3.35	2.36	1.18	.31	.43	DFAL-JJ-WZ
* Material code	Carbon Steel, uncoated W1	6S	4	115	90	45	10	14	DPAL-6S-W2
	Carbon Steel, phosphated W2	03	4	4.53	3.54	1.77	.39	.55	DFAL-03-WZ
	Carbon Steel, zinc/nickel-plated W3	7S	5	152	122	60	10	19	DPAL-7S-W2
	· ·	13	5	5.98	4.80	2.36	.39	.75	DFAL-75-WZ
	Stainless Steel V2A W4	8S	6	206	168	80	15	22	DPAL-8S-W1
	1.4301 / 1.4305 (AISI 304 / 303)	03	0	8.11	6.61	3.15	.59	.87	DFAL-03-WI
	Stainless Steel V4A W5	9S	7	251	205	90	15	26	DPAL-9S-W1
	1.4401 / 1.4571 (AISI 316 / 316 Ti)	93	1	9.88	8.07	3.54	.59	1.02	DFAL-95-WI
	Aluminium EN AW-6060	10S	8	320	265	120	25	35	DPAL-10S-W1
	(for group sizes 3S to 5S only)	105	0	12.60	10.43	4.72	.98	1.38	DFAL-102-WI
	(	115	9	470	395	160	30	35	DPAL-11S-W1
		115	9	18.50	15.55	6.30	1.18	1.38	DFAL-112-WI
		12S	10	630	534	180	30	35	DPAL-12S-W1
		125	10	24.80	21.02	7.09	1.18	1.38	DFAL-125-WI

Alternative materials and surface finishings are available upon request. Contact STAUFF for further information.

# **Cover Plate for Double Clamps Type DPAS**

44



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L1 L2	-
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			Group		Dimensions ( ^{mm} / _{in} )						Ordering Codes	
Ordering C	odes		STAUFF	DIN	L1	L2	B1	B2	S	ØD	(Standard Options)	
			3S	4	55	33	60	30,5	8	11	DPAS-3S-W2	
<b>Cover Plate</b>	*DPAS-*3S-*	W2	33	1	2.16	1.30	2.36	1.20	.31	.43	DFA3-33-W2	
			4S	2	70	45	60	30,5	8	11	DPAS-4S-W2	
* Cover Diete for	Double Clampa		40	2	2.76	1.77	2.36	1.20	.31	.43	DFA3-43-W2	
* Cover Plate for		DPAS	5S	3	83	60	60	30,5	8	11	DPAS-5S-W2	
* STAUFF Group		3S	55	5	3.27	2.36	2.36	1.20	.31	.43	DI A3-33-W2	
		65	6S	4	115	90	90	46	10	14	DPAS-6S-W2	
* Material code	Carbon Steel, uncoated	W1	03		4.53	3.54	3.54	1.81	.39	.55	DFA3-03-W2	
	Carbon Steel, phosphated	W2	75	5	152	122	120	61	10	19	DPAS-7S-W2	
	Carbon Steel, zinc/nickel-plated	W3	/5 5		5	5.98	4.80	4.72	2.40	.39	.75	DI A3-73-W2
	0.11.0.1104	W4	8S	6	206	168	160	81	15	22	DPAS-8S-W1	
	Stainless Steel V2A		00	0	8.11	6.61	6.61	3.19	.59	.87	DI A3-03-W1	
	1.4301 / 1.4305 (AISI 304 / 303)		9S	7	251	205	180	91	15	26	DPAS-9S-W1	
	Stainless Steel V4A	W5	50	1	9.88	8.07	7.09	3.58	.59	1.02	DFA3-93-WT	
	1.4401 / 1.4571 (AISI 316 / 316 Ti)	113	10S	8	320	265	240	121	25	35	DPAS-10S-W1	
			103	0	12.60	10.43	9.45	4.78	.98	1.38	DFA3-103-W1	
			11S	9	470	395	321	166	30	35	DPAS-11S-W1	
			113	3	18.50	15.55	12.64	6.54	1.18	1.38	DI A0-110-WI	
			12S	10	630	534	361	186	30	35	DPAS-12S-W1	
			123	10	24.80	21.02	14.21	7.32	1.18	1.38	DFA3-123-W1	

Alternative materials and surface finishings are available upon request. Contact STAUFF for further information.

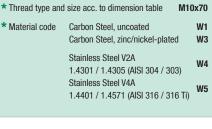
# **Hexagon Head Bolt Type AS**

7/16-14 UNC x 3-1/4



Dimensions applicable only when used with Cover Plates DPAL or DPAS

Group	5.00	Dimensions ( ^{mm} / _{in} )	Ordering Codes	
STAUFF	DIN	Thread G x L	(Standard Options)	Ordering Codes
3S	1	M10 x 45	AS-M10x45-W1	
55	1	3/8-16 UNC x 1-3/4	AS-3/8-16UNCx1-3/4-W3*	Hexagon Head Bolt *AS-*M10x70-*W1
4S	2	M10 x 60	AS-M10x60-W1	
45	2	3/8-16 UNC x 2-1/4	AS-3/8-16UNCx2-1/4-W3*	* Type of bolt Hexagon Head Bolt
5S	0	M10 x 70	AS-M10x70-W1	(according to DIN 931 / 933 AS
55	3	3/8-16 UNC x 2-3/4	AS-3/8-16UNCx2-3/4-W3*	or ANSI / ASME B18.2.1.)
		M12 x 100	AS-M12x100-W1	· · · · · · · · · · · · · · · · · · ·
6S	4	7/16-14 UNC x 4	AS-7/16-14UNCx4-W3*	* Thread type and size acc. to dimension table M10x70
70	-	M16 x 130	AS-M16x130-W1	* Material code Carbon Steel, uncoated W1
7S	5	5/8-11 UNC x 5-1/4	AS-5/8-11UNCx5-1/4-W3*	Carbon Steel, zinc/nickel-plated W3
8S	6	M20 x 190	AS-M20x190-W1	
85	6	3/4-10 UNC x 7-1/2	AS-3/4-10UNCx7-1/2-W1	Stainless Steel V2A W4
00	-	M24 x 220	AS-M24x220-W1	1.4301 / 1.4305 (AISI 304 / 303)
9S	1	7/8-9 UNC x 8-3/4	AS-7/8-9UNCx8-3/4-W1	Stainless Steel V4A W5
100	0	M30 x 300	AS-M30x300-W1	1.4401 / 1.4571 (AISI 316 / 316 Ti)
10S	8	1-1/8-7 UNC x 12	AS-1-1/8-7UNCx12-W1	
440	0	M30 x 450	AS-M30x450-W1	
11S	9	1-1/4-7 UNC x 17-1/2	AS-1-1/4-7UNCx17-1/2-W1	* Standard finishing option for Heavy Series group sizes 3S to 7S
100	10	M30 x 560	AS-M30x560-W1	in North America is W3 (Carbon Steel, zinc/nickel-plated).
12S	10	1-1/4-7 UNC x 22	AS-1-1/4-7UNCx22-W1	



All threaded parts are available with Metric ISO thread or unified coarse (UNC) thread according to dimension table. Alternative materials and surface finishings are available upon request. Contact STAUFF for further information.

# Socket Cap Screw IS (according to ISO 4762 or ANSI / ASME B18.3)

Group		Dimensions ( ^{mm} / _{in} )	Ordering Codes
STAUFF	DIN	Thread G x L	(Standard Options)
3S	4	M10 x 30	IS-M10x30-W1
35	I	3/8-16 UNC x 1	IS-3/8-16UNCx1-W3*
4S	0	M10 x 40	IS-M10x40-W1
45	2	3/8-16 UNC x 1-3/4	IS-3/8-16UNCx1-3/4-W3*
50	2	M10 x 50	IS-M10x50-W1
5S	3	3/8-16 UNC x 2	IS-3/8-16UNCx2-W3*
6S	4	M12 x 80	ISM12x80-W1
05	4	7/16 14 UNC x 2 1/4	IS_7/16_1/UNCv2_1//_W2*

Dimensions applicable only when used without Cover Plates

All threaded parts are available with Metric ISO thread or unified coarse (UNC) thread according to dimension table. Alternative materials and surface finishings are available upon request. Contact STAUFF for further information.

* Standard finishing option in North America is W3 (Carbon Steel, zinc/nickel-plated).



# B

**Socket Cap Screw** 

Type IS

Catalogue 1 - Edition 08/2019







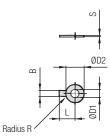
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## **Safety Washer**

(for Use with Hexagon Head Bolt AS) Type SI (DIN 93)







#### Safety Washer SI (Bend longer tab down towards the side of the clamp body

and one side up towards one of the flats of the hexagon head bolt)

Ordering Codes								
Safety Washe	*SI-*10.5-*DIN93-*	W3						
* Safety Washer		SI						
* Exact inner diam	neter ØD1 (mm)	10.5						
* Type of washer	Safety washer with 1 tab (according to DIN 93)	IN 93						
* Material code	Carbon Steel, zinc/nickel-plated	W3						
	Stainless Steel V4A 1.4401 / 1.4571 (AISI 316 / 316 Ti)	W5						

Group		Dimensions	S ( ^{mm} /in)	Ordering Codes				
STAUFF	DIN	ØD1	В	ØD2	L	R	S	(Standard Options)
3S	1	10,5	10	26	22	4	0,75	SI-10.5-DIN93-W3
33	1	.41	.39	1.02	.87	.16	.03	3I-10.3-DIN93-W3
4S	2	10,5	10	26	22	4	0,75	SI-10.5-DIN93-W3
43	2	.41	.39	1.02	.87	.16	.03	31-10.3-DIM93-W3
5S	3	10,5	10	26	22	4	0,75	SI-10.5-DIN93-W3
33 3	.41	.39	1.02	.87	.16	.03	31-10.J-DIN92-W3	
6S	4	13	12	30	28	6	1	SI-13-DIN93-W3
03	4	.51	.47	1.18	1.10	.24	.04	31-13-DIN93-W3
7S	5	17	15	36	32	6	1	SI-17-DIN93-W3
13	0	.67	.59	1.42	1.26	.24	.04	31-17-DIM93-W3
8S	6	21	18	42	36	6	1	SI-21-DIN93-W3
03	0	.83	.71	1.65	1.42	.24	.04	31-21-011493-143
9S	7	25	20	50	42	6	1	SI-25-DIN93-W3
93	1	.98	.79	1.97	1.65	.24	.04	31-20-011193-193
10S	8	31	26	63	52	10	1,6	SI-31-DIN93-W3
103	0	1.22	1.02	2.48	2.05	.39	.06	31-31-DIM93-W3
11S	9	31	26	63	52	10	1,6	SI-31-DIN93-W3
115	9	1.22	1.02	2.48	2.05	.39	.06	91-91-01-01-00-W3
12S	10	31	26	63	52	10	1,6	SI-31-DIN93-W3
123	10	1.22	1.02	2.48	2.05	.39	.06	01-01-01110-0-W0

Safety Washers, type SI are used as locking devices to prevent Hexagon Head Bolts, type AS from loosening. Alternative materials and surface finishings are available upon request. Contact STAUFF for further information.

## **Safety Washer**

**Ordering Codes** 

* Exact inner diameter ØD1 (mm)

* Type of washer Safety washer with 2 tabs

* Safety Washer

* Material code

(for Use with Hexagon Head Bolt AS) Type SI (DIN 463)



Safety Washer *SI-*10.5-*DIN463-*W3

(according to DIN 463)

Stainless Steel V4A

Carbon Steel, zinc/nickel-plated

1.4401 / 1.4571 (AISI 316 / 316 Ti)

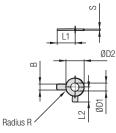
SI

10.5

W3

W5

**DIN 463** 



## Safety Washer SI (Bend longer tab down towards the side of the clamp body and shorter tab up towards one of the flats of the hexagon head bolt)

Group		Dimens	ions ( ^{mm} / _{in} )	Ordering Codes					
STAUFF	DIN	ØD1	В	ØD2	L1	L2	R	S	(Standard Options)
3S	1	10,5	10	21	22	13	4	0,75	SI-10.5-DIN463-W3
35		.41	.39	.83	.87	.51	.16	.03	SI-10.5-DIN403-W3
4S	2	10,5	10	21	22	13	4	1	SI-10.5-DIN463-W3
43	2	.41	.39	.83	.87	.51	.16	.04	51-10.5-DIN403-W3
5S	3	10,5	10	21	22	13	4	1	SI-10.5-DIN463-W3
<b>33</b> 3	3	.41	.39	.83	.87	.51	.16	.04	31-10.3-DIN403-W3
6S	4	13	12	24	28	15	6	1	SI-13-DIN463-W3
03 4	4	.51	.47	.94	1.10	.59	.24	.04	31-13-DIN403-W3
<b>7S</b> 5	5	17	15	30	32	18	6	1	SI-17-DIN463-W3
13	5	.67	.59	1.18	1.26	.71	.24	.04	31-17-DIN403-W3
8S	6	21	18	37	36	21	6	1	SI-21-DIN463-W3
05	0	.83	.71	1.46	1.42	.83	.24	.04	51-21-DIN403-W3
9S	7	25	20	44	42	25	6	1	SI-25-DIN463-W3
95	1	.98	.79	1.73	1.65	.98	.24	.04	51-20-DIN403-W3
10S	8	31	26	56	52	32	10	1,6	SI-31-DIN463-W3
103	0	1.22	1.02	2.20	2.05	1.26	.39	.06	31-31-DIN403-W3
11S	9	31	26	56	52	32	10	1,6	SI-31-DIN463-W3
115	9	1.22	1.02	2.20	2.05	1.26	.39	.06	31-31-DIIV403-W3
12S	10	31	26	56	52	32	10	1,6	SI-31-DIN463-W3
123	10	1.22	1.02	2.20	2.05	1.26	.39	.06	31-31-DIN403-W3

Safety Washers, type SI are used as locking devices to prevent Hexagon Head Bolts, type AS from loosening. Alternative materials and surface finishings are available upon request. Contact STAUFF for further information.

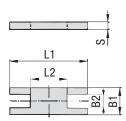




# Safety Locking Plate

(for Use with Stacking Bolt AF) Type SIP

В



R



Group		Dimensions (	^{nm} /in)				Ordering Codes	
STAUFF	DIN	L1	L2	B1	B2	S	(Standard Options)	Ordering Co
3S	4	57	13	30	15,2	8	SIP-3S-W2	
35	I	2.24	.51	1.18	.60	.31	5IP-35-W2	Safety Lockin
4S	2	70	26	30	15,2	8	SIP-4S-W2	
45	2	2.76	1.02	1.18	.60	.31	51P-45-W2	* Safety Locking P
5S	3	85	40	30	15,2	8	SIP-5S-W2	
<b>33</b> 3	3	3.35	1.57	1.18	.60	.31	5IP-35-W2	* STAUFF Group
6S	4	116	68	45	45 17,2 10 SIP-6S-W2		* Material code	
05	4	4.57	2.68	1.77	.68	.39	5IP-05-W2	material code
7S	5	153	96	60	22	10	SIP-7S-W2	
15	5	6.02	3.78	2.36	.87	.39	5IP-75-W2	
8S	6	206	130	80	28	15	SIP-8S-W1	
05	0	8.11	5.12	3.15	1.10	.59	51P-05-W1	
00	7	251	166	90	31	15	SIP-9S-W1	
<b>9S</b> 7	1	9.88	6.54	3.54	1.22	.59	51P-95-W1	
100	0	317	205	120	49	25	CID 10 C W1	
<b>10S</b> 8	0	12.48	8.07	4.72	1.93	.98	SIP-10-S-W1	

SW

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Ordering Co	odes	
afety Lockin	g Plate *SIP-*3S-*\	N2
Safety Locking F	Plate	SIP
STAUFF Group		3S
Material code	Carbon Steel, uncoated Carbon Steel, phosphated Carbon Steel, zinc/nickel-plated Stainless Steel V2A 1.4301 / 1.4305 (AISI 304 / 303)	W1 W2 W3 W4
	Stainless Steel V4A 1.4401 / 1.4571 (AISI 316 / 316 Ti)	W5

Alternative materials and surface finishings are available upon request. Contact STAUFF for further information.

**Stacking Bolt** 

(for Use with Safety Locking Plate SIP) Type AF



Group		Dimension	IS ( ^{mm} / _{in} )				Ordering Codes	
STAUFF	DIN	L1	L2	L3 min.	Hex	Thread G	(Standard Options)	0
3S	1	49	25	15	15	M10	AF-3S-M-W2	
35	1	1.93	.98	.59	.59	3/8-16 UNC	AF-3S-U-W3*	S
40	0	65	40	15	15	M10	AF-4S-M-W2	- 0
<b>4S</b> 2	2.56	1.57	.59	.59	3/8-16 UNC	AF-4S-U-W3*	*	
5S	3	77	51	15	15	M10	AF-5S-M-W2	^
<b>33</b> 3		3.03	2.01	.59	.59	3/8-16 UNC	AF-5S-U-W3*	*
6S	4	110	82	18	17	M12	AF-6S-M-W2	*
05	4	4.33	3.23	.71	.67	7/16-14 UNC	AF-6S-U-W3*	*
7S	5	144	110	24	22	M16	AF-7S-M-W2	
15	5	5.67	4.33	.94	.87	5/8-11 UNC	AF-7S-U-W3*	*
8S	6	200	150	30	27	M20	AF-8S-M-W2	
05	0	7.87	5.91	1.18	1.06	3/4-10 UNC	AF-8S-U-W1*	
9S	7	240	180	50	30	M24	AF-9S-M-W2	
95	1	9.45	7.09	1.97	1.18	7/8-9 UNC	AF-9S-U-W1*	
10S	8	331	256	62	46	M30	AF-10S-M-W2	
105	0	13.03	10.08	2.44	1.81	1-1/8-7 UNC	AF-10S-U-W1*	

All threaded parts are available with Metric ISO thread or unified coarse (UNC) thread according to dimension table. Alternative materials and surface finishings are available upon request. Contact STAUFF for further information.

* Standard finishing option for Heavy Series group sizes 3S to 7S in North America is W3 (Carbon Steel, zinc/nickel-plated). Standard finishing option for Heavy Series group sizes 8S to 10S in North America is W1 (Carbon Steel, uncoated).

# Ordering Codes Stacking Bolt *

Sta ST/ Thi

Ma

cking Bolt	*AF-*3S-*M-*V	N2
acking Bolt		AF
AUFF Group		3S
read code	Metric ISO thread Unified coarse (UNC) thread	M U
aterial code	Carbon Steel, uncoated Carbon Steel, phosphated Carbon Steel, zinc/nickel-plated	W1 W2 W3
	Stainless Steel V2A 1.4301 / 1.4305 (AISI 304 / 303) Stainless Steel V4A 1.4401 / 1.4571 (AISI 316 / 316 Ti)	W4 W5

## 



# ① Type of Installation

Please select the type of installation (e.g. Weld Plates, Rail Nuts etc.) and add the corresponding Code to position ① of the order code for your clamp assembly.

Without Installation Equipment Code: none

## **Installation on Weld Plate**

-	Weld Plate for Single Clamps Code: SPAL
	Weld Plate for Double Clamps Code: SPAS
	Elongated Weld Plate for Single Clamps Code: SPAL-DUEB
-	Elongated Weld Plate for Double Clamps Code: SPAS-DUEB
Instal	lation on Mounting / Channel Rail

Mounting Rail Nut

Code: GMV (for STAUFF Group 3S to 6S only)

Channel Rail Adaptor Code: CRA (for STAUFF Group 3S to 6S only)

# (2) Group Size & Diameter

Please select the required group size and diameter and add the corresponding Code to position (2) of the order code for your clamp assembly.

Group STAUFF	Outside Diameter P / T / H	Availabi Body Ma Profiled			
(DIN)	(mm)	Design	Туре Н	Type RI	Code
	6	•	•	0	3006
	6,4	•	•	0	3006.4
	8	•	•	0	3008
	9,5	•	•	0	3009.5
	10	•	•	0	3010
	12	•	•	0	3012
3S	12,7	•	•	0	3012.7
(1)	13,5	•	•	0	3013.5
	14	•	•	0	3014
	15	•	•	0	3015
	16	•	•	0	3016
	17,2	•	•	0	3017.2
	18	•	•	0	3018
	20	•	0	0	3020

## (2) Group Size & Diameter CONTINUATION

Group					
aroup	Outside Diameter	Availabi Body Ma			
STAUFF	P/T/H	Profiled		J	
(DIN)	(mm)	Design	Type H	Type RI	Code
、 /	6	0	0	•	4006
	8	0	0	•	4008
	10	0	0	•	4010
	12	0	0	•	4012
	12,7	0	0	•	4012.7
	14	0	0	•	4014
	15	0	0	•	4015
	16	0	0	•	4016
	17,2	0	0	•	4017.2
4S	18	0	0	•	4018
(2)	19	•	•	•	4019
	20	•	•	0	4020
	21,3	•	•	0	4021.3
	22	•	•	0	4022
	25	•	•	0	4025
	25,4	•	•	0	4025.4
	26,9	•	•	0	4026.9
	28	•	•	0	4028
	30	•	•	0	4030
	20	0	0	•	5020
	21,3	0	0	•	5021.3
	22	0	0	•	5022
	25	0	0	•	5025
	26,9	0	0	•	5026.9
	28	0	0	•	5028
5S	30	•	•	•	5030
(3)	32	•	•	•	5032
.,	33,7	•	•	0	5033.7
	35	•	•	0	5035
	38	•	•	0	5038
	40	•	•	0	5040
	41,3	•	•	0	5041.3
	42	•	•	0	5042
	32	0	0	•	6032
	33,7	0	0	•	6033.7
	35	0	0	•	6035
	38	•	•	0	6038
	38,7	0	0	•	6038.7
	40	0	0	•	6040
	42	•	•	•	6042
6S	44,5	•	•	0	6044.5
(4)	45,5	0	0	•	6045.5
	48	0	0	•	6048
	48,3	•	•	0	6048.3
	50,8	•	•	0	6050.8
	51	0	0	•	6051
	53,4	0	0	•	6053.4
	54	•	0	0	6054

## (2) Group Size & Diameter CONTINUATION

Group	Outside		lity of Cla		
	Diameter	-	aterials &	Designs	
STAUFF	P/T/H	Profiled			
(DIN)	(mm)	Design	Туре Н	Type RI	Code
	55	•	•	0	6055
	56,4	0	0	•	6056
	57	•	•	0	6057
6S	57,2	•	•	0	6057
(4)	60,3	•	•	0	606
( )	63,5	•	•	0	606
	65	•	•	0	606
	70	•	•	0	6070
	55	0	0	•	705
	57	0	0	•	7057
	60	0	0	•	7060
	60,3	•	0	0	7060
	63,5	0	0	•	7063
	65	•	0	•	706
	70	•	0	•	7070
7S	72	0	0	•	7072
(5)	73	•	0	0	7073
	75	•	0	0	7075
	76	0	0	•	7076
	76,1	•	0	0	7076
	80	•	0	0	7080
	82,5	•	0	0	7082
	88,9	•	0	0	7088
	80	0	0	•	808
	88,9	•	0	•	808
	100	•	0	0	8100
8S	102	•	0	•	8102
65 (6)	102	•	0	0	8108
(0)	114	•	0	0	8114
	127	•	0	0	8127
	133	•	0	0	8133
	114	0	0	•	9114
		•	0		
	127			•	9127
~~	133	•	0		9133
9S	140	•	0	•	9140
(7)	152	•	0	0	9152
	159	•	0	0	9159
	165	•	0	0	9165
	168	•	0	0	9168
	150	0	0	•	1015
	165	0	0	•	1016
	168	•	0	•	1016
10S	172	0	0	•	1017
(8)	177,8	•	0	0	1017
	193,7	•	0	0	1019
	203	•	0	0	1020
	216	•	0	0	1021
	219	•	0	0	1021
11S	219	•	0	0	1121
(9)	273	•	0	0	1127
	324	•	0	0	1132
12S	356	•	0	0	1235
(10)	406	•	0	0	124

Standard Option



Please see pages 50 and 51 with detailed order examples for some of the most popular Heavy Series clamp assemblies.



Please select the design and material of your clamp body and add the corresponding Code to position (3) of the order code for your clamp assembly.

Please check the availability of the selected clamp body design and material according to the matrix table in (2).

## **Profiled Design**



Please contact STAUFF for further details on fire-proof clamp body materials, tested and approved according to several international fire-protection standards

## (4) Mounting & Fitting Combination

Please select the mounting and fitting combination (e.g. bolts, screws, cover plates etc.) and add the corresponding Code to position ④ of the order code for your clamp assembly.

## Installation with Cover Plate and Bolts

Cover Plate for Single Clamps DPAL with Hexagon Head Bolts AS Code: DPAL-AS

Cover Plate for Double Clamps DPAS with **Hexagon Head Bolts AS** Code: DPAS-AS

Cover Plate for Single Clamps DPAL with Socket Cap Screws IS* Code: DPAL-IS (for STAUFF Group 3S to 6S only)

## Installation with Locking Plate and Bolts

Safety Locking Plate SIP with **Stacking Bolts AF** Code: SIP-AF

## Installation with Bolts only

Socket Cap Screws IS Code: IS

Special lengths of Socket Cap Screws IS required. For exact lenghts, please see details of Hexagon Head Bolt, type AS (for use with Cover Plates DPAL or DPAS) on page 45.

# (5) Thread Type

Please select the required thread type and add the corresponding Code to position (5) of the order code for your clamp assembly.

Metric ISO thread Code: M

Unified coarse (UNC) thread Code: U

All threaded parts are available with Metric ISO thread or unified coarse (UNC) thread according to dimension table.

## (6) Material & Surface Finishing

Please select the required material & surface finishing of the metal parts and add the corresponding Code to position (6) of the order code for your clamp assembly.

Metal parts made of Carbon Steel, uncoated	W1
Metal parts made of Carbon Steel, phosphated	W2
Metal parts made of Carbon Steel, zinc/nickel-plated	W3
Metal parts made of Stainless Steel V2A 1.4301 / 1.4305 (AISI 304 / 303)	W4
Metal parts made of Stainless Steel V4A 1.4401 / 1.4571 (AISI 316 / 316 Ti)	W5
Weld Plate made of Carbon Steel, phosphated; Other metal parts made of Carbon Steel, zinc/nickel-plated	W10
Weld Plate and Cover Plate made of Carbon Steel, phosphated; Bolts made of Carbon Steel, uncoated	W12
Mounting Rail Nuts made of Carbon Steel, zinc/nickel-plated; Cover Plate made of Carbon Steel, phosphated; Bolts made of Carbon Steel, uncoated	W13
Weld Plate / Cover Plate made of Carbon Steel, phosphated; Bolts made of Carbon Steel, zinc/nickel-plated	W15
Mounting Rail Nuts made of Carbon Steel, zinc/nickel-plated; Cover Plate made of Carbon Steel, phosphated; Bolts made of Carbon Steel, zinc/nickel-plated	W16
Safety Locking Plate made of Carbon Steel, phosphated; Stacking Bolts made of Carbon Steel, zinc/nickel-plated	W17
Safety Locking Plate made of Carbon Steel, uncoated; Stacking Bolts made of Carbon Steel, phosphated	W18
Cover Plate made of Carbon Steel, phosphated; Bolts made of Carbon Steel, uncoated	W19
Individual combinations of alternative materials and s finishings are available upon request. Contact STAUFI	

# (7) Assembling & Kitting

further information

If required, please select an additional assembling and kitting option and add the corresponding Code to the last position of the order code for your clamp assembly.

**Components supplied separately** Code: none (standard option)

**Components assembled** Code: A (special option)

**Components packed in kits** Code: K (special option)



# Heavy Series according to DIN 3015, Part 2



- 2x Hexagon Head Bolt Surface: W1 Thread: Metric
- 1x Cover Plate for Single Clamps Surface: W2
- 1x **Clamp Body** (two halves) STAUFF Group 3S (DIN 1) 0.D. 6 mm / .24 in Material: Polypropylene Profiled inside surface with tension clearance
- 1x Weld Plate for Single Clamps Surface: W2 Thread: Metric

# **Order Code**

**Order Code** 

## SPAL-3006-PP-DPAL-AS-M-W12

W12 (STAUFF Group 3S to 7S) and W1 (STAUFF Group 8S to 12S) are the standard options for this type of installation.

SPAL-DUEB-3006-PP-DPAL-AS-M-W12

W12 (STAUFF Group 3S to 7S) and W1 (STAUFF Group 8S to 12S)

are the standard options for this type of installation.



- 2x Hexagon Head Bolt Surface: W1 Thread: Metric
- 1x Cover Plate for Single Clamps Surface: W2
- 1x **Clamp Body** (two halves) STAUFF Group 3S (DIN 1) 0.D. 6 mm / .24 in Material: Polypropylene Profiled inside surface with tension clearance
- 1x Elongated Weld Plate for Single Clamps Surface: W2 Thread: Metric



# **Order Code**

## SPAS-3006-PP-DPAS-AS-M-W12

**W12** (STAUFF Group 3S to 7S) and **W1** (STAUFF Group 8S to 12S) are the standard options for this type of installation.



4x Hexagon Head Bolt Surface: W1 Thread: Metric

4x Hexagon Head Bolt

Thread: Metric

1x Cover Plate for Double Clamps

2x Clamp Body (four halves)

0.D. 6 mm / .24 in

Surface: W2

Thread: Metric

STAUFF Group 3S (DIN 1)

Material: Polypropylene

1x Weld Plate for Double Clamps

Profiled inside surface with tension clearance

Surface: W1

Surface: W2

- 1x Cover Plate for Double Clamps Surface: W2
- 2x **Clamp Body** (four halves) STAUFF Group 3S (DIN 1) 0.D. 6 mm / .24 in Material: Polypropylene Profiled inside surface with tension clearance

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1x Elongated Weld Plate for Double Clamps Surface: W2 Thread: Metric

## **Order Code**

# SPAS-DUEB-3006-PP-DPAS-AS-M-W12

W12 (STAUFF Group 3S to 7S) and W1 (STAUFF Group 8S to 12S) are the standard options for this type of installation.



SPAL-3006-PP-IS-M-W12

W12 is the standard option for this type of installation.

Available up to STAUFF Group 6S (DIN Group 4) only.

- 2x Socket Cap Screw Surface: W1 Thread: Metric
- 1x **Clamp Body** (two halves) STAUFF Group 3S (DIN 1) 0.D. 6 mm / .24 in Material: Polypropylene Profiled inside surface with tension clearance
- 1x Weld Plate for Single Clamps Surface: W2 Thread: Metric

2x Socket Cap Screw Surface: W1 Thread: Metric

- 1x **Clamp Body** (two halves) STAUFF Group 3S (DIN 1) 0.D. 6 mm / .24 in Material: Polypropylene Profiled inside surface with tension clearance
- 1x Elongated Weld Plate for Single Clamps Surface: W2 Thread: Metric

# Order Code SPAL-DUEB-3006-PP-IS-M-W12

**W12** is the standard option for this type of installation. Available up to STAUFF Group 6S (DIN Group 4) only.



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**Order Code** 





- 2x Hexagon Head Bolt Surface: W1 Thread: Metric
- 1x Cover Plate for Single Clamps Surface: W2
- 1x **Clamp Body** (two halves) STAUFF Group 3S (DIN 1) 0.D. 6 mm / .24 in Material: Polypropylene Profiled inside surface with tension clearance
- 2x Mounting Rail Nut Surface: W3 Thread: Metric



2x Socket Cap Screw Surface: W1 Thread: Metric

- 1x **Clamp Body** (two halves) STAUFF Group 3S (DIN 1) 0.D. 6 mm / .24 in Material: Polypropylene Profiled inside surface with tension clearance
- 2x Mounting Rail Nut Surface: W3 Thread: Metric

## Order Code (Mounting Rail STSV not included.)

## GMV-3006-PP-IS-M-W13

 $\ensuremath{\textbf{W13}}$  is the standard option for this type of installation. Available up to STAUFF Group 6S (DIN Group 4) only.

## **Thread codes**

All threaded parts are available with Metric ISO thread or	
unified coarse (UNC) thread according to dimension table.	
Metric ISO thread	

# Unified coarse (UNC) thread

# **Material codes**

The below listed material codes describe the materials and surface finishings of metal parts that are most relevant for Heavy Series clamp assemblies. Individual combinations of alternative materials and surface finishings are available upon request. Contact STAUFF for further information.

Metal parts made of Carbon Steel, uncoated Metal parts made of Carbon Steel, phosphated Metal parts made of Carbon Steel, zinc/nickel-plated	W1 W2 W3
Metal parts made of Stainless Steel V2A: 1.4301 / 1.4305 (AISI 304 / 303) Metal parts made of Stainless Steel V4A: 1.4401 / 1.4571 (AISI 316 / 316 Ti)	W4 W5
Weld Plate made of Carbon Steel, phosphated; Other metal parts made of Carbon Steel, zinc/nickel-plated	W10
Weld Plate and Cover Plate made of Carbon Steel, phosphated; Bolts made of Carbon Steel, uncoated	W12
Mounting Rails Nut made of Carbon Steel, zinc/nickel-plated; Cover Plate made of Carbon Steel, phosphated; Bolts made of Carbon Steel, uncoated	W13
Weld Plate and Cover Plate made of Carbon Steel, phosphated; Bolts made of Carbon Steel, zinc/nickel-plated	W15
Mounting Rail Nuts made of Carbon Steel, zinc/nickel-plated; Cover Plate made of Carbon Steel, phosphated; Bolts made of Carbon Steel, zinc/nickel-plated	W16
Safety Locking Plate made of Carbon Steel, phosphated; Bolts made of Carbon Steel, zinc/nickel-plated	W17
Safety Locking Plate made of Carbon Steel, uncoated; Bolts made of Carbon Steel, phosphated	W18
Cover Plate made of Carbon Steel, phosphated; Bolts made of Carbon Steel, uncoated	W19

## Order Code (Mounting Rail STSV not included.)

# GMV-3006-PP-DPAL-AS-M-W13

**W13** is the standard option for this type of installation. Available up to STAUFF Group 6S (DIN Group 4) only.



- 2x Hexagon Head Bolt Surface: W1 Thread: Metric
- 1x Cover Plate for Single Clamps Surface: W2

1x **Clamp Body** (two halves) STAUFF Group 3S (DIN 1) 0.D. 6 mm / .24 in Material: Polypropylene Profiled inside surface with tension clearance

## **Order Code**

# 3006-PP-DPAL-AS-M-W19

W19 (STAUFF Group 3S to 7S) and W1 (STAUFF Group 8S to 12S) are the standard options for this type of installation.



Surface: W2 Thread: Metric

2x Stacking Bolt

- 1x Safety Locking Plate Surface: W2
- 1x **Clamp Body** (two halves) STAUFF Group 3S (DIN 1) 0.D. 6 mm / .24 in Material: Polypropylene Profiled inside surface with tension clearance

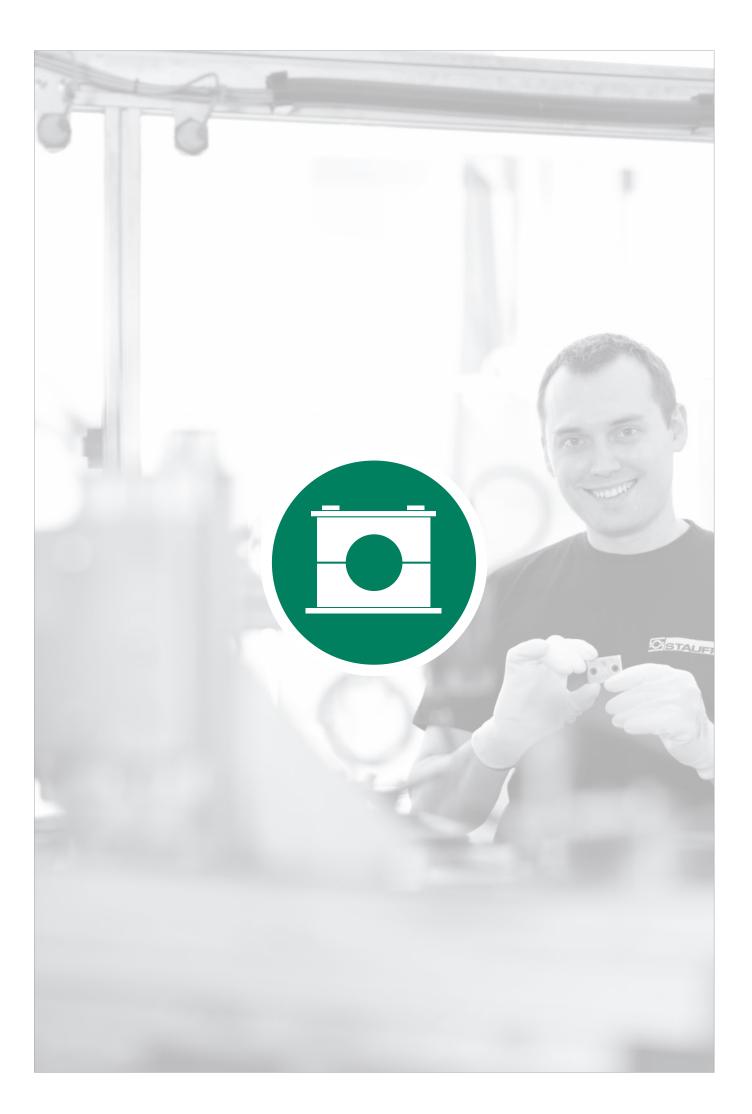
## **Order Code**

## 3006-PP-SIP-AF-M-W2

W2 (STAUFF Group 3S to 7S) and W18 (STAUFF Group 8S to 10S) are the standard options for this type of installation. Available up to STAUFF Group 10S (DIN Group 8) only.

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C

<b>Clamp Body</b> Profiled Inside Surface with Tension Clearance	54	-	Single Weld Plate	55
<b>Clamp Body</b> Smooth Inside Surface without Tension Clearance	54	9 9	Group Weld Plate RAP	55
		2	Hexagon Rail Nut SM / SMG	56
			Mounting Rail	56
		Ser.	Channel Rail Adaptor	57
			<b>Cover Plate</b> GD	58
		1	Hexagon Head Bolt AS	58
		1	Socket Cap Screw	59
		P	Safety Locking Plate	60
		C	Safety Locking Plate	60
		١	Stacking Bolt AF	61
			Clamp Assemblies	62

# Clamp Body - Profiled Design

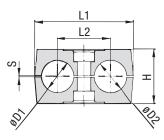
C

# Clamp Body • Type H

Profiled Inside Surface with Tension Clearance Smooth Inside Surface w/o Tension Clearance







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STAUFF

Group			Outside Diameter Pipe / Tube / Hose			Ordering Codes (2 Clamp Halves)	Dimensions ( ^{mm} /in)											
			Pipe	ASTM B88				-										
S		. ,	(in)	(in)	(in)	, ,	L1	L2	H	S min.	H	Widt						
			4.14															
1D	1		_				36	20	27	0,6	26,5	30 1.18						
			3/8		1/4	109.5/09.5-**-*	1.42	.19	1.00	.02	1.04	1.10						
				1/8		110/10-**-*												
	_	12				112/12-**-*												
		12,7	1/2		3/8	212.7/12.7- <b>**-*</b>												
		13,5		1/4		213.5/13.5- <b>**-*</b>												
		14				214/14- <b>**-*</b>												
2D	2	15				215/15- <b>**-*</b>				.03	26 1.02	30						
		16	5/8		1/2	216/16-**-*												
		17,2		3/8		217.2/17.2-**-*												
		18				218/18-**-*												
	3	19	3/4			319/19- <b>**-*</b>												
				20				320/20-**-*										
					21,3		1/2		321.3/21.3-**-*	67	36	37	0.7	36.5	30			
3D		22	7/8		3/4	322/22-**-*				.03	1.44	1.18						
								25				325/25-**-*						
											25,4	1			325.4/25.4-**-*			
		26,9		3/4		426.9/26.9-**-*												
4D	4	28				428/28-**-*	80	45	40	0,7	38	30						
		30				430/30- <b>**</b> - <b>*</b>	3.15	1.77	1.57	.03	1.40	1.18						
		32	1-1/4			532/32-**-*												
		33.7		1		533.7/33.7-**-*												
					1-1/4		100	50	50	0.7	50	0.0						
5D	5		1-1/2				4.17	56 2.20	2.09	.03	52 2.04	30 1.18						
			, ב															
		42		1-1/4		542/42-**-*												
	1D 2D 3D 4D	ID     I       1D     1       2D     2       3D     3       4D     4	Pipe / T Ø D1 / 0 (mm)BØ D1 / 0 (mm)Ø D1 / 0 Ø D1 / 0 (mm)Ø D1 / 0 Ø D1 / 0 (mm)1066,48 9,510121212121214151617.218192021.321.3222525.44041030313233,71353840	Pipe / Turber / Hose Ø D1 / Ø / (m) (m) (m)B0 / (1/4)66.46,41/485/169,53/81012121/21212121/213,51145/8151165/817,21183/42021,3183/42021,321,37/821,3121,3121,3121,3121,3121,3121,3130230340333,7333,7333,7333,73341353353361373301	PipePipe / Tubes (mm)Pipe (mm)Pipe (mm)000060006,41/40085/169,53/809,53/8101/20121/21/21/21/213,51/21/21/21/21414111155/811165/81117/21/23/81183/411193/4112011121,33/41121,311121,411121,411121,411130428114033,711133,73111	PipePipe / Tube / Hose Ø D1 / Ø D2 (m)Pipe (n)Copper Tube ASTM B88 (n)0 D1 / Ø D1 / Ø D1 / Ø D1 / Ø (m)666685/1666666,41/466669,53/85/161/469,53/83/81/46121/21/21/23/8121/21/23/8613,51/411614101/21/21/215165/81/21/2165/81/21/217,23/821/2183/421201/21/21121/21/2113,51/23/42165/81/2117,23/41121,33/41121,31/21/2121,311/2121,411121,411121,4111143111511116111171111811119111101111111112111	Pipe 0 D1 / 0 U (m)Pipe (m)Copper Tube ASTM B88 (m)(2 Clamp Halves) (#**# = Material) 106/06****B0 D1 / 0 U (m)(m)MMMMAMMM106/06****106/06****6,41/4GG106/06****M6,41/4GM108/08****9,53/8G1/4108/08****9,53/8M1/4109.5/09.5****101/2MM109.5/09.5****101/2MM110/10****12MMM110/10****13MMM110/10****14GMM213.5/13.5****15GMM213.5/13.5****165/8M1/2216/16***172MMM215/15****165/8M1/2216/16***172MMM210/20***165/8M1/2216/16***172MMM20/20***20MMM210/20***213MMM210/20***214MMM22/22***215MMM22/22***216MMM22/22****217MMM22/22****218MMMM22/22***219MM		PipePipePipeCopper Tube(2 Clamp Halves)IIII0 D1 / 0 D2 (mm)(m)(m)(m)(m)(m)(m)(m)(m)(m)(m)(m)(m)(m)(m)(m)(m)(m)(m)(m)(m)(m)(m)(m)(m)(m)(m)(m)(m)(m)(m)(m)(m)(m)(m)(m)(m)(m)(m)(m)(m)(m)(m)(m)(m)(m)(m)(m)(m)(m)(m)(m)(m)(m)(m)(m)(m)(m)(m)(m)(m)(m)(m)(m)(m)(m)(m)(m)(m)(m)(m)(m)(m)(m)(m)(m)(m)(m)(m)(m)(m)(m)(m)(m)(m)(m)(m)(m)(m)(m)(m)(m)(m)(m)(m)(m)(m)(m)(m)(m)(m)(m)(m)(m)(m)(m)(m)(m)(m)(m)(m)(m)(m)(m)(m)(m)(m)(m)(m)(m)(m)(m)(m)(m)(m)(m)(m)(m)(m)(m)(m)(m)(m)(m)(m)(m)(m)(m)(m)(m)(m)(m)(m)(m)(m)(m)(m)(m)(m)(m)(m)(m)(m)(m)(m)(m)(m)	PipePipePipeCopper Tube2 Cham Halves)PipePipeCopper Tube2 Cham Halves)PipePipePipePipePipePipePipePipePipePipePipePipePipePipePipePipePipePipePipePipePipePipePipePipePipePipePipePipePipePipePipePipePipePipePipePipePipePipePipePipePipePipePipePipePipePipePipePipePipePipePipePipePipePipePipePipePipePipePipePipePipePipePipePipePipePipePipePipePipePipePipePipePipePipePipePipePipePipePipePipePipePipePipePipePipePipePipePipePipePipePipePipePipePipePipePipePipePipePipePipePipePipePipePipePipePipePipePipePipePipePipePipePipePipePipePipePipePipePipePipePipePipePipePipePipePipePipePipePipePipePipePipePipePipePipePipePipePipePipePipePipePipePipePipePipe <td>PipePipeCopper Tube ASTM B88(2 Clamp Halves) (**** + Material)ProfileDesign H610101010101010101010106,41/410106/06-**-* 10106/06-**-* 10106/06-**-* 103620270,69,53/81/4109.5/09.5-**-* 112/12100108/08-**-* 112/12101001010101/81/4109.5/09.5-**-* 112/121.001.001.001.001.00101/81/4100.5/09.5-**-* 112/121.001.001.001.001.00111/23/81/2213/13.5-**-* 215/15.**-*1.000.021.000.0211151.011.02216/16-**-*1.101.001.001.000.0311151.011.02216/16-**-*1.011.001.011.011.0111123/81.02216/16-**-*1.011.011.011.011.0111123/81.02216/16-**-*1.011.011.011.011.011.011.011.011.011.011.011.011.011.011.011.011.011.011.011.011.011.011.011.011.011.011.011.011.011.011.011.011.011.011.011.011.01<!--</td--><td>Pipe / Tube / Hose (m)         Pipe / Tube / Hose (m)         Copper Tube ASTM B88 (m)         (Camp Halves) ASTM B88 (m)         (Camp Halves) (m)         (</td></td>	PipePipeCopper Tube ASTM B88(2 Clamp Halves) (**** + Material)ProfileDesign H610101010101010101010106,41/410106/06-**-* 10106/06-**-* 10106/06-**-* 103620270,69,53/81/4109.5/09.5-**-* 112/12100108/08-**-* 112/12101001010101/81/4109.5/09.5-**-* 112/121.001.001.001.001.00101/81/4100.5/09.5-**-* 112/121.001.001.001.001.00111/23/81/2213/13.5-**-* 215/15.**-*1.000.021.000.0211151.011.02216/16-**-*1.101.001.001.000.0311151.011.02216/16-**-*1.011.001.011.011.0111123/81.02216/16-**-*1.011.011.011.011.0111123/81.02216/16-**-*1.011.011.011.011.011.011.011.011.011.011.011.011.011.011.011.011.011.011.011.011.011.011.011.011.011.011.011.011.011.011.011.011.011.011.011.011.01 </td <td>Pipe / Tube / Hose (m)         Pipe / Tube / Hose (m)         Copper Tube ASTM B88 (m)         (Camp Halves) ASTM B88 (m)         (Camp Halves) (m)         (</td>	Pipe / Tube / Hose (m)         Pipe / Tube / Hose (m)         Copper Tube ASTM B88 (m)         (Camp Halves) ASTM B88 (m)         (Camp Halves) (m)         (						

### Additional outside diameters and combinations of different outside diameters are available upon request. Please contact STAUFF for further information.

See pages 156 / 157 for material properties and technical information.

## **Product Features**

· Proven, tested and trusted product in various markets

Please contact STAUFF for further details on fire-proof

clamp body materials, tested and approved according to several international fire-protection standards (such as BS 6853, EN 45545-2, UL 94 and many more).

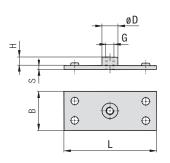
- Profiled design recommended for the safe installation of rigid pipes and tubes; type H recommended for the safe installation of hoses and cables
- · Available for all commonly used pipe and tube outside diameters
- Environmental protection due to vibration/noise reducing design
- Excellent weathering resistance, even under extreme conditions

www.stauff.com/1/en/#54



# STAUFF

# Single Weld Plate Type SP



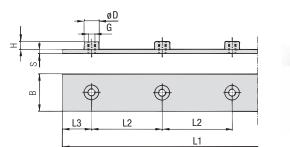


Group									
STAUFF	DIN	L	В	S	Н	ØD	Thread G	(Standard Options)	Ordering Co
1D	1	37	30	3	6,5	12	M6	SP-1D-M-W2	
U		1.46	1.18	.12	.26	.47	1/4-20 UNC	SP-1D-U-W2	Weld Plate
0.0	0	55	30	5	6	14	M8	SP-2D-M-W2	* Single Weld Plate
2D	2	2.17	1.18	.20	.24	.55	5/16-18 UNC	SP-2D-U-W2	* STAUFF Group
0.0	0	70	30	5	6	14	M8	SP-3D-M-W2	* Thread code
3D	3	2.76	1.18	.20	.24	.55	5/16-18 UNC	SP-3D-U-W2	
4D	4	85	30	5	6	14	M8	SP-4D-M-W2	* Material code
40	4	3.35	1.18	.20	.24	.55	5/16-18 UNC	SP-4D-U-W2	
50	5	110	30	5	6	14	M8	SP-5D-M-W2	
5D	0	4.33	1.18	.20	.24	.55	5/16-18 UNC	SP-5D-U-W2	

Ordering Codes Weld Plate *SP-*1D-*M-*W2								
* Single Weld Plat	e	SP 1D						
* Thread code	Metric ISO thread Unified coarse (UNC) thread	M U						
* Material code	Carbon Steel, phosphated Carbon Steel, zinc/nickel-plated	W2 W3						
	Stainless Steel V2A 1.4301 / 1.4305 (AISI 304 / 303) Stainless Steel V4A 1.4401 / 1.4571 (AISI 316 / 316 Ti)	W4 W5						

All threaded parts are available with Metric ISO thread or unified coarse (UNC) thread according to dimension table. Alternative materials and surface finishings are available upon request. Contact STAUFF for further information.

Group Weld Plate for 5 Clamp Bodies Type RAP



13			
	D		

Group	roup Dimensions ( ^{mm} / _{in} )					Ordering Codes				
STAUFF	DIN	L1	L2	L3	В	S	Н	ØD	Thread G	(Standard Options)
1D	1	196	40	18	30	3	6,5	12	M6	RAP-1D-40-5-M-W1
IU	1	7.72	1.57	.71	1.18	.12	.26	.47	1/4-20 UNC	RAP-1D-40-5-U-W1
2D	2	288	58	28	30	5	6	14	M8	RAP-2D-58-5-M-W1
20	2	11.34	2.28	1.10	1.18	.20	.24	.55	5/16-18 UNC	RAP-2D-58-5-U-W1
3D	3	358	72	35	30	5	6	14	M8	RAP-3D-72-5-M-W1
30	3	14.09	2.83	1.37	1.18	.20	.24	.55	5/16-18 UNC	RAP-3D-72-5-U-W1
4D	4	444	90	42	30	5	6	14	M8	RAP-4D-90-5-M-W1
40	4	17.48	3.54	1.65	1.18	.20	.24	.55	5/16-18 UNC	RAP-4D-90-5-U-W1
5D	5	558	112	55	30	5	6	14	M8	RAP-5D-112-5-M-W1
50	5	21.97	4.41	2.16	1.18	.20	.24	.55	5/16-18 UNC	RAP-5D-112-5-U-W1

All threaded parts are available with Metric ISO thread or unified coarse (UNC) thread according to dimension table. Alternative materials and surface finishings are available upon request. Contact STAUFF for further information.

Ordering Codes						
Weld Plate	*RAP-*1D-*40-*5-*M-*	W1				
* Group Weld Plat	ie	RAP				
* STAUFF Group		1D				
* Pipe Center Spa	icing L2 (mm)	40				
* Number of Clan	nps	5				
* Thread code	Metric ISO thread Unified coarse (UNC) thread	M U				
* Material code	Carbon Steel, uncoated Carbon Steel, phosphated Carbon Steel, zinc/nickel-plated	W1 W2 W3				
	Stainless Steel V2A 1.4301 / 1.4305 (AISI 304 / 303) Stainless Steel V4A	W4				
	1.4401 / 1.4571 (AISI 316 / 316 Ti)	W5				

## R TALI

# **Hexagon Rail Nut**

(for Use with Mounting Rail TS) Type SM / SMG



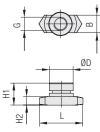
STAUFF Group 1D



STAUFF Group 2D to 5D

# ØD

STAUFF Group 1D



STAUFF Group 2D to 5D

Ordering Co	odes		STAL
Hexagon Rail I	Nut *SM-*1-8/1D-*M	-*W3	1D
* Hexagon Rail Nu	ıt Carbon Steel Stainless Steel	SM SMG	2D
* STAUFF Group	1D (DIN Group 1) 2D to 5D (DIN Group 2 to 5)	1-8/1D 2-5D	3D
* Thread code	Metric ISO thread Unified coarse (UNC) thread	M U	4D
* Material code	Carbon Steel, zinc/nickel-plated	W3	
	Stainless Steel V2A 1.4301 / 1.4305 (AISI 304 / 303)	) W4	5D
	Stainless Steel V4A 1.4401 / 1.4571 (AISI 316 / 316	<b>W5</b>	The H

Group		Dimensions ( ^{mm} / _{in} )						Ordering Codes
STAUFF	DIN	Thread G	L	В	H1	H2	ØD	(Standard Options)
1D	1	M6	25,5	10,4	14,2	5,5	12	SM-1-8/1D-M-W3
U		1/4-20 UNC	1.00	.41	.56	.22	.47	SM-1-8/1D-U-W3
2D	2							
3D	3	M8	25,5	10,4	13	5	14	SM-2-5D-M-W3
4D	4	5/16-18 UNC	1.00	.41	.51	.20	.55	SM-2-5D-U-W3
5D	5							

Hexagon Rail Nut, type SM-1-8/1D is also suitable for Standard Series, STAUFF Group 1 to 8.

All threaded parts are available with Metric ISO thread or unified coarse (UNC) thread according to dimension table. Alternative materials and surface finishings are available upon request. Contact STAUFF for further information.

# **Mounting Rail**

(for Use with Hexagon Rail Nut SM / SMG) Type TS









Mounting Rail TS-11

Mounting Rail TS-14

Mounting Rail TS-30

Ordering Codes						
Mounting Rai	I *TS-*11-*1M-*\	W1				
* Mounting Rail		TS				
* Height of rail	11 mm / .43 in 14 mm / .55 in 30 mm / 1.18 in	11 14 30				
* Length of rail	1 m / 3.28 ft 2 m / 6.56 ft	1M 2M				
	Alternative lengths available upon req Contact STAUFF for further informat					
* Material code	Carbon Steel, uncoated Carbon Steel, hot-dip galvanised	W1 W98				
	Stainless Steel V2A 1.4301 / 1.4305 (AISI 304 / 303) Stainless Steel V4A 1.4401 / 1.4571 (AISI 316 / 316 Ti)	W4 W5				

Group		Dimensions (m			Ordering Codes (Standard Options)		
STAUFF	DIN	B1	B2	S	Length of Rail: 1 m / 3.28ft	Length of Rail: 2m / 6.56ft	
1D	1				Height 11 mm / .43 in <b>TS-11-1M-W1</b>	Height 11 mm / .43 in <b>TS-11-2M-W1</b>	
2D	2						
3D	3	<u>28</u> 1.10	11 .43	2 .08	Height 14 mm / .55 in <b>TS-14-1M-W1</b>	Height 14 mm / .55 in <b>TS-14-2M-W1</b>	
4D	4						
5D	5				Height 30 mm / 1.18 in TS-30-1M-W1	Height 30 mm / 1.18 in TS-30-2M-W1	

Mounting Rails, type TS-11/14/30 are suitable for all Twin Series and Standard Series group sizes.

Alternative materials and surface finishings are available upon request. Contact STAUFF for further information.

Dimensional drawings: All dimensions in mm (in).

C



# Channel Rail Adaptor

C

(for Use with Various Channel Rails) Type CRA



H3	H2

FALIE



STAUFF Group 1D

STAUFF	Group 2-3	D / 4-5D

L3

6

B1 B2

Group STAUFF	DIN	Dimensions ( ^{mm} Thread G	/in) L1	L2	L3	B1	B2	H1	H2	H3	Ordering Codes (Standard Options)
10	4	M6	21	35	40	16	19	6	5,5	20,5	CRA-1-8/1D-M-W3
1D	1	1/4-20 UNC	.83	1.38	1.57	.63	.75	.24	.22	.81	CRA-1-8/1D-U-W3
2D	2	M8	21	35	38	53	19	9	5,5	23,5	CRA-2-3D-M-W3
3D	3	5/16-18 UNC	.83	1.38	1.50	2.09	.75	.35	.22	.93	CRA-2-3D-U-W3
4D	4	M8	21	35	38	80	19	9	5,5	23,5	CRA-4-5D-M-W3
5D	5	5/16-18 UNC	.83	1.38	1.50	3.15	.75	.3	.22	.93	CRA-4-5D-U-W3

Ordering Codes						
Adaptor	*CRA-*1-8/1D-*M	-*W3				
* Channel Rail Ada	aptor	CRA				
* STAUFF Group	1D (DIN Group 1) 2D to 3D (DIN Group 2 to 3) 4D to 5D (DIN Group 4 to 5)	1-8/1D 2-3D 4-5D				
* Thread code	Metric ISO thread Unified coarse (UNC) thread	M U				
* Material code	Carbon Steel, zinc/nickel-plated	W3				
	Stainless Steel V4A 1.4401 / 1.4571 (AISI 316 / 316	Ti) <b>W5</b>				

The Channel Rail Adaptor, type CRA 1-8/1D is also suitable for Standard Series, STAUFF Group 1 to 8.

All threaded parts are available with Metric ISO thread or unified coarse (UNC) thread according to dimension table. Alternative materials and surface finishings are available upon request. Contact STAUFF for further information.

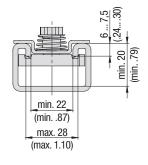


## **Compatibility with Channel Rails**

The STAUFF Channel Rail Adaptor, type CRA, is suitable for various channel rails, including the following types:

HALFEN	HILTI	UNISTRUT®	STAUFF (Cushion Clamp Series)
HM 41/41	MQ-21, MQ-41, MQ-52, MQ-72	P1000, P1000T, P1000V, P1000VT, P1001	SCS-048-1-PL, SCS-048-1-GR
HZA 41/22	MQ-21U, MQ-41U, MQ-72U	P2000, P2000T	SCS-120-1-PL, SCS-120-1-GR
HZM 41/41	MQ-21D, MQ-41D, MQ-52-72D	P3003, P3003T, P3300V, P3300VT, P3301	See page 149 for technical information.
HZM 41/22		P4000, P4000T	
HL 41/41, HL 41/B2		P5000, P5000T, P5001, P5500, P5500T, P5501	

Contact STAUFF to check compatibility with additional types of channel rails.

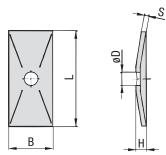


Basic dimensional requirements for channel rails to be used with STAUFF Channel Rail Adaptors, type CRA

Dimensional drawings: All dimensions in mm (in).

## 

# Cover Plate Type GD



Ordering Codes						
Cover Plate	*GD-*1D-*\	N3				
* Cover Plate		GD				
* STAUFF Group		1D				
* Material code	Carbon Steel, zinc/nickel-plated	W3				
	Stainless Steel V2A 1.4301 / 1.4305 (AISI 304 / 303) Stainless Steel V4A 1.4401 / 1.4571 (AISI 316 / 316 Ti)	W4 W5				

Group		Dimensions ("	^{nm} /in)	Ordering Codes			
STAUFF	DIN	L	В	Н	S	ØD	(Standard Options)
1D	1	34	30	7	3	7	GD-1D-W3
10	1	1.34	1.18	.28	.12	.28	dD-1D-W3
2D	2	52	30	7	3	9	GD-2D-W3
20	2	2.05	1.18	.28	.12	.35	dD-2D-W3
3D	3	65	30	7	3	9	GD-3D-W3
30		2.56	1.18	.28	.12	.35	dD-3D-W3
4D	4	79	30	7	3	9	GD-4D-W3
40	4	3.11	1.18	.28	.12	.35	dD-4D-W3
5D	5	102	30	7	3	9	GD-5D-W3
30		4.02	1.18	.28	.12	.35	dD-3D-W3

Alternative materials and surface finishings are available upon request. Contact STAUFF for further information.

# Hexagon Head Bolt Type AS





## Hexagon Head Bolt AS (according to DIN 931 / 933 or ANSI / ASME B18.2.1.) Dimensions applicable only when used with Cover Plate GD

Ordering Codes	STAUFF
Hexagon Head Bolt *AS-*M8x35-*W3	1D
* Type of bolt Hexagon Head Bolt (according to DIN 931 / 933 AS or ANSI / ASME B18.2.1.)	2D
Thread type and size acc. to dimension table     M8x35     Material code Carbon Steel, zinc/nickel-plated     W3	3D
Stainless Steel V2A 1.4301 / 1.4305 (AISI 304 / 303)	4D
Stainless Steel V4A 1.4401 / 1.4571 (AISI 316 / 316 Ti) <b>W5</b>	5D

Group STAUFF	DIN	Dimensions ( ^{mm} / _{in} ) Thread G x L	Ordering Codes (Standard Options)
1D	1	M6 x 35	AS-M6x35-W3
ID	1	1/4-20 UNC x 1-3/8	AS-1/4-20UNCx1-3/8-W3
2D	2	M8 x 35	AS-M8x35-W3
20	2	5/16-18 UNC x 1-3/8	AS-5/16-18UNCx1-3/8-W3
3D	3	M8 x 45	AS-M8x45-W3
30		5/16-18 UNC x 1-3/4	AS-5/16-18UNCx1-3/4-W3
4D	4	M8 x 50	AS-M8x50-W3
40	4	5/16-18 UNC x 2	AS-5/16-18UNCx2-W3
5D	F	M8 x 60	AS-M8x60-W3
5D	5	5/16-18 UNC x 2-1/2	AS-5/16-18UNCx2-1/2-W3

All threaded parts are available with Metric ISO thread or unified coarse (UNC) thread according to dimension table. Alternative materials and surface finishings are available upon request. Contact STAUFF for further information.

C

# STAUFF[®]

Group STAUFF DIN

1

2

3

4

5

1D

2D

3D

4D

5D

Dimensions (^{mm}/_{in}) Thread G x L M6 x 35

1/4-20 UNC x 1-3/8

5/16-18 UNC x 1-3/8

5/16-18 UNC x 1-3/4

5/16–18 UNC x 2 M8 x 60

5/16-18 UNC x 2-1/2

M8 x 35

M8 x 45

M8 x 50

# Socket Cap Screw Type IS



Socket Cap Screw IS (according to ISO 4762 or ANSI / ASME B18.3) Dimensions applicable only when used with Cover Plate GD

G

Ordering Codes (Standard Options) IS-M6x35-W3 IS-1/4-20UNCx1-3/8-W3	Ordering Codes Socket Cap Screw *IS-*M8x35-*W3
IS-M8x35-W3 IS-5/16-18UNCx1-3/8-W3	* Type of bolt Socket Cap Screw (according to ISO 4762 IS or ANSI / ASME B18.3)
IS-M8x45-W3 IS-5/16-18UNCx1-3/4-W3	* Thread type and size acc. to dimension table     M8x35     * Material code     Carbon Steel, zinc/nickel-plated     W3
IS-M8x50-W3 IS-5/16-18UNCx2-W3	Stainless Steel V2A 1.4301 / 1.4305 (AISI 304 / 303) W4
IS-M8x60-W3 IS-5/16-18UNCx2-1/2-W3	Stainless Steel V4A <b>W5</b> 1.4401 / 1.4571 (AISI 316 / 316 Ti)

All threaded parts are available with Metric ISO thread or unified coarse (UNC) thread according to dimension table. Alternative materials and surface finishings are available upon request. Contact STAUFF for further information.



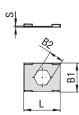


# **Safety Locking Plate**

C

Type SI (for Use with Stacking Bolt AF)





Safety Locking Plate SI (Prevents Stacking Bolt from Loosening)

Ordering C	odes			Group STAUFF	DIN	Dimensio L
Ŭ		*CI *1D	*\//0	1D	1	27
Safety Lockin	ig Plate	*SI-*1D-	"W3	ID	1	1.06
* Safety Locking F	Plate		SI	0.0	0	
* STAUFF Group	1D (DIN Group	1)	1D	2D	2	
	2D to 5D (DIN	Group 2 to 5)	2-5D			
* Material code	Carbon Steel,	zinc/nickel-plated	W3	3D	3	27
	Stainless Stee 1.4301 / 1.430 Stainless Stee	05 (AISI 304 / 303)	W4	4D	4	1.06
		71 (AISI 316 / 316 7	(1) <b>W5</b>			
				5D	5	

Group		Dimensions (mm/in)						
STAUFF	DIN	L	B1	B2	S	(Standard Options)		
1D	1	27	22	11,2	0,5	SI-1D-W3		
ID	1	1.06	.86	.44	.02	31-10-103		
2D	2							
3D	3	27	22	12,2	0,5	SI-2-5D-W3		
4D	4	1.06	.86	.48	.02	51-2-50-103		
5D	5							

Alternative materials and surface finishings are available upon request. Contact STAUFF for further information.

# Safety Locking Plate

**Ordering Codes** 

Safety Locking Plate * Safety Locking Plate

* STAUFF Group 1D (DIN Group 1)

**Type SIV** (for Use with Stacking Bolt AF)



2D to 3D (DIN Group 2 to 3)

1.4401 / 1.4571 (AISI 316 / 316 Ti)

* Material code Carbon Steel, zinc/nickel-plated

Stainless Steel V4A

*SIV-*1D-*W3

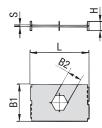
SIV

1D

W3

W5

2-3D



## Safety Locking Plate SIV (Prevents Stacking Bolt from Loosening and Upper Clamp from Turning)

Group		Dimensions ("	Ordering Codes				
STAUFF	DIN	L	B1	B2	S	Н	(Standard Options)
10	1	27	28	11,1	1	7	SIV-1D-W3
1D		1.06	1.10	.44	.04	.27	517-10-103
2D	2	45	28	12,1	1	7	
3D	3	1.77	1.10	.48	.04	.27	SIV-2-3D-W3

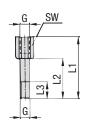
Alternative materials and surface finishings are available upon request. Contact STAUFF for further information.

www.stauff.com/1/en/#60

## 

# **Stacking Bolt**

(for Use with Safety Locking Plates SI / SIV) Type AF





Group		Dimensions (m	^m /in)				Ordering Codes	
STAUFF	DIN	Thread G	L1	L2	L3 min.	Hex	(Standard Options)	Ordering Codes
1D	4	M6	34	20	12	11	AF-1/1A/1D-M-W3	
U	I	1/4-20 UNC	1.33	.78	.47	.43	AF-1/1A/1D-U-W3	Stacking Bolt *AF-*1/1A/1D-*M-*W3
2D	2	M8	33	20	12	12	AF-2D-M-W3	* Stacking Bolt AF
20	2	5/16-18 UNC	1.30	.78	.47	.47	AF-2D-U-W3	* STAUFF Group 1D
3D	3	M8	44	29	12	12	AF-3D-M-W3	* Thread code Metric ISO thread M
30	3	5/16-18 UNC	1.73	1.14	.47	.47	AF-3D-U-W3	Unified coarse (UNC) thread U
		M8	49	34	12	12	AF-4D-M-W3	* Material code Carbon Steel, zinc/nickel-plated W3
4D	4	5/16-18 UNC	1.92	1.33	.47	.47	AF-4D-U-W3	Stainless Steel V2A 1.4301 / 1.4305 (AISI 304 / 303) W4
ED.	5	M8	61	46	12	12	AF-5D-M-W3	Stainless Steel V4A
5D		5/16-18 UNC	2.40	1.81	.47	.47	AF-5D-U-W3	1.4401 / 1.4571 (AISI 316 / 316 Ti)

All threaded parts are available with Metric ISO thread or unified coarse (UNC) thread according to dimension table. Alternative materials and surface finishings are available upon request. Contact STAUFF for further information.

## ര TALIF



Please see page 63 with detailed order examples for some of the most popular Twin Series clamp assemblies.

# 1 Type of Installation

C

Please select the type of installation (e.g. weld plates, rail nuts, etc.) and add the corresponding Code to position ① of the order code for your clamp assembly.

Without Installation Equipment Code: none

## **Installation on Weld Plate**

Single Weld Plate Code: SP

> Group Weld Plate Code: RAP

## Installation on Mounting / Channel Rail

**Mounting Rail Nut** æ. Code: SM (Carbon Steel) Code: SMG (Stainless Steel)

26 **Channel Rail Adaptor** Code: CRA

# 2 Group Size & Diameters

Please select the required group size and diameter and add the corresponding Code to position 2 of the order code for your clamp assembly.

Group		Availability Body Materia		
STAUFF	P/T/H	Profiled		
(DIN)	(mm)	Design	Туре Н	Code
~ /	6	•	•	106/06
	6,4	•	•	106.4/06.4
1D	8	•	•	108/08
(1)	9,5	•	•	109.5/09.5
	10	•	•	110/10
	12	•	•	112/12
	12,7	٠	•	212.7/12.7
	13,5	٠	•	213.5/13.5
	14	٠	•	214/14
2D	15	٠	•	215/15
(2)	16	٠	•	216/16
	17,2	٠	•	217.2/17.2
	18	٠	•	218/18
	19	٠	•	319/19
	20	٠	•	320/20
3D	21,3	٠	٠	321.3/21.3
(3)	22	٠	٠	322/22
	25	٠	٠	325/25
	25,4	٠	•	325.4/25.4
15	26,9	•	•	426.9/26.9
4D	28	•	•	428/28
(4)	30	•	•	430/30
	32	•	•	532/32
	33,7	•	٠	533.7/33.7
5D	35	٠	٠	535/35
(5)	38	٠	٠	538/38
	40	٠	٠	540/40
	42	•	•	542/42

# **(3) Clamp Body Design & Material**

Please select the design and material of your clamp body and add the corresponding Code to position 3 of the order code for your clamp assembly.

Please check the availability of the selected clamp body design and material according to the matrix table in (2).

## **Profiled Design**





Polypropylene (Colour: Black) Code: PP-BK

Polyamide Code: PA

## Type H (Smooth)



Polypropylene (Colour: Black) Code: PP-H-BK



See pages 154 / 155 for material properties and technical information.

Please contact STAUFF for further details on fire-proof clamp body materials, tested and approved according to several international fire-protection standards.

## 4 Mounting & Fitting Combination

Please select the mounting and fitting combination (e.g. Bolts, Cover Plates, etc. ) and add the corresponding Code to position ④ of the order code for your clamp assembly.

## Installation with Cover Plate and Bolt

Cover Plate GD with **Hexagon Head Bolt AS** Code: GD-AS

Cover Plate GD with Socket Cap Screw IS Code: GD-IS

## Installation with Locking Plate and Bolt

Safety Locking Plate SI with Stacking Bolt AF Code: SI-AF

Safety Locking Plate SIV with **Stacking Bolt AF** Code: SIV-AF (for STAUFF Group 1D to 3D only)

## **(5)** Thread Type

Please select the required thread type and add the corresponding Code to position (5) of the order code for your clamp assembly.

Metric ISO thread Code: M

Unified coarse (UNC) thread Code: U

All threaded parts are available with Metric ISO thread or unified coarse (UNC) thread according to dimension table.

# 6 Material & Surface Finishing

Please select the required material & surface finishing of the metal parts and add the corresponding Code to position (6) of the order code for your clamp assembly.

Metal parts made of Carbon Steel, zinc/nickel-plated W3

Metal parts made of Stainless Steel V2A W4 1.4301 / 1.4305 (AISI 304 / 303)

Metal parts made of Stainless Steel V4A 1.4401 / 1.4571 (AISI 316 / 316 Ti)

Weld Plate made of Carbon Steel, phosphated; Other W10 metal parts made of Carbon Steel, zinc/nickel-plated

W5

Individual combinations of alternative materials and surface finishings are available upon request. Contact STAUFF for further information

## Assembling & Kitting

If required, please select an additional assembling and kitting option and add the corresponding Code to the last position of the order code for your clamp assembly.

**Components supplied separately** Code: none (standard option)

**Components assembled** Code: A (special option)

Components packed in kits Code: K (special option)





1x Cover Plate Surface: W3

1x Clamp Body (two halves) STAUFF Group 1D (DIN 1) both 0.D. 6 mm / .24 in Material: Polypropylene Profiled inside surface with tension clearance

## **Order Code**

## SP-106/06-PP-GD-AS-M-W10

W10 is the standard option for this type of installation.



- 1x Stacking Bolt Surface: W3 Thread: Metric
- 1x Safety Locking Plate (Type SI) Surface: W3 Thread: Metric
- 1x Clamp Body (two halves) STAUFF Group 1D (DIN 1) both 0.D. 6 mm / .24 in Material: Polypropylene Profiled inside surface with tension clearance

# **Order Code**

## 106/06-PP-SI-AF-M-W3

W3 is the standard option for this type of installation.



- 1x Hexagon Head Bolt Surface: W3 Thread: Metric
- 1x Cover Plate Surface: W3
- 1x Clamp Body (two halves) STAUFF Group 1D (DIN 1) both 0.D. 6 mm / .24 in Material: Polypropylene Profiled inside surface with tension clearance
- 1x Hexagon Rail Nut Surface: W3 Thread: Metric

# Order Code (Mounting Rail TS not included.)

# SM-106/06-PP-GD-AS-M-W3

W3 is the standard option for this type of installation.



## 1x Hexagon Head Bolt Surface: W3 Thread: Metric

1x Cover Plate Surface: W3

1x Clamp Body (two halves) STAUFF Group 1D (DIN 1) both 0.D. 6 mm / .24 in Material: Polypropylene Profiled inside surface with tension clearance

# **Order Code**

# 106/06-PP-GD-AS-M-W3

W3 is the standard option for this type of installation.



- 1x Stacking Bolt Surface: W3 Thread: Metric
- 1x Safety Locking Plate (Type SIV) Surface: W3 Thread: Metric
- 1x Clamp Body (two halves) STAUFF Group 1D (DIN 1) both 0.D. 6 mm / .24 in Material: Polypropylene Profiled inside surface with tension clearance

# **Order Code**

# 106/06-PP-SIV-AF-M-W3

W3 is the standard option for this type of installation. This type of installation is available up to STAUFF Group 3D only.

# **Thread Codes**

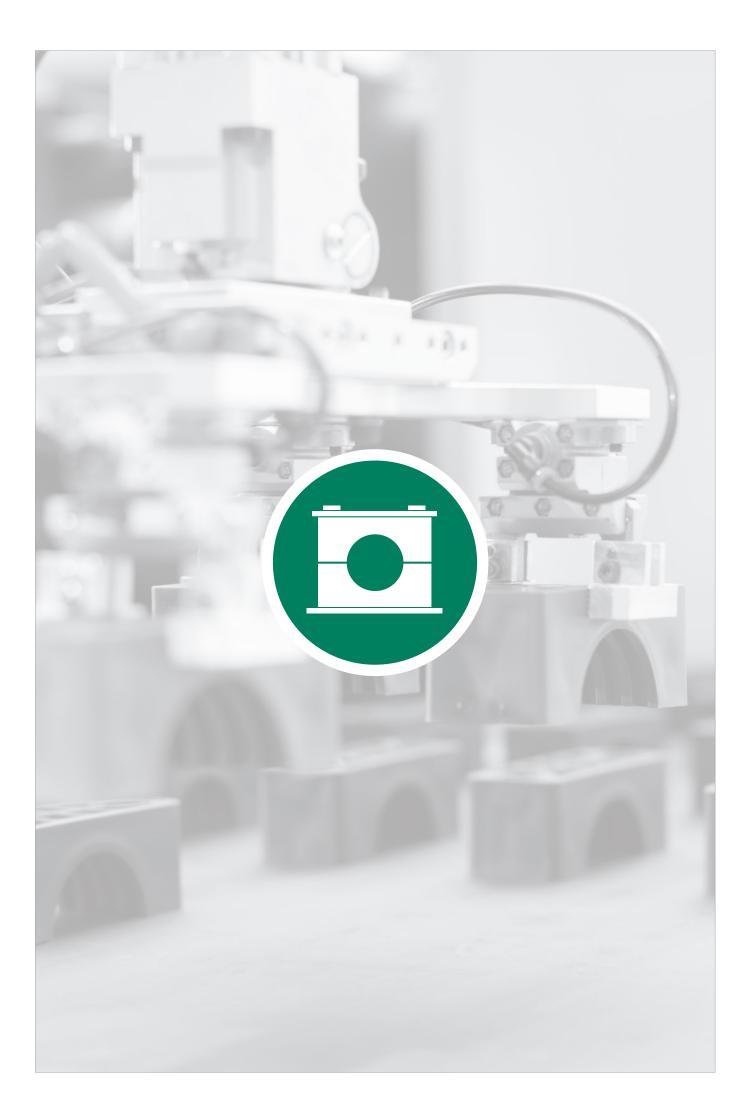
All threaded parts are available with Metric ISO thread or unified coarse (UNC) thread according to dimension table.	
Metric ISO thread	M
Unified coarse (UNC) thread	U

# **Material Codes**

The below listed material codes describe the materials and surface finishings of metal parts that are most relevant for Twin Series clamp assemblies. Individual combinations of alternative materials and surface finishings are available upon request. Contact STAUFF for further information.

Metal parts made of Carbon Steel, zinc/nickel-plated	W3
Metal parts made of Stainless Steel V2A: 1.4301 / 1.4305 (AISI 304 / 303) Metal parts made of Stainless Steel V4A: 1.4401 / 1.4571 (AISI 316 / 316 Ti)	W4 W5
Weld Plate made of Carbon Steel, phosphated Other metal parts made of Carbon Steel, zinc/nickel-plated	W10

¹x Weld Plate Surface: W2 Thread: Metric





16	Clamp Body Profiled Inside Surface with Tension Clearance	66
00	Clamp Body with Elastomer Inserts	66
	Weld Plate SPAD	67
11 - 21	Cover Plate DPAD	67
١	Hexagon Head Bolt AS	68
3	Mounting Rail Nut GMV	68
	Mounting Rail STSV	68
E	Channel Rail Adaptor CRA	68
٩	Socket Cap Screw	68
	Safety Locking Plate	68
١	Stacking Bolt	68
	Clamp Assemblies	69

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## R STALIEF

# Clamp Body - Profiled Design

## **Profiled Inside Surface with Tension Clearance**





Clamp Body	
------------	--

One clamp body is consisting of two clamp halves.

* 1st part of STAUFF Group

**Ordering Codes** 

* Exact outside diameters Ø D1 / Ø D2 (mm) 012.7/12.7 * Material code (see below) PP

## **Standard Materials**



Colour: Green Material code: PP

Polypropylene

Polyamide

**Ordering Codes** 

* 1st part of STAUFF Group

* Material code (see below)

Polypropylene

Material code: PP-R Flastomer Inserts

Colour: Black

Colour: Black

**Standard Materials** 

**Clamp Assembly** 

Colour: Black Material code: PA

See pages 154 / 155 for material properties and technical information.

# **Clamp Body with Elastomer Inserts Type RI**



One assembly is consisting of one clamp body and two inserts.

Thermoplastic Elastomer (73 Shore-A)

* Exact outside diameters Ø D1 / Ø D2 (mm)

*4*006/06-*PP-R

Polyamide

Colour: Black

Material code: PA-R

4

006/06

PP-R

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		H1
		<b>y</b>
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For use with Elastomer Inserts of the Heavy Series, STAUFF Group 4S and 5S (see page 39 for details)

0

L1 L2 L3

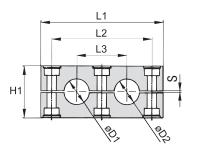
Group	Group Outside Diameter Pipe / Tube / Hose Ø D1 / Ø D2		Ordering Codes (Clamp Assembly)	Dimensions ( ^{mm} / _{in} )					
STAUFF	(mm)	(in)	( <b>**</b> R = Material)	ØD	L1	L2	L3	H1	Width
	6		4006/06- <b>**</b> -R						
	8	5/16	4008/08- <b>**</b> -R						
	10		4010/10- <b>**</b> -R						
	12		4012/12- <b>**</b> -R						
	12,7	1/2	4012.7/12.7- <b>**</b> -R	25	115	90	45	48	30
4S-D	14		4014/14- <b>**</b> -R	.98	4.53	3.54	1.77	1.89	1.18
	15		4015/15- <b>**</b> -R	.50	1.00	0.04	1.77	1.00	
	16	5/8	4016/16- <b>**</b> -R						
	17,2		4017.2/17.2- <b>**</b> -R						
	18		4018/18- <b>**</b> -R						
	19	3/4	4019/19- <b>**</b> -R						
	20		5020/20- <b>**</b> -R						
	21,3		5021.3/21.3- <b>**</b> -R						
	22	7/8	5022/22- <b>**</b> -R						
5S-D	25		5025/25- <b>**</b> -R	38	145	120	60	60	30
00 0	26,9		5026.9/26.9- <b>**</b> -R	1.50	5.71	4.72	2.36	2.36	1.18
	28		5028/28- <b>**</b> -R						
	30		5030/30- <b>**</b> -R						
	32	1-1/4	5032/32- <b>**</b> -R						

See pages 154 / 155 for properties and technical information. Additional outside diameters are available upon request. Please contact STAUFF for further information.

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*4*012.7/12.7-*PP

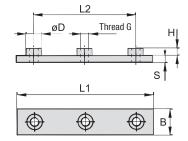


	Group	Outside	Diameter	Nominal	Bore	Ordering Codes	Dimensions ( ^{mm} / _{in} )						
		Pipe / Tu	ıbe		Copper Tube	(2 Clamp Halves)							
		Ø D1 / Ø	D2	Pipe	ASTM B88								
	STAUFF	(mm)	(in)	(in)	(in)	( <b>**</b> = Material)	L1	L2	L3	H1	S	Width	
		12,7	1/2		3/8	4012.7/12.7-**							
		19	3/4			4019/19- <b>**</b>							
	4S-D	20				4020/20-**	115 00	90	45	48	1.2	30	
		21,3		1/2		4021.3/21.3-**	115 4.53	3.54	45	1.89	.05	1.18	
		22			3/4	4022/22-**	4.55	5.54	1.77	1.09	.05	1.10	
		25,4	1			4025.4/25.4- <b>**</b>							
		26,9		3/4		4026.9/26.9-**							
		32	1-1/4			5032/32- <b>**</b>							
	5S-D	33,7		1		5033.7/33.7-**	145 5.71	120	60	60	2,0	30	
	53-D	38	1-1/2			5038/38- <b>**</b>		4.72	2.36	2.36	.08	1.18	
		42		1-1/4		5042/42-**							

Additional outside diameters and Clamp Bodies, type H (smooth inside surface without tension clearance) are available upon request. Please contact STAUFF for further information.

## 

# Weld Plate Type SPAD





Group	Group Dimensions ( ^{mm} / _{in} )							Ordering Codes
STAUFF	L1	L2	В	S	Н	Thread G	ØD	(Standard Options)
40.0	130	90	30	8	8,5	M10	18	SPAD-4S-M-W1
4S-D	5.12	3.54	1.18	.31	.33	3/8-16 UNC	.71	SPAD-4S-U-W2*
50 D	160	120	30	8	8,5	M10	18	SPAD-5S-M-W1
5S-D	6.30	4.72	1.18	.31	.33	3/8-16 UNC	.71	SPAD-5S-U-W2*

All threaded parts are available with Metric ISO thread or unified Coarse (UNC) thread according to dimension table. Alternative materials and surface finishings are available upon request. Contact STAUFF for further information.

* Standard finishing option in North America is W2 (Carbon Steel, phosphated).

Ordering Codes Weld Plate *SPAD-*4S-*M-*W						
* Weld Plate	S	PAD				
* STAUFF Group	4S-D 5S-D	4S 5S				
* Thread code	Metric ISO thread Unified coarse (UNC) thread	M U				
* Material code	Carbon Steel, uncoated Carbon Steel, phosphated Carbon Steel, zinc/nickel-plated Stainless Steel V2A 1.4301 / 1.4305 (AISI 304 / 303) Stainless Steel V4A 1.4401 / 1.4571 (AISI 316 / 316 Ti)	W1 W2 W3 W4 W5				

Cover Plate Type DPAD



Group STAUFF	Dimensio L1	ns ( ^{mm} / _{in} ) L2	В	S	ØD	Ordering Codes (Standard Options)
40	115	90	30	8	11	
4S	4.53	3.54	1.18	.31	.43	DPAD-4S-W1*
5S	145	120	30	8	11	DPAD-5S-W1*
22	5.71	4.72	1.18	.31	.43	DPAD-05-W1"

L2

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L1

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All threaded parts are available with Metric ISO thread or unified Coarse (UNC) thread according to dimension table. Alternative materials and surface finishings are available upon request. Contact STAUFF for further information.

* Standard finishing option in North America is W3 (Carbon Steel, phosphated).

Ordering Codes					
Cover Plate	*DPAD-*4S-*	W1			
* Cover Plate	ſ	OPAD			
* STAUFF Group	4S-D 5S-D	4S 5S			
* Material code	Carbon Steel, uncoated Carbon Steel, phosphated Carbon Steel, zinc/nickel-plated Stainless Steel V2A 1.4301 / 1.4305 (AISI 304 / 303) Stainless Steel V4A 1.4401 / 1.4571 (AISI 316 / 316 Ti)	W1 W2 W3 W4 W5			

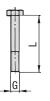
www.stauff.com/1/en/#67

222

# **Hexagon Head Bolt Type AS**

D





## **Hexagon Head Bolt AS**

(according to DIN 931 / 933 or ANSI / ASME B18.2.1.) Dimensions applicable only when used with Cover Plate DPAD

Ordering Codes						
Hexagon Head	Bolt *AS-*M10x70-*W1					
(8	lexagon Head Bolt according to DIN 931 / 933 AS r ANSI / ASME B18.2.1.)					
* Thread type and si	ze acc. to dimension table M10x70					
	arbon Steel, uncoated W1 arbon Steel, zinc/nickel-plated W3					
1	tainless Steel V2A .4301 / 1.4305 (AISI 304 / 303) W4					
, i i i i i i i i i i i i i i i i i i i	tainless Steel V4A .4401 / 1.4571 (AISI 316 / 316 Ti) <b>W5</b>					

Group STAUFF	DIN	Dimensions (""/") Thread G x L	Ordering Codes (Standard Options)
4S	2	M10 x 60	AS-M10x60-W1
43	2	3/8-16 UNC x 2-1/4	AS-3/8-16UNCx2-1/4-W3*
5S	3	M10 x 70	AS-M10x70-W1
55	3	3/8-16 UNC x 2-3/4	AS-3/8-16UNCx2-3/4-W3*

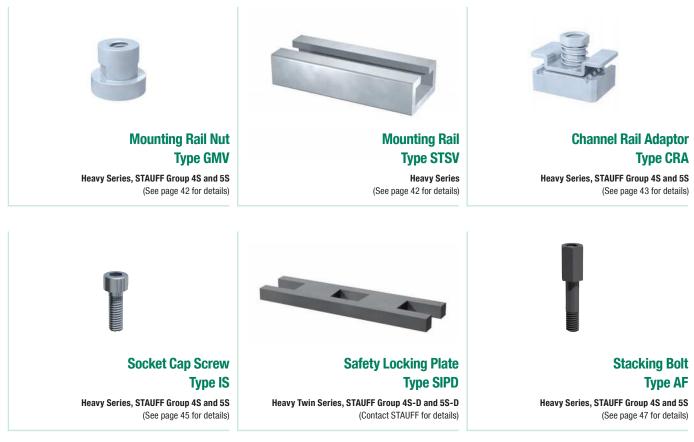
All threaded parts are available with Metric ISO thread orunified coarse (UNC) thread according to dimension table. Alternative materials and surface finishings are available upon request. Contact STAUFF for further information.

If required, use Safety Washers, type SI as locking devices to prevent Hexagon Head Bolts, type AS from loosening. See page 46 for details.

* Standard finishing option in North America is W3 (Carbon Steel, zinc/nickel-plated).

# **Further Metal Hardware**

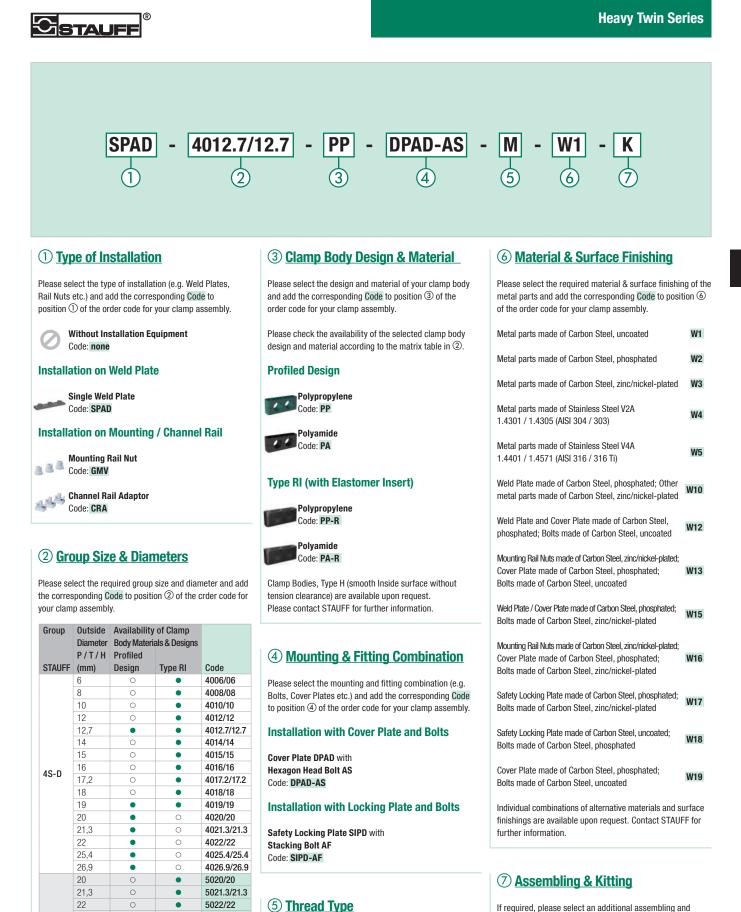
For Use with the Heavy Twin Series



R

STAUFF





Please select the required thread type and add the corresponding

Code to position (5) of the order code for your clamp assembly.

All threaded parts are available with Metric ISO thread or unified

coarse (UNC) thread according to dimension table.

If required, please select an additional assembling and kitting option and add the corresponding Code to the last position of the order code for your clamp assembly.

**Components Supplied Separately** Code: **none** (Standard Option)

**Components Assembled** Code: **A** (Special Option)

Components Packed in Kits Code: K (Special Option)

•

•

25

28

30

32

38

42

Standard Option

33.7

5S-D

26.9

•

.

5025/25

5028/28

5030/30

5032/32

5038/38

5042/42

5033.7/33.7

5026.9/26.9

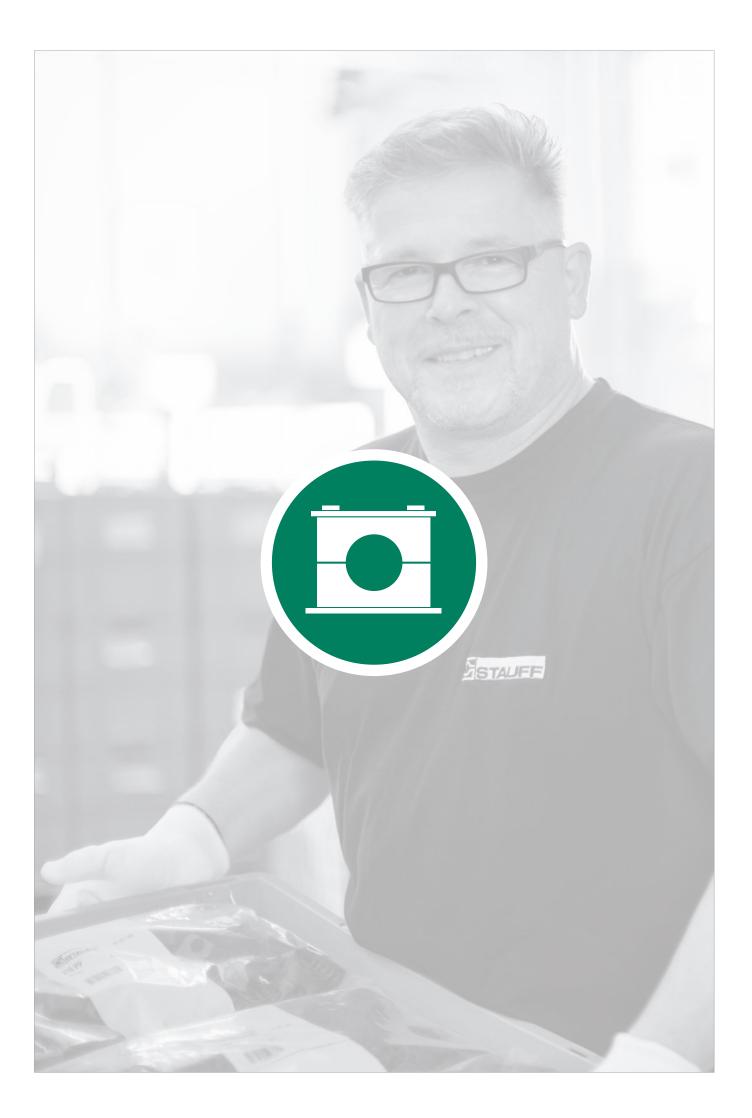
Metric ISO thread

Unified coarse (UNC) thread

Code: M

Code: U

D





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## **STAUFF ACT Anti-Corrosion Technology**



Crevice corrosion formed under a regular plastic clamp



Crevice corrosion formed under a regular plastic clamp

## **Stainless Steel Pipework**

Stainless steel pipework on oil and gas platform and processing plants (that are located offshore and up to 50 km inland) is used over a wide range of temperature, flow and pressure conditions, e.g. for process instrumentation and sensing, as well as for chemical inhibition, hydraulic or utility lines.

The typical tubing material selected for these particular applications is AISI 316 stainless steel, although in more recent times other tube materials have been utilized to try and counteract the offshore corrosion issue.

In all major offshore oil and gas regions - including the Gulf of Mexico, the North Sea, the Gulf of Guinea and the China Sea corrosion of AISI 316 stainless steel pipework can be observed, and has been a researched and well documented problem as well as a costly and time consuming issue with regard to maintenance processes for many years.

## **Pitting Corrosion**

One of the most prevalent forms of localised corrosion is pitting corrosion: Under certain specific conditions - particularly involving chlorides (such as sodium chloride in seawater) and exacerbated by elevated temperatures - small pits can form in a stainless steel surface.

Dependent upon both the environment and the stainless steel itself, these pits may continue to grow and eventually lead to perforation of tubing walls and leaks, while the majority of the surface may still be totally unaffected.

Pitting corrosion is often quite easy to recognise: small individual pits and - in later stages - sometimes deeper and connected pits can be observed by visual inspection with the unaided eye.

## **Crevice Corrosion**

Another dominant type is crevice corrosion, which is a lot more difficult to observe: It usually tends to occur in shielded areas such as crevices, formed under gaskets, washers, fastener heads, insulating material, surface deposits, disbonded coatings, threads and lap joints.

Pipe clamps made of plastic in particular have also been prone to inducing crevice corrosion in the past, because the plastic deforms around the tubing and creates even tighter crevices.

Crevice corrosion is always initiated by changes in the local chemistry within the shielded area, usually associated with a stagnant solution on the micro-environmental level:

- Trapped seawater becomes stagnant
- Depletion of inhibitor and oxygen
- A shift to acid conditions
- Build-up of aggressive ion species
- (such as sodium chloride in seawater)
- Accelerated corrosion process

Crevice corrosion can have serious and adverse consequences eventually leading to perforation of tubing walls and the escape of highly flammable and hazardous fluids and chemicals

## Material Selection

Hence, the selection of proper materials and the use of robust design and safe construction practices are mandatory, even if crevices are sometimes difficult or even impossible to avoid in tubing installations when using regular types of tubing supports and clamps.

This is where STAUFF ACT Clamps come into play ...

## **Corrosion Facts**

Corrosion in general is a naturally occurring phenomenon commonly defined as the deterioration of a substance (usually a metal) or its properties because of a reaction with its environment. Like other natural hazards, corrosion can cause not only expensive but also dangerous damage to almost everything from automobiles, home appliances and drinking water systems to pipelines, bridges and public buildings.

Figures provided by the U.S. National Climatic Data Center underline that major weather related disasters the U.S. incurred total losses of averaging USD 17 billion annually (1980 - 2001). According to U.S. corrosion studies, the estimated direct cost of metallic corrosion in general was USD 276 billion on an annual basis in 1998. This represented 3,1% of the U.S. Gross Domestic Product.

Direct corrosion costs associated with the domestic oil and gas production activities in the U.S. were determined to be about USD 1,4 billion annually, with USD 0,6 billion attributed to surface piping and facility costs, USD 0,5 billion to downhole tubing, and USD 0,3 billion to capital expenditures related to corrosion.

The U.S. refineries represent approximately 23% of the world's petroleum production in 1996 supplying more than 18 million barrels of refined petroleum products per day, with a total corrosion related direct cost of USD 3,7 billion. Maintenance expenses make up USD 1,8 billion of this total, vessel expenses are USD 1,4 billion and fouling costs are approximately USD 0,5 billion annually.

Source of Information: Report No. FHWA-RD-01-156, September 2001 Corrosion Costs and Preventive Strategies in the United States Report by CC Technologies Laboratories, Inc. to Federal Highway ation Office of Infrastructure Research and Development





Technology protected

by utility model patent

ACT Mounting Hardware is made of Stainless Steel V4A

(Material Code: W55) with enhanced corrosion resistance

during production, processing and handling (delivered in

hermetically-sealed quality storage bags with 25 pieces

each to avoid contamination during transport)

Suitable for continuous exposure to temperatures

from -25 °C to +80 °C (from -13 °F to +176 °F)

- To be used in sub-sea and top-side environments;

High UV stability of the clamp body material;

resistant against seawater, rain and oil

by practically excluding metallic and non-metallic impurities

Corrosion Innovation

#### **Main Features**

Efficient Prevention of Crevice Corrosion under Pipe Clamps on Stainless Steel Pipework Middle- and Long-Term Cost Savings due to Extended Service and Maintenance Intervals

#### **Construction based on STAUFF Clamps**

- Design based on Original STAUFF Clamps according to DIN 3015, Parts 1 and 3 (Standard Series and Twin Series), the tried and tested industry standard for several decades
- Covering the most commonly used metric and imperial pipe diameters from 6 mm to 42 mm (from 1/4 inch to 1 1/2 inch)
- Alternative configurations and pipe diameters on request
- Installation time reduction (compared to alternative designs)

#### Independent Testing and Approval

- Subject to stringent testing at the STAUFF in-house laboratories located in Werdohl (Germany)
- Salt spray tests according to ASTM B117 applied in controlled laboratory environments
- Long-term field tested on a rig in the Dutch sector of the North Sea
- Tests results independently assessed by Centre for Corrosion Technolog at Sheffield Hallam University
- Fully detailed, independent test reports available on request

#### **Innovative Design and Materials**

- Material and design in compliance with section 7.3 (Tubing Installation) of the Norwegian offshore standard Norsok Z-010 (Revision 3, published in October 2000), API RP 552 and NACE SP 0108-2008 (section 13)
- O Clamp body made of flame-retardant PP-V0 plastic material; tested and V0 classified according to UL 94
- Integrated ACE anti-corrosion elastomer strips avoid the accumulation of seawater between clamp body and pipe
- ③ Drainage channels aid the dispersal of seawater (self-draining)





Salt-spray testing of ACT Mounting Hardware (above of the picture) compared to contaminated hardware made of Stainless Steel V4A (below of the picture)

#### Design

STAUFF ACT Clamps are an innovatively designed solution for the installation of instrumentation pipework where anti-corrosion properties are of paramount importance (e.g. in the fields of offshore oil and gas exploration and processing).

The design - based on the tried and tested STAUFF Clamps according to DIN 3015 - offers installation time reduction and long term cost savings due to extended service intervals.

The STAUFF ACT clamp body design is available for the Standard Series (DIN 3015, Part 1) and the Twin Series (DIN 3015, Part 3) to cover the most commonly used metric and imperial pipe diameters from 6 mm to 42 mm (1/4 inch to 1 1/2 inch).

#### **Development**

Throughout their development, STAUFF ACT Clamps have been subject to stringent testing at the STAUFF in-house laboratories located in Werdohl, Germany.

In order to ensure credibility of the product, the development process has also involved independent testing.

#### Sheffield Hallam University

To achieve this, the services of the Centre for Corrosion Technology at Sheffield Hallam University's Materials and Engineering Research Institute have been utilized, applying advanced techniques with equipment such as high resolution surface metrology and form measurement systems. In a controlled laboratory environment, continous hot salt spray tests according to ASTM B117 have been applied for periods of 2000 hours to various clamp configurations holding AISI 316 stainless steel tubing.



In addition to that, independent field test samples – located on an oil rig in the Dutch sector of the North Sea – have also been assessed at the Sheffield Hallam University facilities.

Both independent tests have recorded positive results in favour of the anti-corrosion attributes of the STAUFF ACT Clamp. Fully detailed test reports are available upon request.

#### Conformity

Using flame-retardant PP-V0 plastic material for the clamp body and ACE anti-corrosion elastomer material for the rubber strips, STAUFF ACT Clamps have been constructed in compliance with section 7.3 (Tubing Installation) of the Norwegian offshore standard Norsok Z-010 (Revision 3, published in October 2000). They also comply with Norsok I-001 (Revision 4, published in January 2010), API RP 552 and NACE SP 0108-2008 (section 13).

#### **The Norsok Organisation**



Norsok is a Norwegian industry initiative to add value, reduce cost and lead time and remove unnecessary activities in offshore field developments and operations.

The Norsok standards are developed by the Norwegian petroleum industry and are jointly issued by the Norwegian Oil Industry Association (OLF) and the Federation of Norwegian Engineering Industries (TBL). They are administered by the Norwegian Technology Standards Institution (NTS).

The purpose of the Norsok industry standards is to replace the individual oil company specifications for use in existing and future petroleum industry developments, subject to the individual company's review and application.

#### R STAUFF

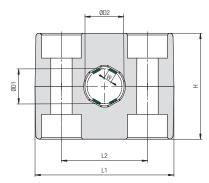
#### Standard Series according to DIN 3015, Part 1 **ACT Clamp Body**



Clamp Body Clamp Body, STAUFF Group 1A	*2-*12.7-*ACT *1-*06.4A-*ACT
One clamp body consists of two in halves, each with two integrated	•
* STAUFF Group	2
* Exact outside diameter Ø D1 (m	
	ÁCT



Integrated Rubber Strips made of Anti-Corrosion Elastomer (ACE)



	Group Size		Outside   Ø D1	Diameter	Ordering Code	Packaging Unit	Dimer	nsions (	^{mm} /in)			
1	STAUFF	DIN	(mm)	(in)	(2 Clamp Halves)	(in pieces / bag)	ØD2	W	L1	L2	Н	Width
Γ			6		106A-ACT	25	9	1,4				
						20	.35	.06				
			6,4	1/4	106.4A-ACT	25	9,4	1,5				
			-,.				.37	.06				
			8		108A-ACT	25	11,0	1,8	07	0.0	0.0	00
	1A	1					.43	.07	37 1.46	20 .79	26 1.06	30 1.18
			9,5	3/8	109.5A-ACT	25	12,5 .49	2,2 .09	1.40	.19	1.00	1.10
							13	2,3				
			10		110A-ACT	25	.51	.09				
							15	2,8				
			12		112A-ACT	25	.59	.11				
ľ			10.7	1.10		0.5	15,7	3,5				
			12,7	1/2	212.7-ACT	25	.62	.14				
			14		014 ACT	05	17	3,5				
			14		214-ACT	25	.67	.14				
			14,3	9/16	214.3-ACT	25	17,3	3,5				
	2	2	14,5	3/10	214.3-A01	20	.68	.14	42	26	32	30
	2	2	15		215-ACT	25	18	3,5	1.65	1.02	1.30	1.18
			10		210 /101	20	.71	.14				
			16	5/8	216-ACT	25	19	3,5	_			
						-	.74	.14				
			18		218-ACT	25	21	3,5				
-							.83	.14	-			
			19	3/4	319-ACT	25	22 .87	3,5 .14	-			
							23	3,5				
			20		320-ACT	25	.91	.14				
							24,3	3,5	50	33	35,5	30
	3	3	21,3		321.3-ACT	25	.96	.14	1.97	1.30	1.42	1.18
			05		205 ACT	05	28	3,5				
			25		325-ACT	25	1.10	.14				
			25,4	1	325.4-ACT	25	28,4	3,5				
			20,4	'	020.4 A01	20	1.12	.14	_			
			26,9		426.9-ACT	25	31,1	6,0				
			,-				1.22	.24				
	4	4	28		428-ACT	25	32,2	6,0	59	40	42	30
							1.27	.24	2.32	1.57	1,65	1.18
			30		430-ACT	25	34,2 1.35	6,0 .24				
┝							36,2	.24	-			
			32	1 1/4	532-ACT	25	1.43	.28	-			
							39,2	7				
	_	_	35		535-ACT	25	1.54	.28	71	52	58	30
	5	5	20	1.1/0	520 ACT	05	42,2	8	2.80	2.05	2.28	1.18
			38	1 1/2	538-ACT	25	1.66	.31	1			
			42		542-ACT 25	46,2	8					
			72		042-A01	20	1.82	.31				

Additional sizes and outside diameters are available upon request. Please contact STAUFF for further information.



#### **ACT Mounting Hardware** Installation on Single Weld Plates

#### Required components (for use with single weld plate):

- 2 ACT Hexagon Head Bolts AS...W55
- I ACT Cover Plate DP...W55
- 1 ACT Clamp Body (2 Clamp Halves)
- 1 ACT Single Weld Plate SP...W55

Before welding, always make sure that the designated position of the ACT Weld Plate is suitable for the expected loads.

#### Material Code W55

#### **ACT Mounting Hardware** Material Properties and Handling Instructions

ACT Mounting Hardware is made of Stainless Steel V4A (Material Code: W55) with enhanced corrosion resistance by practically excluding metallic and non-metallic impurities during production, processing and handling.

ACT Mounting Hardware is always delivered in hermetically-sealed quality storage bags with 25 pieces each to avoid contamination during transport.

Always make sure that ACT Mounting Hardware is stored separately from carbon steel and any other metals, and that appropriate tools are used to assemble the clamps. Details: www.stauff.com/act/assembly

#### **ACT Hexagon Head Bolt** Type AS ... W55 (according to DIN 931 / 933)





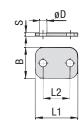
Dimensions applicable only when used with Cover Plate DP and Weld Plate SP

Group STAUFF	DIN	Dimensions ( ^{mm} / _{in} ) Thread G x L	Ordering Code	Packaging Unit (in pieces / bag)
1A	1	M6 x 30 M6 x 1.18	AS-M6x30-W55	25
2	2	M6 x 35 M6 x 1.38	AS-M6x35-W55	25
3	3	M6 x 40 M6 x 1.57	AS-M6x40-W55	25
4	4	M6 x 45 M6 x 1.77	AS-M6x45-W55	25
5	5	M6 x 60 M6 x 2.36	AS-M6x60-W55	25

2	1999	22

**ACT Cover Plate** 

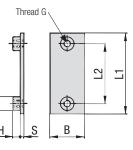
Type DP ... W55



Group		Dimen	sions ("	^{im} /in)			Ordering Code	Packaging Unit
STAUFF	DIN	L1	L2	В	S	ØD		(in pieces / bag)
1A	1	34	20	30	3	7	DP-1A-W55	25
	1	1.34	.79	1.18	.12	.28	DI - IA-W33	20
2	2	40,5	26	30	3	7	DP-2-W55	25
2	2	1.59	1.02	1.18	.12	.28	DF-2-W33	20
3	3	48	33	30	3	7	DP-3-W55	25
3	3	1.89	1.30	1.18	.12	.28	DP-3-W55	25
4	4	57	40	30	3	7	DP-4-W55	25
4	4	2.24	1.57	1.18	.12	.28	DP-4-W00	20
F	E	70	52	30	3	7	DD E WEE	05
5	5	2.76	2.05	1.18	.12	.28	DP-5-W55	25

#### **ACT Single Weld Plate** Type SP ... W55





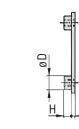
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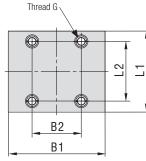
Group		Dim	ensio	1 <b>S (</b> ^{mm}	/in)				Ordering Code	Packaging Unit
STAUFF	DIN	G	L1	L2	В	S	Н	ØD		(in pieces / bag)
1A	1	M6	36	20	30	3	6,5	12	SP-1A-M-W55	25
IA	1	IVIO	1.42	0.79	1.18	.12	.26	.47	3F-1A-101-0035	25
2	2	M6	42	26	30	3	6,5	12	SP-2-M-W55	25
2	2	IVIO	1.65	1.02	1.18	.12	.26	.47	5P-2-IVI-W55	20
3	3	M6	50	33	30	3	6,5	12	SP-3-M-W55	25
3	3	IVIO	1.97	1.30	1.18	.12	.26	.47	3F-3-WI-W00	25
4	4	M6	60	40	30	3	6,5	12	SP-4-M-W55	25
4	4	IVIO	2.36	1.57	1.18	.12	.26	.47	58-4-111-1122	20
5	5	M6	71	52	30	3	6,5	12	SP-5-M-W55	05
Э	5	IVIO	2.80	2.05	1.18	.12	.26	.47	5P-5-IVI-W55	25

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Alternative types of weld plates are available upon request. Please contact STAUFF for further information.

#### **ACT Double Weld Plate Type SPD ... W55**





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Group		Dim	ensio	ns ( ^{mr}	ⁿ /in)					Ordering Code	Packaging Unit	
STAUFF	DIN	G	L1	L2	B1	B2	S	Н	ØD		(in pieces / bag)	
1A	4	M6	36	20	60	30,5	3	6,5	12	SPD-1A-M-W55	05	
IA	I	1010	1.42	0.79	2.36	1.20	.12	.26	.47	SPD-TA-IM-W55	20	
2	2	M6	42	26	60	30,5	3	6,5	12	SPD-2-M-W55	25	
2	2	IVIO	1.65	1.02	2.36	1.20	.12	.26	.47	3FD-2-INI-W35	20	
3	3	M6	50	33	60	30,5	3	6,5	12	SPD-3-M-W55	25	
3	э	1010	1.97	1.30	2.36	1.20	.12	.26	.47	350-3-10-000	20	

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**ACT Stacking Bolt** 

Type AF ... W55

#### ACT Mounting Hardware Multi-Level Installation (with Weld Plate)

#### Required components for each level:

- 2 ACT Stacking Bolt AF...W55
- I ACT Safety Locking Plate SIG...ACT-W55

Thread G

1 ACT Clamp Body (2 Clamp Halves)

The upper layer is secured by a cover plate and hexagon head bolts. The lower layer has to be mounted to a weld plate (with a recommended maximum of two levels in total).

Hex

#### ACT Mounting Hardware Material Properties and Handling Instructions

ACT Mounting Hardware is made of Stainless Steel V4A (Material Code: W55) with enhanced corrosion resistance by practically excluding metallic and non-metallic impurities during production, processing and handling.

ACT Mounting Hardware is always delivered in hermetically-sealed quality storage bags with 25 pieces each to avoid contamination during transport.

Always make sure that ACT Mounting Hardware is stored separately from carbon steel and any other metals, and that appropriate tools are used to assemble the clamps. <u>Details: www.stauff.com/act/assembly</u>

#### ACT Safety Locking Plate Type SIG ... ACT-W55





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Group		Dime	nsions (	^{mm} /in)			Ordering Code	Packaging Unit	Group		Di
STAUFF	DIN	G	L1	L2	L3 min.	Hex		(in pieces / bag)	STAUFF	DIN	L
1A	4	M6	34	20	12	11	AF-1/1A/1D-M-W55	25	1A	4	33
IA	I	IVIO	1.34	.79	.47	.43	AF-1/1A/1D-W1-W00	25	IA	I.	1.
2	2	M6	40	26	12	11	AF-2-M-W55	25	2	2	39
2	2	IVIO	1.57	1.24	.47	.43	AF-2-IVI-W00	20	2	2	1.
3	3	M6	44	30	12	11	AF-3-M-W55	25	3	3	47
3	3	IVIO	1.73	1.18	.47	.43	AF-3-IVI-W35	20	3	3	1.
4	4	M6	49	35	12	11	AF-4-M-W55	25	4	4	56
4	4	IVIO	1.93	1.38	.47	.43	AF-4-IVI-W35	20	4	4	2.
5	5	M6	64	50	12	11	AF-5-M-W55	25	5	5	69
5	5	IVIO	2.52	1.97	.47	.43	AF-0-IVI-W00	20	5	5	2.

Group		Dimens	ions ( ^{mm} )	/in)		Ordering Code	Packaging Unit
STAUFF	DIN	L	B1	B2	S		(in pieces / bag)
1A	1	33	28	11,2	2	SIG-1A-ACT-W55	25
IA	1	1.30	1.10	.44	.08	510-1A-A01-W55	20
2	2	39	28	11,2	2	SIG-2-ACT-W55	25
2	2	1.54	1.10	.44	.08	310-2-A01-W33	20
3	3	47	28	11,2	2	SIG-3-ACT-W55	25
3	3	1.85	1.10	.44	.08	510-3-ACT-W00	20
4	4	56	28	11,2	2	SIG-4-ACT-W55	25
4	4	2.20	1.10	.44	.08	510-4-ACT-W55	20
5	5	69	28	11,2	2		25
5	5	2.72	1.10	.44	.08	SIG-5-ACT-W55	20

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**ACT Hexagon Head Bolt** 

Type AS ... W55 (according to DIN 931 / 933)

#### **ACT Mounting Hardware** Installation with Channel Rail Adaptors

#### **Required components:**

- 2 ACT Hexagon Head Bolts AS...W55
- 1 ACT Cover Plate DP. W55
- 1 ACT Clamp Body (2 Clamp Halves)
- 2 ACT Channel Rail Adaptors CRA...W55

Suitable for various brands and types of channel rails (including Halfen, Hilti, Unistrut® etc.).

#### Material Code 55

#### **ACT Mounting Hardware** Material Properties and Handling Instructions

ACT Mounting Hardware is made of Stainless Steel V4A (Material Code: W55) with enhanced corrosion resistance by practically excluding metallic and non-metallic impurities during production, processing and handling.

ACT Mounting Hardware is always delivered in hermetically-sealed quality storage bags with 25 pieces each to avoid contamination during transport.

Always make sure that ACT Mounting Hardware is stored separately from carbon steel and any other metals, and that appropriate tools are used to assemble the clamps. Details: www.stauff.com/act/assembly

#### **ACT Cover Plate** Type DP ... W55

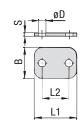




Dimensions applicable only when used with Cover Plate DP and Weld Plate SP

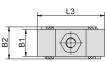
Group STAUFF	DIN	Dimensions ( ^{mm} / _{in} ) Thread G x L	Ordering Code	Packaging Unit (in pieces / bag)
1A	1	M6 x 30 M6 x 1.18	AS-M6x30-W55	25
2	2	M6 x 35 M6 x 1.38	AS-M6x35-W55	25
3	3	M6 x 40 M6 x 1.57	AS-M6x40-W55	25
4	4	M6 x 45 M6 x 1.77	AS-M6x45-W55	25
5	5	M6 x 60 M6 x 2.36	AS-M6x60-W55	25

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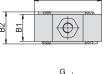


Group		Dimen	sions ("	^{ım} /in)			Ordering Code	Packaging Unit
STAUFF	DIN	L1	L2	В	S	ØD		(in pieces / bag)
1A	1	34	20	30	3	7	DP-1A-W55	25
IA	1	1.34	.79	1.18	.12	.28	DF-IA-W55	20
2	2	40,5	26	30	3	7	DP-2-W55	25
2	2	1.59	1.02	1.18	.12	.28	DF-2-W55	20
3	3	48	33	30	3	7	DP-3-W55	25
3	3	1.89	1.30	1.18	.12	.28	DF-3-W35	20
4	4	57	40	30	3	7	DP-4-W55	25
4	4	2.24	1.57	1.18	.12	.28	DP-4-W00	20
5	F	70	52	30	3	7	DP-5-W55	05
5	5	2.76	2.05	1.18	.12	.28	DP-5-W55	25

#### **ACT Channel Rail Adaptor Type CRA ... W55**







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The STAUFF Channel Rail Adaptor, type CRA, is suitable for various brands and types of channel rails (including Halfen, Hilti, Unistrut® etc.). The drawing describes the basic dimensional requirements for channel rails to be used with STAUFF Channel Rail Adaptors, type CRA.

In case of doubt, please do not hesitate to contact STAUFF prior to field application.

min. 22 (min. .87)

max. 28 (max. 1.10)

INCOME AND ADDRESS OF TAXABLE AD												
Group		Dimensions	( ^{mm} /in)								Ordering Code	Packaging Unit
STAUFF	DIN	G	L1	L2	L3	B1	B2	H1	H2	H3		(in pieces / bag)
1A	1											
2	2											
3	3	M6	21 .83	35 1.38	40 1.57	16 .63	19 .75	6 .24	5,5 .22	20,5 .81	CRA-1-8/1D-M-W55	25
4	4			1.00	1.07					.01		
5	5											





#### ACT Mounting Hardware Installation in Field Trays / Cable Ladders

#### **Required components:**

- 2 ACT Self-Locking Nuts MUS-HKS ... W55
- 1 ACT Cover Plate DP ... W55
- 1 ACT Clamp Body (2 Clamp Halves)
- 2 ACT Hammerhead Bolts HKS ... W55

Suitable for commonly used field trays and cable ladders with diagonal, lengthwise and/or crosswise slots and perforations.

#### ACT Mounting Hardware W555 Material Properties and Handling Instructions

ACT Mounting Hardware is made of Stainless Steel V4A (Material Code: W55) with enhanced corrosion resistance by practically excluding metallic and non-metallic impurities during production, processing and handling.

ACT Mounting Hardware is always delivered in hermetically-sealed quality storage bags with 25 pieces each to avoid contamination during transport.

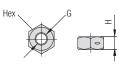
Always make sure that ACT Mounting Hardware is stored separately from carbon steel and any other metals, and that appropriate tools are used to assemble the clamps. <u>Details: www.stauff.com/act/assembly</u>

#### ACT Cover Plate Type DP ... W55



**All-Metal Self-Locking ACT Nut** 

Type MUS-HKS ... W55 (similar to DIN 980 / Biloc)



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For use with ACT Hammerhead Bolts HKS ... W55

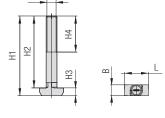
Group		Dimensions			Ordering Code	Packaging Unit
STAUFF	DIN	Thread G	H	Hex		(in pieces / bag)
1A	1					
2	2					
3	3	M6	5	10	MUS-HKS-M6-W55	25
4	4		.20	.39		
5	5					

Rost frei						L		
Group		Dimen	sions ("	^{nm} /in)			Ordering Code	Packaging Unit
STAUFF	DIN	L1	L2	В	S	ØD		(in pieces / bag)
1A	4	34	20	30	3	7	DP-1A-W55	25
IA	1	1.34	.79	1.18	.12	.28	DF-IA-W55	20
2	2	40,5	26	30	3	7	DP-2-W55	25
2	2	1.59	1.02	1.18	.12	.28	DF-2-W33	20
3	3	48	33	30	3	7	DP-3-W55	25
3	3	1.89	1.30	1.18	.12	.28	DP-3-W00	20
4	4	57	40	30	3	7		05
4	4	2.24	1.57	1.18	.12	.28	DP-4-W55	25
-	-	70	52	30	3	7		05
5	5	2.76	2.05	1.18	.12	.28	DP-5-W55	25

L2

#### ACT Hammerhead Bolt Type HKS ... W55

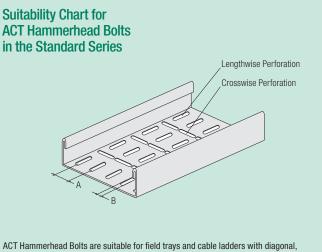






For use with Self-Locking ACT Nuts MUS-HKS ... W55

Group		Dim	ensior	1 <b>S (</b> ^{mm} /i	n)				Ordering Code	Packaging Unit
STAUFF	DIN	G	H1	H2	H3	H4 min	В	L		(in pcs. / bag)
1A	1	M6	44,3	40	4,3	20	6,1	13,3	HKS-M6x40-W55	25
IA	1	IVIO	1.74	1.57	.17	.79	.24	.52	NK3-W0X40-W35	20
2	2	M6	49,3	45	4,3	20	6,1	13,3	HKS-M6x45-W55	25
2	2	IVIO	1.94	1.77	.17	.79	.24	.52	NK3-100X43-W35	20
3	3	M6	54,3	50	4,3	20	6,1	13,3	HKS-M6x50-W55	25
3	3	IVIO	2.14	1.97	.17	.79	.24	.52	HK3-W0X30-W35	20
4	4	M6	59,3	55	4,3	20	6,1	13,3	HKS-M6x55-W55	25
4	4	IVIO	2.33	2.17	.17	.79	.24	.52	HK3-W0X33-W35	20
5	5	M6	74,3	70	4,3	20	6,1	13,3	HKS-M6x70-W55	25
J	5	IVIO	2.93	2.76	.17	.79	.24	.52	11K3-100X70-1035	20



lengthwise and/or crosswise slots and perforations that meet the following requirements:

Dimension A: Equal to the bolt center spacing of the clamp assembly
 Dimension B: 6,2 mm ... 7,0 mm / .24 in ... .28 in (Min ... Max)

In case of doubt, please do not hesitate to contact STAUFF prior to field application.





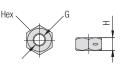
#### ACT Mounting Hardware Multi-Level Installation (with Stacking & Hammerhead Bolts)

Required components (for a recommended maximum of two levels in total):

- 2 ACT Self-Locking Nuts MUS-HKS ... W55
- 1 ACT Cover Plate DP ... W55
- 1 ACT Clamp Body (2 Clamp Halves)
- I ACT Safety Locking Plate SIG...ACT-W55
- 2 ACT Stacking Bolts AF-HKSK...W55
- 1 ACT Clamp Body (2 Clamp Halves)
- 2 ACT Hammerhead Bolts HKSK ... W55

#### All-Metal Self-Locking ACT Nut Type MUS-HKS ... W55 (similar to DIN 980 / Biloc)







For use with ACT Stacking Bolts AF-HKS ... W55

Group STAUFF	DIN	Dimensions Thread G	s ( ^{mm} / _{in} ) H	Hex	Ordering Code	Packaging Unit (in pieces / bag)
1A	1					
2	2	M6	5 .20	10 .39	MUS-HKS-M6-W55	25
3	3					

#### ACT Mounting Hardware Material Properties and Handling Instructions

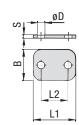
ACT Mounting Hardware is made of Stainless Steel V4A (Material Code: W55) with enhanced corrosion resistance by practically excluding metallic and non-metallic impurities during production, processing and handling.

ACT Mounting Hardware is always delivered in hermetically-sealed quality storage bags with 25 pieces each to avoid contamination during transport.

Always make sure that ACT Mounting Hardware is stored separately from carbon steel and any other metals, and that appropriate tools are used to assemble the clamps. Details: www.stauff.com/act/assembly

#### ACT Cover Plate Type DP ... W55





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-	-	2.2	/		
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Group		Dimen	Ordering Code	Packaging Unit				
STAUFF	DIN	L1	L2	В	S	ØD		(in pieces / bag)
1A	4	34	20	30	3	7	DP-1A-W55	25
IA	1	1.34	.79	1.18	.12	.28	DF-1A-W55	20
2	2	40,5	26	30	3	7	DP-2-W55	25
2	2	1.59	1.02	1.18	.12	.28	DF-2-W55	20
3	3	48	33	30	3	7	DP-3-W55	25
3	3	1.89	1.30	1.18	.12	.28	DF-3-W35	20

#### ACT Stacking Bolt Type AF-HKSK ... W55



Dimen

G

M6

M6

M6

Group

1A

2

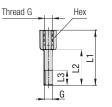
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STAUFF DIN

1

2

3



For use with Self-Locking ACT Nuts MUS-HKS ... W55

^{mm} /in)			Ordering Code	Packaging Unit
L2	L3 min.	Hex		(in pieces / bag)
30	12	11		25
1.18	.47	.43	AL-UK2V-IN-INI-MOD	20
40	12	11	AE HKCK 2 M WEE	25
1.57	.47	.43	AL-UK9K-5-IM-M00	20
40	12	11	AE-HKSK-2-M-W55	25
1.57	.47	.43	AI -IIK3K-3-W-W33	20
	30 1.18 40 1.57 40	L2L3 min.30121.18.4740121.57.474012	L2         L3 min.         Hex           30         12         11           1.18         .47         .43           40         12         11           1.57         .47         .43           40         12         11	L2         L3 min.         Hex         Area           30         12         11         AF-HKSK-1A-M-W55           40         12         11         AF-HKSK-2-M-W55           1.57         .47         .43         AF-HKSK-2-M-W55           40         12         11         AF-HKSK-3-M-W55

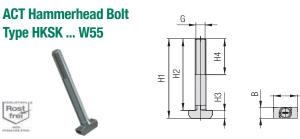
#### ACT Safety Locking Plate Type SIG ... ACT-W55







Group STAUFF	DIN	Dimens L	sions ( ^{mm} ) B1	/in) B2	S	Ordering Code	Packaging Unit (in pieces / bag)
1A	4	33	28	11,2	2	SIG-1A-ACT-W55	05
IA	1	1.30	1.10	.44	.08	SIG-1A-A01-W55	25
2	2	39	28	11,2	2	SIG-2-ACT-W55	25
2	2	1.54	1.10	.44	.08	510-2-AG1-W55	20
3	3	47	28	11,2	2	SIG-3-ACT-W55	25
5	5	1.85	1.10	.44	.08	310-3-A01-W33	20



Group		Dim	ensior	1 <b>s (</b> ^{mm} /i	in)				Ordering Code	Packaging Unit
STAUFF	DIN	G	H1	H2	H3	H4 min	В	L		(in pcs. / bag)
1A	4	M6	29,3	25	4,3	20	6,1	13,3	HKSK-M6x25-W55	25
IA	I	IVIO	1.15	.98	.17	.79	.24	.52	HK5K-IVI0X20-W00	25
2	2	M6	36,3	32	4,3	20	6,1	13,3	HKSK-M6x32-W55	25
2	2	IVIO	1.43	1.26	.17	.79	.24	.52	HK3K-INI0X32-W33	20
0	0	MC	39,3	35	4,3	20	6,1	13,3	HKSK-M6x35-W55	05
3	3	M6	1.55	1.38	.17	.79	.24	.52	пкак-IVI0X35-W55	20







#### ACT Mounting Hardware Multi-Level Installation in Field Trays / Cable Ladders (with Hammerhead Bolts)

Required components (for a recommended maximum of two levels in total):

- 2 ACT Self-Locking Nuts MUS-HKS ... W55
- 1 ACT Cover Plate DP ... W55
- 1 ACT Clamp Body (2 Clamp Halves)
- 1 ACT Clamp Body (2 Clamp Halves)
- 2 ACT Hammerhead Bolts HKSV ... W55

# Waterial Code ACT Mounting Hardware Material Properties and Handling Instructions

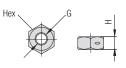
ACT Mounting Hardware is made of Stainless Steel V4A (Material Code: W55) with enhanced corrosion resistance by practically excluding metallic and non-metallic impurities during production, processing and handling.

ACT Mounting Hardware is always delivered in hermetically-sealed quality storage bags with 25 pieces each to avoid contamination during transport.

Always make sure that ACT Mounting Hardware is stored separately from carbon steel and any other metals, and that appropriate tools are used to assemble the clamps. <u>Details: www.stauff.com/act/assembly</u>

#### All-Metal Self-Locking ACT Nut Type MUS-HKS ... W55 (similar to DIN 980 / Biloc)





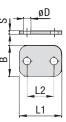
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For use with ACT Hammerhead Bolts HKS ... W55

Group	DIN	Dimensions			Ordering Code	Packaging Unit
STAUFF	DIN	Thread G	H	Hex		(in pieces / bag)
1A	1					
2	2	M6	5 .20	10 .39	MUS-HKS-M6-W55	25
			.20	.00		
3	3					





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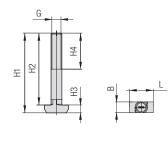
**ACT Cover Plate** 

Type DP ... W55

NYANA MAR WYORK								
Group		Dimen	sions ("	^{im} /in)		Ordering Code	Packaging Unit	
STAUFF	DIN	L1	L2	В	S	ØD		(in pieces / bag)
1A	4	34	20	30	3	7	DP-1A-W55	25
IA	1	1.34	.79	1.18	.12	.28	DF-IA-W55	20
2	2	40,5	26	30	3	7	DP-2-W55	25
2	2	1.59	1.02	1.18	.12	.28	DP-2-W55	20
3	3	48	33	30	3	7	DP-3-W55	25
3	3	1.89	1.30	1.18	.12	.28	DP-3-W55	20

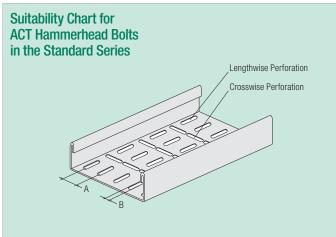
#### ACT Hammerhead Bolt Type HKSV ... W55





For use with Self-Locking ACT Nuts MUS-HKS ... W55

DURING DIRECTORY.											
Group	roup Dimensions ( ^{mr}				)				Ordering Code	Packaging Unit	
STAUFF	DIN	G	H1	H2	H3	H4 min	В	L		(in pcs. / bag)	
1 0	4	M6	68,3	64	4,3	20	6,1	13,3	HKSV-M6x64-W55	05	
1A	1	IVIO	2.69	2.52	.17	.79	.24	.52	HK5V-IVI0X04-W00	25	
0	2	MG	80,3	76	4,3	20	6,1	13,3	HKSV-M6x76-W55	05	
2	2	M6	3.16	2.99	.17	.79	.24	.52	HK5V-IVIOX/0-W00	20	
3	3	M6	87,3	83	4,3	20	6,1	13,3		05	
3	3	IVIO	3.44	3.27	.17	.79	.24	.52	HKSV-M6x83-W55	25	



ACT Hammerhead Bolts are suitable for field trays and cable ladders with diagonal, lengthwise and/or crosswise slots and perforations that meet the following requirements:

- Dimension A: Equal to the bolt center spacing of the clamp assembly
   Dimension B: 6,2 mm ... 7,0 mm / .24 in ... .28 in (Min ... Max)
- In case of doubt, please do not hesitate to contact STAUFF prior to field application.

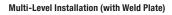




**Order Code** 

**Order Code** 

#### STAUFF ACT Clamps: Anti-Corrosion Technology



Required components (for each level) for a maximum of two levels in total:

2 Stacking Bolt AF...W55

1 Safety Locking Plate SIG...ACT-W55

1 ACT Clamp Body (2 Clamp Halves)

The upper layer has to be secured by a cover plate and hexagon head bolts. The lower level has to be mounted to a weld plate.

SP-110a-ACT-DP-AS-M-W55

#### Installation on Weld Plate

Required components:

- 2 Hexagon Head Bolts AS...W55
- 1 Cover Plate DP...W55
- 1 ACT Clamp Body (2 Clamp Halves) 1 Single Weld Plate SP...W55

Before welding, always make sure that the designated position of the weld plate is suitable for the expected loads.

#### **Order Code**

#### 110a-ACT-SIG-AF-M-W55

W55 is the recommended option for metal hardware to be used with STAUFF ACT Clamps.



#### Installation with Channel Rail Adaptors

Required components:

- 2 Hexagon Head Bolts AS...W55
- 1 Cover Plate DP...W55
- 1 Clamp Body (2 Clamp Halves) 2 Channel Rail Adaptors CRA...W55

Suitable for various brands and types of channel rails (including Halfen, Hilti, Unistrut® etc.).



HKS-110a-ACT-DP-MUS-M-W55

W55 is the recommended option for metal hardware to be used with STAUFF ACT Clamps.

#### Installation in Field Trays / Cable Ladders

Required components:

2 Self-Locking Nuts MUS-HKS ... W55 1 Cover Plate DP ... W55

- 1 Clamp Body (2 Clamp Halves)
- 2 Hammerhead Bolts HKS ... W55

Suitable for commonly used field trays and cable ladders with diagonal, lengthwise and/or crosswise slots and perforations.

# CRA-110a-ACT-DP-AS-M-W55

W55 is the recommended option for metal hardware to be used with STAUFF ACT Clamps.

W55 is the recommended option for metal hardware to be used with STAUFF ACT Clamps.



#### **Multi-Level Installation** in Field Trays / Cable Ladders

Required components (for a maximum of two levels in total):

- 2 Self-Locking Nuts MUS-HKS ... W55 1 Cover Plate DP ... W55
- 1 ACT Clamp Body (2 Clamp Halves)
- 1 Safety Locking Plate SIG...ACT-W55
- 2 Stacking Bolts AF-HKSK...W55
- 1 ACT Clamp Body (2 Clamp Halves)
- 2 Hammerhead Bolts HKSK ... W55

Suitable for commonly used field trays and cable ladders with diagonal, lengthwise and/or crosswise slots and perforations.

#### **Order Codes**

Upper Level: HKSK-212.7-ACT-DP-MUS-M-W55 Lower Level: 212.7-ACT-SIG-AF-HKSK-M-W55

W55 is the recommended option for metal hardware to be used with STAUFF ACT Clamps.



#### **Multi-Level Installation** in Field Trays / Cable Ladders

Required components (for a maximum of two levels in total):

2 Self-Locking Nuts MUS-HKS ... W55 1 Cover Plate DP ... W55

- 1 ACT Clamp Body (2 Clamp Halves)
- 1 ACT Clamp Body (2 Clamp Halves)
- 2 Hammerhead Bolts HKSV ... W55

Suitable for commonly used field trays and cable ladders with diagonal, lengthwise and/or crosswise slots and perforations.

#### **Order Codes**

**Order Code** 

Upper Level: 212.7-ACT (Clamp Body only) Lower Level: HKSV-212.7-ACT-DP-MUS-M-W55

W55 is the recommended option for metal hardware to be used with STAUFF ACT Clamps.

Ε

#### R STAUFF

#### Twin Series according to DIN 3015, Part 3 **ACT Clamp Body**

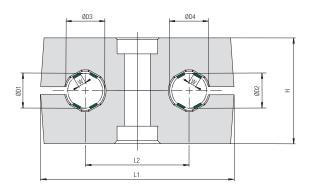


#### **Ordering Codes** *2*12.7/12.7-*ACT **Clamp Body** One clamp body consists of two identical clamp halves, each with four integrated rubber strips. * 1st Part of STAUFF Group * Exact outside diameters Ø D1 / Ø D2 (mm) 12.7/12.7 * Material code ACT



Integrated Rubber Strips made of Anti-Corrosion Elastomer (ACE)

2



Group S	ize		Diameters	Ordering Code	Packaging Unit	Dime	nsions	( ^{mm} /in)			
STAUFF	DIN	ØD1/ØD (mm)	2 (in)	(2 Clamp Halves)	(in pieces / bag)	ØD3/ ØD4	W	L1	L2	Н	Width
		6		106/06-ACT	25	9 .35	1,4 .06	-			
		6,4	1/4	106.4/06.4-ACT	25	9,4 .37	1,5 .06				
1D	1	9,5	3/8	109.5/09.5-ACT	25	12,5 .49	2,2 .09	36 1.42	20 .79	26,6 1.05	30 1.18
		10		110/10-ACT	25	13 .51	2,3 .09	-			
		12		112/12-ACT	25	15 .59	2,8 .11	-			
2D	2	12,7	1/2	212.7/12.7-ACT	25	15,7 .62	3,5 .14	53	29	26,6	
ZD	Ζ	14		214/14-ACT	25	17 .67	3,5 .14	2.09	1.14	1.05	1.18
		18		318/18-ACT	25	21 .83	3,5 .14	-			
		19	3/4	319/19-ACT	25	22 .87	3,5 .14				
3D	3	20		320/20-ACT	25	23 .91	3,5 .14	67 2.64	36 1.42	36,6 1.44	30 1.18
		21,3		321.3/21.3-ACT	25	24,3 .96	3,5 .14				
		25,4	1	325.4/25.4-ACT	25	28,4 1.12	3,5 .14	-			

Additional outside diameters and combinations of different outside diameters are available upon request. Please contact STAUFF for further information.





#### **ACT Mounting Hardware** Installation on Single Weld Plates

#### **Required components:**

- I ACT Hexagon Head Bolt AS...W55
- I ACT Cover Plate GD...W55
- 1 ACT Clamp Body (2 Clamp Halves)
- 1 ACT Single Weld Plate SP...W55

Before welding, always make sure that the designated position of the ACT Weld Plate is suitable for the expected loads.

#### **Material Code** W55

#### **ACT Mounting Hardware** Material Properties and Handling Instructions

ACT Mounting Hardware is made of Stainless Steel V4A (Material Code: W55) with enhanced corrosion resistance by practically excluding metallic and non-metallic impurities during production, processing and handling.

ACT Mounting Hardware is always delivered in hermetically-sealed quality storage bags with 25 pieces each to avoid contamination during transport.

Always make sure that ACT Mounting Hardware is stored separately from carbon steel and any other metals, and that appropriate tools are used to assemble the clamps. Details: www.stauff.com/act/assembly

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.12 .28

.12

.12

9

.35

.35

9

#### **ACT Hexagon Head Bolt** Type AS ... W55 (according to DIN 931 / 933)





Dimensions applicable only when used with Cover Plate GD and Weld Plate SP

Group STAUFF	DIN	Dimensions ( ^{mm} / _{in} ) Thread G x L	Ordering Code	Packaging Unit (in pieces / bag)
1D	1	M6 x 35 M6 x 1.38	AS-M6x35-W55	25
2D	2	M8 x 35 M8 x 1.38	AS-M8x35-W55	25
3D	3	M8 x 45 M8 x 1.77	AS-M8x45-W55	25



Dimensions (mm/in)

н

7

7

В

30 7

1.18 .28

1.18 .28

1.18 .28

30

30

34

1.34

52

2.05

2.56

65

**ACT Cover Plate** 

fre

Group STAUFF DIN

1

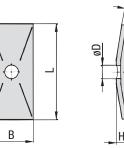
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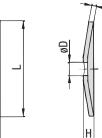
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1D

2D

3D





	-	
	Ordering Code	Packaging Unit
ØD	Ū	(in pieces / bag)
7		

25

25

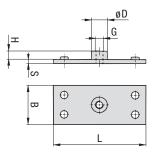
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GD-1D-W55

GD-2D-W55

GD-3D-W55

#### **ACT Single Weld Plate** Type SP ... W55





Group		Dime	nsions	; ( ^{mm} /in)		Ordering Code Packaging Unit						
STAUFF	DIN	G	L	В	S	Н	ØD		(in pieces / bag)			
1D	4	M6	37	30	3	6,5	12	SP-1D-M-W55	25			
ID	1	IVIO	1.46	1.18	.12	.26	.47	5P-1D-INI-W00	20			
2D	2	M8	55	30	5	6	14	SP-2D-M-W55	25			
20	2	IVIO	2.17	1.18	.20	.24	.55	5P-2D-IVI-W00	20			
3D	3	M8	70	30	5	6	14	SP-3D-M-W55	25			
30	3	IVIO	2.76	1.18	.20	.24	.55	35-30-101-0033	20			

S





**ACT Stacking Bolt** 

Type AF ... W55

#### ACT Mounting Hardware Multi-Level Installation (with Weld Plate)

#### Required components for each level:

- I ACT Stacking Bolt AF...W55
- 1 ACT Safety Locking Plate SIV...ACT
- 1 ACT Clamp Body (2 Clamp Halves)

Thread G

The upper layer is secured by a cover plate and hexagon head bolts. The lower layer has to be mounted to a weld plate (with a recommended maximum of two levels in total).

Hex

#### ACT Mounting Hardware Material Properties and Handling Instructions

ACT Mounting Hardware is made of Stainless Steel V4A (Material Code: W55) with enhanced corrosion resistance by practically excluding metallic and non-metallic impurities during production, processing and handling.

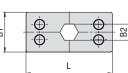
ACT Mounting Hardware is always delivered in hermetically-sealed quality storage bags with 25 pieces each to avoid contamination during transport.

Always make sure that ACT Mounting Hardware is stored separately from carbon steel and any other metals, and that appropriate tools are used to assemble the clamps. <u>Details: www.stauff.com/act/assembly</u>

#### ACT Safety Locking Plate Type SIV ... ACT







Made of flame-retardant PP-VO plastic material; tested and VO classified according to UL 94

ITTALE INTERATION.								
Group		Dimen	isions (	( ^{mm} / _{in} ) Order Code Packaging U				
STAUFF	DIN	G	L1	L2	L3 min.	Hex		(in pieces / bag)
1D	4	M6	34	20	12	11	AF-1/1A/1D-M-W55	25
ID	I	WIO	1.33	.78	.47	.43	AF-1/1A/1D-W-W55	20
2D	2	M8	33	20	11	12	AF-2D-M-W55	25
20	2	IVIO	1.30	.78	.43	.47	AF-2D-IVI-W00	20
3D	3	M8	44	29	15	12	AF-3D-M-W55	05
30	3	NIO	1.73	1.14	.59	.47	AL-2D-INI-M22	25

Group STAUFF	DIN	Dimens L	sions ( ^{mm} ) B1	/in) B2	S	Order Code	Packaging Unit (in pieces / bag)
10	4	34	30	11,2	2		05
1D	1	1.39	1.18	.44	.08	SIV-1D-PP-V0-ACT	25
2D	2	52	30	12,1	2	SIV-2D-PP-VO-ACT	25
20	2	2.05	1.18	.48	.08	31V-2D-FF-VU-AG1	20
3D	3	65	30	12,1	2	SIV-3D-PP-VO-ACT	25
50	5	2.56	1.18	.48	.08	31V-3D-FF-VU-AG1	20





**ACT Hexagon Head Bolt** 

Type AS ... W55 (according to DIN 931 / 933)

#### ACT Mounting Hardware Installation with Channel Rail Adaptors

#### **Required components:**

- 1 ACT Hexagon Head Bolt AS...W55
- 1 ACT Cover Plate GD...W55
- 1 ACT Clamp Body (2 Clamp Halves)
- 1 ACT Channel Rail Adaptor CRA...W55

Suitable for various brands and types of channel rails (including Halfen, Hilti, Unistrut® etc.).

## Material Code

#### ACT Mounting Hardware Material Properties and Handling Instructions

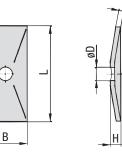
ACT Mounting Hardware is made of Stainless Steel V4A (Material Code: W55) with enhanced corrosion resistance by practically excluding metallic and non-metallic impurities during production, processing and handling.

ACT Mounting Hardware is always delivered in hermetically-sealed quality storage bags with 25 pieces each to avoid contamination during transport.

Always make sure that ACT Mounting Hardware is stored separately from carbon steel and any other metals, and that appropriate tools are used to assemble the clamps. <u>Details: www.stauff.com/act/assembly</u>

#### ACT Cover Plate Type GD ... W55

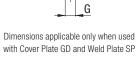




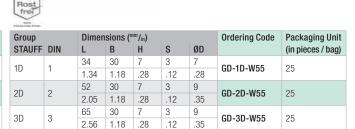
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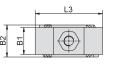


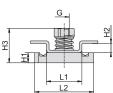
In the second second second				
Group STAUFF	DIN	Dimensions ( ^{mm} / _{in} ) Thread G x L	Ordering Code	Packaging Unit (in pieces / bag)
1D	1	M6 x 35 M6 x 1.38	AS-M6x35-W55	25
2D	2	M8 x 35 M8 x 1.38	AS-M8x35-W55	25
3D	3	M8 x 45 M8 x 1.77	AS-M8x45-W55	25



#### Channel Rail Adaptor Type CRA ... W55



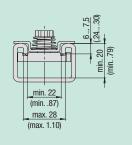




#### Suitability Chart for ACT Channel Rail Adaptors in the Twin Series

The STAUFF Channel Rail Adaptor, type CRA, is suitable for various brands and types of channel rails (including Halfen, Hilti, Unistrut® etc.). The drawing describes the basic dimensional requirements for channel rails to be used with STAUFF Channel Rail Adaptors, type CRA.

In case of doubt, please do not hesitate to contact STAUFF prior to field application.



Group		Dimensions	6 ( ^{mm} /in)								Order Code	Packaging Unit
STAUFF	DIN	G	L1	L2	L3	B1	B2	H1	H2	H3		(in pieces / bag)
10	4	MG	21	35	40	16	19	6	5,5	20,5	CRA-1-8/1D-M-W55	25
1D	I	M6	.83	1.38	1.57	.63	.75	.24	.22	.81	GRA-1-6/ ID-IM-W00	20
2D	2	- M8	21	35	38	53	19	9	5,5	23,5	CRA-2-3D-M-W55	25
3D	3	IVIO	.83	1.38	1.50	2.09	.75	.35	.22	.93	GRA-2-3D-M-W35	20





#### ACT Mounting Hardware Installation in Field Trays / Cable Ladders

#### **Required components:**

0

**All-Metal Self-Locking ACT Nut** 

Dimensions (mm/in)

.20

6,5

.26

Thread G H

M6

M8

Type MUS-HKS ... W55 (similar to DIN 980 / Biloc)

Hex

Hex

10

.39

13

.51

- 1 ACT Self-Locking Nut MUS-HKS ... W55
- 1 ACT Cover Plate GD ... W55
- 1 ACT Clamp Body (2 Clamp Halves)
- 1 ACT Hammerhead Bolt HKS ... W55

Suitable for commonly used field trays and cable ladders with diagonal, lengthwise and/or crosswise slots and perforations.

For use with ACT Hammerhead Bolts HKS ... W55

**Ordering Code** 

MUS-HKS-M6-W55

MUS-HKS-M8-W55

#### ACT Mounting Hardware W555 Material Properties and Handling Instructions

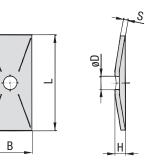
ACT Mounting Hardware is made of Stainless Steel V4A (Material Code: W55) with enhanced corrosion resistance by practically excluding metallic and non-metallic impurities during production, processing and handling.

ACT Mounting Hardware is always delivered in hermetically-sealed quality storage bags with 25 pieces each to avoid contamination during transport.

Always make sure that ACT Mounting Hardware is stored separately from carbon steel and any other metals, and that appropriate tools are used to assemble the clamps. <u>Details: www.stauff.com/act/assembly</u>

#### ACT Cover Plate Type GD ... W55





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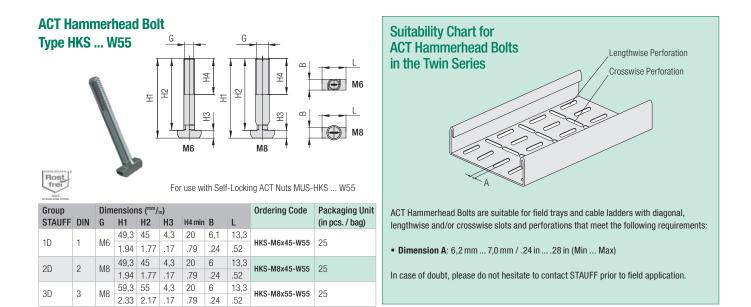
Packaging Unit

(in pieces / bag)

25

25

Information and Arrest.								
Group		Dimen	sions ("	^{im} /in)		Ordering Code	Packaging Unit	
STAUFF	DIN	L	В	Н	S	ØD		(in pieces / bag)
1D	4	34	30	7	3	7		25
ID	1	1.34	1.18	.28	.12	.28	GD-1D-W55	20
0.0	0	52	30	7	3	9		0.5
2D	2	2.05	1.18	.28	.12	.35	GD-2D-W55	25
3D	3	65	30	7	3	9	GD-3D-W55	05
30	3	2.56	1.18	.28	.12	.35	GD-3D-W55	25



Rost

Group

1D

2D

3D

STAUFF DIN

1

2

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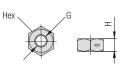
#### ACT Mounting Hardware Multi-Level Installation (with Stacking & Hammerhead Bolts)

Required components (for a recommended maximum of two levels in total):

- 1 ACT Self-Locking Nut MUS-HKS ... W55
- 1 ACT Cover Plate GD ... W55
- 1 ACT Clamp Body (2 Clamp Halves)
- I ACT Stacking Bolt AF-HKSK...W55
- 1 ACT Safety Locking Plate SIV...ACT
- 1 ACT Clamp Body (2 Clamp Halves)
- I ACT Hammerhead Bolt HKSK ... W55

#### All-Metal Self-Locking ACT Nut Type MUS-HKS ... W55 (similar to DIN 980 / Biloc)







For use with ACT Stacking Bolts AF-HKS ... W55

Group STAUFF	DIN	Dimensior Thread G	ns ( ^{mm} / _{in} ) H	Hex	Ordering Code	Packaging Unit (in pieces / bag)
1D	4	M6	5	10	MUS-HKS-M6-W55	25
ID	1	IVIO	.20	.39	102-042-1010-0022	
2D	2	M8	6,5	13	MUS-HKS-M8-W55	05
3D	3	MO	.26	.51	MO2-UV2-M02-M22	25

#### ACT Mounting Hardware Material Properties and Handling Instructions

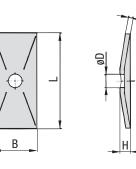
ACT Mounting Hardware is made of Stainless Steel V4A (Material Code: W55) with enhanced corrosion resistance by practically excluding metallic and non-metallic impurities during production, processing and handling.

ACT Mounting Hardware is always delivered in hermetically-sealed quality storage bags with 25 pieces each to avoid contamination during transport.

Always make sure that ACT Mounting Hardware is stored separately from carbon steel and any other metals, and that appropriate tools are used to assemble the clamps. Details: www.stauff.com/act/assembly

#### ACT Cover Plate Type GD ... W55







RYANG SING STREET								
Group Dimensions ( ^{mm} / _{in} )							Ordering Code	Packaging Unit
STAUFF DIN		L	В	Н	S	ØD		(in pieces / bag)
1D	4	34	30	7	3	7	GD-1D-W55	25
ID	1	1.34	1.18	.28	.12	.28		20
2D	2	52	30	7	3	9	GD-2D-W55	25
20	2	2.05	1.18	.28	.12	.35	GD-2D-W00	20
3D	3	65	30	7	3	9	GD-3D-W55	25
20	3	2.56	1.18	.28	.12	.35		20

#### ACT Stacking Bolt Type AF-HKSK ... W55



Dimensions (

L1

49

1.93

50

61

1.97

2.40 1.81 .59

G

M6

M8

M8

^{1m}/in)

L2

35

37

46

1.38

1.47 .43

Rost

Group

1D

2D

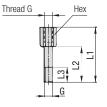
3D

STAUFF DIN

1

2

3



For use with Self-Locking ACT Nuts MUS-HKS ... W55

Order Code

AF-HKSK-1D-M-W55 25

AF-HKSK-2D-M-W55 25

AF-HKSK-3D-M-W55 25

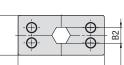
Packaging Unit

(in pieces / bag)

#### ACT Safety Locking Plate Type SIV ... ACT

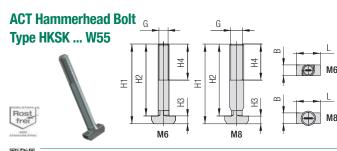






Made of flame-retardant PP-VO plastic material; tested and VO classified according to UL 94

Group		Dimen	sions ( ^{mm}	/in)		Order Code	Packaging Unit
STAUFF	DIN	L	B1	B2	S		(in pieces / bag)
1D	1	34	30	11,2	2	SIV-1D-PP-V0-ACT	25
U U	1	1.39	1.18	.44	.08	31V-1D-FF-VU-AG1	20
2D	2	52	30	12,1	2	SIV-2D-PP-VO-ACT	25
20	2	2.05	1.18	.48	.08	31V-2D-FF-VU-AG1	20
3D	3	65	30	12,1	2	SIV-3D-PP-VO-ACT	25
30	3	2.56	1.18	.48	.08	31V-3D-PP-V0-AG1	20



L3 min. Hex

11

.43

12

.47

12

.47

12

.47

11

15

Group	Group Dimensions ( ^{mm} / _{in} )									Packaging Unit
STAUFF	DIN	G	H1	H2	H3	H4 min	В	L		(in pcs. / bag)
1D	4	M6	29,3	25	4,3	20	6,1	13,3	UKCK MOVOE WEE	05
ID	I	IVIO	1.15	.98	.17	.79	.24	.52	HKSK-M6x25-W55	20
2D	2	M8	32,3	28	4,3	20	6	13,3	HKSK-M8x28-W55	0.5
20	2	IVIO	1.27	1.10	.17	.79	.24	.52	HK2K-INIOX20-W00	20
3D	3	M8	42,3	38	4,3	20	6	13,3	HKSK-M8x38-W55	0.5
30	3	IVIO	1.67	1.50	.17	.79	.24	.52	UK9V-M0X30-M00	25

S





**All-Metal Self-Locking ACT Nut** 

Type MUS-HKS ... W55 (similar to DIN 980 / Biloc)

#### ACT Mounting Hardware Multi-Level Installation in Field Trays / Cable Ladders (with Hammerhead Bolts)

Required components (for a recommended maximum of two levels in total):

- 1 ACT Self-Locking Nut MUS-HKS ... W55
- 1 ACT Cover Plate GD ... W55
- 1 ACT Clamp Body (2 Clamp Halves)
- 1 ACT Safety Locking Plate SIV-ACT
- 1 ACT Clamp Body (2 Clamp Halves)
- 1 ACT Hammerhead Bolt HKSV ... W55

#### ACT Mounting Hardware W555 Material Properties and Handling Instructions

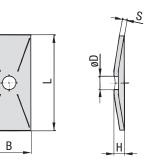
ACT Mounting Hardware is made of Stainless Steel V4A (Material Code: W55) with enhanced corrosion resistance by practically excluding metallic and non-metallic impurities during production, processing and handling.

ACT Mounting Hardware is always delivered in hermetically-sealed quality storage bags with 25 pieces each to avoid contamination during transport.

Always make sure that ACT Mounting Hardware is stored separately from carbon steel and any other metals, and that appropriate tools are used to assemble the clamps. <u>Details: www.stauff.com/act/assembly</u>

#### ACT Cover Plate Type GD ... W55





Rost frei

Group Dimensions ( ^{mm} / _{in} )							Ordering Code	Packaging Unit
STAUFF	DIN	L	B	H	S	ØD	Ũ	(in pieces / bag)
1D	4	34	30	7	3	7	GD-1D-W55	25
ID	1	1.34	1.18	.28	.12	.28	GD-1D-W55	20
00	0	52	30	7	3	9		0.5
2D	2	2.05	1.18	.28	.12	.35	GD-2D-W55	25
20	0	65	30	7	3	9		05
3D	3	2.56	1.18	.28	.12	.35	GD-3D-W55	25

#### Rost

For use with ACT Hammerhead Bolts HKS ... W55

Group		Dimension	IS ( ^{mm} /in)		Ordering Code	Packaging Unit	
STAUFF	DIN	Thread G	Н	Hex		(in pieces / bag)	
1D	4	M6	5	10	MUS-HKS-M6-W55	25	
IU II	1	IVIO	.20	.39	1003-003-100-0033	20	
2D	2	M8	6,5	13	MUS-HKS-M8-W55	05	
3D	3	IVIO	.26	.51	1002-042-102-0022	25	

Hex

# ACT Hammerhead Bolt Type HKSV ... W55 $\xrightarrow{G}$ 


For use with Self-Locking ACT Nuts MUS-HKS ... W55

	Dim	ensior	Ordering Code	Packaging Unit					
DIN	G	H1	H2	H3	H4 min	В	L		(in pcs. / bag)
4	MC	76,3	72	4,3	20	6,1	13,3	UKOV MOVZO WEE	05
I	IVIO	3.00	2.83	.17	.79	.24	.52	HKSV-M6X/2-W55	20
0	MO	77,3	73	4,3	20	6	13,3	HKCV MOV72 WEE	05
2	IVIO	3.04	2.87	.17	.79	.24	.52	HK3V-INIOX73-W33	20
0	MO	97,3	93	4,3	20	6	13,3	HKCV MOVOS WEE	25
3	IVIO	3.83	3.66	.17	.79	.24	.52	HK3V-INIOX93-W33	25
	<b>DIN</b> 1 2 3	DIN         G           1         M6           2         M8	$ \begin{array}{c c} \text{DIN} & \text{G} & \text{H1} \\ \hline 1 & M6 & \frac{76,3}{3.00} \\ 2 & M8 & \frac{77,3}{3.04} \\ 3 & M8 & \frac{97,3}{3.04} \end{array} $	DIN         G         H1         H2           1         M6         76,3         72           3.00         2.83           2         M8         77,3         73           3.04         2.87           3.05         97,3         93	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	DIN         G         H1         H2         H3         H4 min           1         M6         76,3         72         4,3         20           3.00         2.83         .17         .79           2         M8         77,3         73         4,3         20           3.04         2.87         .17         .79           3         M8         97,3         93         4,3         20		DIN         G         H1         H2         H3         H4min         B         L           1         M6         76,3         72         4,3         20         6,1         13,3           3.00         2.83         1.7         .79         .24         .52           2         M8         77,3         73         4,3         20         6         13,3           3.04         2.87         .17         .79         .24         .52           3         M8         97,3         93         4,3         20         6         13,3	DIN         G         H1         H2         H3         H4 min         B         L           1         M6         76,3         72         4,3         20         6,1         13,3           1         M6         76,3         72         4,3         20         6,1         13,3           2         M8         77,3         73         4,3         20         6         13,3           3.04         2.87         .17         .79         .24         .52         HKSV-M8x73-W55           3         M8         97,3         93         4,3         20         6         13,3           HKSV-M8x73-W55         HKSV-M8x73-W55         HKSV-M8x73-W55         HKSV-M8x73-W55

#### ACT Safety Locking Plate Type SIV ... ACT

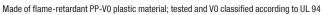


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Group		Dimens	sions ( ^{mm} ,	/in)		Order Code	Packaging Unit
STAUFF	DIN	L	B1	B2	S		(in pieces / bag)
1D	4	34	30	11,2	2	SIV-1D-PP-V0-ACT	25
ID	1	1.39	1.18	.44	.08	51V-1D-PP-VU-AG1	20
2D	2	52	30	12,1	2	SIV-2D-PP-V0-ACT	25
20	2	2.05	1.18	.48	.08	31V-2D-FF-VU-AG1	20
3D	3	65	30	12,1	2	SIV-3D-PP-VO-ACT	25
30	3	2.56	1.18	.48	.08	31V-3D-FP-VU-AG1	20





#### STAUFF ACT Clamps: Anti-Corrosion Technology

#### Multi-Level Installation (with Weld Plate)

Required components (for each level) for a maximum of two levels in total:

1 Stacking Bolt AF...W55

- 1 Safety Locking Plate SIG...W55
- 1 ACT Clamp Body (2 Clamp Halves)

The upper layer has to be secured by a cover plate and hexagon head bolts. The lower level has to be mounted to a weld plate.

#### Order Code

#### 110/10-ACT-SIV-ACT-AF-M-W55

W55 is the recommended option for metal hardware to be used with STAUFF ACT Clamps.



#### Order Code

#### SP-110/10-ACT-GD-AS-M-W55

W55 is the recommended option for metal hardware to be used with STAUFF ACT Clamps.

#### Installation with Channel Rail Adaptors

Required components:

1 Hexagon Head Bolt AS...W55

Installation on Weld Plate

1 Hexagon Head Bolt AS...W55 1 Cover Plate GD...W55

1 Single Weld Plate SP...W55

1 ACT Clamp Body (2 Clamp Halves)

Before welding, always make sure that

is suitable for the expected loads.

the designated position of the weld plate

Required components:

- 1 Cover Plate GD...W55
- 1 ACT Clamp Body (2 Clamp Halves)
- 1 Channel Rail Adaptor CRA...W55

Suitable for various brands and types of channel rails (including Halfen, Hilti, Unistrut® etc.).



HKS-110/10-ACT-GD-MUS-M-W55

W55 is the recommended option for metal hardware to be used with STAUFF ACT Clamps.

**Order Code** 

#### Installation in Field Trays / Cable Ladders

Required components:

- 1 Self-Locking Nut MUS-HKS ... W55
- 1 Cover Plate GD ... W55
- 1 ACT Clamp Body (2 Clamp Halves)
- 1 Hammerhead Bolt HKS ... W55

Suitable for commonly used field trays and cable ladders with diagonal, lengthwise and/or crosswise slots and perforations.

#### Order Code

#### CRA-110/10-ACT-GD-AS-M-W55

W55 is the recommended option for metal hardware to be used with STAUFF ACT Clamps.



#### Multi-Level Installation in Field Trays / Cable Ladders

<u>Required components</u> (for a maximum of two levels in total):

- 1 Self-Locking Nut MUS-HKS ... W55
- 1 Cover Plate GD ... W55
- 1 ACT Clamp Body (2 Clamp Halves)
- 1 Stacking Bolt AF-HKSK...W55
- 1 Safety Locking Plate SIV...ACT
- 1 ACT Clamp Body (2 Clamp Halves)
- 1 Hammerhead Bolt HKSK ... W55

Suitable for commonly used field trays and cable ladders with diagonal, lengthwise and/or crosswise slots and perforations.

#### **Order Codes**

Upper Level: HKSK-212.7/12.7-ACT-GD-MUS-M-W55 Lower Level: 212.7/12.7-ACT-SIV-ACT-AF-HKSK-M-W55

W55 is the recommended option for metal hardware to be used with STAUFF ACT Clamps.



#### Multi-Level Installation in Field Trays / Cable Ladders

<u>Required components</u> (for a maximum of two levels in total):

1 Self-Locking Nut MUS-HKS ... W55

- 1 Cover Plate GD ... W55 1 ACT Clamp Body (2 Clamp Halves)
- 1 Safety Locking Plate SIV-ACT
- 1 ACT Clamp Body (2 Clamp Halves)
- 1 Hammerhead Bolt HKSV ... W55

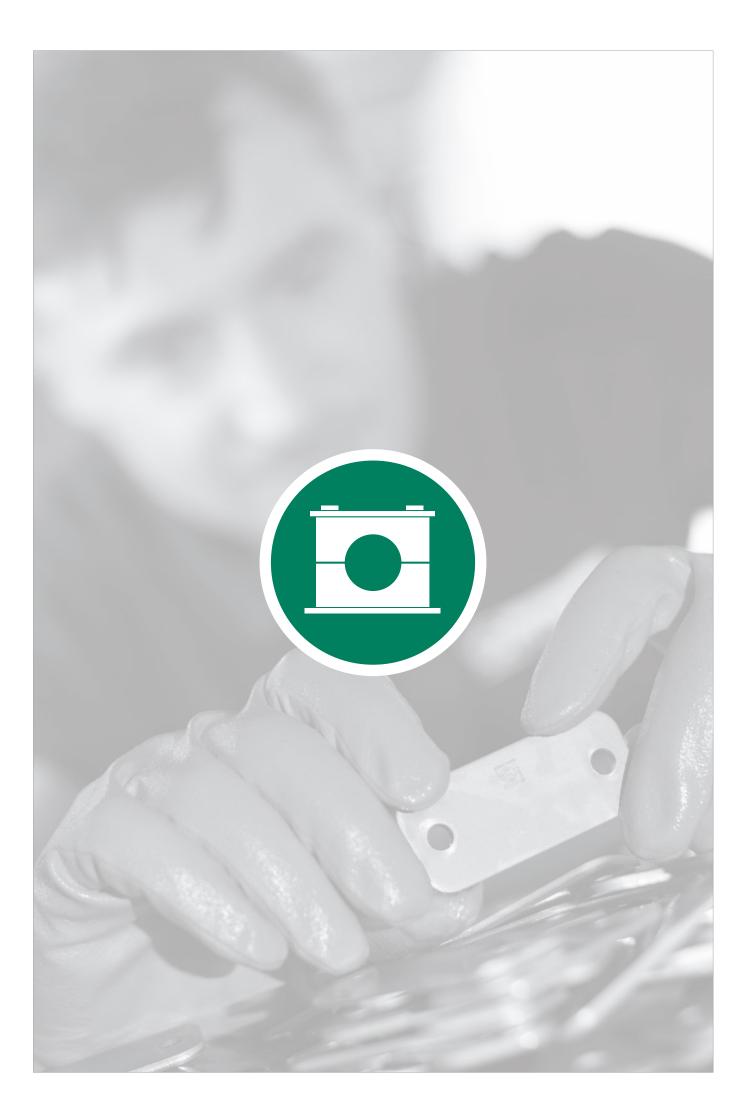
Suitable for commonly used field trays and cable ladders with diagonal, lengthwise and/or crosswise slots and perforations.

#### Order Codes

#### Upper Level: HKSV-212.7/12.7-ACT-GD-MUS-M-W55 Lower Level: 212.7/12.7-ACT-SIV-ACT

W55 is the recommended option for metal hardware to be used with STAUFF ACT Clamps.

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	Introduction	92
	Weld Stud with Female Thread SWG-SF	92
9	Distance Plate for DIN 3015 Clamps SWG-DIP	93
	Cable Tie Holder SWG-CTH-11-M6	93
	Cable Tie / Tension Belt Holder SWG-CTH-30-M6-1	93
	Cable Tie / Tension Belt Holder SWG-CTH-30-M6-2	93
	Starterkit SWG-WI06-Starterkit	94
	Weld Inverter SWG-WI06	94
A	Weld Gun - Arc Ignition SWG-WG	94
C	Distance Adaptor SWG-AGS	95
	Distance Tube DIT-SR6-SWG	95
	Stud Retainer SWG-SR6	95
	Ground Cable SWG-GC	95



#### **STAUFF SWG Stud Welding System**

In many areas, stud welding is considered to be the most economic fastening method for components and is sometimes even the only technically feasible solution. Because the stud is joined with the substructure over the entire surface of the stud, a high strength of the ioint can be achieved.

STAUFF is now using this proven principle for the installation of pipe, tube, hose and cable clamps in the Standard Series (according to DIN 3015, part 1) as well as in the Twin Series (according to DIN 3015, part 3) with M6 mounting thread, where female threaded weld studs replace the regular weld plates; distance plates made from plastic provide the necessary spacing between the clamp bodies and the substructure.

If required, the system can also be adopted for alternative fastening methods, e.g. for clamping belts, cable ties or conduit hoses.

In addition to the individual components - weld studs, distance plates, clamp bodies and metal hardware required - STAUFF also provides the correspondingly designed assembly tools such as the weld inverter and the weld gun with distance tube, stud retainer and distance adaptor for DIN 3015 clamps. The lightweight and compact weld inverter works without high-voltage current.

Thanks to increased productivity and flexibility for the installation of clamps, the system offers considerable savings potentials for users with significant processing volumes, especially when working in horizontal or overhead position. The amount of rework on welding locations can be significantly decreased, and material distortion is reduced to a minimum through low thermal

The joint of the weld stud with the substructure impresses in particular with a high degree of strength and safety, which is at least at the same level as for regular weld plates.

- Developed and optimised to the functions of original STAUFF Clamps in the Standard Series (DIN 3015, Part 1)
- Versatile combination and adaptation options available (e.g. fastening elements for conduit hoses, clamping belts and cable ties)
- All installation options are fully covered by only one weld stud
- · Significant time and cost savings by a quicker welding process and reduced rework on welding locations
- Material distortion reduced to a minimum through low thermal stress (particularly significant when handling thin metal sheets)
- High degree of safety and protection against corrosion due to a welded joint over the whole surface
- Lightweight and compact designed welding inverter
- By default no shielding gas or ceramic ferrule required
- Works without high-voltage current

**Ordering Codes** 

Weld Stud

#### Weld Stud with Female Thread **Type SWG-SF**





Assembly using weld plates

100%

	Group		Dimensions ("	^{im} /in)		Order Codes	Packaging Units
	STAUFF	DIN	Thread G	ØD1	H1	(Standard Options)	(in pcs. / per bag)
124			M6	11	14	SWG-SF-M6x11x14-W124	100
G-SF		08	IVIO	.43	.55	3wd-31-w0x11x14-w124	100
1x14	1 8	00	1/4 00 UNC	11	14	SWG-SF-UNC1/4-20x11x14-W124	100
1v14			1/4-20 UNC	.43	.55		

Alternative materials are available upon request. Please contact STAUFF for further information.

Maximum torque rating: 6 N·m / 4.43 ft·lb. Specific series can further limit the torque rating. The maximum loads in pipe direction listed on page 161 reduce accordingly. In case of doubt, please contact STAUFF in advance.



#### **Reduction of the** assembly time per clamp*



*For a typical assembly procedure in production environments.

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stress

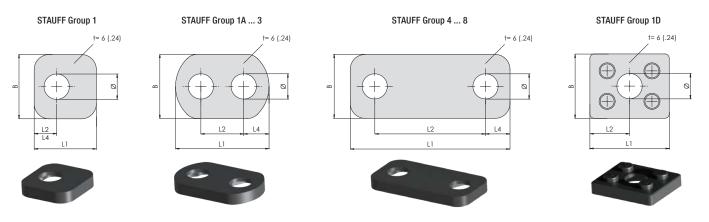


*SWG-SF-*M6x11x14-*W1

* Material code copper coating C1E W124 (DIN EN ISO 4042)



#### Distance Plate for DIN 3015 Clamps Type SWG-DIP



Group		Pipe/Tube-Ø (mm/in)	Dimen	sions (m	ⁿ /in)			Order Codes	Packaging Units				
STAUFF	DIN	Clamp Body	L1	L2*	L4	В	Ø	(Standard Options)	(in pcs. / per bag)	Ordering Codes			
1	0	6 12	29	10,5	10,5	30	11,8	SWG-DIP-1-PP-BK	25	,			
1	0	.2448	1.14	.41	.41	1.18	.46	SWG-DIF-I-FF-DK	25	Distance Plate			
1A	1	6 12	43,5	20	11,8	30	11,8	SWG-DIP-1A-PP-BK	25				
IA	1	.2448	1.71	.79	.46	1.18	.46	SWG-DIF-IA-FF-DK	25	* Distance Plate			
2	2	12,7 18	48,5	26	11,3	30	11,8	SWG-DIP-2-PP-BK	25				
2	2	.5071	1.90	1.02	.44	1.18	.46	3W0-DIF-2-FF-DK	25	* STAUFF Group			
3	3	19 25,4	56,5	33	11,8	30	11,8	SWG-DIP-3-PP-BK	25				
3	3	.75 1.00	2.22	1.30	.46	1.18	.46	SWU-DIF-3-PP-BK	SWU-DIF-S-FF-DK	SWU-DIF-S-FF-DK	SWU-DIF-S-FF-DK	20	* Material code Polypr
4	4	26,9 32	62	40	11	30	11,8	SWG-DIP-4-PP-BK	25				
4	4	1.06 1.26	2.44	1.57	.43	1.18	.46	SWU-DIF-4-FF-DK	20				
5	5	32 42	75	52	11,5	30	11,8	SWG-DIP-5-PP-BK	25				
5	5	1.26 1.65	2.95	2.05	.45	1.18	.46	SWU-DIF-J-FF-DK	20				
6	6	44,5 54	88	66	11	30	11,8	SWG-DIP-6-PP-BK	25				
0	0	1.75 2.12	3.46	2.60	.43	1.18	.46	SWU-DIF-0-FF-DK	20				
7	7	57,2 76,1	121	94	13,5	30	11,8	SWG-DIP-7-PP-BK	10				
1	1	2.25 3.00	4.76	3.70	.53	1.18	.46	3WG-DIF-7-FF-DK	10				
8	8	88,9 102	147	120	13,5	30	11,8	SWG-DIP-8-PP-BK	10				
0	0	3.50 4.00	5.78	4.72	.53	1.18	.46	SWU-DIF-O-FF-DK	10				
1D	4	6 12	612 37 18,5 - 30 11,8 cure		SWG-DIP-1D-PP-BK 25								
ID ID	1	.2448	1.45	.73	-	1.18	.46	SWU-DIF-ID-FF-DK	25				

Distance Plat	e *SWG-DIP*2	*PP-BK
* Distance Plate		SWG-DIP
* STAUFF Group		2
* Material code	Polypropylene (Colour: Black)	PP-BK

Alternative materials are available upon request. Please contact STAUFF for further information.

* ±0,1(.003)

29 (1.14)

26 (1.02)

Ø6,6

16,4 (.65)

Ø6,6

224 (.94)

6,5 (,26) 5 (,59)

X3

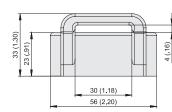
50 (1.97)

30 (1.18)

Material: Polyamide (reinforced)

Suitable for hexagon socket button cap screws M6x12 (ISO 7380-1)

Standard packaging unit: 25 pcs.



Material: Polyamide (reinforced)

Suitable for socket cap screws M6x12 (ISO 4762) or hexagon socket button cap screws M6x12 (ISO 7380-1)

Standard packaging unit: 25 pcs.

Dimensional drawings: All dimensions in mm (in).







**Cable Tie Holder** 

Cable Tie / Tension Belt Holder Type SWG-CTH-30-M6-1

**Cable Tie / Tension Belt Holder** 

Type SWG-CTH-30-M6-2





#### Starterkit including:

- 1 Weld Inverter SWG-WI06
- 1 Weld Gun SWG-WG
- I Ground Cable SWG-GC
- 1 Distance Tube DIT-SR6-SWG-WG30 (for STAUFF Groups 2 to 8)
- 5 Stud Retainer SWG-SR6
- I Toolkit (Box Spanner/Hex Wrench) Operating Manual (English / German)

#### **Required Accessories:**

Distance Adaptor SWG-AGS-... for DIN 3015 Clamps

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- Weld Stud SWG-SF
- Distance Tube DIT-SR6-SWG-WG25
- (for STAUFF Group 1A, if required)

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#### **Characteristics**

- Works without high-voltage current
- No heavy extension cords required
- Extremely powerful and robust
- Compact in design
- Lightweight with only 18 kg / 40 lbs
- Welding current: 100 ... 650 A (stepless control)
- Welding time: 5 ... 200 ms (stepless control)
- Connection Cable: 3 m / 9.84 ft

#### **Required Accessories**

• Weld Gun SWG-WG and Accessories Ground Cable SWG-GC

#### **Technical Data**

#### **Primary Power**

- 100 V to 240 V, 1 phase, 50/60 Hz, 16 AT
- **Primary Plug**
- I6 A 2-pin grounded safety plug (plug type F CEE 7/4)

#### IP Code

- IP 44 (also permits operation outdoors)
- **Ambient Temperature Limits** ■ ±0 °C ... +40 °C / +32 °F ... +104 °F
- Dimensions (L x W x H)
- 474 x 337 x 351 mm / 18.66 x 13.27 x 13.82 in

#### Weld Gun - Arc Ignition **Type SWG-WG**



#### **Characteristics**

- Compact in design
- Lightweight with only 0,8 kg / 1.8 lbs (without cable)
- Ergonomic handle
- Comfortable setup Connection Cable: 5 m / 16.40 ft

#### **Required Accessories**

- Distance Adaptor SWG-AGS-... for DIN 3015 Clamps
- Distance Tube DIT-SR6-SWG-WG30 (for STAUFF Groups 2 to 8)
- Distance Tube DIT-SR6-SWG-WG25 (for STAUFF Group 1A)

Stud Retainer SWG-SR6

#### **Technical Data**

#### Lift

- Adjustment range 3 mm / .11 in, lockable
- Workplace noise level • Up to 90 dB (A) may occur during welding
- Dimensions (L x W x H)
- 200 x 65 x 140 mm / 7.87 x 2.56 x 5.51 in (without cable, without distance tube)



#### Distance Adaptor Type SWG-AGS

Group	DIN	for use with	Ordenian Orden
STAUFF	DIN	for use with	Ordering Codes
1	0	Distance Tube Type A	NO DISTANCE ADAPTOR REQUIRED
1A	1	Distance Tube Type A	SWG-AGS-1A
2	2	Distance Tube Type B	SWG-AGS-2
3	3	Distance Tube Type B	SWG-AGS-3
4	4	Distance Tube Type B	SWG-AGS-4
5	5	Distance Tube Type B	SWG-AGS-5
6	6	Distance Tube Type B	SWG-AGS-6
7	7	Distance Tube Type B	SWG-AGS-7
8	8	Distance Tube Type B	SWG-AGS-8
1D	1D	Distance Tube Type A	NO DISTANCE ADAPTOR REQUIRED

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ISTAUFF



#### Distance Tube Type DIT-SR6-SWG

for use with	Ordering Codes
Distance Adaptor SWG-AGS-1A	DIT-SR6-SWG-WG25
Distance Adaptor SWG-AGS-28	DIT-SR6-SWG-WG30



#### Stud Retainer Type SWG-SR6

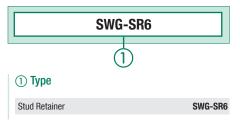


#### **Order Code**

Туре

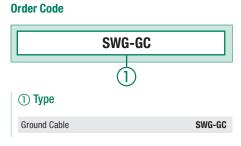
Α

В



Standard packaging unit: 5 pcs.

Ground Cable Type SWG-GC



#### Characteristics

Cable length: 5 m / 16.40 ft
Equipped with 2 vice grips 10"



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	Introduction	98
9	STAUFF Bond Plate for DIN 3015 Clamps	99
	Adhesive Cartridge CB420-50(E)	100
R	Manual Adhesive Dispenser SBD	101
	Dispenser Slide SBDS-81	101
	Mixing Tip SRMT	101

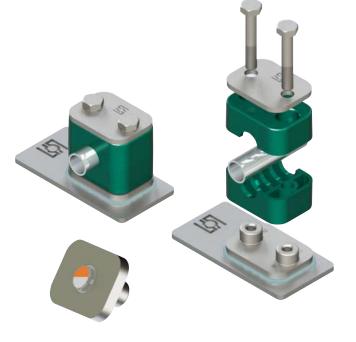


#### STAUFF Bond Adhesive Bonded Fastening

The innovative STAUFF Bond system allows for pipes, tubes, hoses, cables and other components with outside diameters up to 102 mm / 4.00 in to be adhesively bonded to almost any surface material, such as prepared or unprepared metals, thermoplastics and composites.

It enables assembly and service technicians such as tube fitters to replace expensive and sometimes complicated mechanical fastening methods for STAUFF Clamps such as welding, brazing, bolting and riveting - a crucial benefit especially in safety-critical situations where welding is usually not considered to be an option.

- Reduce cycle time and labor cost during installation
- Eliminate need for hot work, fire watch and gas freeing
- Expensive tools and welding equipment no longer necessary
- No external power supply or electrical power required for installation
- Can be used with a variety of surfaces,
- especially in safety-critical situations when welding is not an option
- Enhance structural design, strength and integrity
- Reduce number of holes drilled into the structure
- Prevent galvanic corrosion and potential leak paths
- Maximize design and work sequence flexibility
- Facilitate last minute changes and additions
- Simplify subsequent modification and repair



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STAUFF

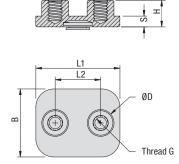


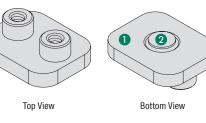
Tensile testing of the STAUFF Bond Plate (type SBP) with STAUFF Bond Adhesive (type CB420-50E) in the STAUFF Technology Centre. Please contact STAUFF for detailed test reports.

www.stauff.com/1/en/#98



#### STAUFF Bond Plate for DIN 3015 Clamps Type SBP







Group Diameter (""		Diameter (mm/in)	Dimensions (	^{nm} /in)						Order Codes	Packaging Unit	
STAUFF	DIN	Clamp Body	Thread G	L1	L2	В	S	Н	ØD	(Standard Options)	(in Pieces)	
1A	1	6 12	M6	36	20	30	5	11,3	11,8	SBP-1A-M-W5	25	
IA	1	.2448	1/4-20 UNC	1.42	.79	1.18	.20	.44	.46	SBP-1A-U-W5		
2	2	12,7 18	M6	42	26	30	5	11,3	11.8	SBP-2-M-W5	05	
2	Ζ	.5071	1/4-20 UNC	1.65	1.02	1.18	.20	.44	.46	SBP-2-U-W5	25	
3	3	19 25,4	M6	50	33	30	5	11,3	11,8	SBP-3-M-W5	25	
3	3	.75 1.00	1/4-20 UNC	1.97	1.30	1.18	.20	.44	.46	SBP-3-U-W5	23	
4	4	26,9 32	M6	60	40	30	5	11,3	11.8	SBP-4-M-W5	25	
4	4	1.06 1.26	1/4-20 UNC	2.36	1.57	1.18	.20	.44	.46	SBP-4-U-W5	20	
5	<b>5</b> 5	32 42	M6	71	52	30	5	11,3	11,8	SBP-5-M-W5	25	
5	J	1.26 1.65	1/4-20 UNC	2.80	2.05	1.18	.20	.44	.46	SBP-5-U-W5	23	
6 ¹	6	44,5 54	M6	88	66	30	5	11,3	11.8	SBP-6-M-W5	25	
0	0	1.75 2.12	1/4-20 UNC	3.46	2.60	1.18	.20	.44	.46	SBP-6-U-W5	20	

Ordering Codes STAUFF Bond Plate *SBP-*2-*M-*W5						
* STAUFF Bond Pla	ate		SBP			
* STAUFF Group			2			
* Thread code	Metric ISO Unified coa	thread rse (UNC) thread	M U			
* Material code	Stainless S 1.4408 (AlS		W5			

Please note: The bonding surface of the STAUFF Bond Plate is primed with a two-component chemically cured waterborne primer (MIL-PRF-85582) that forms a film that is resistant to chemicals, solvents, moisture and abrasion.

¹Please note: For STAUFF Group 6, STAUFF Bond Plates are equipped with each two internal installation fixtures.

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#### Adhesive Cartridge Type CB420-50(E)



#### **Characteristics**

The STAUFF Bond acrylic structural adhesive is a two-component thixotropic paste adhesive (mixing ratio of 10:1) packed in a suitable 35 ml / 1.23 oz dual cartridge.

It is capable of bonding a wide variety of prepared or unprepared metals, engineering thermoplastics and composites, and replacing commonly used mechanical fastening methods such as welding, brazing, bolting and riveting in various industries.

The STAUFF Bond adhesive cures quickly at room temperature and exhibits excellent environmental and chemical resistance.

#### **Processing instructions**

#### Cure Time

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15 to 18 minutes to 75% of ultimate strength and 24 hours to 100% of ultimate strength at room temperature of +24 °C / +75 °F.

#### Shelf Life

Minimum 9 months when stored in a dry place and in the original package at temperatures from +13 °C to +24 °C / +55 °F to +75 °F

Shelf life can be maximized by refrigeration at temperatures from +7 °C to +13 °C / +45 °F to +55 °F.

Do not freeze adhesive!

#### Temperature

Operating temperature range from -55 °C to +121 °C / -67 °F to +240 °F.

Pay attention to the expiry dates printed on the cartridges.

Alternative types of adhesives are available on request. Please contact STAUFF for further information.

Find the safety data sheets at <u>www.stauff.com/en/bond/sds</u>

#### **Ordering Code**



#### **Required Accessories**

Adhesive Dispenser, Dispenser Slide, Mixing Tip

Recommended number of STAUFF Bond Plates SBP to be installed with a single Adhesive Cartridge Type CB420-50(E)								
STAUFF Group         1A         2         3         4         5         6         7         8								
No. of Bond Plates	25	25	20	20	15	15	5	5

#### **Installation Guideline**

#### **Surface Preparation**

Thorough surface preparation is an essential part of adhesive bonding and at least as important as the actual installation.

Lightly abrade glossy surfaces to improve the adhesive bond strength. Just prior to adhesive application, clean surfaces with solvent using clean and lintless rags or paper towels. Do not use shop towels, rags or paper wipes contaminated with oil, soap or reclaimed solvents.

Clean one small area at a time, then dry with a clean cloth before the solvent evaporates to prevent re-deposition of contaminants. To maintain a clean solvent supply, always pour the solvent onto the washing cloth.

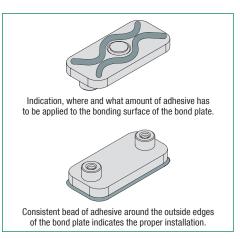
You may also want to clean the bottom of the bond plate prior to adhesive preparation. Use a clean cloth saturated with solvent to wipe the part with a single circular motion. Use caution not to disturb the internal fixture.

Safety note: Always wear gloves and protective glasses!

#### **Dispensing Directions**

- Place the cartridge into the retaining lip on the dispensing gun. Mark the position of the cap of the cartridge, remove it by turning counter-clockwise and keep it for later use. When reclosing the cartridge, the cap must be used in the exact same position as it was before to avoid unwanted mixing and curing.
- 2 Activate the dispensing gun slightly to extrude a small amount of adhesive onto scrap material to ensure adequate flow of both components. Attach the mixing tip to the adhesive cartridge and dispense a small line of adhesive onto scrap material to ensure adequate mixing.
- 3 Remove the protective foil from the internal dynamic installation fixture(s) of the bond plate.
- Apply suitable amount of adhesive to the bonding surface of the bond plate (see drawing on the left), position the part in the desired location on the surface and press lightly on the center of the bond plate to actuate the installation fixture(s), which will provide constant positive pressure and hold the bond plate in position while the advesive cures.

- A consistent bead of adhesive around the outside edges of the bond plate indicates proper installation and is a good visual quality assurance check.
- When not in use, remove and dispose the mixing tip and replace the cap to preserve remaining adhesive.



Selection, proper application and correct installation of the products are the user's responsibility!





#### **STAUFF Bond: Adhesive Bonded Fastening**

#### Manual Adhesive Dispenser Type SBD

# Ordering Code SBD 1 1 1 Type Manual Adhesive Dispenser SBD

#### **Required Accessories**

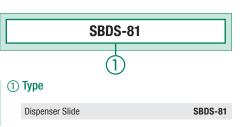
Dispenser Slide, Mixing Tip

#### **Characteristics**

The STAUFF Bond Manual Adhesive Dispenser has been designed for use with STAUFF Bond dual adhesive cartridges. It is paired with a specific slide for dispensing adhesives with the correct mixing ratio.



#### **Ordering Code**



#### **Characteristics**

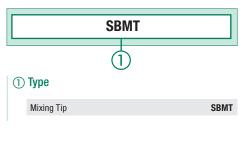
The STAUFF Dispenser Slide is used in combination with the Manual Adhesive Dispenser and provides the required mixing ratio for the dispensing adhesives.



#### **Required Accessories**

Adhesive Dispenser, Mixing Tip

#### **Ordering Code**



Standard packaging unit: 50 pcs.

#### **Required Accessories**

Adhesive Dispenser, Dispenser Slide

#### **Characteristics**

The STAUFF Mixing Tip is designed to twist and lock onto the end of the adhesive cartridge. It does not only provide proper interleaving of pre-portioned components but additionally pre-phasing to ensure optimum mix uniformity.

To prevent pre-mix of the adhesive, the tip integrates a barri separating the individual adhesive components until they reather integral mixer. If open time of adhesive in the mixing tip exceeds the adhesive pot life, the adhesive will become cure in the tip, preventing further dispensing. Removal of the use, tip and replacement with a fresh tip is as simple as twisting to remove the cured tip, wiping off the end of the cartridge, and twisting a new tip in place.

Mixing Tip Type SBMT

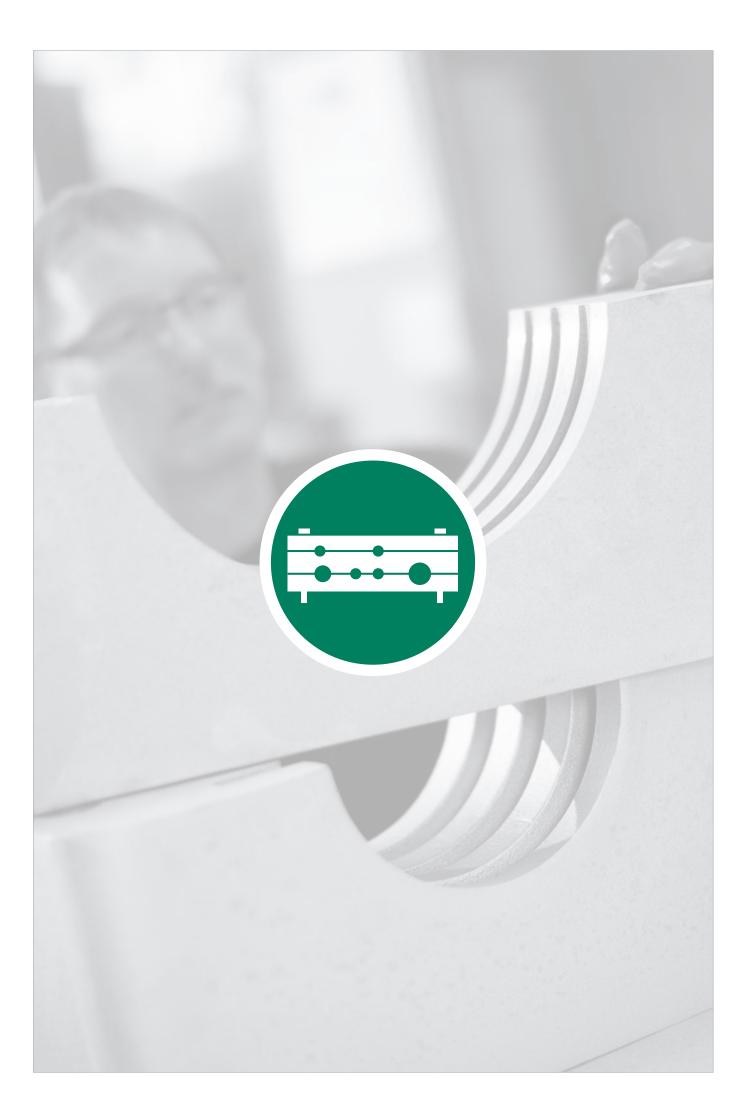
Dispenser Slide Type SBDS-81



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#### **Machined Versions**

Custom-designed clamping systems for pipes, tubes, hoses, cables and other components according to customer's specifications or based on STAUFF developments, made of thermoplastics, metals and non-ferrous metals.



















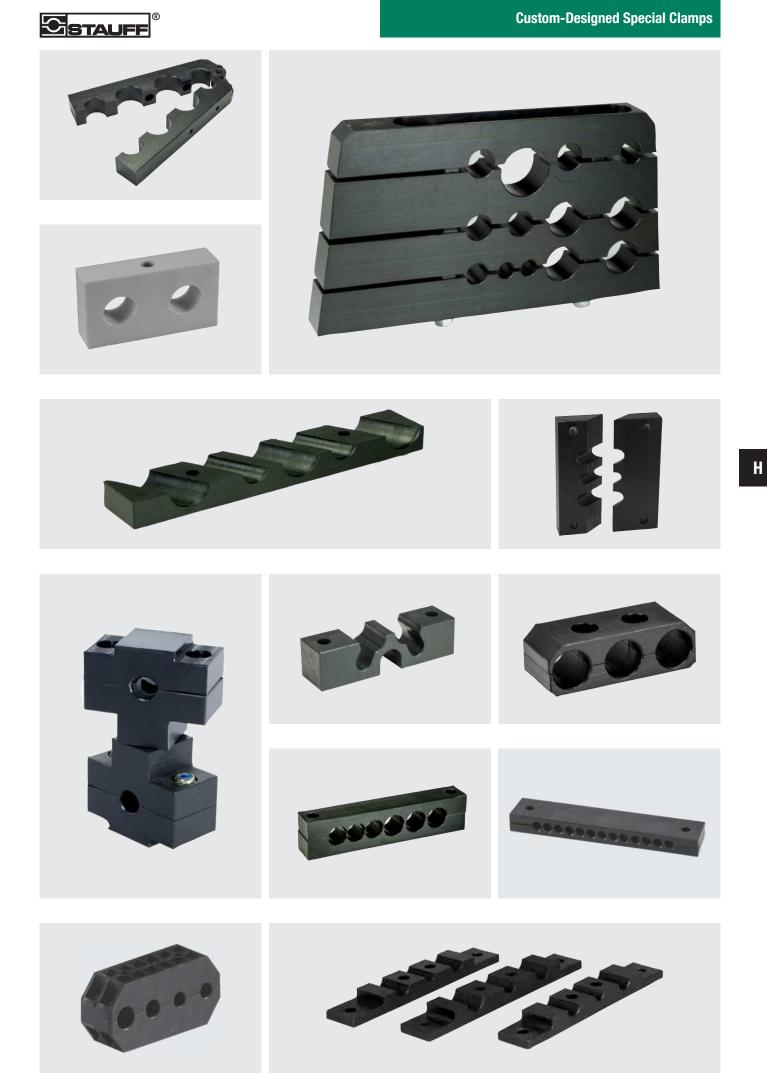












### **STAUFF**[®]

#### Injection Moulded Versions (Flexi Clamps)

Custom-designed clamping systems for pipes, tubes, hoses, cables and other components according to customer's specifications or based on STAUFF developments, made of Polypropylene, Polyamide and other thermoplastics.





















Catalogue 1 - Edition 08/2019

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#### **Enquiry Form for Custom-Designed Special Clamps**

Please use the following form as a guideline when preparing an enquiry for a custom-designed special clamp. Scan or copy the page from the catalogue, print and complete it

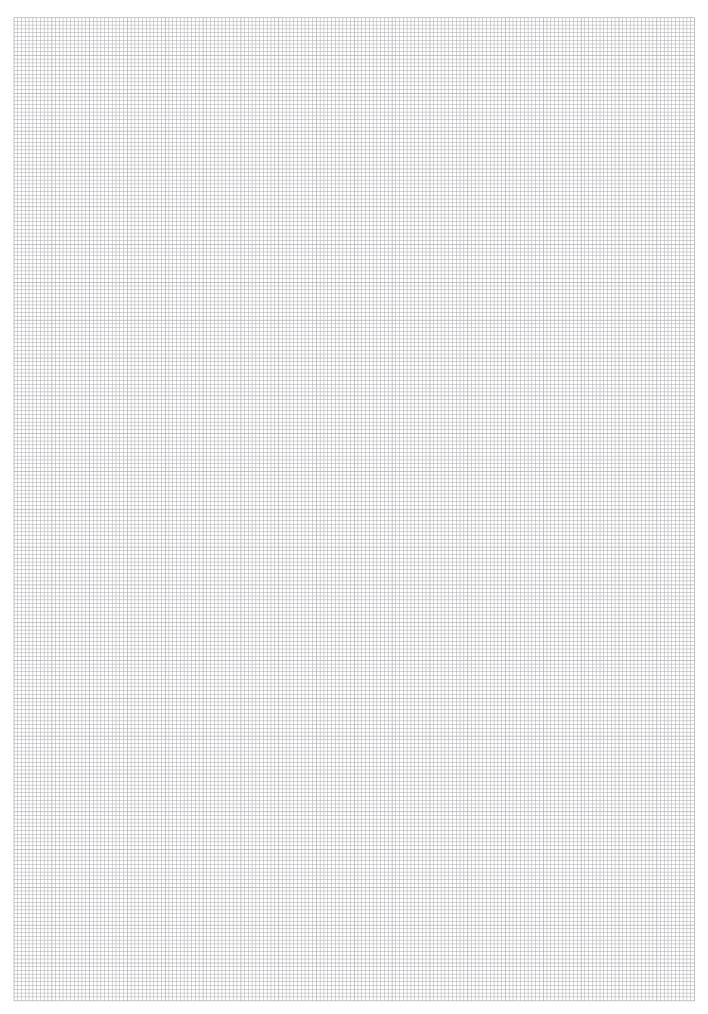
**Application Information** 

with as much information as possible, before sending it by email of fax to the closest STAUFF branch office. If possible, please also provide a sketch / drawing and let us know the

quantities required, and if the enquiry is for a one-time or recurring demand. We look forward to hearing from you, and are always available for consultation, when required.

Area of use	Indoor	Outdoor		
Ambient temperature	Lowest □ °C / □ °F	Highest □ °C / □ °F		
Resistance against particular media	□ No	<ul> <li>☐ Yes</li> <li>☐ Mineral oils</li> <li>☐ Other oils</li> <li>☐ Benzine</li> <li>☐ Weak acids</li> <li>☐ Solvents</li> <li>☐ Alcohols</li> <li>☐ Seawater</li> <li>☐ Other media</li></ul>		
Fire protection requirements	□ No	□ Yes □ UL94 □ BS 6853 □ Other standard		
Material preference for the clamp body	v □ Polypropylene □ Aluminium □ Stainless Steel □ V2A □ V4A	<ul> <li>Polyamide</li> <li>Steel</li> <li>Other material</li> </ul>		
Design Information				
Type of line	<ul> <li>Pipe / tube (fixed installation)</li> <li>Hose</li> <li>Cable</li> <li>Other components</li> </ul>	<ul> <li>Pipe / tube (<u>sliding</u> installation)</li> <li>Conduit Hose</li> <li>Mix of different types of lines</li> </ul>		
Maximum dimensions of clamp body	Length x Width x H	eight 🗆 mm / 🗖 inch		
Total number of lines				
Diameters per line	Line 1   mm /   inch Line 2   mm /   inch Line 3   mm /   inch Line 4   mm /   inch Line 5   mm /   inch Line 6   mm /   inch Line 7   mm /   inch Line 8   mm /   inch	Further comments         Further comments		
Preferred centre distance of the lines	0	mm / 🗖 inch		
Preferred number of screw holes				
Information on Mounting Hardw	are			
Preferred type of bolts	<ul> <li>Hexagon head bolts (with cover plate)</li> <li>Socket cap crews (with cover plate)</li> <li>Socket cap crews (w/o cover plate)</li> </ul>	<ul> <li>with metric threads</li> <li>with metric threads</li> <li>with metric threads</li> <li>with unc threads</li> <li>with unc threads</li> </ul>		
Preferred type of installation	<ul> <li>Welding (using a weld plate)</li> <li>Direct screw-fastening</li> <li>Mounting rail (using a rail nut / adaptored)</li> </ul>	☐ Welding (using weld studs) ☐ Adhesive bonded fastening r)		
Material preference for the hardware	□ Steel	□ Stainless Steel □ V2A □ V4A		







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# Clamp Body = Single Design Type LBBU



Ord	lering	Cod	es
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Clamp Body	*LBBU-*1*06-*SA-*!	<b>VI8/U5/16</b>
* Light Series LBBU		LBBU
* STAUFF Group		1
* Exact outside dian	neter Ø D1 (mm)	06
* Material code (see	e below)	SA
* Thread code (suital	ble for bolts M8 and U5/16)	M8/U5/16

#### **Standard Materials**

Thermoplastic Elastomer (87 Shore-A) Colour: Black Material code: SA

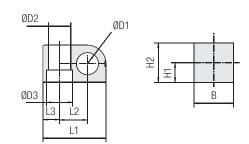
See pages 154 / 155 for material properties and technical information.

Alternative materials are available upon request. Please contact STAUFF for further information.

#### **Product Features**

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- Compact and light-weight design for applications in which space is limited
- Available in 3 different sizes and covering all standard metric and imperial diameters between 4 mm and 32 mm
- Vibration-damping and noise-reducing clamp body material with UV, ozone and weathering-resistant characteristics
- Advanced design with a film hinge allows the top part of the Plastic clamp body to open up and insert or replace the pipe, tube or hose without the use of force
- Embedded metal sleeve to ensure stability of the clamp assembly



Group	Outside I Pipe / Tu Ø D1		Nominal Bore Pipe	Ordering Codes (1 Clamp Body)	Dimensions ( ^{mm} / _{in} )							
STAUFF	(mm)	(in)	(in)		Ø D2	Ø D3	L1	L2	L3	H1	H2	В
	6			LBBU-106-SA-M8/U5/16								
	6,4	1/4		LBBU-106.4-SA-M8/U5/16								
	8	5/16		LBBU-108-SA-M8/U5/16								
1	9,5	3/8		LBBU-109.5-SA-M8/U5/16	12	14	34	15	9	10	20	20
'	10		1/8	LBBU-110-SA-M8/U5/16	.47	.55	1.34	.59	.35	.39	.79	.79
	11			LBBU-111-SA-M8/U5/16								
	12			LBBU-112-SA-M8/U5/16								
	12,7	1/2		LBBU-112.7-SA-M8/U5/16								
	4			LBBU-204-SA-M8/U5/16								
	6			LBBU-206-SA-M8/U5/16								
	6,4	1/4		LBBU-206.4-SA-M8/U5/16								
	8	5/16		LBBU-208-SA-M8/U5/16								
	9,5	3/8		LBBU-209.5-SA-M8/U5/16								
	10		1/8	LBBU-210-SA-M8/U5/16								
	11			LBBU-211-SA-M8/U5/16								
	12			LBBU-212-SA-M8/U5/16	12	14	39	18	9	12	24	20
2	12,7	1/2		LBBU-212.7-SA-M8/U5/16	.47	.55	1.54	.71	.35	.47	94	.79
	13,5		1/4	LBBU-213.5-SA-M8/U5/16					.00			
	14			LBBU-214-SA-M8/U5/16								
	15			LBBU-215-SA-M8/U5/16								
	16	5/8		LBBU-216-SA-M8/U5/16								
	17,2		3/8	LBBU-217.2-SA-M8/U5/16								
	18			LBBU-218-SA-M8/U5/16								
	19	3/4		LBBU-219-SA-M8/U5/16								
	20			LBBU-220-SA-M8/U5/16								
	21,3			LBBU-321.3-SA-M8/U5/16								
	22	7/8		LBBU-322-SA-M8/U5/16								
	23			LBBU-323-SA-M8/U5/16								
3	25			LBBU-325-SA-M8/U5/16	12	14	57,5	23,5	15	20	40	30
•	25,4	1		LBBU-325.4-SA-M8/U5/16	.47	.55	2.26	.93	.59	.79	1.57	1.18
	28			LBBU-328-SA-M8/U5/16								
	30			LBBU-330-SA-M8/U5/16								
	32	1-1/4		LBBU-332-SA-M8/U5/16								

Additional outside diameters are available upon request. Please contact STAUFF for further information.



Type of Mounting SP (with Weld Plate LBBU-SP)

Clamp assembly consisting of:

- 1 Hexagon Head Bolt AS1 Cover Plate LBBU-DP
- I Cover Plate LBBU-DP
   1 Sleeve LBBU-HUE
- 1 Sleeve LBBU-HUE
   1 Clamp Body LBBU
- I Glamp Body LBBU
   I Weld Plate L PBU CP
- 1 Weld Plate LBBU-SP

#### Order Code LBBU-SP-216-SA-DP-AS-M8-W10 W10 (Weld Plate made of Carbon Steel, phosphated;

Other metal parts made of Carbon Steel, zinc/nickel-plated) is the standard option for this type of installation. For UNC threads / bolts, please replace M8 by U5/16.

#### **Type of Mounting SM** (with Hexagon Rail Nut SM-2-5D)

Clamp assembly consisting of:

- 1 Hexagon Head Bolt AS
- 1 Cover Plate LBBU-DP1 Sleeve LBBU-HUE
- 1 Sleeve LBBO-HOE
   1 Clamp Body LBBU
- 1 Hexagon Rail Nut SM-2-5D
- (for use with Mounting Rail TS, see page 24 for details)

#### Order Code (Mounting Rail TS not included.) LBBU-SM-216-SA-DP-AS-M8-W3

**W3** (Metal parts made of Carbon Steel, zinc/nickel-plated) is the standard option for this type of installation. For UNC threads / bolts, please replace M8 by U5/16.

# 5

## Type of Mounting PM

(for panel mounting without Weld Plate or Hexagon Rail Nut)

Clamp assembly consisting of:

- 1 Hexagon Head Bolt AS1 Cover Plate LBBU-DP
- 1 Sleeve LBBU-HUE
- 1 Clamp Body LBBU
- Order Code

# LBBU-PM-216-SA-DP-AS-M8-W3

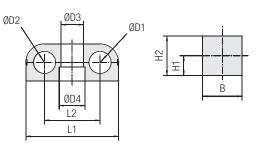
**W3** (Metal parts made of Carbon Steel, zinc/nickel-plated) is the standard option for this type of installation. For UNC threads / bolts, please replace M8 by U5/16.

Alternative sizes (e.g. for bolts M6 and 1/4–20 UNC), materials and surface finishings are available upon request.





# Clamp Body Twin Design **Type LBBU**



Group		ibe / Hose	eters Nominal Ordering Codes Dimensions Hose Bore (1 Clamp Body) ( ^{mm} / _{in} )								
STAUFF	(mm)	(in)	(in)		Ø D3	Ø D4	L1	L2	H1	H2	В
	4			LBBU-104/04-SA-M8/U5/16							
	6			LBBU-106/06-SA-M8/U5/16							
	6,4	1/4		LBBU-106.4/06.4-SA-M8/U5/16							
	8	5/16		LBBU-108/08-SA-M8/U5/16	12	14	50	30	10	20	20
1D	9,5	3/8		LBBU-109.5/09.5-SA-M8/U5/16	.47	.55	1.97	1.18	.39	.79	.79
	10		1/8	LBBU-110/10-SA-M8/U5/16	.47	.00	1.97	1.10	.59	.19	.19
	11			LBBU-111/11-SA-M8/U5/16							
	12			LBBU-112/12-SA-M8/U5/16							
	12,7	1/2		LBBU-112.7/12.7-SA-M8/U5/16							
	4			LBBU-204/04-SA-M8/U5/16							
	6			LBBU-206/06-SA-M8/U5/16							
	8	5/16		LBBU-208/08-SA-M8/U5/16							
	9,5	3/8		LBBU-209.5/9.5-SA-M8/U5/16							
	10		1/8	LBBU-210/10-SA-M8/U5/16							
	11			LBBU-211/11-SA-M8/U5/16							
	12			LBBU-212/12-SA-M8/U5/16							
2D	12,7	1/2		LBBU-212.7/12.7-SA-M8/U5/16	12	14	59	35	12	24	20
20	13,5		1/4	LBBU-213.5/13.5-SA-M8/U5/16	.47	.55	2.32	1.38	.47	.94	.79
	14			LBBU-214/14-SA-M8/U5/16							
	15			LBBU-215/15-SA-M8/U5/16							
	16	5/8		LBBU-216/16-SA-M8/U5/16							
	17,2		3/8	LBBU-217.2/17.2-SA-M8/U5/16							
	18			LBBU-218/18-SA-M8/U5/16							
	19	3/4		LBBU-219/19-SA-M8/U5/16							
	20			LBBU-220/20-SA-M8/U5/16							
	21,3			LBBU-321.321.3-SA-M8/U5/16							
	22	7/8		LBBU-322/22-SA-M8/U5/16	1						
	23			LBBU-323/23-SA-M8/U5/16	1						
20	25			LBBU-325/25-SA-M8/U5/16	12	14	86	47	20	40	30
3D	25,4	1		LBBU-325.4/25.4-SA-M8/U5/16	.47	.55	3.39	1.85	.79	1.57	.79
	28			LBBU-328/28-SA-M8/U5/16	1						
	30			LBBU-330/30-SA-M8/U5/16							
	32	1-1/4		LBBU-332/32-SA-M8/U5/16	1						

Additional outside diameters and combinations of different outside diameters are available upon request. Please contact STAUFF for further information.



Type of Mounting SP (with Weld Plate LBBU-SP)

Clamp assembly consisting of: I Hexagon Head Bolt AS

- I Cover Plate LBBU-DP
- I Sleeve LBBU-HUE
- I Clamp Body LBBU
- I Weld Plate LBBU-SP

**Order Code** LBBU-SP-216/16-SA-DP-AS-M8-W10 W10 (Weld Plate made of Carbon Steel, phosphated; Other metal parts made of Carbon Steel, zinc/nickel-plated) is the standard option for this type of installation. For UNC threads / bolts, please replace M8 by U5/16.

# (with Hexagon Rail Nut SM-2-5D) Clamp assembly consisting of:

Type of Mounting SM

- I Hexagon Head Bolt AS
- I Cover Plate LBBU-DP
- I Sleeve LBBU-HUE 1 Clamp Body LBBU
- 1 Hexagon Rail Nut SM-2-5D (for use with Mounting Rail TS, see page 24 for details)

#### Order Code (Mounting Rail TS not included.) LBBU-SM-216/16-SA-DP-AS-M8-W3

W3 (Metal parts made of Carbon Steel, zinc/nickel-plated) is the standard option for this type of installation. For UNC threads / bolts, please replace M8 by U5/16.



# **Ordering Codes**

Clamp Body *LBBU-*1*06/06-*SA-*M8/U5/16

* Light Series LBBU LBBU * 1st Part of STAUFF Group 1 * Exact outside diameters Ø D1 / Ø D2 (mm) 06/06 * Material code (see below) SA * Thread code (suitable for bolts M8 and U5/16) M8/U5/16

## Standard Materials

Thermoplastic Elastomer (87 Shore-A)

Colour: Black Material code: SA

See pages 154 / 155 for material properties and technical information

Alternative materials are available upon request. Please contact STAUFF for further information.

#### **Product Features**

- Compact and light-weight design for applications in which space is limited
- · Available in 3 different sizes and covering all standard
- metric and imperial diameters between 4 mm and 32 mm Vibration-damping and noise-reducing clamp body material with UV, ozone and weathering-resistant characteristics
- Advanced design with a film hinge allows the top part of the Plastic clamp body to open up and insert or replace the pipe, tube or hose without the use of force
- Embedded metal sleeve to ensure stability of the clamp assembly



#### Type of Mounting PM

(for panel mounting without Weld Plate or Hexagon Rail Nut)

Clamp assembly consisting of:

- I Hexagon Head Bolt AS I Cover Plate LBBU-DP
- I Sleeve LBBU-HUE
- I Clamp Body LBBU
- **Order Code**

# LBBU-PM-216/16-SA-DP-AS-M8-W3

W3 (Metal parts made of Carbon Steel, zinc/nickel-plated) is the standard option for this type of installation. For UNC threads / bolts, please replace M8 by U5/16.

Alternative sizes (e.g. for bolts M6 and 1/4-20 UNC), materials and surface finishings are available upon request.

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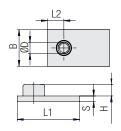
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# **Weld Plate Type LBBU-SP**



Ordering Codes							
Weld Plate	*LBBU-SP-*1D-*	M8-*W2					
* Light Series LBI	30	LBBU					
* Weld Plate		-SP					
* STAUFF Group		1D					
* Thread code	Metric ISO thread: M8 UNC thread: 5/16–18 UNC	M8 U5/16					
* Material code	Carbon Steel, phosphated	W2					



## STAUFF Group 1 to 3

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STAUFF Group 1D to 3D

Group	Dimens	Dimensions ( ^{mm} / _{in} ) Ordering Codes									
STAUFF	ØD	L1	L2	Н	В	S	Thread G	(Standard Options)			
4	14	34	9	10,3	20	5	M8	LBBU-SP-1-M8-W2			
1	.55	1.34	.35	.41	.79	.20	5/16-18 UNC	LBBU-SP-1-U5/16-W2			
0	14	39	9	10,3	20	5	M8	LBBU-SP-2-M8-W2			
2	.55	1.54	.35	.41	.79	.20	5/16-18 UNC	LBBU-SP-2-U5/16-W2			
3	14	57,5	15	10,3	30	5	M8	LBBU-SP-3-M8-W2			
3	.55	2.26	.59	.41	1.18	.20	5/16-18 UNC	LBBU-SP-3-U5/16-W2			
1D	14	50		10,3	20	5	M8	LBBU-SP-1D-M8-W2			
ID	.55	1.97		.41	.79	.20	5/16-18 UNC	LBBU-SP-1D-U5/16-W2			
2D	14	59	$\neg$ $\lor$	10,3	20	5	M8	LBBU-SP-2D-M8-W2			
20	.55	2.32	$\neg \land$	.41	.79	.20	5/16-18 UNC	LBBU-SP-2D-U5/16-W2			
3D	14	86		10,3	30	5	M8	LBBU-SP-3D-M8-W2			
30	.55	3.39		.41	1.18	.20	5/16-18 UNC	LBBU-SP-3D-U5/16-W2			

All threaded parts are available with Metric ISO thread or unified coarse (UNC) thread according to dimension table.  $\label{eq:linear} Alternative sizes (e.g. for bolts M6 and 1/4-20 UNC), materials and surface finishings are available upon request.$ 

# **Sleeve Type LBBU-HUE**



Dimensions applicable only when used with Weld Plate LBBU-SP (Type of Mounting SP)

Group	Dimer	nsions	( ^{mm} /in)	Ordering Codes
STAUFF	ØD1	ØD2	L	(Standard Options)
1	12	9	13,5	LBBU-HUE-1/1D-SP-
'	.47	.35	.53	M8/U5/16-W3
2	12	9	17,5	LBBU-HUE-2/2D-SP-
2	.47	.35	.69	M8/U5/16-W3
3	12	9	33,5	LBBU-HUE-3/3D-SP-
3	.47	.35	1.32	M8/U5/16-W3
1D	12	9	13,5	LBBU-HUE-1/1D-SP-
ID	.47	.35	.53	M8/U5/16-W3
20	12	9	17,5	LBBU-HUE-2/2D-SP-
20	.47	.35	.69	M8/U5/16-W3
3D	12	9	33,5	LBBU-HUE-3/3D-SP-
30	.47	.35	1.32	M8/U5/16-W3



Dimensions applicable only when used with Hexagon Rail Nut SM-2-5D (Type of Mounting SM)

Group	Dimer	nsions	( ^{mm} /in)	Ordering Codes
STAUFF	ØD1	ØD2	L	(Standard Options)
1	12	9	12,8	LBBU-HUE-1/1D-SM-
1	.47	.35	.50	M8/U5/16-W3
2	12	9	16,8	LBBU-HUE-2/2D-SM
2	.47	.35	.66	M8/U5/16-W3
3	12	9	32,8	LBBU-HUE-3/3D-SM-
3	.47	.35	1.29	M8/U5/16-W3
1D	12	9	12,8	LBBU-HUE-1/1D-SM-
ID	.47	.35	.50	M8/U5/16-W3
2D	12	9	16,8	LBBU-HUE-2/2D-SM-
20	.47	.35	.66	M8/U5/16-W3
3D	12	9	32,8	LBBU-HUE-3/3D-SM-
30	.47	.35	1.29	M8/U5/16-W3

Dimensions applicable only when used for panel mounting without Weld Plate or Hexagon Rail Nut (Type of Mounting PM)

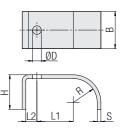
Group	Dimer	isions	( ^{mm} /in)	Ordering Codes
STAUFF	ØD1	ØD2	L	(Standard Options)
1	12	9	18,8	LBBU-HUE-1/1D-PM-
1	.47	.35	.74	M8/U5/16-W3
2	12	9	22,7	LBBU-HUE-2/2D-PM-
2	.47	.35	.89	M8/U5/16-W3
3	12	9	38,8	LBBU-HUE-3/3D-PM-
3	.47	.35	1.53	M8/U5/16-W3
1D	12	9	18,8	LBBU-HUE-1/1D-PM-
ID	.47	.35	.74	M8/U5/16-W3
2D	12	9	22,7	LBBU-HUE-2/2D-PM-
20	.47	.35	.89	M8/U5/16-W3
3D	12	9	38,8	LBBU-HUE-3/3D-PM-
30	.47	.35	1.53	M8/U5/16-W3

Alternative sizes (e.g. for bolts M6 and 1/4–20 UNC), materials and surface finishings are available upon request.

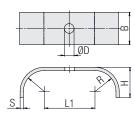


# **Light Series**

# **Cover Plate Type LBBU-DP**



STAUFF Group 1 to 3



STAUFF Group 1D to 3D

Group	Dimens	ions ( ^{mm} /in)						Ordering Codes
STAUFF	ØD	L1	L2	R	Н	В	S	(Standard Options)
4	9	15	9	10	16	20	3	LBBU-DP-1-M8/U5/16-W3
1	.35	.59	.35	.39	.63	.79	.12	LBB0-DF-1-W6/05/10-W3
2	9	18	9	12	20	20	3	LBBU-DP-2-M8/U5/16-W3
2	.35	.71	.35	.47	.79	.79	.12	LBBU-DP-2-W0/05/10-W3
3	9	23,5	15	19,5	28	30	3	LBBU-DP-3-M8/U5/16-W3
3	.35	.93	.59	.77	1.10	1.18	.12	LBBU-DP-3-100/05/10-W3
1D	9	30		10	16	20	3	LBBU-DP-1D-M8/U5/16-W3
ID	.35	1.18		.39	.63	.79	.12	LBBU-DP-1D-W6/05/10-W3
20	9	35	$\neg$ $\lor$	12	20	20	3	
2D	.35	1.38	$\neg \land$	.47	.79	.79	.12	LBBU-DP-2D-M8/U5/16-W3
20	9	47		19,5	28	20	3	
3D	.35	1.85		.77	.63	.79	.12	LBBU-DP-3D-M8/U5/16-W3

-		
	6	

Ordering Codes										
Cover Plate	*LBBU-DP-*1D-*M8/U5/16-*W	3								
* Light Series LBI	BU LBE	U								
* Cover Plate	-D	P								
* STAUFF Group	1	D								
* Thread code (su	itable for bolts M8 and U5/16) M8/U5/1	6								
* Material code	Carbon Steel, zinc/nickel-plated	3								

Alternative sizes (e.g. for bolts M6 and 1/4-20 UNC), materials and surface finishings are available upon request.

# **Hexagon Head Bolt Type AS**



# Hexagon Head Bolt AS

(according to DIN 931 / 933 or ANSI / ASME B18.2.1.) Dimensions applicable only when used with Weld Plate LBBU-SP (Type of Mounting SP) or Hexagon Rail Nut SM-2-5D (Type of Mounting SM)

Dimensions ( ^{mm} /in)	Ordering Codes				
Thread G x L	(Standard Options)				
M8 x 25	AS-M8x25-W3				
5/16–18 UNC x 1	AS-U5/16-18x1-W3				
M8 x 28	AS-M8x28-W3				
5/16–18 UNC x 1-1/8	AS-U5/16-18x1-1/8-W3				
M8 x 45	AS-M8x45-W3				
5/16–18 UNC x 1-3/4	AS-U5/16-18x1-3/4-W3				
M8 x 25	AS-M8x25-W3				
5/16–18 UNC x 1	AS-U5/16-18x1-W3				
M8 x 28	AS-M8x28-W3				
5/16–18 UNC x 1-1/8	AS-U5/16-18x1-1/8-W3				
M8 x 45	AS-M8x45-W3				
5/16–18 UNC x 1-3/4	AS-U5/16-18x1-3/4-W3				
	Fhread G x L           M8 x 25           5/16–18 UNC x 1           M8 x 28           5/16–18 UNC x 1-1/8           M8 x 45           5/16–18 UNC x 1-3/4           M8 x 25           5/16–18 UNC x 1           M8 x 25           5/16–18 UNC x 1           M8 x 28           5/16–18 UNC x 1           M8 x 28           5/16–18 UNC x 1-1/8           M8 x 28           5/16–18 UNC x 1-1/8           M8 x 45				



#### **Hexagon Head Bolt AS**

(according to DIN 931 / 933 or ANSI / ASME B18.2.1.) Dimensions applicable only when used for panel mounting without Weld Plate or Hexagon Rail Nut (Type of Mounting PM)

Group	Dimensions (mm/in)	Ordering Codes					
STAUFF	Thread G x L	(Standard Options)					
4	M8 x 30	AS-M8x30-W3					
1	5/16-18 UNC x 1-1/4	AS-U5/16-18x1-1/4-W3					
2	M8 x 35	AS-M8x35-W3					
2	5/16-18 UNC x 1-3/8	AS-U5/16-18x1-3/8-W3					
3	M8 x 50	AS-M8x50-W3					
3	5/16-18 UNC x 2	AS-U5/16-18x2-W3					
1D	M8 x 30	AS-M8x30-W3					
ID	5/16-18 UNC x 1-1/4	AS-U5/16-18x1-1/4-W3					
2D	M8 x 35	AS-M8x35-W3					
20	5/16-18 UNC x 1-3/8	AS-U5/16-18x1-3/8-W3					
20	M8 x 50	AS-M8x50-W3					
3D	5/16-18 UNC x 2	AS-U5/16-18x2-W3					

Ordering Codes										
Hexagon Head Bolt *AS-*M8x25-*W3										
* Type of bolt	Hexagon Head Bolt (according to DIN 931 / 933 or ANSI / ASME B18.2.1.)	AS								
* Thread code	Thread dimension according to dimension table	M8x25								
* Material code	Carbon Steel, zinc/nickel-plated	W3								

All threaded parts are available with Metric ISO thread or unified coarse (UNC) thread according to dimension table. Alternative sizes (e.g. for bolts M6 and 1/4–20 UNC), materials and surface finishings are available upon request.



# **STAUFF**[®]

# Clamp Body = Single Design Type LB



Orde	ering C	odes	
Clam	p Body	*LB-*1*03.	2 <b>-*PP</b>
* STAL * Exac		Clamp Body / Single Design iameter Ø D1 (mm) see below)	LB 1 03.2 PP
Standa	rd Mate	erials	
	<b>Polypro</b> Colour: E		

Material code: PP

Polyamide Colour: Yellow Material code: PA

information.

**Applications** 

Group		Diameter ube / Hose	Nominal Bore Pipe	Ordering Codes (1 Clamp Body)	Dimer ( ^{mm} / _{in} )	Dimensions ( ^{mm} / _{in} )							
STAUFF	(mm)	(in)	(in)	(** = Material)	L1	L2	L3	В	Н	S	Ø D2	Ø D3	
	3,2	1/8		LB-103.2-**									
1	6			LB-106- <b>**</b>	22	9	6,5	12	10,5	2	6,8	7	
	6,4	1/4		LB-106.4-**	.87	.35	.26	.47	.41	.08	.27	.28	
	8			LB-108- <b>**</b>									
	9,5	3/8		LB-209.5-**									
2	10		1/8	LB-210- <b>**</b>	27	11	7	16	15	2	6,8	7	
	11,1			LB-211.1- <b>**</b>	1.06	.43	.28	.63	.59	.08	.27	.28	
	12			LB-212- <b>**</b>									
	12,7	1/2		LB-312.7-**									
	13,5		1/4	LB-313.5-**									
	14			LB-314- <b>**</b>	34	15	7	20	22,5	2	6.8	7	
3	15			LB-315- <b>**</b>	1.34	.59	.28	.79	.89	.08	.27	.28	
	16	5/8		LB-316- <b>**</b>	1.54	.55	.20	.79	.09	.00	.21	.20	
	17,2		3/8	LB-317.2-**									
	18			LB-318- <b>**</b>									
	19	3/4		LB-419- <b>**</b>									
	20			LB-420- <b>**</b>									
4	21,3		1/2	LB-421.3- <b>**</b>	42	19	7	20	30	2	6,8	7	
4	22			LB-422- <b>**</b>	1.65	.75	.28	.79	1.18	.08	.27	.28	
	25			LB-425- <b>**</b>									
	25,4	1		LB-425.4- <b>**</b>									

øD2

L2

L3

øD1

øD3

S

Additional outside diameters are available upon request. Please contact STAUFF for further information.

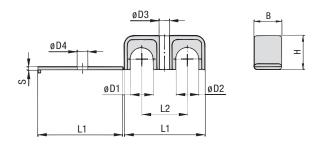
See pages 154 / 155 for material properties and technical

Alternative materials are available upon request. Please contact STAUFF for further information.



**Light Series** 

# Clamp Body = Twin Design Types LBG / LBU



Group		Diameters be / Hose D2	Nominal Bore Pipe	Ordering Codes (1 Clamp Body)	Dimen: ( ^{mm} / _{in} )	Dimensions ( ^{mm} / _{in} )					
STAUFF	(mm)	(in)	(in)	(** = Material)	L1	L2	В	Н	S	Ø D3	Ø D4
	3,2	1/8		LBG-103.2/03.2-**							
1	6			LBG-106/06-**	31	18	12	10,5	2	6,8	7
	6,4	1/4		LBG-106.4/06.4-**	1.22	.71	.47	.41	.08	.27	.28
	8			LBG-108/08-**							
	9,5	3/8		LBG-209.5/09.5-**							
2	10		1/8	LBG-210/10-**	39	22	16	15	2	6,8	7
2	11,1			LBG-211.1/11.1-**	1.54	.87	.63	.59	.08	.27	.28
	12			LBG-212/12-**							
	12,7	1/2		LBG-312.7/12.7-**							
	13,5		1/4	LBG-313.5/13.5-**							
	14			LBG-314/14- <b>**</b>	53	30	20	22,5	2	6,8	7
3	15			LBG-315/15-**	2.09	1.18	.79	.89	.08	.27	.28
	16	5/8		LBG-316/16-**	2.05	1.10	.15	.00	.00		.20
	17,2		3/8	LBG-317.2/17.2-**							
	18			LBG-318/18-**							
	19	3/4		LBG-419/19-**							
	20			LBG-420/20-**							
4	21,3		1/2	LBG-421.3/21.3-**	70	38	20	30	2	6,8	7
-	22			LBG-422/22-**	2.76	1.50	.79	1.18	.08	.27	.28
	25			LBG-425/25-**							
	25,4	1		LBG-425.4/25.4-**							

Additional outside diameters and combinations of different outside diameters (Clamp Body, Type LBU) are available upon request. Please contact STAUFF for further information.



Ordering Codes									
Clamp Body	*LBG-*1*03.2/03	3.2 <b>-*PP</b>							
* Light Series: * STAUFF Group * Exact outside di	Clamp Body / Twin Design with identical diameters Clamp Body / Twin Design with different diameters ameters Ø D1 / Ø D2 (mm)	LBG LBU 1 03.2/03.2							
* Material code (s	ee below)	PP							

#### **Standard Materials**



Polyamide Colour: Yellow Material code: PA

See pages 154 / 155 for material properties and technical information.

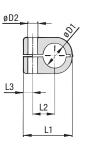
Alternative materials are available upon request. Please contact STAUFF for further information.

#### **Applications**

 Pneumatics, Instrumentation and Automotive Technology, Machine Tool Industry, Lubrication, Mechanical Engineering

# Clamp Body = Single Design Type LN







		Group		Diameter ube / Hose	Nominal Bore Pipe	Ordering Codes (1 Clamp Body)	Dimens ( ^{mm} / _{in} )	sions				
LN-*1*06-	-*PP	STAUFF	(mm)	(in)	(in)	(** = Material)	L1	L2	L3	В	Н	Ø D2
			6			LN-106- <b>**</b>	22	9	7	14,5	13,5	6,8
ngle Design	LN	1	6,4	1/4		LN-106.4- <b>**</b>	.87	.35	.28	.57	.53	.27
5 5	1		8			LN-108- <b>**</b>	.07	.55	.20	.57	.55	.21
)	06		8			LN-208-**					18,5	
	PP		9,5	3/8		LN-209.5-**	27	11	7	145		6.0
		2	10		1/8	LN-210- <b>**</b>	1.06	.43	.28	14,5 .57	.59	6,8
			12			LN-212- <b>**</b>	1.00	. 10	.20	.07	.00	.21
			12,7	1/2		LN-212.7-**						
			10		1/8	LN-310-**						
			12			LN-312- <b>**</b>						
			12,7	1/2		LN-312.7-**	33	15	7	14,5	23,5	6,8
		3	13,5		1/4	LN-313.5-**	1.30	.59	.28	.57	.93	6,8 .27
			14			LN-314- <b>**</b>		.00	.20			
			15			LN-315- <b>**</b>						
			16	5/8		LN-316- <b>**</b>						
			14			LN-414- <b>**</b>						
			15			LN-415- <b>**</b>						
ties and technical			16	5/8		LN-416- <b>**</b>						
			17,2		3/8	LN-417.2-**	40	19	7	14.5	30.5	
		4	18			LN-418- <b>**</b>	1.57	.75	.28	.57	1.20	
on request.			19	3/4		LN-419- <b>**</b>	1.57	.15	.20	.37	1.20	.21
ormation.			20			LN-420- <b>**</b>						
			21,3		1/2	LN-421.3- <b>**</b>						
			22			LN-422-**						

**Ordering Codes** 

Clamp Body ^LN-^1^U6-	<b>۲</b> ^
<ul> <li>Light Series: Clamp Body / Single Design</li> <li>STAUFF Group</li> </ul>	L
<ul> <li>* STAOFF Group</li> <li>* Exact outside diameter Ø D1 (mm)</li> </ul>	(
* Material code (see below)	F

#### **Standard Materials**

Polypropylene Colour: Green Material code: PP



Polyamide Colour: Black Material code: PA

See pages 154 / 155 for material properties and technical information.

Alternative materials are available upon request. Please contact STAUFF for further information.

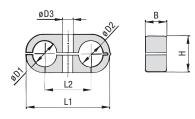
#### **Applications**

 Pneumatics, Instrumentation and Automotive Technology, Machine Tool Industry, Lubrication, Mechanical Engineering Additional outside diameters are available upon request. Please contact STAUFF for further information.

#### R STALIFI

**Light Series** 

# Clamp Body • Twin Design **Type LNGF / LNUF**





Group		Diameters be / Hose D2	Nominal Bore Pipe	Ordering Codes (1 Clamp Body)	Dimensions ( ^{mm} / _m )						
STAUFF	(mm)	(in)	(in)	(** = Material)	L1	L2	В	Н	Ø D3		
	6			LNGF-106/06-**	32	18	14.5	13,5	6.8		
1	6,4	1/4		LNGF-106.4/06.4-**	1.26	.70	.57	.53	.27		
	8			LNGF-108/08-**	1.20	.70	.01	.00	.21		
	8			LNGF-208/08-**							
	9,5	3/8		LNGF-209.5/09.5-**	41	22	14,5	18,5	6,8		
2	10		1/8	LNGF-210/10-**	1.61	.86	.57	.73	.27		
	12			LNGF-212/12-**	1.01	.00	.07	.70	.21		
	12,7	1/2		LNGF-212.7/12.7-**							
	10		1/8	LNGF-310/10-**							
	12			LNGF-312/12-**							
	12,7	1/2		LNGF-312.7/12.7-**	54	30	14,5	23.5	6.8		
3	13,5		1/4	LNGF-313.5/13.5-**	2.13	1.18	.57	.93	.27		
	14			LNGF-314/14-**	2.10	1.10	.01	.50			
	15			LNGF-315/15-**							
	16	5/8		LNGF-316/16-**							
	14			LNGF-414/14- <b>**</b>							
	15			LNGF-415/15-**							
	16	5/8		LNGF-416/16-**							
	17,2		3/8	LNGF-417.2/17.2- <b>**</b>	70	38	14,5	30,5	6,8		
4	18			LNGF-418/18-**	2.76	1.50	.57	1.20	.27		
	19	3/4		LNGF-419/19-**	2 0			1.20			
	20			LNGF-420/20-**							
	21,3		1/2	LNGF-421.3/21.3-**							
	22			LNGF-422/22-**							

Additional outside diameters and combinations of different outside diameters (Clamp Body, type LNUF) are available upon request. Please contact STAUFF for further information.

Ordering Codes								
Clamp Body	*LNGF-*1*06/0	6-*PP						
* Light Series:	Clamp Body / Twin Design with identical diameters	LNGF						
	Clamp Body / Twin Design with different diameters	LNUF						
* STAUFF Group		1						
* Exact outside d	iameters Ø D1 / Ø D2 (mm)	06/06						
* Material code (s	see below)	PP						

#### **Standard Materials**





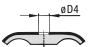
Material code: PA

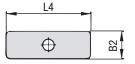
See pages 154 / 155 for material properties and technical information. Alternative materials are available upon request. Please contact STAUFF for further information.

#### **Applications**

Pneumatics, Instrumentation and Automotive Technology, Machine Tool Industry, Lubrication, Mechanical Engineering

# **Cover Plate Type DPL**





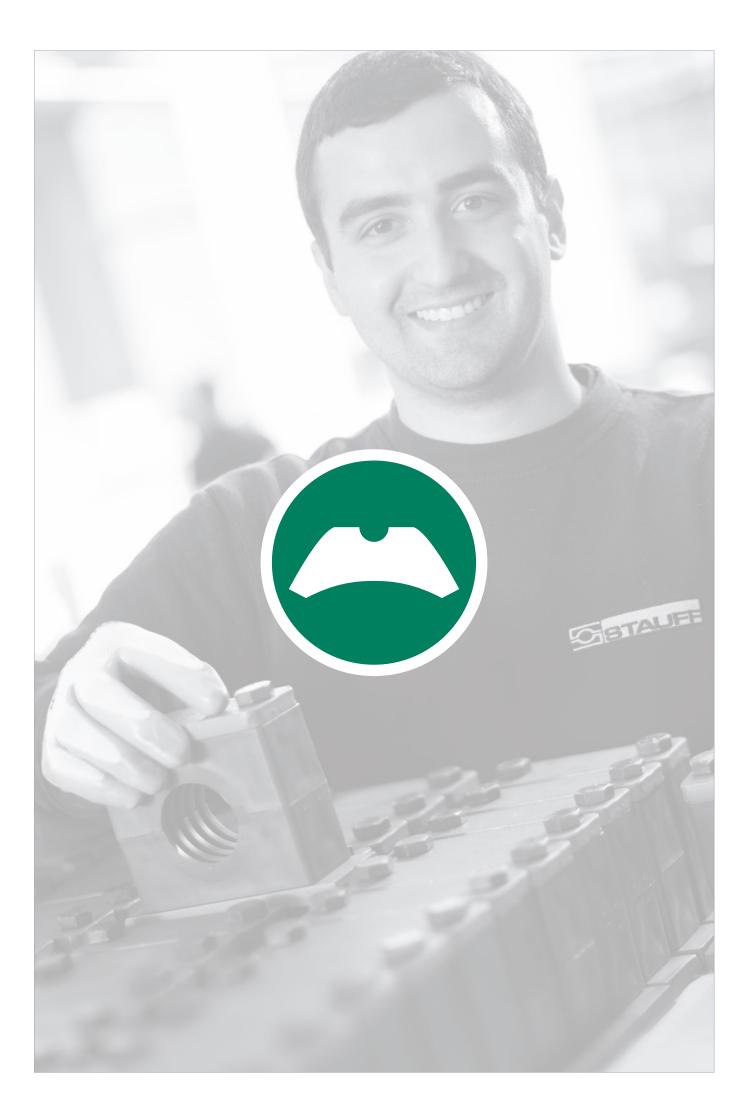


Group	Dimensions (mm/in)			Ordering Codes	
STAU	FF L4	B2	Ø D4	(Standard Options)	Orc
4	29,5	15,5	6,8	DPL-1-W3	
1	1.16	.61	.27	DFL-1-W3	Cov
2	40	15,5	6,8	DPL-2-W3	
2	1.57	.61	.27	DFL-2-W3	<b>*</b> Co
3	51	16	6,8	DPL-3-W3	
3	2.01	.63	.27	DPL-3-W3	* ST/
4	63,5	16	6,8		<b>*</b> Ma
4	2.50	.63	.27	DPL-4-W3	

Alternative materials and surface finishings are available upon request. Contact STAUFF for further information. Please note: The maximum tightening torque for bolts is 2,5 N·m (1.85 ft·lb).



* Cover Plate for (	Clamp Body / Twin Design	DPL
* STAUFF Group		1
* Material code	Carbon Steel, zinc/nickel-plated	W3





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Saddle / Piggyback Clamp

ZR-518

Custom-Designed Saddle / Piggyback Clamps

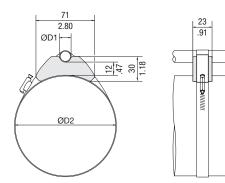
# Saddle / Piggyback Clamps Type ZR

Order Co Saddle Cla

Standard M

See pages 154





er Code	Min/Max Ou Pipe / Tube	itside Diameter	S *		Tightening Strap Dimensions (Not Included in Scope of Delivery)			
	Ø D1		Ø D2				Width	
lle Clamp ZR-518-SA73-BK	(mm)	(in)	(mm)	(in)	(mm)	(in)	(mm)	(in)
			50 70	1.96 2.76	196 254	7.71 10.00		
ard Material			60 80	2.36 3.15	225 284	8.86 11.18		
Thermoplastic Elastomer (73 Shore-A) Colour: Black			70 90	2.76 3.54	254 314	10.00 12.36		
es 154 / 155 for properties and technical information.			80 105	3.15 4.13	284 359	11.18 14.13		
	10 22	.3987	90 120	3.54 4.72	314 404	12.36 15.90	13	.51
			105 140	4.13 5.51	359 464	14.13 18.27	_	
			125 160	4.92 6.30	419 525	16.50 20.66		
			145 180	5.71 7.09	479 586	18.86 23.07		
			165 200	6.50 7.87	540 647	21.26 25.47		

* Ø D1 depending on Ø D2!

# Saddle / Piggyback Clamps

Type ZR saddle clamps from STAUFF allow direct fixing and safe guiding of pipes, tubes and hoses on hydraulic cylinders and other round or oval structures, without causing damage to their strength or integrity as with screw-fixing or welding and without preparation or reworking of the surface coating. The simple system also allows a pipe, tube or hose with a small outer diameter to be installed on top of a significantly larger one.

The position can be adjusted at any time thanks to free axial and radial positioning of the clamps on the structure. This also makes the system suitable for retrofitting.

The standard version ZR-518 made of thermoplastic elastomer material covers diameters in a range from 50 to 200 mm / 1.96 to 7.87 in for the cylinder and from 10 to 22 mm / .39 to .87 inch for the attached tube or hose. The diameters to be covered are used to calculate the overall length of the required tightening straps or the dimensions of the steel strap or worm drive hose clamp, e.g. according to DIN 3017.

STAUFF meets deviating requirements with numerous other variants which were implemented in the past and can be manufactured again at any time.

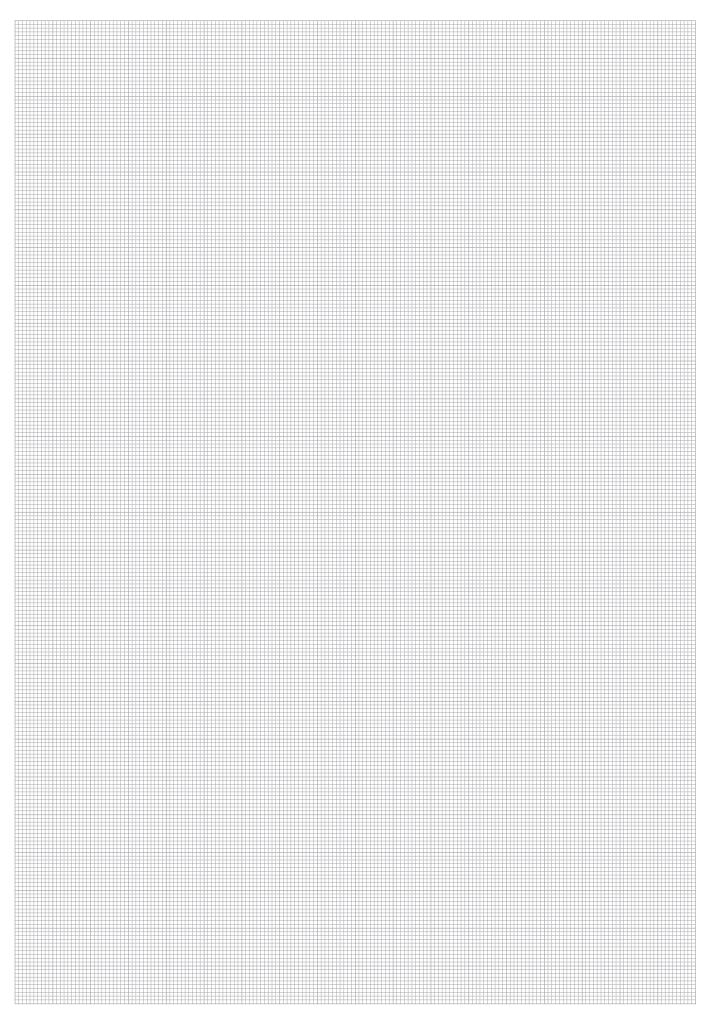
If required, customised clamps can be developed for specific requirements or manufactured based on drawings and models provided.

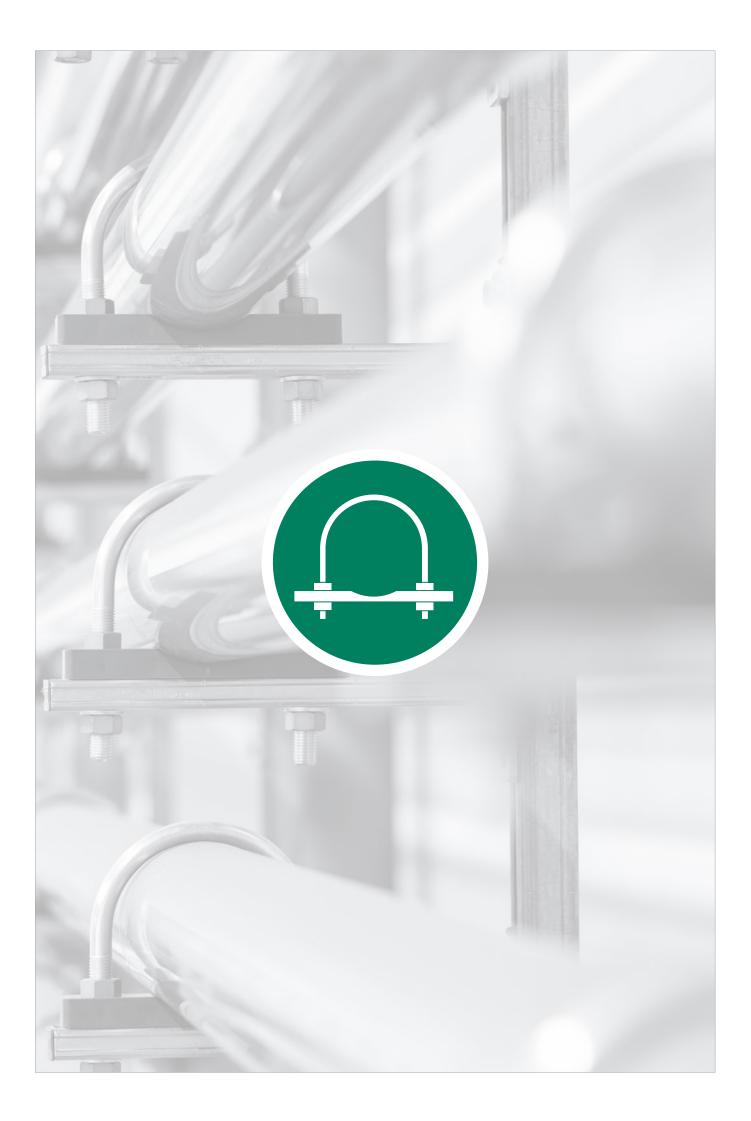
Please contact STAUFF for further information.



Dimensional drawings: All dimensions in mm (in).









0	Flat Steel U-Bolt with Plastic Pipe Saddle (Short) and U-Profile FB / RUK	126
Ω	Round Steel U-Bolt with Plastic Pipe Saddle (Short) RB / RUK	128
Ω	Round Steel U-Bolt with Plastic Pipe Saddle (Long) RB / RUL	130
$\bigcap$	Round Steel U-Bolt (DIN 3570, Type A) without Plastic Pipe Saddle RBD	132



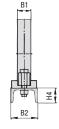
# R

# Flat Steel U-Bolt with Plastic Pipe Saddle (Short) and U-Profile

Type FB+RUK (To be used as Fixed Point Clamps only)



Ŧ	H2	
		L2 L1



Flat Steel U-Bolt (type FB) with Plastic Pipe Saddle (type RUK), U-Profile and Hexagon Head Bolts

Ordering Codes		Diameter Nominal	ominal Pipe / Tube Bore						U-Profile			
<b>5</b> -			Ø D1		Pipe	Flat Steel U-Bolt (Type FB)		ype FB)				(DIN 1026)
Clamp Assem	bly *FB+RUK-*48.3-*PP-*W1	DN	(mm)	(in)	(in)	L1	L2	H1	H2	H3	B1	B2 x H4
	-	40	48,3	1.93	1-1/2	100	76	95	67	5	20 x 3	50 x 38
One clamp assem	bly is consisting of one Flat Steel U-Bolt		40,0	1.00	1 1/2	3.94	2.99	3.74	2.64	.20	.78 x .12	1.97 x 1.50
	stic Pipe Saddle (type RUK), one U-Profile		57	2.28		115	85	103	71,5	5	20 x 3	50 x 38
(to DIN 1026) with	two Nuts (to DIN EN ISO 4032) and	50	01	2.20		4.53	3.35	4.06	2.81	.20	.78 x .12	1.97 x 1.50
two Hexagon Head	d Bolts (to DIN EN ISO 4014 / 4017).	00	60,3	2.41	2	115	88	106	73,2	5	20 x 3	50 x 38
			00,0		-	4.53	3.46	4.17	2.88	.20	.78 x .12	1.97 x 1.50
* Clamp Assembly	y (as listed above) <b>FB+RUK</b>	65	76,1	3.04	2-1/2	132	104	122	81	5	20 x 3	50 x 38
* Exact outsido di	ameter Ø D1 (mm) 48.3		,.			5.20	4.09	4.80	3.19	.20	.78 x .12	1.97 x 1.50
LAGI UUISIUE UI	40.3 40.3	80	88,9	3.56	3	160	121	146	97,5	8	40 x 4	80 x 45
* Material of Pipe	Saddle (see below) PP				-	6.30	4.76	5.75	3.84	.31	1.57 x .16	3.15 x 1.77
* Material code	Carbon Steel, uncoated W1		108	4.32		170	140	165	107	8	40 x 4	80 x 45
Waterial Coue	Carbon Steel, zinc-plated,	100				6.69	5.51	6.50	4.21	.31	1.57 x .16	3.15 x 1.77
	blue-chromated W33		<b>114,3</b> 4.57	4	180	147	171	110	8	40 x 4	80 x 45	
						7.09	5.79	6.73	4.33	.31	1.57 x .16	3.15 x 1.77
	Stainless Steel V4A W5		133	5.32		210	165	190	119,5	8	40 x 4	80 x 45
	1.4401 / 1.4571 (AISI 316 / 316 Ti)	125				8.27	6.50	7.48	4.70	.31	1.57 x .16	3.15 x 1.77
	The U-Profile (to DIN 1026) is made of		139,7	5.59	5	210	172	197	123	8	40 x 4	80 x 45
	Carbon Steel, uncoated. All items are		,			8.27	6.77	7.76	4.84	.31	1.57 x .16	3.15 x 1.77
	supplied non-assembled.		159	6.36		265	201	220	132,5	8	40 x 6	80 x 45
	supplied non-assembled.	150				1.43	7.91	8.66	5.22	.31	1.57 x .24	3.15 x 1.77
			168,3	6.73	6	275	211	230	137	8	40 x 6	80 x 45
					-	1.83	8.31	9.06	5.39	.31	1.57 x .24	3.15 x 1.77
Standard Mate	Standard Materials for Plastic Pipe Saddles		193,7	7.75		305	236	255	150	8	40 x 6	80 x 45
		-	,			12.01	9.29	1.04	5.91	.31	1.57 x .24	3.15 x 1.77
Polyprop			216 219,1	8.64		320	258	277	161	8	40 x 6	80 x 45
Colour: G	reen	200				12.60	10.16	1.91	6.34	.31	1.57 x .24	3.15 x 1.77
Material	code: PP			8.76	8	320	261	280	162,5	8	40 x 6	80 x 45
						12.60	1.28	11.02	6.40	.31	1.57 x .24	3.15 x 1.77
Polyamie			267	10.68		380	324	328	186,5	8	40 x 8	80 x 45
Colour: B	lack	250				14.96	12.76	12.91	7.34	.31	1.57 x .31	3.15 x 1.77
Material	code: PA		273	10.92	10	385	330	334	189,5	8	40 x 8	80 x 45
						15.16	12.99	13.15	7.46	.31	1.57 x .31	3.15 x 1.77
	for material properties and technical		318	12.72		440	375	382	212	8	40 x 8	80 x 45
information.		300				17.32	14.76	15.04	8.35	.31	1.57 x .31	3.15 x 1.77
			323,9	12.96	12	450 17.72	381 15.00	390 15.35	215 8.46	8 .31	40 x 8 1.57 x .31	80 x 45
	s are available upon request.							-	235	-		3.15 x 1.77
Please contact STA	UFF for further information.		355,6	14.22	14	480 18.90	417,5 16,44	421 16.57	9.25	12 .47	60 x 8	100 x 50
		350				490	-	434	9.25	.47	2.36 x .31 60 x 8	3.94 x 1.97 100 x 50
Applications			368	14.72		490	430	-	9.53	.47		
							16.93	17.09			2.36 x .31	3.94 x 1.97
• •	<ul> <li>Standing or hanging installation of pipes and</li> </ul>		406,4	16.26	16	550 21.65	468,5 18,44	472 18.58	261 10.28	12 .47	60 x 8 2.36 x .31	100 x 50 3.94 x 1.97
tubes on beams, profiles and consoles							481	485	267.5		60 x 8	
0	<ul> <li>Design with two threaded ends allows for ideal adaptation to suit the exact outer diameter of the pipe or tube</li> </ul>		419	16.76		550 21.65	18.94	485	267,5	.47	2.36 x .31	100 x 50 3.94 x 1.97
						21.65	18.94 519	523	286,5	.47	2.36 X .31 60 X 8	100 x 50
pipe or tube			457	18.28	18	23.03	20.43	20.59	11.28	.47	2.36 x .31	3.94 x 1.97
						630	20.43	574	312	.47	2.30 X .31 60 X 8	100 x 50
			508	20.32	20	24.80	22.44	22.60	12.28	.47	2.36 x .31	3.94 x 1.97
		500				24.80 640	22.44 583	22.60 587	319	.47		
			521	20.84		25.20	22.96	23.11	12.56	.47	60 x 8	100 x 50
						23.20	22.90	23.11	12.00	.47	2.36 x .31	3.94 x 1.97

Alternative materials and surface finishings are available upon request. Contact STAUFF for further information.

#### **Applications**

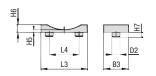
- Standing or hanging installation of pipes and tubes on beams, profiles and consoles
- Design with two threaded ends allows for ideal adaptation to suit the exact outer diameter of the pipe or tube





# Flat Steel U-Bolt with Plastic Pipe Saddle (Short) and U-Profile

# (To be used as Fixed Point Clamps only) Type FB+RUK



**Plastic Pipe Saddle (type RUK)** (For size DN 40, dimension L4 is staggered by 90°)



Hexagon Head Bolt AS (according to DIN EN ISO 4014 / 4017)

Diameter Nominal	Outside Pipe / Tu	Diameter ıbe	Nominal Bore	Dimen							Hexagon Head Bolt
DN	Ø D1 (mm)	(in)	Pipe (in)	Plastic L3	Pipe Sa	addle (ty B3	pe RUK) D2	H5	H6	H7	(DIN EN ISO 4014 / 4017) Thread G x L
	. ,			24	25	35	8	5	8	5	
40	48,3	1.93	1-1/2	.94	.98	1.38	.31	.20	.31	.20	M10 x 40
	57	0.00		38	25	50	10	5	10	6	M10 x 40
EO	57	2.28		1.50	.98	1.97	.39	.20	.39	.24	M10 x 40
50	60,3	2.41	2	38	25	50	10	5	10	6	M10 x 40
	60,3	2.41	2	1.50	.98	1.97	.39	.20	.39	.24	WITU X 40
65	76,1	3.04	2-1/2	38	25	50	10	5	10	6	M10 x 40
00	70,1	3.04	2-1/2	1.50	.98	1.97	.39	.20	.39	.24	WITU X 40
80	88,9	3.56	3	75	40	70	15	8	17	10	M 12 x 55
00	00,5	0.00	0	2.95	1.57	2.76	.59	.31	.67	.39	WITZ X 00
	108	4.32		75	40	70	15	8	17	10	M 12 x 55
100	100	7.02		2.95	1.57	2.76	.59	.31	.67	.39	WI 12 X 00
100	114,3	4.57	4	75	40	70	15	8	17	10	M 12 x 55
	111,0	1.07		2.95	1.57	2.76	.59	.31	.67	.39	MI 12 X 00
	133	5.32		75	40	70	15	8	17	10	M 12 x 55
125				2.95	1.57	2.76	.59	.31	.67	.39	
	139,7	5.59	5	75	40	70	15	8	17	10	M 12 x 55
	,.		-	2.95	1.57	2.76	.59	.31	.67	.39	
	159	6.36		140	90	75	25	8	26	10	M 16 x 75
150				5.51	3.54	2.95	.98	.31	1.02	.39	
	168,3	6.73	6	140	90	75	25	8	26	10	M 16 x 75
	, -		-	5.51	3.54	2.95	.98	.31	1.02	.39	
175	193,7	7.75		140	90	75	25	8	26	10	M 16 x 75
				5.51	3.54	2.95	.98	.31	1.02	.39	
	216	8.64		140	90	75	25	8	26	10	M 16 x 75
200				5.51	3.54	2.95	.98	.31	1.02	.39	
	219,1	8.76	8	140	90	75	25	8	26	10	M 16 x 75
				5.51	3.54	2.95	.98	.31	1.02	.39	
	267	10.68		140	90 3.54	75	25 .98	8 .31	26	10	M 20 x 80
250				5.51	90	2.95 75	25	8	1.02	.39	
	273	10.92	10	140 5.51	3.54	2.95	.98	o .31	26	10 .39	M 20 x 80
				220	150	75	30	8	32	10	
	318	12.72		8.66	5.91	2.95	1.18	.31	1.26	.39	M 20 x 80
300				220	150	75	30	8	32	10	
	323,9	12.96	12	8.66	5.91	2.95	1.18	.31	1.26	.39	M 20 x 80
				220	150	75	30	8	32	10	
	355,6	14.22	14	8.66	5.91	2.95	1.18	.31	1.26	.39	M 24 x 100
350				220	150	75	30	8	32	10	
	368	14.72		8.66	5.91	2.95	1.18	.31	1.26	.39	M 24 x 100
				220	150	75	30	8	32	10	
	406,4	16.26	16	8.66	5.91	2.95	1.18	.31	1.26	.39	M 24 x 100
				220	150	75	30	8	32	10	
400	419	16.76		8.66	5.91	2.95	1.18	.31	1.26	.39	M 24 x 100
				220	150	75	30	8	32	10	
	457	18.28	18	8.66	5.91	2.95	1.18	.31	1.26	.39	M 24 x 100
				220	150	75	30	8	32	10	
	508	20.32	20	8.66	5.91	2.95	1.18	.31	1.26	.39	M 24 x 100
500	504	00.01		220	150	75	30	8	32	10	11.04 1.02
	521	20.84		8.66	5.91	2.95	1.18	.31	1.26	.39	M 24 x 100



# **Ordering Codes**

Flat Steel U-Be	olt *FB-*A-48.	*FB-*A-48.3-*W1				
* Flat Steel U-Boli	t	FB				
* Exact outside di	ameter Ø D1 (mm)	A-48.3				
* Material code	W1 W32					
	Stainless Steel V4A 1.4401 / 1.4571 (AISI 316 / 316	Ti) <b>W5</b>				
only Plastic Pi	pe Saddle *RUK-*48	.3-*PP				
* Plastic Pipe Sad	dle (Short)	RUK				
* Exact outside diameter Ø D1 (mm) 48.3						
* Material of Pipe	Saddle (see below)	PP				
Diagon poto, All ito	me are supplied non-accombled					

Please note: All items are supplied non-assembled.

#### **Standard Materials for Plastic Pipe Saddles**



Polyamide Colour: Black Material code: PA

See pages 154 / 155 for material properties and technical information.

Alternative materials are available upon request. Please contact STAUFF for further information.

#### **Applications**

- Standing or hanging installation of pipes and tubes on beams, profiles and consoles
- Design with two threaded ends allows for ideal adaptation to suit the exact outer diameter of the pipe or tube





## Round Steel U-Bolt with Plastic Pipe Saddle (Short) **Type RB+RUK**

DN

20

25

32

40

50

65

80

RB+RUK

48.3

PP

W1

W32

W5



#### **Ordering Codes Clamp Assembly** *RB+RUK-*48.3-*PP-*W1 One clamp assembly is consisting of one Round Steel U-Bolt (type RB), one Plastic Pipe Saddle (type RUK) and four Nuts (to DIN EN ISO 4032). * Clamp Assembly (as listed above) * Exact outside diameter Ø D1 (mm) * Material of Pipe Saddle (see below) * Material code Carbon Steel, uncoated Carbon Steel, zinc-plated, blue-chromated

Stainless Steel V4A 1.4401 / 1.4571 (AISI 316 / 316 Ti)

Please note: All items are supplied non-assembled.

#### **Standard Materials for Plastic Pipe Saddles**

Polypropylene Colour: Green Material code: PP Polyamide

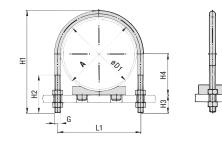
Colour: Black Material code: PA

See pages 154 / 155 for material properties and technical information.

Alternative materials are available upon request. Please contact STAUFF for further information.

#### **Applications**

- · Standing or hanging installation of pipes and tubes on beams, profiles and consoles
- Design with two threaded ends allows for ideal adaptation to suit the exact outer diameter of the pipe or tube





**Recommended Installation** 

>DN25

Round Steel U-Bolt (type RB) with Plastic Pipe Saddle (type RUK)

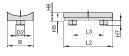
**Outside Diameter** Nominal Dimensions (mm/in) Diameter Nominal Pipe / Tube Bore Ø D1 Pipe Round Steel U-Bolt (Type RB) H3 H4 Thread G (in) (in) L1 H2 (mm)Α H1 40 73.5 41 30 17.5 25 .98 M10 30 1.57 2.89 1.61 1.18 69 1.18 40 73,5 41 30 18,5 26.9 1.06 3/4 M10 1.57 2.89 1.61 1.18 .73 48 48 20 81 30 1.18 M10 30 38 1.89 3.19 1.89 1.18 .79 1.50 22 48 30 81 48 33,7 1.33 M10 1 1,18 1,89 3,19 1,89 .87 56 89 48 30 24 38 1.50 M10 46 2.20 3.50 1.89 1.18 94 89 48 30 26,2 1.81 56 1.69 1-1/4 42.4 M10 2.20 3.50 1.89 1.18 1.03 62 100 55 35 27,2 44,5 1.76 M10 52 2.44 3.94 2.17 1.38 1.07 100 2.05 62 55 35 29 1-1/2 48,3 1.90 M10 2 4 4 1.38 1 1 4 3 94 2 17 76 118 63 39 33.5 57 2.28 M12 64 2.99 4.65 2.48 1.54 1.32 2.52 76 118 63 39 35,2 2 60.3 2.41 M12 2.99 2.48 1.39 4.65 1.54 82 135 39 43 94 77 76,1 3.04 2-1/2 M12 3.23 3.03 1.54 1.69 3.70 5.31 94 106 152 82 41 52.5 88,9 3.56 3 M12 3 70 4 17 5.98 3 23 1 61 2 07 136 190 105 49 62 108 M16 4.32 120 5.35 7.48 4.13 1.93 2.44 100 136 190 105 65 4.72 49 4 57 4 M16 114.3 5.35 7.48 4.13 1.93 2.56 217 74,5 164 105 49 133 5.32 M16 148 6.46 8.54 4.13 1.93 2.93 125 5.83 164 217 105 49 78 5 139,7 5.59 M16 6 4 6 8 5 4 413 1.93 3 07 192 247 105 51 87,5 M16 159 6.36 176 4.13 3.44 7.56 9.72 2.01 150 6.93 192 247 105 51 92 6.73 6 M16 168.3 7.56 9.72 4.13 2.01 3.62 202 218 105 51 105 175 193,7 7.75 M16 7.96 8.58 10.75 4.13 2.01 4.13 248 311 125 59 116 216 8.64 M20 228 9.76 12.24 4.92 2.32 4.57 200 8.98 248 125 59 117,5 311 219,1 8.76 8 M20 9.76 12.24 4.92 2.32 4.63 303 364 125 59 141,5 267 10.68 M20 282 11.93 14.33 4.92 2.32 5.57 250 11.10 302 364 125 59 144.5 273 10.92 10 M20 11 89 14.33 4 92 2 32 5 69 352 418 125 62 167 318 12.72 M20 332 13.86 16.46 4.92 2.44 6.57 300 13.07 352 418 125 62 170 323.9 12.96 12 M20 13.86 16.46 4.92 2.44 6.69 186 402 475 145 70 355,6 14.22 14 M24 378 15.83 18.70 5.71 2.76 7.32 350 14.88 192 402 475 145 70 368 14.72 M24 2.76 15.83 18.70 5.71 7.56 452 526 145 70 211 406,4 16.26 16 M24 428 17.80 20.71 5.71 2.76 8.31 400 452 145 70 217,5 16.85 526 419 16.76 M24 17.80 20.71 5.71 2.76 8.56 554 145 262 627 70 508 20.32 20 M24 530 21.81 5.71 10.31 24.69 2.76 500 554 145 20.87 627 70 269 521 20.84 M24 21.81 24.69 5.71 2.76 10.59

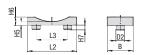
Alternative materials and surface finishings are available upon request. Contact STAUFF for further information.

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# **Round Steel U-Bolt with Plastic Pipe Saddle (Short) Type RB+RUK**





Plastic Pipe Saddle (type RUK) (For sizes DN 20 to DN 40)

Plastic Pipe Saddle (type RUK) (From size DN 50 on)

Diameter Nominal		Diameter	Nominal Bore	nal Dimensions ( ^{mm} / _{in} )							
	Ø D1		Pipe		Plastic Pipe Saddle (Type RUK)						
DN	(mm)	(in)	(in)	Α	L2	L3	В	H5	H6	H7	D2
	25	.98			35	25	24	5	8	5	8
20				30	1.38	.98	.94	.20	.31	.20	.31
	26,9	1.06	3/4	1.18	35 1.38	25	.94	5	8	5 .20	8
					35	.98 25	24	.20 5	.31 8	5	.31 8
	30	1.18		38	1.38	.98	.94	.20	.31	.20	.31
25		4.00		1.50	35	25	24	5	8	5	8
	33,7	1.33	1		1.38	.98	.94	.20	.31	.20	.31
	38	1.50			35	25	24	5	8	5	8
32	30	1.50		46	1.38	.98	.94	.20	.31	.20	.31
02	42,4	1.69	1-1/4	1.81	35	25	24	5	8	5	8
	,				1.38	.98	.94	.20	.31	.20	.31
	44,5	1.76		52	35 1.38	25 .98	24 .94	5 .20	8 .31	5 .20	8 .31
40				2.05	35	25	24	5	8	5	8
	48,3	1.90	1-1/2	2.00	1.38	.98	.94	.20	.31	.20	.31
	67	0.00			38	25	50	5	10	6	10
50	57	2.28		64	1.50	.98	1.97	.20	.39	.24	.39
50	60,3	2.41	2	2.52	38	25	50	5	10	6	10
	00,5	2.41	4		1.50	.98	1.97	.20	.39	.24	.39
65	76,1	3.04	2-1/2	82	38	25	50	5	10	6	10
	,			3.23	1.50	.98	1.97	.20	.39	.24	.39
80	88,9	3.56	3	<b>94</b> 3.70	75 2.95	40	70 2.76	8 .31	17 .67	10 .39	15 .59
				3.70	75	40	70	8	17	10	15
100	108	4.32		120	2.95	1.57	2.76	.31	.67	.39	.59
100	114.0	4 57	4	4.72	75	40	70	8	17	10	15
	114,3	4.57	4		2.95	1.57	2.76	.31	.67	.39	.59
	133	5.32		<b>148</b> 5.83	75	40	70	8	17	10	15
125					2.95	1.57	2.76	.31	.67	.39	.59
	139,7	5.59	5		75 2.95	40	70 2.76	8 .31	17 .67	10 .39	15 .59
			_		140	90	75	8	26	10	25
150	159	6.36		176	5.51	3.54	2.95	.31	1.02	.39	.98
150	168,3	6.73	6	6.93	140	90	75	8	26	10	25
	100,5	0.73	0		5.51	3.54	2.95	.31	1.02	.39	.98
175	193,7	7.75		202	140	90	75	8	26	10	25
				7.96	5.51	3.54	2.95	.31	1.02	.39	.98
	216	8.64		220	140	90	75	8	26	10	25
200				<b>228</b> 8.98	5.51 140	3.54 90	2.95 75	.31 8	1.02 26	.39 10	.98 25
	219,1	8.76	8	0.00	5.51	3.54	2.95	.31	1.02	.39	.98
	007	10.00			140	90	75	8	26	10	25
250	267	10.68		282	5.51	3.54	2.95	.31	1.02	.39	.98
200	273	10.92	10	11.10	140	90	75	8	26	10	25
	270	10.02	10		5.51	3.54	2.95	.31	1.02	.39	.98
	318	12.72		000	220	150	75	8	32	10	30
300				<b>332</b> 13.07	8.66 220	5.91 150	2.95 75	.31 8	1.26 32	.39 10	1.18 30
	323,9	12.96	12	13.07	8.66	5.91	2.95	.31	1.26	.39	1.18
	055.0	14.00	14		220	150	75	8	32	10	30
250	355,6	14.22	14	378	8.66	5.91	2.95	.31	1.26	.39	1.18
350	368	14.72		14.88	220	150	75	8	32	10	30
	000	17.12			8.66	5.91	2.95	.31	1.26	.39	1.18
	406,4	16.26	16	400	220	150	75	8	32	10	30
400				<b>428</b> 16.85	8.66 220	5.91 150	2.95 75	.31 8	1.26 32	.39 10	1.18 30
	419	16.76		10.00	8.66	5.91	2.95	.31	1.26	.39	1.18
		0.65	-		220	150	75	8	32	10	30
500	508	2.32	20	530	8.66	5.91	2.95	.31	1.26	.39	1.18
500	521	2.84		2.87	220	150	75	8	32	10	30
	521	2.04			8.66	5.91	2.95	.31	1.26	.39	1.18



# **Ordering Codes**

	-Bolt *RB-*A-52-*W1-* -Bolt (type RB) inIcludes N ISO 4032).	COMPL					
* Round Steel U-B	olt	RB					
* Dimension A (mr	m)	A-52					
* Material code	terial code Carbon Steel, uncoated Carbon Steel, zinc-plated, blue-chromated						
	Stainless Steel V4A 1.4401 / 1.4571 (AISI 316 / 31)	6 Ti) <b>W5</b>					
only Plastic Pi	pe Saddle *RUK-*44	8.3 <b>-*PP</b>					
* Plastic Pipe Sade	dle (Short)	RUK					
* Exact outside dia	* Exact outside diameter Ø D1 (mm) 48.3						
* Material of Pipe	Saddle (see below)	РР					

#### **Standard Materials for Plastic Pipe Saddles**



Colour: Black

Material code: PA See pages 154 / 155 for material properties and technical

information.

Alternative materials are available upon request. Please contact STAUFF for further information.

#### **Applications**

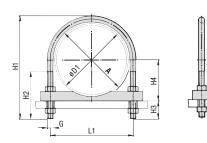
- Standing or hanging installation of pipes and tubes on beams, profiles and consoles
- Design with two threaded ends allows for ideal adaptation to suit the exact outer diameter of the pipe or tube



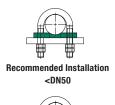
# **Round Steel U-Bolt with Plastic Pipe Saddle (Long) Type RB+RUL**



Ordering Codes				Diameter Nominal		e Diameter Tube	Nominal Bore Pipe	Dimensions ( ^{mm} /in) Round Steel U-Bo	
	Clamp Accom	hh. *DD.DIII *40.2	*DD *\//1	DN	(mm)	(in)	(in)	A	L1
	Clamp Assem	bly *RB+RUL-*48.3	· PP- WI	DI	. ,	. ,	(11)	~	40
	One clamp cocom	bly is consisting of one Round	Ctool II Dolt		25	.98		30	1.57
		stic Pipe Saddle (type RUL) an		20	26,9	1.06	3/4	1.18	40
	(to DIN EN ISO 403				20,9		3/4		1.57
	(10 DIN EN 100 400	<i>iLj</i> .			30	1.18			48
	* Clamp Assembly	(as listed above)	RB+RUL	25				38	1.89
		, , , , , , , , , , , , , , , , , , ,		33,7	1.33	1	1.50	48 1.89	
	* Exact outside di	ameter Ø D1 (mm)	48.3						56
	* Material of Pipe	Saddle (see below)	PP		38	1.50		46	2.20
	* Material code Carbon Steel, uncoated W1			32	40.4	1.00	4 4 /4	1.81	56
	Wiaterial Coue	Carbon Steel, uncoated Carbon Steel, zinc-plated,	VV I		42,4	1.69	1-1/4		2.20
		blue-chromated	W32		44,5	1.76			62
				40	- 11,0	1.70		52	2.44
		Stainless Steel V4A			48,3	1.90	1-1/2	2.05	62
		1.4401 / 1.4571 (AISI 316 /	316 Ti)						2.44
	Please note: All items are supplied non-assembled.				57	2.28		64	2.99
				50			-	2.52	76
					60,3	2.41	2	-	2.99
	Standard Materials for Plastic Pipe Saddles				76,1	3.04	2-1/2	82	94
	Stanuaru Materiais for Flashe Fipe Saudies			65	70,1	0.01	2-1/2	3.23	3.70
	Polypropylene				88,9	3.56	3	94	106
	Colour: G	•			,			3.70	4.17
	Material			100 -	108	4.32		120	5.35
								4.72	136
	Polyamic	le			114,3	4.57	4	4.72	5.35
	Colour: B	lack			133	5.32			164
	Material	code: PA		125	155	0.52		148	6.46
				120	139,7	5.59	5	5.83	164
	1 0	for material properties and tech	hnical		,.		-		6.46
	information.				159	6.36		176	192 7.56
				150				6.93	192
		s are available upon request.			168,3	6.73	6	0.33	7.56
	Please contact STAL	JFF for further information.		475	400 7	7 75		202	218
				175	193,7	7.75		7.96	8.58
	Applications				216	8.64			248
					210	0.04		228	9.76
	Standing or hangi	200	219,1	8.76	8	8.98	248		
	<ul> <li>Standing or hanging installation of pipes and tubes on beams, profiles and consoles</li> </ul>								9.76 303
	<ul> <li>Design with two threaded ends allows for ideal</li> </ul>				267	10.68		282	303
	0	the exact outer diameter of t		250				11.10	302
	pipe or tube		-		273	10.92	10		11.89
					210	10.70			352
					318	12.72		332	13.86



Round Steel U-Bolt (type RB) with Plastic Pipe Saddle (type RUL)





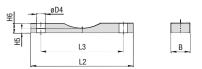
**Recommended Installation** >DN50

Diameter Nominal	Pipe / T	Diameter ube	Bore		ions ( ^{mm} /in)					
	Ø D1		Pipe		Round Steel U-Bolt (Type RB)					<b>T</b> 1. 1 <b>T</b>
DN	(mm)	(in)	(in)	A	L1	H1	H2	H3	H4	Thread G
	25	.98		20	40	73,5	41	30	17,5	M10
20				<b>30</b> 1.18	1.57	2.89	1.61	1.18	.69	
	26,9	1.06	3/4	1.10	40 1.57	73,5 2.89	41	30 1.18	18.5 .73	M10
					48	81	48	30	20	
	30	1.18		38	1.89	3.19	1.89	1.18	.79	M10
25				1.50	48	81	48	30	22	
	33,7	1.33	1		1.89	3.19	1.89	1.18	.87	M10
		4.50			56	89	48	30	24	1440
20	38	1.50		46	2.20	3.50	1.89	1.18	.94	M10
32	42,4	1.69	1-1/4	1.81	56	89	48	30	26,2	M10
	42,4	1.09	1-1/4		2.20	3.50	1.89	1.18	1.03	IVITO
	44,5	1.76			62	100	55	35	27,2	M10
40	. 1,0	1.10		52	2.44	3.94	2.17	1.38	1.07	into
	48,3	1.90	1-1/2	2.05	62	100	55	35	29	M10
	.,-				2.44	3.94	2.17	1.38	1.14	
	57	2.28		64	76	118	63	39	33,5	M12
50				64 2.52	2.99	4.65	2.48	1.54	1.32	
	60,3	2.41	2	2.52	76 2.99	118 4.65	63 2.48	39 1.54	35,2 1.39	— M12
				82	94	4.05	77	39	43	
65	76,1	3.04	2-1/2	3.23	3.70	5.31	3.03	1.54	1.69	M12
				94	106	152	82	39	54,5	
30	88,9	3.56	3	3.70	4.17	5.98	3.23	1.54	2.15	M12
				0.110	136	190	105	47	64	
100	108	4.32		120	5.35	7.48	4.13	1.85	2.52	M16
100	114.0	4 57	4	4.72	136	190	105	47	67	MIC
	114,3	4.57	4		5.35	7.48	4.13	1.85	2.64	M16
	133	5.32			164	217	105	47	76,5	M16
125	155	5.52		148	6.46	8.54	4.13	1.85	3.01	INITO
20	139,7	5.59	5	5.83	164	217	105	47	80	M16
	,.	0.00	-		6.46	8.54	4.13	1.85	3.15	
	159	6.36		170	192	247	105	47	91,5	M16
50				176	7.56	9.72	4.13	1.85	3.60	
	168,3	6.73	6	6.93	192 7.56	247 9.72	105 4.13	47 1.85	96 3.78	M16
				202	218	273	105	47	109	
75	193,7	7.75		7.96	8.58	10.75	4.13	1.85	4.29	M16
				1.50	248	311	125	55	120	
	216	8.64		228	9.76	12.24	4.92	2.17	4.72	M20
200	040.4	0.70	0	8.98	248	311	125	55	121,5	1400
	219,1	8.76	8		9.76	12.24	4.92	2.17	4.78	M20
	267	10.60			303	364	125	55	145,5	M20
250	267	10.68		282	11.93	14.33	4.92	2.17	5.73	M20
	273	10.92	10	11.10	302	364	125	55	148,5	M20
	210	10.32	10		11.89	14.33	4.92	2.17	5.85	MLU
	318	12.72			352	418	125	55	174	M20
300				332	13.86	16.46	4.92	2.17	6.85	
	323,9	12.96	12	13.07	352	418	125	55	177	M20
					13.86	16.46	4.92	2.17	6.97	
	355,6	14.22	14	279	402	475	145	63	193	M24
350				<b>378</b> 14.88	15.83 402	18.70 475	5.71 145	2.48 63	7.60	
	368	14.72		14.00	15.83	18.70	5.71	2.48	7.83	M24
					452	526	145	63	218	
	406,4	16.26	16	428	17.80	20.71	5.71	2.48	8.58	M24
400				16.85	452	526	145	63	224,5	
	419	16.76		10.00	17.80	20.71	5.71	2.48	8.84	— M24
	FOC	00.00	00		554	627	145	63	269	
-00	508	20.32	20	530	21.81	24.69	5.71	2.48	10.59	M24
500	F04	00.01		20.87	554	627	145	63	276	M0.4
	521	20.84			21.81	24.69	5.71	2.48	10.87	- M24

Alternative materials and surface finishings are available upon request. Contact STAUFF for further information.



# Round Steel U-Bolt with Plastic Pipe Saddle (Long) Type RB+RUL



#### Plastic Pipe Saddle (type RUL)

Diameter Nominal	Outside Pipe / Ti	Diameter ube	Nominal Bore	Dimensio	Dimensions ( ^{mm} / _{in} )					
DN	Ø D1		Pipe		Plastic Pipe Saddle (Type RUL)			115	110	6.04
DN	(mm)	(in)	(in)	Α	L2	L3	B	H5	H6	Ø D4
	25	.98		30	75 2.95	40	30	5 .20	.47	.43
20				1.18	75	40	30	5	12	11
	26,9	1.06	3/4	1.10	2.95	1.57	1.18	.20	.47	.43
					80	48	30	5	12	11
05	30	1.18		38	3.15	1.89	1.18	.20	.47	.43
25	22.7	1.00	1	1.50	80	48	30	5	12	11
	33,7	1.33			3.15	1.89	1.18	.20	.47	.43
	38	1.50			90	56	30	5	12	11
32				46	3.54	2.20	1.18	.20	.47	.43
	42,4	1.69	1-1/4	1.81	90	56	30	5	.47	.43
					3.54 95	2.20 62	1.18 35	.20 5	15	11
	44,5	1.76		52	3.74	2.44	1.38	.20	.59	.43
40				2.05	95	62	35	5	15	11
	48,3	1.90	1-1/2		3.74	2.44	1.38	.20	.59	.43
	57	2.20			110	76	35	5	15	14
50	57	2.28		64	4.33	2.99	1.38	.20	.59	.55
50	60,3	2.41	2	2.52	110	76	35	5	15	14
	50,5	2.71	L		4.33	2.99	1.38	.20	.59	.55
65	76,1	3.04	2-1/2	82	135	94	35	5	15	14
	-,			3.23	5.31	3.70	1.38	.20	.59	.55
80	88,9	3.56	3	<b>94</b> 3.70	145	106	40	10	20	14
				3.70	5.71 190	4.17 136	40	.39 10	.79 20	.55 18
	108	4.32		120	7.48	5.35	1.57	.39	.79	.71
100				4.72	190	136	40	10	20	18
	114,3	4.57	4		7.48	5.35	1.57	.39	.79	.71
	100	E 00			220	164	40	10	20	18
125	133	5.32		148	8.66	6.46	1.57	.39	.79	.71
120	139,7	5.59	5	5.83	220	164	40	10	20	18
	100,1	0.00	0		8.66	6.46	1.57	.39	.79	.71
	159	6.36		170	250	192	50	12	25	18
150				<b>176</b> 6.93	9.84 250	7.56	1.97 50	.47	.98 25	.71
	168,3	6.73	6	0.35	9.84	7.56	1.97	.47	.98	.71
				202	270	218	50	12	25	18
175	193,7	7.75		7.96	10.63	8.58	1.97	.47	.98	.71
	216	8.64			315	248	50	12	25	22
200	210	0.04		228	12.40	9.76	1.97	.47	.98	.87
200	219,1	8.76	8	8.98	315	248	50	12	25	22
	,.		-		12.40	9.76	1.97	.47	.98	.87
	267	10.68		202	370	302	50	12	25	22
250				<b>282</b> 11.10	14.57 370	11.89 302	1.97 50	.47	.98 25	.87
	273	10.92	10	11.10	14.57	11.89	1.97	.47	.98	.87
	040	10 70			420	352	60	15	30	22
200	318	12.72		332	16.54	13.86	2.36	.59	1.18	.87
300	323,9	12.96	12	13.07	420	352	60	15	30	22
	323,9	12.90	12		16.54	13.86	2.36	.59	1.18	.87
	355,6	14.22	14		480	402	60	15	30	26
350			· ·	378	18.90	15.83	2.36	.59	1.18	1.02
	368	14.72		14.88	480 18.90	402 15.83	60 2.36	15 .59	30 1.18	26
					540	452	60	15	30	26
	406,4	4 16.26 16 428	428	21.26	17.80	2.36	.59	1.18	1.02	
400		10		16.85	540	452	60	15	30	26
	419	16.76			21.26	17.80	2.36	.59	1.18	1.02
	500	20.20	20		640	554	60	15	30	26
500	508	20.32	20	530	25.20	21.81	2.36	.59	1.18	1.02
500	521	20.84		20.87	640	554	60	15	30	26
		20.01			25.20	21.81	2.36	.59	1.18	1.02



# **Ordering Codes**

Round Steel U-Bolt*RB-*A-52-*W1-*COMPL							
One Round Steel U-Bolt (type RB) inIcludes four Nuts (to DIN EN ISO 4032).							
* Round Steel U-Bolt RB							
* Dimension A (mm) A-52							
* Material code Carbon Steel, uncoated W1							
Carbon Steel, zinc-plated, W32 blue-chromated							
Stainless Steel V4A <b>W5</b> 1.4401 / 1.4571 (AISI 316 / 316 Ti)							
only Plastic Pipe Saddle *RUL-*48.3-*PP							
* Plastic Pipe Saddle (Long) RUL							
* Exact outside diameter Ø D1 (mm) 48.3							
* Material of Pipe Saddle (see below) PP							

#### **Standard Materials for Plastic Pipe Saddles**



Polyamide Colour: Black Material code: PA

See pages 154 / 155 for material properties and technical information.

Alternative materials are available upon request. Please contact STAUFF for further information.

#### **Applications**

- Standing or hanging installation of pipes and tubes on beams, profiles and consoles
- Design with two threaded ends allows for ideal adaptation to suit the exact outer diameter of the pipe or tube

Alternative materials and surface finishings are available upon request. Contact STAUFF for further information.

Κ



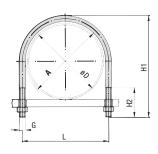
# Round Steel U-Bolt (without Plastic Pipe Saddle) Type RBD (DIN 3570, Type A)



#### **Ordering Codes** Clamp Assembly *RBD-*A-30-*W1-*COMPL One clamp assembly is consisting of one Round Steel U-Bolt (type RBD according to DIN 3570, Type A) and two Nuts (to DIN EN ISO 4032). * Clamp Assembly (as listed above) RBD * Dimension A (mm) A-30 * Material code Carbon Steel, uncoated W1 Carbon Steel, zinc-plated, W32 blue-chromated Stainless Steel V4A W5 1.4401 / 1.4571 (AISI 316 / 316 Ti) Please note: All items are supplied non-assembled.

#### **Applications**

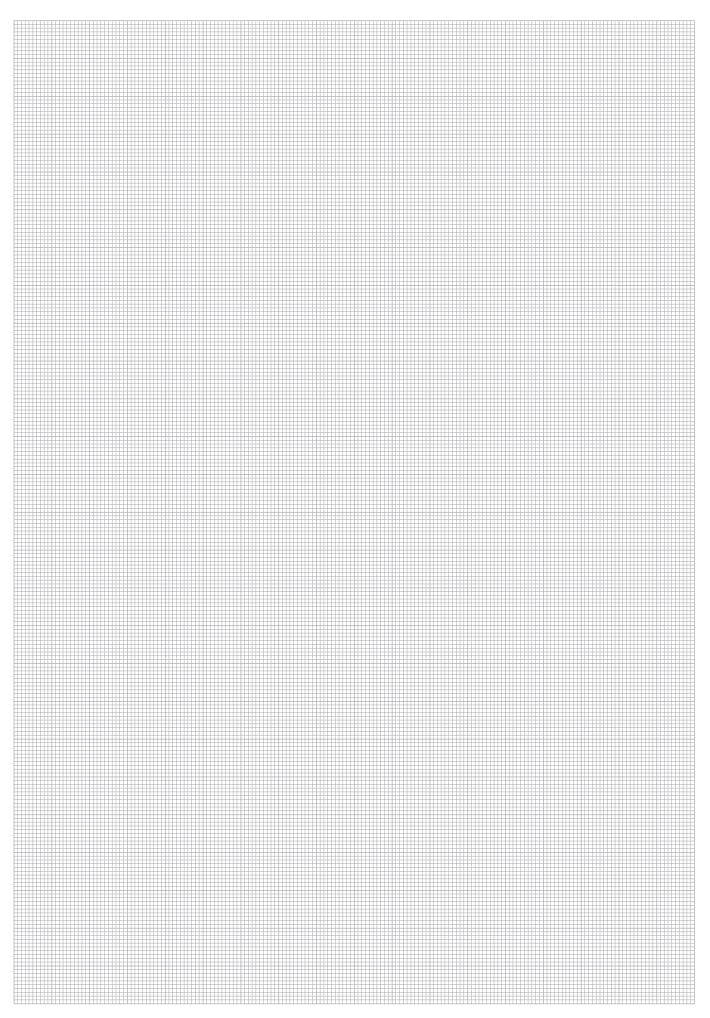
- Standing or hanging installation of pipes and tubes on beams, profiles and consoles
- Design with two threaded ends allows for ideal adaptation to suit the exact outer diameter of the pipe or tube

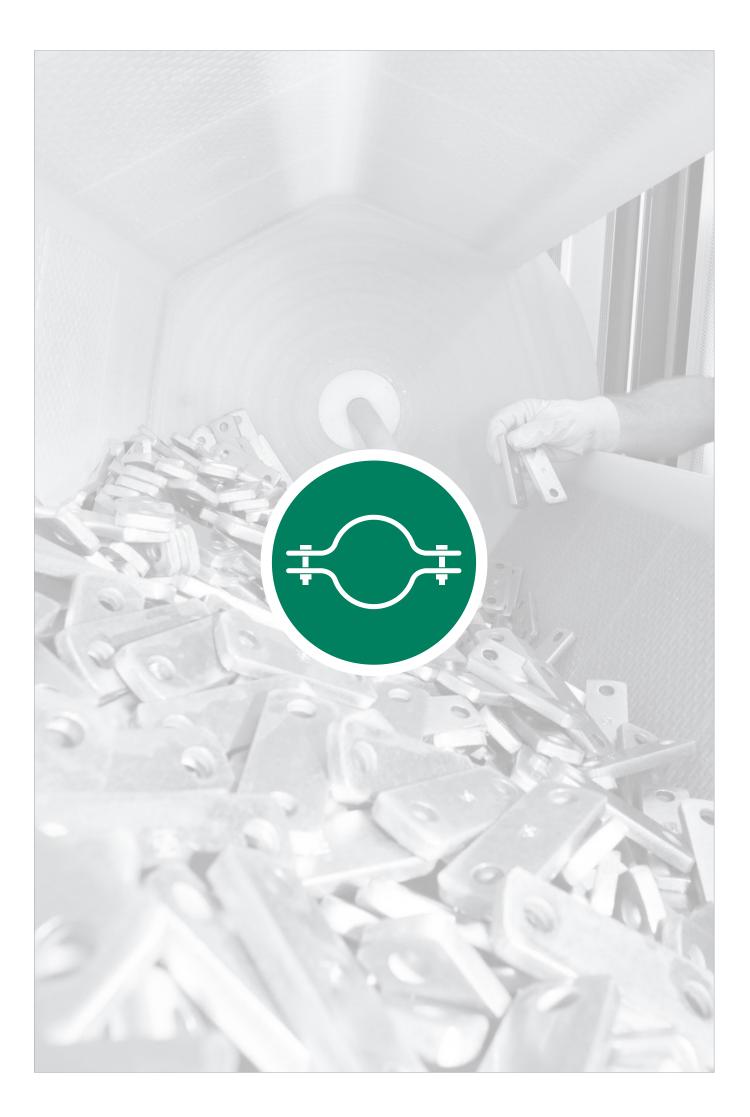


#### Round Steel U-Bolt (type RBD)

01         00         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0	Diameter Nominal	•		Bore	Dimensions ( ^{mm} /m)				
20         25         98         30         30         70         40         40         M10           20         1.66         1.67         1.67         2.76         1.57         40         M10           25         30         1.18         1.89         2.76         1.57         M10           26         337         1.33         1         1.50         48         76         40         M10           37         1.33         1         1.50         48         76         40         M10           38         1.50         2.46         2.20         3.39         1.97         M10           31         1.76         5         2.60         3.90         1.97         M10           41         1.89         2.90         3.90         1.97         M10         M12           41         1.97         7.66         1.97         M10         M12         M12           50         5         2.20         3.30         1.97         M12         M12           60         3.61         3.61         3.70         1.66         1.89         1.97         M12           61         3.61         3.61		Ø D1		Pipe					
2b         2b         3b         3c         3c         157         2 for         157         2 for         157         2 for         160           2b         1.6         1.6         1.6         157         2.6         1.57         100           3c         1.8         1.8         2.9         1.57         2.0         1.57           3c         1.3         1.8         2.9         1.57         400         400           3c         1.3         1.8         2.9         1.57         400         400           3c         1.50         1.6         2.9         3.9         400         400         400           42.4         1.69         1.7         2.00         3.9         1.97         400           46.5         1.67         2.60         3.9         1.97         400         3.9         40         40         3.9         40         40         3.9         40         40         40         40         40         40         40         40         40         40         40         40         40         40         40         40         40         40         40         40         40         40	DN	(mm)	(in)	(in)	A				Thread G
20         1.6e           26         1.8         1.8         1.8         2.6         1.67         Mo         Mo           37.         1.8         1.8         1.6         48         76         40         Mo           37.         1.8         1.6         1.6         86         50         Mo           38         1.7         1.8         1.6         2.2         3.9         1.97         Mo           40.         1.6         1.6         3.8         1.97         Mo         Mo         Mo           40.         1.6         1.6         3.8         1.97         Mo         Mo         Mo           40.         1.6         3.8         1.97         Mo         2.4         3.8         1.97         Mo           40.         2.8         4.9         1.97         Mo         3.9         Mo         Mo           10.         1.6         1.97         1.9         1.9         Mo         Mo         Mo         Mo           10.         1.6		25	.98		20				M10
Koy         Koy         Koy         Koy         Koy         Koy         Koy         Koy         Koy           3         1.8         1.8         3         1.8         2.8         7.6         40         Mo           3.7         1.33         1.3         1.8         1.89         2.9         1.57         Mo           3.8         1.50         1.8         2.9         3.9         1.97         Mo           4.8         1.9         1.69         1.69         2.20         3.9         1.97         Mo           4.9         1.69         1.7         2.20         3.9         1.97         Mo         Mo           4.0         1.9         1.7         2.20         3.9         1.97         Mo         Mo           4.0         1.9         1.9         1.9         2.20         3.9         1.97         Mo         Mo           4.0         1.9         3.9         1.9         2.20         3.9         1.97         Mo         Mo           6.0         1.9         1.9         1.97         1.9         Mo         Mo         Mo         Mo           7.0         1.9         1.9         1.9	20								
30         1.18         1.18         38         48         76         40         M0           37.0         1.33         1         1.50         48         76         40         M10           38         1.50         1.80         2.99         1.57         M10           38         1.60         1.14         1.88         2.09         3.39         1.97         M10           42.4         1.69         1.16         2.20         3.39         1.97         M10           40         1.90         1.12         2.06         86         50         M10           40.1         1.90         1.12         2.01         3.30         1.97         M10           40         1.90         1.97         M10         1.97         M10         1.97         M10           57         2.80         2.41         3.62         1.97         M12         1.90         M12           60         3.41         2.9         4.29         4.29         1.97         M12           76         1.98         1.97         M12         1.97         M12         1.97           100         5.59         5.6         5.63		26,9	1.06	3/4	1.10				M10
1         1         38         1,89         2,99         1,57         40           33,7         1,33         1         1         1.89         2,99         1,57         40           32         3         1,50         46         66         66         50         40           42,4         1,69         1,1/4         1.81         2,00         3,39         1,97         40           40         1,69         1,61         2,00         3,39         1,97         40           40         1,97         1,97         2,00         3,39         1,97         40           60         3,99         1,97         40         1,97         40         1,97         40           61         1,97         1,97         40         1,97         40         1,97         40           61         1,90         2,28         4,92         1,97         40         40         1,97         40           61         1,90         3,00         4,17         5,43         1,97         40         1,97         40           100         1,33         3,70         4,92         1,97         40         1,96         1,97		00	1.10						1410
33.7     1.33     1.00     48     76     40     40       38     1.50     1.89     48     76     40     1.67       32     38     1.50     1.60     46     86     50       42.4     1.69     1.1/4     1.81     66     86     50       40     1.70     1.1/4     1.81     66     86     50       40     48.3     1.70     1.1/2     2.05     62     92     50       40     8.9     1.70     1.1/2     2.44     3.62     1.97     100       50     61.4     2.99     4.29     1.97     102     100       60     8.9     3.64     2.12     2.99     4.29     1.97       76.1     3.04     2.12     3.23     3.70     4.29     1.97       76.3     3.44     2.12     3.23     3.70     4.29     1.97       76.4     3.55     6.73     2.36     1.97     112       76.4     4.32     1.97     1.93     1.97     1.93       76.4     4.32     1.97     1.93     1.97     1.93       76.1     5.56     6.73     2.36     1.97       71.6     6.94 </td <td>25</td> <td>30</td> <td>1.18</td> <td></td> <td>38</td> <td>1.89</td> <td>2.99</td> <td>1.57</td> <td>IVITU</td>	25	30	1.18		38	1.89	2.99	1.57	IVITU
10         100         100         100         100         100         100         100           32         8         1.50         1.60         46         2.20         3.30         1.97         M1           42.4         1.60         1.76         2.20         3.30         1.97         M1           40         4.5         1.97         52         2.44         3.62         1.97         M1           40.0         1.90         1.91         2.20         3.30         1.97         M1           40.0         1.91         1.92         2.44         3.62         1.97         M1           60         2.31         1.90         52         2.44         3.62         1.97         M1           61         3.0         2.41         2.52         76         109         50         M1           63         8.9         3.64         2.12         3.70         4.92         1.97         M1           64         1.55         5.5         1.71         60         M6         M6           111.0         5.5         6.73         2.36         M1         M1         M1           111.1         5.5	20	33.7	1.33	1	1.50				M10
36         1.80         46         2.20         3.39         1.97         MID           42.4         1.69         1.61         1.81         2.20         3.39         1.97         MID           40         1.76         1.76         2.20         3.39         1.97         MID           40         1.76         1.76         2.09         2.09         92         50         MID           62         92         50         50         MID         MID         MID           50         50         50         MID         MID         MID         MID           60         8.9         2.41         2         2.99         4.29         1.97         MID           60         7.4         3.04         2.14         2.99         4.29         1.97         MID           61         3.24         2.99         4.90         1.55         50         MID         MID           61         3.4         3.62         3.9         3.70         4.92         1.97         MID           700         8.9         3.50         7.75         2.36         MID         MID           101         5.35         6.73 <td></td> <td>00,7</td> <td>1.00</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>WITO</td>		00,7	1.00						WITO
32         42,4         1.69         1.1/4         1.81         56         86         50         M1           40         45,5         1.76         32         330         1.97         M0           40.1         44,5         1.90         1.1/2         2.04         3.62         1.97         M1           60.1         1.90         50         43.3         1.90         1.1/2         2.44         3.62         1.97         M1           50         2.80         6.6         1.90         50         M1         M1           60.3         2.41         2         2.52         76         10.9         50         M12           61.3         2.41         2         2.52         76         10.9         50         M12           63.0         2.41         2.52         76         1.97         M12         M12           64.0         7.50         5.0         1.97         M12         M12         M12           700         8.9.9         3.60         3.70         4.92         1.97         M16           11.14         5.70         6.75         2.36         M16         M16           11.14 <t< td=""><td></td><td>38</td><td>1.50</td><td></td><td>46</td><td></td><td></td><td></td><td>M10</td></t<>		38	1.50		46				M10
42,4     1.69     1.14     2.00     3.39     1.97     M10       44,5     1.76     2.8     2.20     3.39     1.97     M10       40.0     43.3     1.90     1.1/2     2.05     2.44     3.62     1.97     M10       40.0     43.3     1.90     1.1/2     2.05     62     92     50     M10       50     61     9.0     50     M10     50     M10       50     60.3     2.41     2     2.52     76     109     50     M12       65     76,1     3.04     2.12     82     94     1.25     50     M12       65     76,1     3.04     2.12     82     94     1.25     50     M12       80.9     3.61     3.04     3.70     4.17     5.43     1.97     M12       80.9     3.56     3     3.70     4.17     5.43     1.97     M16       100     11.43     4.57     4.72     136     171     60     M16       110     6.35     6.73     2.366     M16     M16       111     6.75     2.36     M16       111     6.76     8.54     2.366       113	32								
40         1.76         1.76         2         62         92         50         M1           40.1         1.90         1-1/2         2.05         62         92         50         M1           50         43.3         1.90         1-1/2         2.05         62         92         50         M1           50         2.81         2.28         2.44         3.62         1.97         M12           60.3         2.41         2.28         7.6         109         50         M12           60.7         7.6         1.97         1.97         M12         M12           61.8         7.61         3.04         2.17         3.70         4.92         1.97         M12           61.9         3.69         3.70         4.17         5.43         1.97         M12           100         4.32		42,4	1.69	1-1/4					M10
40     100     101     205     244     3.62     1.97     M10       50     64     2.99     4.23     1.97     M10       50     7     2.28     2.28     2.99     4.29     1.97     M12       60.3     2.41     2     2.99     4.29     1.97     M12       60.3     2.41     2     2.99     4.29     1.97     M12       65     7.6.1     3.04     2.12     82     94     125     50     M12       66     7.6.1     3.04     2.12     82     94     125     50     M12       60     88.9     3.66     3     94     166     138     50     M12       100     4.32     94     166     138     50     M16       114.3     4.57     4     4.72     136     171     60       114.3     4.57     4     4.72     136     171     60     M16       12     139.7     5.59     5     5.83     164     191     60     M16       150     6.36     6.46     7.52     2.36     M16     155     55     M16       16.3     6.73     2.36     M16     1		44.5	1.76						M10
48,3     1.90     1.1/2     2.09     62     92     50     197       50     2.24     3.62     1.97     M1       50     60,3     2.41     2     2.52     76     109     50     M12       65     76,1     3.04     2.12     3.23     3.70     4.92     1.97     M12       65     76,1     3.04     2.12     3.23     3.70     4.92     1.97     M12       80     88,9     3.66     3     3.70     4.92     1.97     M12       80     88,9     3.66     3     3.70     4.17     5.43     1.97     M12       100     114,3     4.57     4     4.72     136     171     60     M16       110     5.35     6.73     2.36     M16     M16     M16     M16       121     136     171     60     M16     M16     M16     M16       121     143     4.57     4.72     136     171     60     M16       121     146     191     60     M16     M16     M16       121     148     192     217     60     M16       121     122     166     552	40	44,0	1.70						IVITO
57         2.80         64         2.99         4.29         1.97         M12           60.3         2.41         2         2.52         76         109         50         M12           60.3         2.41         2         2.52         76         109         50         M12           65         76.1         3.04         2.12         3.23         3.70         4.29         1.97         M12           65         76.1         3.04         2.12         3.23         3.70         4.92         1.97         M12           60         88.9         3.56         3         3.70         4.17         5.43         1.97         M12           100         114.3         4.57         4         4.72         136         171         60         M16           114.3         4.52         1.97         1.16         1.17         60         M16           125         139.7         5.59         5         5.63         1.14         1.91         60         M16           126         139.7         5.59         5         5.83         1.92         1.76         8.54         2.36         M16           130.7	10	48.3	1.90	1-1/2	2.05				M10
50         57         2.28         64         2.99         4.29         1.97         M12           60,3         2.41         2         2.52         76         109         50         M12           65         76,1         3.04         2-1/2         82         94         125         50         M12           66         76,1         3.04         2-1/2         82         94         126         50         M12           60         88,9         3.04         2-1/2         94         106         138         50         M12           100         43.2         94         106         138         50         M12           110         6.33         7.70         4.17         5.43         1.97         M12           110         6.32         2.36         6.73         2.36         M16         M16           125         5.35         6.73         2.36         M16         M16         M16           126         138         5.32         1.48         191         60         M16           126         6.36         7.56         8.54         2.36         M16           127         193,7									
50         60.3         2.41         2         2.52         76         109         50         M12           65         76.1         3.04         2-12         82         94         125         50         M12           66         88.9         3.60         3.23         3.70         4.92         1.97         M12           80         88.9         3.66         3.70         4.17         5.43         1.97         M12           100         114.3         4.32		57	2.28		64				M12
b0.3         2.41         2         2.99         4.29         1.97         M12           66         76,1         3.04         2-1/2         82         94         126         50         M12           80         86,9         3.56         3         94         106         138         50         M12           100         4.32	50								
65     76,1     3.04     2-1/2     82     3.4     125     50     M2       80     86,9     3.56     3.69     3.70     4.92     1.97     M2       80     86,9     3.69     3.70     4.92     1.97     M2       100     138     50     M2     M2       100     14.3     6.32     2.36     M16       110     6.35     6.73     2.36     M16       111     60     2.36     M16       113     5.37     6.73     2.36     M16       113     5.39     6.4     7.52     2.36     M16       113     5.39     6.6     7.52     2.36     M16       113     5.39     6.8     7.52     2.36     M16       113     6.36     1.64     191     60     M16       114     7.50     8.64     2.36     M16       115     6.33     2.36     M16     M16       116     7.76     8.54     2.36     M16       116     7.76     8.54     2.36     M16       117     10.3     7.6     8.54     2.36     M16       116     7.76     8.54     9.30		60,3	2.41	2					M12
80         88,9         3.56         3         94         106         138         50         M12           100         4.32         106         138         50         M12           100         4.32         120         5.35         6.73         2.36         M16           114.3         4.57         4         4.72         136         171         60         M16           125         133         5.32         148         646         7.52         2.36         M16           139,7         5.59         5         5.83         6.73         2.36         M16           139,7         5.59         5         5.83         164         191         60         M16           139,7         5.59         5         5.83         164         191         60         M16           150         139,7         7.5         192         217         60         M16           168,3         6.73         2.36         112         217         60         M16           100         192         217         60         M16         M16         M16           110         7.66         8.54         2.36	65	76.1	3.04	2-1/2		94	125	50	M12
80         88,9         3.56         3         3.70         4.17         5.43         1.97         M12           100         4.32         120         5.35         6.73         2.36         M16           114.3         4.57         4         4.72         136         171         60         M16           125         133         5.32         1         148         164         191         60         M16           139,7         5.59         5.63         164         191         60         M16           139,7         5.59         5         5.83         164         191         60         M16           150         139,7         5.59         5         6.63         164         191         60         M16           150         168,3         6.73         6         6         7.56         8.54         2.36         M16           150         193,7         7.75         2         222         217         60         M16           200         193,7         7.75         2         228         976         11.14         2.76         M20           201         193,7         10.8         8.98 <td>00</td> <td>70,1</td> <td>3.04</td> <td>2-1/2</td> <td></td> <td></td> <td></td> <td></td> <td>IVITZ</td>	00	70,1	3.04	2-1/2					IVITZ
$ \begin{array}{ c c c c } 100 & 1.17 & 5.43 & 1.37 \\ 100 & 1.17 & 5.0 & 1.37 \\ 110 & 1.20 & 1.36 & 1.71 & 60 \\ \hline 114,3 & 4.57 & 4 & 4.72 & 136 & 1.71 & 60 \\ \hline 114,3 & 4.57 & 4 & 4.72 & 136 & 1.71 & 60 \\ \hline 114,3 & 5.32 & 1 & 1.48 & 164 & 191 & 60 \\ \hline 113 & 5.32 & 1 & 1.48 & 164 & 191 & 60 \\ \hline 113 & 5.32 & 5.83 & 1.64 & 191 & 60 \\ \hline 113 & 5.9 & 5.9 & 5.83 & 1.64 & 191 & 60 \\ \hline 115 & 193,7 & 5.9 & 5.8 & 164 & 191 & 60 \\ \hline 116 & 164 & 191 & 60 & 164 \\ \hline 116 & 191 & 60 & 164 \\ \hline 116 & 191 & 60 & 164 \\ \hline 118,3 & 6.73 & 6 & 122 & 217 & 60 & 164 \\ \hline 116 & 191 & 60 & 164 \\ \hline 116 & 191 & 60 & 164 \\ \hline 116 & 191 & 60 & 164 \\ \hline 118,3 & 6.73 & 6 & 192 & 217 & 60 & 164 \\ \hline 118 & 192 & 217 & 60 & 116 \\ \hline 116 & 193,7 & 7.75 & 222 & 218 & 249 & 60 & 164 \\ \hline 116 & 222 & 218 & 249 & 60 & 164 \\ \hline 116 & 228 & 192 & 176 & 11.14 & 2.76 & 164 \\ \hline 119 & 8.64 & 228 & 193 & 334 & 70 & 164 \\ \hline 119 & 10.68 & 282 & 11.93 & 13.15 & 2.76 & 164 \\ \hline 11.89 & 13.15 & 2.76 & 11.24 & 2.76 & 11.24 \\ \hline 11.89 & 13.15 & 2.76 & 11.24 & 1.48 \\ \hline 11.89 & 13.15 & 2.76 & 164 \\ \hline 11.89 & 13.15 & 2.76 & 164 \\ \hline 123,9 & 12.9 & 12 & 13.07 & 12.86 & 15.16 & 2.76 & 164 \\ \hline 1368 & 14.72 & 14 & 378 & 13.86 & 15.16 & 2.76 & 164 \\ \hline 151 & 2.76 & 16.8 & 171 & 1.73 & 2.76 & 16.8 \\ \hline 119 & 16.76 & 16.8 & 171 & 2.76 & 16.8 & 171 & 17.8 & 17.13 & 2.76 & 16.8 \\ \hline 119 & 16.76 & 16.8 & 17.13 & 2.76 & 16.8 & 17.13 & 2.76 & 16.8 & 17.13 & 2.76 & 15.16 & 2.76 & 15.16 & 2.76 & 15.16 & 2.76 & 15.16 & 2.76 & 15.16 & 2.76 & 15.16 & 2.76 & 15.16 & 2.76 & 15.16 & 2.76 & 15.16 & 2.76 & 15.16 & 2.76 & 15.16 & 2.76 & 15.16 & 2.76 & 15.16 & 2.76 & 15.16 & 2.76 & 15.16 & 2.76 & 15.16 & 2.76 & 15.16 & 2.76 & 15.16 & 2.76 & 15.16 & 2.76 & 15.16 & 2.76 & 15.16 & 2.76 & 15.16 & 2.76 & 15.16 & 2.76 & 15.16 & 2.76 & 15.16 & 2.76 & 15.16 & 2.76 & 15.16 & 2.76 & 15.16 & 2.76 & 15.16 & 2.76 & 15.16 & 2.76 & 15.16 & 2.76 & 15.16 & 2.76 & 15.16 & 2.76 & 15.16 & 2.76 & 15.16 & 2.76 & 15.16 & 2.76 & 15.16 & 2.76 & 15.16 & 2.76 & 15.16 & 2.76 & 15.16 & 2.76 & 15.16 & 2.76 & 15.16 & 2.76 & 15.16 & 2.76 & 15.16 & 2$	80	88,9	3.56	3					M12
$ \begin{array}{ c c c c c } \hline 100 & 4.32 & 120 & 5.35 & 6.73 & 2.36 & M \ \mbox{mb} \ \m$					3.70				
100         14,3         4,57         4         4.72         136         171         60         M16           125         133         5.32         -         184         191         6.0         M16           125         139,7         5.59         5         5.83         164         191         60         M16           139,7         5.59         5         5.83         164         191         60         M16           150         159         6.36         7.52         2.36         M16           150         159         6.36         7.56         8.54         2.36         M16           150         193,7         7.75         2         202         218         249         60         M16           175         193,7         7.75         2         228         283         70         M16           200         191,         8.76         8.98         9.80         2.36         M20           201         19.7         7.75         2         282         9.76         11.14         2.76         M20           203         19.4         10.68         2         36         70         M20		108	4.32		120				M16
	100	444.0	4.57						1440
$ \begin{array}{ c c c c c c c } \hline 133 & 5.32 & 148 & 6.46 & 7.52 & 2.36 & 164 & 191 & 60 & 160 & 160 & 160 & 160 & 160 & 160 & 160 & 160 & 160 & 160 & 160 & 160 & 160 & 160 & 160 & 160 & 160 & 160 & 160 & 160 & 160 & 160 & 160 & 160 & 160 & 160 & 160 & 160 & 160 & 160 & 160 & 160 & 160 & 160 & 160 & 160 & 160 & 160 & 160 & 160 & 160 & 160 & 160 & 160 & 160 & 160 & 160 & 160 & 160 & 160 & 160 & 160 & 160 & 160 & 160 & 160 & 160 & 160 & 160 & 160 & 160 & 160 & 160 & 160 & 160 & 160 & 160 & 160 & 160 & 160 & 160 & 160 & 160 & 160 & 160 & 160 & 160 & 160 & 160 & 160 & 160 & 160 & 160 & 160 & 160 & 160 & 160 & 160 & 160 & 160 & 160 & 160 & 160 & 160 & 160 & 160 & 160 & 160 & 160 & 160 & 160 & 160 & 160 & 160 & 160 & 160 & 160 & 160 & 160 & 160 & 160 & 160 & 160 & 160 & 160 & 160 & 160 & 160 & 160 & 160 & 160 & 160 & 160 & 160 & 160 & 160 & 160 & 160 & 160 & 160 & 160 & 160 & 160 & 160 & 160 & 160 & 160 & 160 & 160 & 160 & 160 & 160 & 160 & 160 & 160 & 160 & 160 & 160 & 160 & 160 & 160 & 160 & 160 & 160 & 160 & 160 & 160 & 160 & 160 & 160 & 160 & 160 & 160 & 160 & 160 & 160 & 160 & 160 & 160 & 160 & 160 & 160 & 160 & 160 & 160 & 160 & 160 & 160 & 160 & 160 & 160 & 160 & 160 & 160 & 160 & 160 & 160 & 160 & 160 & 160 & 160 & 160 & 160 & 160 & 160 & 160 & 160 & 160 & 160 & 160 & 160 & 160 & 160 & 160 & 160 & 160 & 160 & 160 & 160 & 160 & 160 & 160 & 160 & 160 & 160 & 160 & 160 & 160 & 160 & 160 & 160 & 160 & 160 & 160 & 160 & 160 & 160 & 160 & 160 & 160 & 160 & 160 & 160 & 160 & 160 & 160 & 160 & 160 & 160 & 160 & 160 & 160 & 160 & 160 & 160 & 160 & 160 & 160 & 160 & 160 & 160 & 160 & 160 & 160 & 160 & 160 & 160 & 160 & 160 & 160 & 160 & 160 & 160 & 160 & 160 & 160 & 160 & 160 & 160 & 160 & 160 & 160 & 160 & 160 & 160 & 160 & 160 & 160 & 160 & 160 & 160 & 160 & 160 & 160 & 160 & 160 & 160 & 160 & 160 & 160 & 160 & 160 & 160 & 160 & 160 & 160 & 160 & 160 & 160 & 160 & 160 & 160 & 160 & 160 & 160 & 160 & 160 & 160 & 160 & 160 & 160 & 160 & 160 & 160 & 160 & 160 & 160 & 160 & 160 & 160 & 160 & 160 & 160 & 160 & 160 & 160 & 160 & 160$		114,3	4.57	4					MID
$ \begin{array}{ c c c c c c } \hline 125 & \hline 148 & 6.46 & 7.52 & 2.36 & \ 148 & 191 & 60 & \ 166 & 7.52 & 2.36 & \ 160 & 191 & 60 & \ 160 & 191 & 60 & \ 160 & 191 & 60 & \ 160 & 191 & 60 & \ 160 & 191 & 60 & \ 160 & 191 & 60 & \ 160 & 191 & 60 & \ 160 & 191 & 60 & \ 160 & 191 & 60 & \ 160 & 191 & 60 & \ 160 & 191 & 60 & \ 160 & 191 & 60 & \ 160 & 191 & 60 & \ 160 & 191 & 60 & \ 160 & 191 & 60 & \ 160 & 191 & 60 & \ 160 & 191 & 60 & \ 160 & 191 & 60 & \ 160 & 191 & 60 & \ 160 & 191 & 60 & \ 160 & 191 & 60 & \ 160 & 191 & 191 & \ 16.6 & 161 & 2.76 & \ 191 & 191 & 192 & 217 & 60 & \ 11.6 & 2.76 & \ 11.6 & 2.76 & \ 100 & 11.14 & 2.76 & \ 100 & 11.14 & 2.76 & \ 100 & 11.14 & 2.76 & \ 100 & 11.14 & 2.76 & \ 100 & 11.14 & 2.76 & \ 100 & 11.14 & 2.76 & \ 100 & 11.13 & 13.15 & 2.76 & \ 100 & 11.19 & 13.15 & 2.76 & \ 100 & 11.19 & 13.15 & 2.76 & \ 100 & 11.19 & 13.15 & 2.76 & \ 100 & 11.19 & 13.15 & 2.76 & \ 100 & 11.19 & 13.15 & 2.76 & \ 100 & 11.19 & 13.15 & 2.76 & \ 100 & 11.19 & 13.15 & 2.76 & \ 100 & 11.19 & 13.15 & 2.76 & \ 100 & 11.19 & 13.15 & 2.76 & \ 100 & 11.19 & 13.15 & 2.76 & \ 100 & 11.19 & 13.15 & 2.76 & \ 100 & 11.19 & 13.15 & 2.76 & \ 100 & 11.19 & 13.15 & 2.76 & \ 100 & 11.19 & 13.15 & 2.76 & \ 100 & 11.19 & 13.15 & 2.76 & \ 100 & 11.19 & 13.15 & 2.76 & \ 100 & 11.19 & 13.15 & 2.76 & \ 100 & 11.19 & 13.15 & 2.76 & \ 100 & 11.19 & 13.15 & 2.76 & \ 100 & 11.19 & 13.15 & 2.76 & \ 100 & 11.19 & 13.15 & 2.76 & \ 100 & 11.10 & 100 & 11.10 & \ 11.19 & 13.15 & 2.76 & \ 100 & 11.10 & 100 & 11.10 & \ 11.10 & 100 & 11.10 & 100 & \ 11.10 & 100 & 11.10 & 100 & \ 11.10 & 100 & 11.10 & 100 & \ 11.10 & 100 & 11.10 & \ 11.10 & 100 & 11.10 & 100 & \ 11.10 & 100 & 11.10 & 100 & \ 11.10 & 100 & 11.10 & 100 & \ 11.10 & 100 & 110 & 110 & 100 & \ 11.10 & 100 & 110 & 110 & \ 11.10 & 110 & 110 & 110 & \ 11.10 & 110 & 110 & 110 & \ 11.10 & 110 & 110 & 110 & \ 11.10 & 110 & 110 & 110 & \ 11.10 & 110 & 110 & 110 & \ 11.10 & 110 & 110 & 110 & \ 11.10 & 110 & 110 & 110 & \ 11.10 & 110 & 110 & 110 & 110 & 110 & \ 11.10 & 110 & 110 & 110 & \ 11.10 &$		133	5.32						M16
$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$	125	100	0.02						MITO
$ \begin{array}{ c c c c c } \hline \begin{tabular}{ c c c } \hline 159 \\ \hline 168,3 \\ 168,3 \\ 168,3 \\ 168,3 \\ 168,3 \\ 168,3 \\ 168,3 \\ 168,3 \\ 168,3 \\ 168,3 \\ 175 \\ 193,7 \\ 175 \\ 193,7 \\ 175 \\ 193,7 \\ 175 \\ 193,7 \\ 175 \\ 193,7 \\ 175 \\ 175 \\ 193,7 \\ 175 \\ 175 \\ 175 \\ 193,7 \\ 175 \\ 175 \\ 175 \\ 193,7 \\ 175 \\ 175 \\ 175 \\ 193,7 \\ 175 \\ 175 \\ 175 \\ 175 \\ 175 \\ 175 \\ 175 \\ 175 \\ 175 \\ 175 \\ 175 \\ 175 \\ 175 \\ 175 \\ 175 \\ 175 \\ 175 \\ 175 \\ 175 \\ 175 \\ 175 \\ 175 \\ 175 \\ 175 \\ 175 \\ 175 \\ 185 \\ 110 \\ 175 \\ 110 \\ 110 \\ 110 \\ 110 \\ 110 \\ 110 \\ 110 \\ 110 \\ 110 \\ 110 \\ 110 \\ 110 \\ 110 \\ 110 \\ 110 \\ 110 \\ 110 \\ 110 \\ 110 \\ 110 \\ 110 \\ 110 \\ 110 \\ 110 \\ 110 \\ 110 \\ 110 \\ 110 \\ 110 \\ 110 \\ 110 \\ 110 \\ 110 \\ 110 \\ 110 \\ 110 \\ 110 \\ 110 \\ 110 \\ 110 \\ 110 \\ 110 \\ 110 \\ 110 \\ 110 \\ 110 \\ 110 \\ 110 \\ 110 \\ 110 \\ 110 \\ 110 \\ 110 \\ 110 \\ 110 \\ 110 \\ 110 \\ 110 \\ 110 \\ 110 \\ 110 \\ 110 \\ 110 \\ 110 \\ 110 \\ 110 \\ 110 \\ 110 \\ 110 \\ 110 \\ 110 \\ 110 \\ 110 \\ 110 \\ 110 \\ 110 \\ 110 \\ 110 \\ 110 \\ 110 \\ 110 \\ 110 \\ 110 \\ 110 \\ 110 \\ 110 \\ 110 \\ 110 \\ 110 \\ 110 \\ 110 \\ 110 \\ 110 \\ 110 \\ 110 \\ 110 \\ 110 \\ 110 \\ 110 \\ 110 \\ 110 \\ 110 \\ 110 \\ 110 \\ 110 \\ 110 \\ 110 \\ 110 \\ 110 \\ 110 \\ 110 \\ 110 \\ 110 \\ 110 \\ 110 \\ 110 \\ 110 \\ 110 \\ 110 \\ 110 \\ 110 \\ 110 \\ 110 \\ 110 \\ 110 \\ 110 \\ 110 \\ 110 \\ 110 \\ 110 \\ 110 \\ 110 \\ 110 \\ 110 \\ 110 \\ 110 \\ 110 \\ 110 \\ 110 \\ 110 \\ 110 \\ 110 \\ 110 \\ 110 \\ 110 \\ 110 \\ 110 \\ 110 \\ 110 \\ 110 \\ 110 \\ 110 \\ 110 \\ 110 \\ 110 \\ 110 \\ 110 \\ 110 \\ 110 \\ 110 \\ 110 \\ 110 \\ 110 \\ 110 \\ 110 \\ 110 \\ 110 \\ 110 \\ 110 \\ 110 \\ 110 \\ 110 \\ 110 \\ 110 \\ 110 \\ 110 \\ 110 \\ 110 \\ 110 \\ 110 \\ 110 \\ 110 \\ 110 \\ 110 \\ 110 \\ 110 \\ 110 \\ 110 \\ 110 \\ 110 \\ 110 \\ 110 \\ 110 \\ 110 \\ 110 \\ 110 \\ 110 \\ 110 \\ 110 \\ 110 \\ 110 \\ 110 \\ 110 \\ 110 \\ 110 \\ 110 \\ 110 \\ 110 \\ 110 \\ 110 \\ 110 \\ 110 \\ 110 \\ 110 \\ 110 \\ 110 \\ 110 \\ 110 \\ 110 \\ 110 \\ 110 \\ 110 \\ 110 \\ 110 \\ 110 \\ 110 \\ 110 \\ 110 \\ 110 \\ 110 \\ 110 \\ 110 \\ 110 \\ 110 \\ 110 \\ 110 \\ 110 \\ 110 \\ 110 \\ 110 \\ 110 \\ 110 \\ 110 \\ 110 \\ 110 \\ 110 \\ 110 \\ 110 \\ 110 \\ 110 \\ 110 \\ 110 \\ 110 \\ 110 \\ 110 \\ 110 \\ 110 \\ 110 \\ 110 \\ 110 \\ 110 \\ 110$		139,7	5.59	5	5.83				M16
$ \begin{array}{ c c c c c } \hline 150 & 1.36 & 1.76 & 7.56 & 8.54 & 2.36 & 1.06 & 1.06 & 1.06 & 1.06 & 1.06 & 1.06 & 1.06 & 1.06 & 1.06 & 1.06 & 1.06 & 1.06 & 1.06 & 1.06 & 1.06 & 1.06 & 1.06 & 1.06 & 1.06 & 1.06 & 1.06 & 1.06 & 1.06 & 1.06 & 1.06 & 1.06 & 1.06 & 1.06 & 1.06 & 1.06 & 1.06 & 1.06 & 1.06 & 1.06 & 1.06 & 1.06 & 1.06 & 1.06 & 1.06 & 1.06 & 1.06 & 1.06 & 1.06 & 1.06 & 1.06 & 1.06 & 1.06 & 1.06 & 1.06 & 1.06 & 1.06 & 1.06 & 1.06 & 1.06 & 1.06 & 1.06 & 1.06 & 1.06 & 1.06 & 1.06 & 1.06 & 1.06 & 1.06 & 1.06 & 1.06 & 1.06 & 1.06 & 1.06 & 1.06 & 1.06 & 1.06 & 1.06 & 1.06 & 1.06 & 1.06 & 1.06 & 1.06 & 1.06 & 1.06 & 1.06 & 1.06 & 1.06 & 1.06 & 1.06 & 1.06 & 1.06 & 1.06 & 1.06 & 1.06 & 1.06 & 1.06 & 1.06 & 1.06 & 1.06 & 1.06 & 1.06 & 1.06 & 1.06 & 1.06 & 1.06 & 1.06 & 1.06 & 1.06 & 1.06 & 1.06 & 1.06 & 1.06 & 1.06 & 1.06 & 1.06 & 1.06 & 1.06 & 1.06 & 1.06 & 1.06 & 1.06 & 1.06 & 1.06 & 1.06 & 1.06 & 1.06 & 1.06 & 1.06 & 1.06 & 1.06 & 1.06 & 1.06 & 1.06 & 1.06 & 1.06 & 1.06 & 1.06 & 1.06 & 1.06 & 1.06 & 1.06 & 1.06 & 1.06 & 1.06 & 1.06 & 1.06 & 1.06 & 1.06 & 1.06 & 1.06 & 1.06 & 1.06 & 1.06 & 1.06 & 1.06 & 1.06 & 1.06 & 1.06 & 1.06 & 1.06 & 1.06 & 1.06 & 1.06 & 1.06 & 1.06 & 1.06 & 1.06 & 1.06 & 1.06 & 1.06 & 1.06 & 1.06 & 1.06 & 1.06 & 1.06 & 1.06 & 1.06 & 1.06 & 1.06 & 1.06 & 1.06 & 1.06 & 1.06 & 1.06 & 1.06 & 1.06 & 1.06 & 1.06 & 1.06 & 1.06 & 1.06 & 1.06 & 1.06 & 1.06 & 1.06 & 1.06 & 1.06 & 1.06 & 1.06 & 1.06 & 1.06 & 1.06 & 1.06 & 1.06 & 1.06 & 1.06 & 1.06 & 1.06 & 1.06 & 1.06 & 1.06 & 1.06 & 1.06 & 1.06 & 1.06 & 1.06 & 1.06 & 1.06 & 1.06 & 1.06 & 1.06 & 1.06 & 1.06 & 1.06 & 1.06 & 1.06 & 1.06 & 1.06 & 1.06 & 1.06 & 1.06 & 1.06 & 1.06 & 1.06 & 1.06 & 1.06 & 1.06 & 1.06 & 1.06 & 1.06 & 1.06 & 1.06 & 1.06 & 1.06 & 1.06 & 1.06 & 1.06 & 1.06 & 1.06 & 1.06 & 1.06 & 1.06 & 1.06 & 1.06 & 1.06 & 1.06 & 1.06 & 1.06 & 1.06 & 1.06 & 1.06 & 1.06 & 1.06 & 1.06 & 1.06 & 1.06 & 1.06 & 1.06 & 1.06 & 1.06 & 1.06 & 1.06 & 1.06 & 1.06 & 1.06 & 1.06 & 1.06 & 1.06 & 1.06 & 1.06 & 1.06 & 1.06 & 1.06 & 1.06 & 1.06 & 1.06 & 1.06 & 1.06 & 1.06$									
$ \begin{array}{ c c c c c c } \hline 150 & \hline 168,3 \\ \hline 193,7 \\ \hline 193,7 \\ \hline 193,7 \\ \hline 7.75 \\ \hline 193,7 \\ \hline 193,7 \\ \hline 7.75 \\ \hline 193,7 \\ \hline 7.75 \\ \hline 100 \\ \hline 175 \\ \hline 193,7 \\ \hline 7.75 \\ \hline 100 \\ \hline 175 \\ \hline 193,7 \\ \hline 7.75 \\ \hline 100 \\ \hline 100 \\ \hline 191, \\ \hline 100 $	450	159	6.36		176				M16
$ \begin{array}{ c c c c c c } \hline 193,7 \\ 193,7 \\ 193,7 \\ 193,7 \\ 193,7 \\ 193,7 \\ 195,7 \\ 195,7 \\ 195,7 \\ 195,7 \\ 100 \\ \hline 11,9 \\ 1$	150	169.2	6.72	6	6.93	192	217	60	M16
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$		100,5	0.75	0					WITO
$ \begin{array}{c c c c c c c } \hline \begin{tabular}{ c c c c } \hline \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ $	175	193,7	7.75						M16
$ \begin{array}{ c c c c c c c } \hline 216 & 8.64 & 228 & 9.76 & 11.14 & 2.76 & M20 \\ \hline 219,1 & 8.76 & 8 & 8.98 & 248 & 283 & 70 & M20 \\ \hline 219,1 & 8.76 & 8 & 8.98 & 248 & 283 & 70 & M20 \\ \hline 9.76 & 11.14 & 2.76 & M20 & M20 \\ \hline 9.76 & 11.14 & 2.76 & M20 & M20 \\ \hline 11.93 & 13.15 & 2.76 & M20 & M20 \\ \hline 1273 & 10.92 & 10 & 11.10 & 302 & 334 & 70 & M20 \\ \hline 13.9 & 13.15 & 2.76 & M20 & M20 & M20 & M20 & M20 \\ \hline 323,9 & 12.96 & 12 & 332 & 352 & 385 & 70 & M20 & M20 & M20 \\ \hline 323,9 & 12.96 & 12 & 13.07 & 352 & 385 & 70 & M20					7.96				
$ \begin{array}{ c c c c c c c } \hline 200 & \hline 219,1 & 8.76 & 8 & 8.98 & \frac{248}{9.76} & 283 & 70 & & & & & & & & & & & & & & & & & $		216	8.64		228				M20
$ \begin{array}{ c c c c c c c } \hline 10.68 & 1.1.4 & 2.76 & 1.1.4 & 2.76 & 1.1.4 & 2.76 & 1.1.4 & 2.76 & 1.1.4 & 2.76 & 1.1.4 & 2.76 & 1.1.4 & 2.76 & 1.1.4 & 2.76 & 1.1.4 & 2.76 & 1.1.4 & 2.76 & 1.1.4 & 2.76 & 1.1.4 & 2.76 & 1.1.4 & 2.76 & 1.1.4 & 2.76 & 1.1.4 & 2.76 & 1.1.4 & 2.76 & 1.1.4 & 1.1.4 & 1.2.76 & 1.1.4 & 1.1.4 & 1.2.76 & 1.1.4 & 1.1.4 & 1.2.76 & 1.1.4 & 1.1.4 & 1.2.76 & 1.1.4 & 1.1.4 & 1.2.76 & 1.1.4 & 1.1.4 & 1.2.76 & 1.1.4 & 1.1.4 & 1.2.76 & 1.1.4 & 1.1.4 & 1.2.76 & 1.1.4 & 1.1.4 & 1.2.76 & 1.1.4 & 1.1.4 & 1.2.76 & 1.1.4 & 1.1.4 & 1.2.76 & 1.1.4 & 1.1.4 & 1.1.4 & 1.2.76 & 1.1.4 & 1.1.4 & 1.2.76 & 1.1.4 & 1.1.4 & 1.2.76 & 1.1.4 & 1.1.4 & 1.1.4 & 1.2.76 & 1.1.4 & 1.1.4 & 1.1.4 & 1.1.4 & 1.1.4 & 1.1.4 & 1.1.4 & 1.1.4 & 1.1.4 & 1.1.4 & 1.1.4 & 1.1.4 & 1.1.4 & 1.1.4 & 1.1.4 & 1.1.4 & 1.1.4 & 1.1.4 & 1.1.4 & 1.1.4 & 1.1.4 & 1.1.4 & 1.1.4 & 1.1.4 & 1.1.4 & 1.1.4 & 1.1.4 & 1.1.4 & 1.1.4 & 1.1.4 & 1.1.4 & 1.1.4 & 1.1.4 & 1.1.4 & 1.1.4 & 1.1.4 & 1.1.4 & 1.1.4 & 1.1.4 & 1.1.4 & 1.1.4 & 1.1.4 & 1.1.4 & 1.1.4 & 1.1.4 & 1.1.4 & 1.1.4 & 1.1.4 & 1.1.4 & 1.1.4 & 1.1.4 & 1.1.4 & 1.1.4 & 1.1.4 & 1.1.4 & 1.1.4 & 1.1.4 & 1.1.4 & 1.1.4 & 1.1.4 & 1.1.4 & 1.1.4 & 1.1.4 & 1.1.4 & 1.1.4 & 1.1.4 & 1.1.4 & 1.1.4 & 1.1.4 & 1.1.4 & 1.1.4 & 1.1.4 & 1.1.4 & 1.1.4 & 1.1.4 & 1.1.4 & 1.1.4 & 1.1.4 & 1.1.4 & 1.1.4 & 1.1.4 & 1.1.4 & 1.1.4 & 1.1.4 & 1.1.4 & 1.1.4 & 1.1.4 & 1.1.4 & 1.1.4 & 1.1.4 & 1.1.4 & 1.1.4 & 1.1.4 & 1.1.4 & 1.1.4 & 1.1.4 & 1.1.4 & 1.1.4 & 1.1.4 & 1.1.4 & 1.1.4 & 1.1.4 & 1.1.4 & 1.1.4 & 1.1.4 & 1.1.4 & 1.1.4 & 1.1.4 & 1.1.4 & 1.1.4 & 1.1.4 & 1.1.4 & 1.1.4 & 1.1.4 & 1.1.4 & 1.1.4 & 1.1.4 & 1.1.4 & 1.1.4 & 1.1.4 & 1.1.4 & 1.1.4 & 1.1.4 & 1.1.4 & 1.1.4 & 1.1.4 & 1.1.4 & 1.1.4 & 1.1.4 & 1.1.4 & 1.1.4 & 1.1.4 & 1.1.4 & 1.1.4 & 1.1.4 & 1.1.4 & 1.1.4 & 1.1.4 & 1.1.4 & 1.1.4 & 1.1.4 & 1.1.4 & 1.1.4 & 1.1.4 & 1.1.4 & 1.1.4 & 1.1.4 & 1.1.4 & 1.1.4 & 1.1.4 & 1.1.4 & 1.1.4 & 1.1.4 & 1.1.4 & 1.1.4 & 1.1.4 & 1.1.4 & 1.1.4 & 1.1.4 & 1.1.4 & 1.1.4 & 1.1.4 & 1.1.4 & 1.1.4 & 1.1.4 & 1.1.4 & 1.1.4 & 1.1.4 & 1.1.4 & 1.1.4 & 1.1.4 & 1.1.4 & 1.1.4 &$	200	010.1	0.70	0					1400
$ \begin{array}{ c c c c c c c c c } \hline 267 & 10.68 & 282 & 11.93 & 13.15 & 2.76 & M20 \\ \hline 273 & 10.92 & 10 & 11.10 & 302 & 334 & 70 & \\ \hline 11.89 & 13.15 & 2.76 & M20 \\ \hline 11.89 & 13.15 & 2.76 & M20 \\ \hline 323,9 & 12.96 & 12 & 332 & 13.86 & 15.16 & 2.76 & \\ \hline 323,9 & 12.96 & 12 & 13.07 & 352 & 385 & 70 & \\ \hline 326 & 355,6 & 14.22 & 14 & 378 & 402 & 435 & 70 & \\ \hline 368 & 14.72 & 14.88 & 402 & 435 & 70 & \\ \hline 368 & 14.72 & 14.88 & 402 & 435 & 70 & \\ \hline 368 & 14.72 & 14.88 & 402 & 435 & 70 & \\ \hline 419 & 16.76 & 16.85 & 452 & 487 & 70 & \\ \hline 419 & 16.76 & 16.85 & 452 & 487 & 70 & \\ \hline 500 & 508 & 20.32 & 20 & 530 & \hline 554 & 589 & 70 & \\ \hline 501 & 20.84 & 20.87 & 554 & 589 & 70 & \\ \hline \end{array} $		219,1	8.76	8		9.76	11.14		W20
$ \begin{array}{c c c c c c c c c c c c c c c c c c c $		267	10.68						M20
$ \begin{array}{c c c c c c c c c c c c c c c c c c c $	250								
$\begin{array}{c c c c c c c c c c c c c c c c c c c $		273	10.92	10	11.10				M20
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$			10						1100
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	000	318	12.72		332				M20
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	300	323.0	12.06	12		352		70	M20
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$		020,9	12.30	12					WIZU
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$		355,6	14.22	14	070				M24
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	350								
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$		368	14.72		14.00				M24
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$		406 4	10.00	10					MOA
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	400	406,4	16.26	10	428	17.80	19.17	2.76	IVIZ4
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	-100	419	16.76		16.85				M24
508         20.32         20         530         21.81         23.19         2.76         M24           500         521         20.84         20.87         554         589         70         M24									
500 20.87 554 589 70 M24		508	20.32	20	530				M24
	500								
		521	20.84						M24







#### ®

	Metal Pipe Clamp with Tension Clearance Two-Bolt Design DIN 3567-A	136
£0=	Metal Pipe Clamp with Tension Clearance Three-Bolt Design (Extended to One Side) DIN 3567-B	137
~	Heavy Saddle with Tension Clearance Single-Bolt Design DIN 1592	138
s	Heavy Saddle with Tension Clearance Two-Bolt Design DIN 1593	139
\$	Light Saddle with Tension Clearance Single-Bolt Design DIN 1596	140
s	Light Saddle with Tension Clearance Two-Bolt Design DIN 1597	141

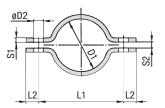
# Metal Pipe Clamp with Tension Clearance (DIN 3567-A) Two-Bolt Design



Ordering C	odes						
Metal Pipe Cla	mp *DIN3567-A*-2	0*W1					
	ump is consisting of two clamp halv ts and nuts are not included.	/es.					
* Metal Pipe Clam	up to DIN 3567, type A DIN	3567-A					
* STAUFF Group (	ð D1)	-20					
* Material code	Carbon Steel, uncoated	W1					
	Carbon Steel, hot-dip galvanised	W40					
	Stainless Steel V4A 1.4401 / 1.4571 (AISI 316 / 316 ⁻	Гі) <b>W5</b>					
Clamp Assem	bly *DIN3567-A*-20*W1*C	OMPL					
•	bly is consisting of two clamp halve bolts and two hexagon head nuts.						
* Metal Pipe Clam	up to DIN 3567, type A DIN	3567-A					
* STAUFF Group (	ð D1)	-20					
* Material code	Carbon Steel, uncoated	W1					
	Carbon Steel, hot-dip galvanised	W40					
	Stainless Steel V4A 1.4401 / 1.4571 (AISI 316 / 316	<b>W5</b> Fi)					
* Clamp assembly with bolts and nuts COMPL							
Please note: All ite	Please note: All items are supplied non-assembled.						

## **Applications**

 Installation of pipes, tubes and other construction elements on beams, profiles and consoles





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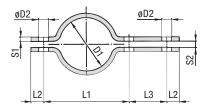
STAUFF

STAUFF Group			Dimension	NS ( ^{mm} /in)	Accessories				
Ø D1	(mm)	Pipe (in)	L1	L2	S1	S2	D2	B1	Hexagon Head Bolts (Hexagon Head Nuts)
	(1111)	(11)	57	15	5	7	11.5	30	(noxugon nouu nuto)
20			2.24	.59	.20	.28	.45	1.18	-
	15		59	15	5	7	11.5	30	
22			2.32	.59	.20	.28	.45	1.18	
25			62	15	5	7	11.5	30	
23	20		2.44	.59	.20	.28	.45	1.18	
27	20	3/4	66	15	5	7	11.5	30	_
			2.60	.59	.20	.28	.45	1.18	
30			68 2.68	15 .59	5 .20	7 .28	11.5 .45	30 1.18	M10 x 30 (M10)
	25		72	15	5	.20	11.5	30	3/8–16 UNC x 1-1/4
34		1	2.83	.59	.20	.28	.45	1.18	(3/8–16 UNC)
			76	15	5	7	11.5	30	(
38	20		2.99	.59	.20	.28	.45	1.18	-
43	32	1-1/4	82	15	5	7	11.5	30	
-10		1-1/4	3.23	.59	.20	.28	.45	1.18	-
45			84	15	5	7	11.5	30	_
	40		3.31	.59	.20	.28	.45	1.18	_
49		1-1/2	88	15	5	7	11.5	30	-
			3.46	.59 18	.20 6	.28 9	.45 14	1.18 40	
57			4.09	.71	.24	.35	.55	1.57	
~	50		108	18	6	9	14	40	M12 x 35
61		2	4.25	.71	.24	.35	.55	1.57	(M12)
77	65	0.1/0	122	18	6	9	14	40	7/16-14 UNC x 1-3/8
77	60	2-1/2	4.80	.71	.24	.35	.55	1.57	(7/16-14 UNC)
89	80	3	136	18	6	9	14	40	_
00	00	0	5.35	.71	.24	.35	.55	1.57	
108			172	24	8	11	18	50	-
	100		6.77 178	.94 24	.31 8	.43 11	.71 18	1.97 50	
115		4	7.01	.94	.31	.43	.71	1.97	-
			196	24	8	11	18	50	
133	105		7.72	.94	.31	.43	.71	1.97	
140	125		204	24	8	11	18	50	
140			8.03	.94	.31	.43	.71	1.97	M16 x 45
159			222	24	8	11	18	50	(M16)
	150		8.74	.94	.31	.43	.71	1.97	5/8-11 UNC x 1-3/4
169			232	24 .94	8	11 .43	18	50 1.97	(5/8–11 UNC)
			9.13 258	.94	.31 8	.43	.71 18	50	
194	175		10.16	.94	.31	.43	.71	1.97	-
040			280	24	8	11	18	50	
216	200		11.02	.94	.31	.43	.71	1.97	
220	200		284	24	8	11	18	50	
220			11.18	.94	.31	.43	.71	1.97	
267			342	30	8	14	23	60	_
	250		13.46	1.18	.31	.55	.91	2.36	
273			348 13.70	30 1.18	8 .31	14 .55	23 .91	60 2.36	M20 x 50
			392	30	8	.55	23	60	(M20)
318			15.43	1.18	.31	.55	.91	2.36	3/4–10 UNC x 2
224	300		398	30	8	14	23	60	(3/4–10 UNC)
324			15.67	1.18	.31	.55	.91	2.36	
368	350		444	30	8	14	23	60	
500	000		17.48	1.18	.31	.55	.91	2.36	
407			498	36	10	18	27	70	
	400		19.61	1.42	.39	.71 18	1.06 27	2.76	M24 x 60
419			510 10.08	36 1.42	10 .39	.71	1.06	70 2.76	(M24) 7/8–9 UNC 2-3/8
			614	36	10	18	27	70	(7/8–9 UNC)
521	500		24.17	1.42	.39	.71	1.06	2.76	. ,
						1.11.1			





# Metal Pipe Clamp with Tension Clearance (DIN 3567-B) Three-Bolt Design (Extended to One Side)







STAUFF Group	Nominal		Dimens	sions ( ^{mm} /i	n)					Accessories	Ordering Code	
Ø D1	(mm)	Pipe (in)	L1	L2	L3	S1	S2	D2	B1	Hexagon Head Bolts (Hexagon Head Nuts)	Metal Pipe Clamp	
20	,		57	15	46	5	7	11.5	30	( • • • • • • • • • • • • • • • • • • •	metal ripe olamp	
20	15		2.24	.59	1.81	.20	.28	.45	1.18		One metal pipe clamp is	
22	10		59	15	46	5	7	11.5	30		Hexagon head bolts and	
			2.32	.59	1.81	.20	.28	.45	1.18		U U	
25			2.44	15 .59	46	5 .20	.28	.45	30	_	* Metal Pipe Clamp to D	
	20		66	15	46	5	7	11.5	30		* STAUFF Group (Ø D1)	
27		3/4	2.60	.59	1.81	.20	.28	.45	1.18			
30			68	15	46	5	7	11.5	30	M10 x 30	* Material code Carb	
30	25		2.68	.59	1.81	.20	.28	.45	1.18	(M10)	Carb	
34	20	1	72	15	46	5	7	11.5	30	3/8-16 UNC x 1-1/4		
-			2.83 76	.59 15	1.81	.20	.28	.45	1.18	(3/8–16 UNC)	Stair 1.44	
38			2.99	.59	46	5 .20	.28	.45	1.18	_	1.44	
	32		82	15	46	5	7	11.5	30		Clamp Assembly *	
43		1-1/4	3.23	.59	1.81	.20	.28	.45	1.18			
45			84	15	46	5	7	11.5	30		One clamp assembly is o	
40	40		3.31	.59	1.81	.20	.28	.45	1.18		three hexagon head bolt	
49	10	1-1/2	88	15	46	5	7	11.5	30			
			3.46	.59	1.81	.20	.28	.45	1.18		* Metal Pipe Clamp to D	
57			104 4.09	18 .71	54 2.13	6	9 .35	.55	40			
	50		108	18	54	6	9	14	40	M12 x 35	* STAUFF Group (Ø D1)	
61		2	4.25	.71	2.13	.24	.35	.55	1.57	(M12)	* Material code Carb	
	05	0.1/0	122	18	54	6	9	14	40	7/16-14 UNC x 1-3/8	Carb	
77	65	2-1/2	4.80	.71	2.13	.24	.35	.55	1.57	(7/16-14 UNC)		
89	80	3	136	18	54	6	9	14	40		Stair	
00	00	0	5.35	.71	2.13	.24	.35	.55	1.57		1.44	
108			172	24	70	8	11	18	50	_	* Clamp assembly with	
	100		6.77 178	.94 24	2.76 70	.31 8	.43	.71 18	1.97 50		Disease mater All items and	
115		4	7.01	.94	2.76	.31	.43	.71	1.97		Please note: All items are	
			196	24	70	8	11	18	50			
133	125		7.72	.94	2.76	.31	.43	.71	1.97		Applications	
140	120		204	24	70	8	11	18	50		rippiloutiono	
110			8.03	.94	2.76	.31	.43	.71	1.97	M16 x 45	<ul> <li>Installation of pipes, tub</li> </ul>	
159			222	24	70	8	11	18	50	(M16)	elements on beams, pro	
	150		8.74 232	.94 24	2.76 70	.31 8	.43	.71 18	1.97 50	5/8-11 UNC x 1-3/4 (5/8-11 UNC)		
169			9.13	.94	2.76	.31	.43	.71	1.97	(0/0 11 0110)		
	175		258	24	70	8	11	18	50			
194	175		10.16	.94	2.76	.31	.43	.71	1.97			
216			280	24	70	8	11	18	50			
210	200		11.02	.94	2.76	.31	.43	.71	1.97			
220	200		284	24	70	8	11	18	50			
			11.18	.94	2.76	.31	.43	.71	1.97			
267			342 13.46	30	86 3.39	8	14 .55	23 .91	60 2.36	-		
	250		348	30	86	8	14	23	60			
273			13.70	1.18	3.39	.31	.55	.91	2.36	M20 x 50		
010			392	30	86	8	14	23	60	(M20)		
318	300		15.43	1.18	3.39	.31	.55	.91	2.36	3/4-10 UNC x 2		
324	300		398	30	86	8	14	23	60	(3/4-10 UNC)		
021			15.67	1.18	3.39	.31	.55	.91	2.36			
368	350		444	30	86	8	14	23	60	_		
			17.48 498	1.18 36	3.39	.31 10	.55 18	.91 27	2.36 70			
407			498	1.42	4.09	.39	.71	1.06	2.76	M24 x 60		
	400		510	36	104	10	18	27	70	(M24)		
419			10.08	1.42	4.09	.39	.71	1.06	2.76	7/8–9 UNC 2-3/8		
521	500		614	36	104	10	18	27	70	(7/8–9 UNC)		
521	000		24.17	1.42	4.09	.39	.71	1.06	2.76			

#### **Ordering Codes**

*DIN3567-B*-20*W1

One metal pipe clamp is consisting of two clamp halves. Hexagon head bolts and nuts are not included.

* Metal Pipe Clamp to DIN 3567, type B DIN3567						
* STAUFF Group (Ø D1)						
* Material code	Carbon Steel, uncoated	W1				
	Carbon Steel, hot-dip galvanised	W40				
	Stainless Steel V4A 1.4401 / 1.4571 (AISI 316 / 316 7	Ті) <b>W5</b>				
Clamp Assembly *DIN3567-B*-20*W1*COMPL						
One clamp assembly is consisting of two clamp halves,						

three hexagon head bolts and three hexagon head nuts.

* Metal Pipe Clamp to DIN 3567, type B DIN3567					
* STAUFF Group (Ø D1)					
* Material code	Carbon Steel, uncoated	W1			
	Carbon Steel, hot-dip galvan	ised W40			
	Stainless Steel V4A 1.4401 / 1.4571 (AISI 316 / 3	316 Ti) <b>W5</b>			
* Clamp assembly with bolts and nuts COM					
Please note: All items are supplied non-assembled					

#### pplications

Installation of pipes, tubes and other construction elements on beams, profiles and consoles

Alternative materials and surface finishings are available upon request. Contact STAUFF for further information.

www.stauff.com/1/en/#137

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# Heavy Saddle with Tension Clearance (DIN 1592)

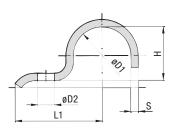
Single-Bolt Design

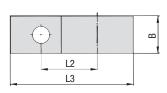


Ordering Codes							
Heavy Saddle	*DIN1592	-*7-*W66					
* Heavy Saddle to	DIN1592						
* STAUFF Group (Ø D1)							
* Material code	Carbon Steel, uncoated	W1					
	Carbon Steel, zinc-plated and thick-film passivated	W66					
	Stainless Steel V4A 1.4401 / 1.4571 (AISI 316 /	316 Ti) <b>W5</b>					

#### Applications

 Installation of pipes, tubes, poles and other round components directly on the substrate (floor, wall or ceiling)





STAUFF Group	Diameter Range		Dimensions ( ^{mm} / _{in} )						
Ø D1	(mm)	(in)	L1	L2	L3	Н	D2	В	S
7	5.5 7	.2228	22	14	27,5	5	6,6	16	2
1	5,5 7	.2220	.87	.55	1.08	.20	.26	.63	.08
9	79	.2835	27	18	33,5	6	6,6	20	2
9	7 3 .20	.2033	1.06	.71	1.32	.24	.26	.79	.08
13	0.5 12	9,5 13 .3951	40	25	49,5	9	11	25	3
15	9,0 10	.0901	1.57	.98	1.95	.35	.43	.98	.12
15,5	12 155	13 15,5 .5161	41	26	52	12	11	25	3
15,5	1010,0		1.61	1.02	2.05	.47	.43	.98	.12
19	15,5 19	.6175	43	28	55,5	15	11	25	3
13	10,0 19 10	1.69	1.10	2.19	.59	.43	.98	.12	
23	<b>3</b> 20 23	.7991	51	35	67	19	14	30	5
23		.1991	2.01	1.38	2.64	.75	.55	1.18	.20
26	<b>6</b> 23 26 .91 1.02	01 1 00	52	36	70	22	14	30	5
20		.91 1.02	2.05	1.42	2.76	.87	.55	1.18	.20
28 5	<b>8,5</b> 26 28,5	3,5 1.02 1.12	53	37	73	24	14	30	5
20,5			2.09	1.46	2.87	.94	.55	1.18	.20
31	28,5 31	31 1.12 1.22	55	39	75,5	27	14	30	5
31	20,0 01	1.12 1.22	2.17	1.54	2.97	1.06	.55	1.18	.20
36	33 36	. 36 1.30 1.42	57	41	81	32	14	40	5
50	00 00	1.00 1.42	2.24	1.61	3.19	1.26	.55	1.57	.20
39	36 39	1.42 1.54	59	43	83,5	34	14	40	5
00	0000	1.42 1.04	2.32	1.69	3.29	1.34	.55	1.57	.20
43	39 43	1.54 1.69	68	48	94,5	38	18	40	5
-0	00 40	43 1.54 1.69	2.68	1.89	3.72	1.50	.71	1.57	.20
46	43 46	1.69 1.81	70	50	98	41	18	40	5
		1.03 1.01	2.76	1.97	3.86	1.61	.71	1.57	.20
49	46 49	1.81 1.93	73	53	105,5	44	18	40	8
-5	40 40	1.01 1.33	2.87	2.09	4.15	1.73	.71	1.57	.31
52 *	49 52	1.93 2.05	76	56	110	47	18	40	8
02	-3 32	1.00 2.00	2.99	2.20	4.33	1.85	.71	1.57	.31
58	53 58	2.09 2.28	78	58	115	52	18	40	8
00	0000	2.03 2.20	3.07	2.28	4.53	2.05	.71	1.57	.31
61	58 61	2.28 2.40	80	60	118,5	57	18	40	8
01	0001	2.20 2.40	3.15	2.36	4.67	2.24	.71	1.57	.31

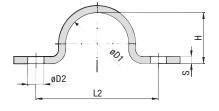
* Similar to DIN 1592.



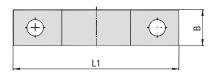
STAUFF Diameter Range Group

# Heavy Saddle with Tension Clearance (DIN 1593)

**Two-Bolt Design** 



Dimensions (mm/in)





# **Ordering Codes**

	or doring o	0400		
	Heavy Saddle	*DIN1593-*7-*V	66	
	* Heavy Saddle to	DIN 1593 DIN1	593	
-	* STAUFF Group (	Ø D1)	7	
	* Material code	Carbon Steel, uncoated	W1	
		Carbon Steel, zinc-plated and thick-film passivated	W66	
		Stainless Steel V4A 1.4401 / 1.4571 (AISI 316 / 316 Ti)	W5	

#### Applications

 Installation of pipes, tubes, poles and other round components directly on the substrate (floor, wall or ceiling)

Ø D1	(mm)	(in)	L1	L2	Н	D2	В	S
7	5,5 7	.2228	44	28	5	6,6	16	2
<u>'</u>	0,0 /	.2220	1.73	1.10	.20	.26	.63	.08
9	79	.2835	48	32	6	6,6	20	2
5	1 5	.2000	1.89	1.26	.24	.26	.79	.08
13	9,5 13	.3951	52	36	9	6,6	20	2
15	3,5 15	.0001	2.05	1.42	.35	.26	.79	.08
15,5	13 15,5	.5161	56	40	12	6,6	20	2
15,5	10 10,0	.0101	2.20	1.57	.47	.26	.79	.08
19	15,5 19	.6175	60	44	15	6,6	20	2
10	10,0 10	.0170	2.36	1.73	.59	.26	.79	.08
23	20 23	.7991	82	56	19	11	25	3
23	20 20	.10	3.23	2.20	.75	.43	.98	.12
26	23 26	.91 1.02	84	58	22	11	25	3
20	20 20	.01 1.02	3.31	2.28	.87	.43	.98	.12
28,5	26 28,5	1.02 1.12	90	64	24	11	25	3
20,0	20 20,0	1.02 1.12	3.54	2.52	.94	.43	.98	.12
31	28,5 31	1.12 1.22	90	64	27	11	25	3
51	20,0 01	1.12 1.22	3.54	2.52	1.06	.43	.98	.12
36	33 36	1.30 1.42	106	80	32	11	30	5
50	55 50	1.00 1.42	4.17	3.15	1.26	.43	1.18	.20
39	36 39	1.42 1.54	110	84	34	11	30	5
00	50 55	1.42 1.04	4.33	3.31	1.34	.43	1.18	.20
43	39 43		120	88	38	14	30	5
43	35 43		4.72	3.46	1.50	.55	1.18	.20
46	43 46	1.69 1.81	122	90	41	14	30	5
40	43 40	1.05 1.01	4.80	3.54	1.61	.55	1.18	.20
49	46 49	1.81 1.93	122	90	44	14	30	5
49	40 49	1.01 1.35	4.80	3.54	1.73	.55	1.18	.20
58	53 58	2.09 2.28	142	110	52	14	40	5
00	55 56	2.09 2.20	5.59	4.33	2.05	.55	1.57	.20
61	58 61	2.28 2.40	142	110	57	14	40	5
01	10 00	2.20 2.40	5.59	4.33	2.24	.55	1.57	.20
71	67 71	0.64 0.00	152	120	66	14	40	5
71	67 71	2.64 2.80	5.98	4.72	2.60	.55	1.57	.20
77	73 77	0.07 0.00	176	136	72	18	40	5
77	/3 //	2.87 3.03	6.93	5.35	2.83	.71	1.57	.20
01	77 01	2.02 2.10	184	144	76	18	40	5
81	77 81	3.03 3.19	7.24	5.67	2.99	.71	1.57	.20
01	00 01	0.00 0.50	198	158	85	18	40	8
91	88 91	3.39 3.58	7.80	6.22	3.35	.71	1.57	.31
100	00 100	0.00 4.00	214	174	98	18	40	8
103	99 103	3.90 4.06	8.43	6.85	3.86	.71	1.57	.31
100	105 100	4.10 4.00	220	180	104	18	40	8
109	105 109	4.13 4.29	8.66	7.09	4.09	.71	1.57	.31
	110 115	4.00 4.50	226	186	109	18	40	8
115	110 115	4.33 4.53	8.90	7.32	4.29	.71	1.57	.31

Alternative materials and surface finishings are available upon request. Contact STAUFF for further information.

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# Light Saddle with Tension Clearance (DIN 1596)

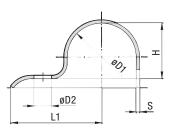
Single-Bolt Design

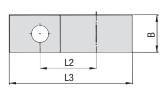


Ordering C	odes	
Light Saddle	*DIN1596-	*7-*W66
* Light Saddle to	DIN 1596	DIN1596
* STAUFF Group (	Ø D1)	7
* Material code	Carbon Steel, uncoated Carbon Steel, zinc-plated and thick-film passivated	W1 W66
	Stainless Steel V4A 1.4401 / 1.4571 (AISI 316 / 3	16 Ti) <b>W5</b>

#### **Applications**

 Installation of pipes, tubes, poles and other round components directly on the substrate (floor, wall or ceiling)





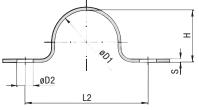
STAUFF Group	Diameter R	ange	Dimensions ( ^{mm} /m)							
Ø D1	(mm)	(in)	L1	L2	L3	Н	D2	В	S	
7	5.5 7	.2228	26	14	31,5	5	6,6	16	2	
<u> </u>	0,0 1	.2220	1.02	.55	1.24	.20	.26	.63	.08	
9	79	.2835	28	16	34,5	6	6,6	16	2	
5	19	.2033	1.10	.63	1.36	.24	.26	.63	.08	
13	9,5 13	.3951	30	18	38,5	9	6,6	20	2	
15	9,0 10	.5551	1.18	.71	1.52	.35	.26	.79	.08	
15,5	13 15,5	.5161	32	20	41,75	12	6,6	20	2	
15,5	15 10,0	.0101	1.26	.79	1.64	.47	.26	.79	.08	
19	15,5 19	5,5 19 .6175	34	22	45,5	15	6,6	20	2	
19	10,0 19 .0170	1.34	.87	1.79	.59	.26	.79	.08		
<b>00</b>	00 00 70 01	70 01	43	28	57,5	19	9	25	3	
23	20 23	.7991	1.69	1.10	2.26	.75	.35	.98	.12	
~~	00 00	01 1 00	44	29	60	22	9	25	3	
26	23 26	.91 1.02	1.73	1.14	2.36	.87	.35	.98	.12	
00 F	00 00 5	1 00 1 10	47	32	64,25	24	9	25	3	
28,5	26 28,5	1.02 1.12	1.85	1.26	2.53	.94	.35	.98	.12	
<b>31</b> 28,5 31 1	1.12 1.22	47	32	65,5	27	9	25	3		
		1.85	1.26	2.58	1.06	.35	.98	.12		
00 *	01 00	1 00 1 00	56	36	75,5	29	9	25	3	
33 *	31 33	1.221.30	2.20	1.42	2.97	1.14	.35	.98	.12	
~~	00 00	1 00 1 10	57	40	78	32	11	30	3	
36	33 36	1.30 1.42	2.24	1.57	3.07	1.26	.43	1.18	.12	
<b>~</b>	00 00	4 40 4 54	59	42	81,5	34	11	30	3	
39	36 39	1.42 1.54	2.32	1.65	3.21	1.34	.43	1.18	.12	
40	00 40		61	44	85,5	38	11	30	3	
43	39 43	1.54 1.69	2.40	1.73	3.37	1.50	.43	1.18	.12	
40	10 10		62	45	88	41	11	30	3	
46	43 46	1.69 1.81	2.44	1.77	3.46	1.61	.43	1.18	.12	
40	40 40	1 01 1 00	67	48	95,5	44	14	40	4	
49	46 49	1.81 1.93	2.64	1.89	3.76	1.73	.55	1.57	.16	
F0 *	40 50	1 00 0 05	72	53	102	47	14	40	4	
52 *	49 52	1.93 2.05	2.83	2.09	4.02	1.85	.55	1.57	.16	
			76	55	107	52	14	40	4	
58	53 58	2.09 2.28	2.99	2.17	4.21	2.05	.55	1.57	.16	
			77	58	111,5	56	14	40	4	
61	58 61	2.28 2.40	3.03	2.28	4.39	2.20	.55	1.57	.16	

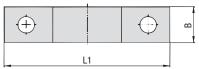
* Similar to DIN 1596.



# Light Saddle with Tension Clearance (DIN 1597)

**Two-Bolt Design** 







# **Ordering Codes**

Light Saddle	*DIN15	i97-*7-*W66
* Light Saddle to	DIN 1597	DIN 1597
* STAUFF Group (	Ø D1)	7
* Material code	Carbon Steel, uncoated Carbon Steel, zinc-plated and thick-film passivated	W66
	Stainless Steel V4A 1.4401 / 1.4571 (AISI 31	6 / 316 Ti) <b>W5</b>

#### Applications

 Installation of pipes, tubes, poles and other round components directly on the substrate (floor, wall or ceiling)

STAUFF Diameter Range Dimensions (mm/in)

Ø D1	(mm)	(in)	L1	L2	Н	D2	В	S
	(1111)	(11)	44	28	5	5,5	16	1,5
7	5,5 7	.2228	1.73	1.10	.20	.22	.63	1,5
			48	32	6	5,5	16	1,5
9	7 9	.2835	40	1.26	.24	.22	.63	.06
			52	36	9	5,5	16	1,5
13	9,5 13	.3951	2.05	1.42	.35	.22	.63	.06
			56	40	12	5,5	16	1.5
15,5	13 15,5	.5161	2.20	1.57	.47	.22	.63	.06
			60	44	15	5,5	16	1.5
19	15,5 19	.6175	2.36	1.73	.59	.22	.63	.06
			76	56	19	6,6	20	2
23	20 23	.7991	2.99	2.20	.75	.26	.79	.08
			2.99 78	58	.75	6,6	20	2
26	23 26	.91 1.02	3.07	2.28	.87	.26	.79	.08
			84	64	.07	6,6	20	2
28,5	<b>28,5</b> 26 28,5	1.02 1.12	3.31	2.52	.94	.26	.79	.08
			84	64	27	6,6	20	2
31		31 1.12 1.22	3.31	2.52	1.06	.26	.79	.08
		33 1.221.30	92	72	29	6,6	20	2
33 *	31 33 1.221.30	3.62	2.83	1.14	.26	.79	.08	
			104	2.03	32	9	25	3
36	33 36	336 1.301.42	4.09	3.15	1.26	.35	.98	.12
			108	84	34	.35	.98	3
39	36 39	1.42 1.54	4.25	3.31	1.34	.35	.98	.12
			112	88	38	.35	25	3
43	39 43	1.54 1.69	4.41	3.46	1.50	.35	.98	.12
			114	90	41	9	25	3
46	43 46	1.69 1.81	4.49	3.54	1.61	.35	.98	.12
			118	90	44	.35	30	3
49	46 49	1.81 1.93	4.65	3.54	1.73	.43	1.18	.12
			134	106	47	11	30	3
52 *	49 52	1.93 2.05	5.28	4.17		.43	1.18	.12
			138	4.17	1.85 52	.43	30	.12
58	53 58	2.09 2.28	5.43	-	-			
				4.33	2.05	.43	1.18	.12
61	58 61	2.28 2.40	138	110	56	11	30	3
			5.43	4.33	2.20	.43	1.18	.12

* Similar to DIN 1597.

Alternative materials and surface finishings are available upon request. Contact STAUFF for further information.

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**Construction Series** 144 KS / DKS Construction Series (for Anchor Bolt Fastening) KSV / DKSV 145



# Construction Series Types KS (Single Version) / DKS (Double Version)

#### 



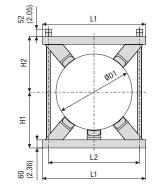
Ordering Codes								
Construction Series *KS-*220-*PA-*W8								
* Version	Single version Double version	KS DKS						
* Exact outside diameter ØD1 (mm) 220								
* Material of Plastic Pads (see below) PA								
* Material Code	Steel, prime coated (grey, RAL 7035)	W8						
Please note: All ite	ms are supplied non-assembled.							

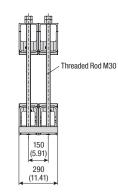
# **Standard Materials for Plastic Pads**



and technical information.

Material Code: **PA** See pages 154 / 155 for material properties





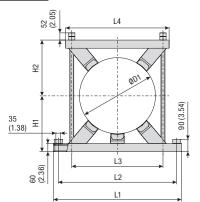
140 (5.51)

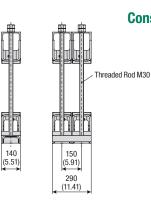
Group	Outside Diamet Diameter Range	Dimensi	Dimensions ( ^{mm} / _{in} )						
STAUFF	(mm)	(in)	Standard Di (mm)	(in)	L1	L2	H1	H2	Plastie Pads
	()	()	220	8.66					· uuo
		247	9.72	420	330	220	220		
1	220 275	8.66 10.85	267	10.51	16.54	12.99	8.66	8.66	- 4
			273	10.75	10.04	12.00	0.00	0.00	
			280	11.02					
			300		400	070	0.40	0.40	
2	276 325	10.87 12.80		11.81	460	370	240	240	4
			318	12.52	18.11	14.57	9.45	9.45	
			323,9	12.75					
			355,6	14.00					
3	326 370	12.83 14.57			510	420	260	260	4
-	020 11 07 0	12.00 1	368	14.49	20.08	16.53	10.23	10.23	· ·
			000	17.75					
			390	15.35					
1	271 /25	05 14 61 16 70	030	10.00	570	480	290	290	4
÷	371 425 14.61 16.73	406.4	10.00	22.44	18.89	11.42	11.42	4	
		406,4	16.00						
		457.0	10.00						
_	100 105	485 16.77 19.09	457,2	18.00	620	530	305	305	
5	426 485				24.41	20.87	12.01	12.01	4
			470	18.50					
		490	19.29						
			508	20.00	680	590	370	370	
5	486 550 19.13 21.65	521	20.51	26.77	23.23	14.57	14.57	4	
		546	21.50		20.20	11.07	11.07		
			540	21.00					
			558,8	22.00	760	670	410	410	
7	551 630	21.69 24.80			29.92	26.38	16.14	16.14	- 5
			609,6	24.00	29.92	20.30	10.14	10.14	
					0.45	355	450	450	
3	631 715	24.84 28.15	711	28.00	845	755	452	452	5
					33.27	29.72	17.80	17.80	
9	716 800	28.19 31.50	762	30.00	940	850	495	495	5
					37.00	33.46	19.49	19.49	0
10			813	32.00	990	900	500	500	5
			510	02.00	38.97	35.43	19.69	19.69	0
	7	7							
11			1000	39.37	1200	1100	591,5	593	5
			1000	39.37	47.24	43.30	23.29	23.34	0
			1						
2			1016	40.00	1200	1100	602	602	5
12			1016	40.00	47.24	43.30	23.70	23.70	5

Alternative outside diameters, materials and surface finishings are available upon request. Contact STAUFF for further information.

Dimensional drawings: All dimensions in mm (in).

#### R TAUF





## **Construction Series for Anchor Bolt Fastening** Types KSV (Single) / DKSV (Double)



Ordering Codes							
Construction	Series *KSV-*220-*PA-*	*W8					
* Version	Single version Double version	KSV DKSV					
* Exact outside di	ameter ØD1 (mm)	220					
* Material of Plas	tic Pads (see below)	PA					
* Material Code	Steel, prime coated (grey, RAL 7035)	W8					
Please note: All ite	ms are supplied non-assembled.						

### **Standard Materials for Plastic Pads**



See pages 154 / 155 for material properties and technical information.

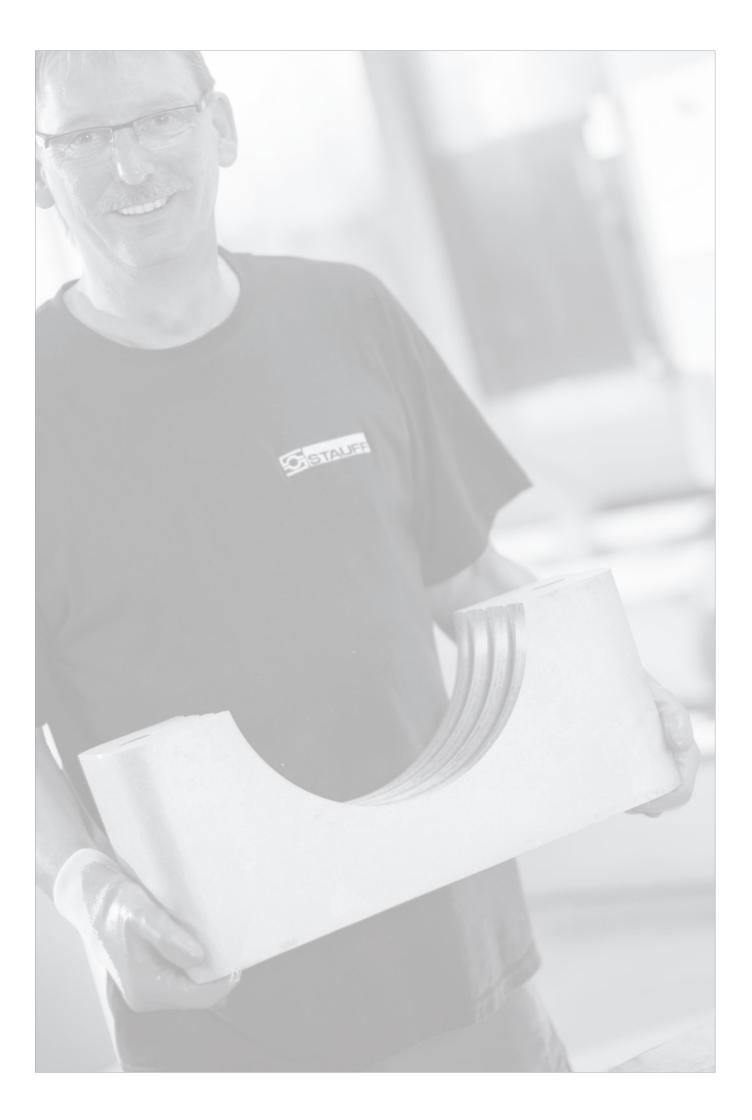
Group	Outside Diamet Diameter Range	er ØD1 Pipe / Tub e	e Standard Di	ameters	Dimensions ( ^{mm} / _{in} )						No. of Plastic	
STAUFF	(mm)	(in)	(mm)	(in)	L1	L2	L3	L4	H1	H2	Pads	
			220	8.66								
		0.00 10.05	247	9.72	580	490	330	420	220	220		
1	220 275	8.66 10.85	267	10.51			12.99			8.66	4	
			273	10.75								
			280	11.02								
					600	E00	070	460	040	040		
2	276 325	10.87 12.80	300	11.81	620	530	370 14.57	460	240 9.45	240 9.45	4	
			318	12.52	24.41	20.07	14.57	10.11	9.45	9.45		
			323,9	12.75								
			355,6	14.00								
3	326 370	12.83 14.57	000,0		670	580	420	510	260	260	4	
5	020 0/ 0	12.00 14.07	368	14.49	26.38	22.83	16.53	20.08	10.23	10.23	7	
			300	14.49								
			000	45.05								
			390	15.35	750	640	480	570	290	290		
4	371 425 14.61 16.73	14.61 16.73					18.89				4	
				406,4	16.00	20.00	20.20	10.03	22.44	11.42	11.42	
				18.00	000	700	500	000	0.05	0.05		
5	426 485	16.77 19.09	457,2		800	730	530	620	305	305	4	
			470	18.50	31.50	28.74	20.87	24.41	12.01	12.01		
				10.00								
			490	19.29								
<u>_</u>	400 550	10.10 01.05	508	20.00	860	790	590	680	370	370		
6	486 550	19.13 21.65	521	20.51	33.86	31.10	23.23	26.77	14.57	14.57	4	
			546	21.50								
			558,8	22.00	940	870	670	760	410	410		
7	551 630	21.69 24.80					26.38	760			5	
			609,6	24.00	57.00	34.20	20.30	29.92	10.14	10.14		
8	631 715	24.84 28.15	711	28.00	1025	955	755	845	452	452	5	
	001			20.00	40.31	37.60	29.72	33.27	17.80	17.80	0	
	74.0 000	00.40 04.55	700	00.00	1120	1050	850	940	495	495	-	
9	716 800	28.19 31.50	762	30.00			33.46				5	
							,					
	/											
					1170	1100	900	990	500	500		
10			813	32.00		1100				500	5	
					40.06	43.30	35.43	30.97	19.09	19.69		
	/	/										
11			1000	39.37	1400		1100				5	
			1000	00.07	55.12	51.18	43.30	47.24	23.29	23.34	5	
	/	/										
	/	//										
					1400	1300	1100	1200	602	602		
12			1016	40.00	1400	1300 51.18	1100 43.30	1200	602 23.70	602 23.70	5	

Alternative outside diameters, materials and surface finishings are available upon request. Contact STAUFF for further information.

Dimensional drawings: All dimensions in mm (in).



www.stauff.com/1/en/#145





6	Cushion Clamp Series	148
	STC / SPC	
	Channel Rail	149
	SCS	
	Compact Twin Series	150
	DS	
	Agriculture Twin Series	150
	AG	
A	Pipe / Tube Bushing	151
	RF	

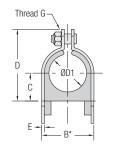


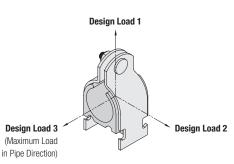


Clamp Assembly = Types STC / SPC

(for Use with Channel Rail SCS)







Outside Diameter         Nominal         Ordering Codes         Standard           Pipe / Tube / Hose         Bore         (1 Clamp Assembly)         Packaging Units					Dimensio ( ^{mm} / _{in} )	ns	Design Loads ( ^{KN} / _{lbf} )					
Ø D1 (mm)	(in)	Pipe (in)	( <b>**</b> = Material Code)	pcs.	B*	С	D	E	Thread G	1	2	3
6,4	1/4	()	, ,	24 / box	15,7	5,6	28,2	2		1,78	0,22	0,22
5,4	1/4		STC-025- <b>**</b> -K	24 / DUX	.62	.22	1.11	.08	1/4-20 UNC	400	50	50
}	3/8		STC-037- <b>**</b> -K	24 / box	19,1	7,1	31,5	2	1/4-20 UNC	1,78	0,22	0,22
					.75	.28	1.24	.08		400	50	50
2,7	1/2		STC-050-**-K	24 / box	22,1 .87	8,6	34,5 1.36	2	1/4-20 UNC	1,78 400	0,22 50	0,22
					23,1	9,1	35,8	2		1,78	0,22	0,22
3,5		1/4	SPC-025-**-K	24 / box	.91	.36	1.41	.08	1/4-20 UNC	400	50	50
<u>_</u>	5.10			04.44	25,4	10,4	38,1	2		1,78	0,22	0,22
6	5/8		STC-062- <b>**</b> -K	24 / box	1.00	.41	1.50	.08	1/4-20 UNC	400	50	50
7,2		3/8	SPC-037- <b>**</b> -K	24 / box	27,2	11,4	40,4	2	1/4-20 UNC	2,67	0,33	0,33
1,2		3/0	3F0-03/-**	24 / DUX	1.07	.45	1.59	.08	174-20 UNC	600	75	75
9	3/4		STC-075- <b>**</b> -K	24 / box	33,8	13,5	45,2	2	1/4-20 UNC	2,67	0,33	0,33
-	G, I				1.33	.53	1.78	.08		600	75	75
1,3		1/2	SPC-050- <b>**</b> -K	24 / box	36,8	15,0	48,5	2	1/4-20 UNC	2,67	0,33	0,33
					1.45	.59 14,7	1.91 48,5	.08 2		600	75 0,33	75 0,33
2,2	7/8		STC-087-**-K	24 / box	36,8 1.45	.58	46,5	.08	1/4-20 UNC	2,67 600	75	75
					42,2	16,8	51,6	2,8		2,67	0,33	0,33
5,4	1		STC-100-**-K	12 / box	1.66	.66	2.03	.11	1/4-20 UNC	600	75	75
					45,5	18,3	54,9	2,8		2,67	0,33	0,33
6,9		3/4	SPC-075- <b>**</b> -K	12 / box	1.79	.72	2.16	.11	1/4-20 UNC	600	75	75
0			070 (07 1 1 1	10 //-	48,8	19,8	58,4	2,8	4/4 00 100	2,67	0,33	0,33
2	1-1/4		STC-125- <b>**</b> -K	12 / box	1.92	.78	2.30	.11	1/4-20 UNC	600	75	75
0.7		1	CDO 100 shite K	10 / how	56,4	23,1	69,9	3	E/10 10 UNC	2,67	0,33	0,33
3,7		1	SPC-100- <b>**</b> -K	12 / box	2.22	.91	2.75	.12	5/16-18 UNC	600	75	75
8	1-1/2		STC-150-**-K	12 / box	56,4	23,1	69,9	3	5/16-18 UNC	2,67	0,33	0,33
0	1-1/2		310-130- <b>**</b> -K	12 / 00	2.22	.91	2.75	.12	3/10-10 0110	600	75	75
2		1-1/4	SPC-125-**-K	12 / box	62,7	26,2	77,0	3	5/16-18 UNC	3,56	0,56	0,56
					2.47	1.03	3.03	.12		800	125	125
8,3		1-1/2	SPC-150- <b>**</b> -K	12 / box	62,7	29,5	83,3 3.28	3	5/16-18 UNC	3,56	0,56	0,56
					2.47 69,1	1.16 29,5	83,3	3		800 3,56	125 0,56	125 0,56
0,8	2		STC-200-**-K	12 / box	2.72	1.16	3.28	.12	5/16-18 UNC	800	125	125
					69,1	35,8	96,0	3		3,56	0,56	0,56
0,3		2	SPC-200- <b>**</b> -K	1 / bag	3.22	1.41	3.78	.12	5/16–18 UNC	800	125	125
	0.4/0				88,1	38,9	102,4	3	540.40100	3,56	0,56	0,56
3,5	2-1/2		STC-250- <b>**</b> -K	1 / bag	3.47	1.53	4.03	.12	5/16-18 UNC	800	125	125
6,7	2-5/8		STC-262- <b>**</b> -K	1 / hog	88,1	38,9	102,4	3	5/16-18 UNC	3,56	0,56	0,56
0,7	2-0/0		310-202- <b>**</b> -N	1 / bag	3.47	1.53	4.03	.12	5/10-16 0100	800	125	125
3		2-1/2	SPC-250-**-K	1 / bag	94,5	42,2	108,5	3	5/16-18 UNC	3,56	0,56	0,56
0		2 172		17 bug	3.72	1.66	4.27	.12	0,10 10 010	800	125	125
6,2	3		STC-300- <b>**</b> -K	1 / bag	100,8	45,2	114,8	3	5/16-18 UNC	4,45	0,89	0,67
					3.97	1.78	4.52	.12		1 000	200	150
8,9		3	SPC-300-**-K	1 / bag	110,7 4.36	50,0 1.97	124,7 4.91	3	3/8-16 UNC	4,45 1 000	0,89 200	0,67 150
					4.36	57,9	140,5	3		4,45	0,89	0,67
02		3-1/2	SPC-350- <b>**</b> -K	1 / bag	4.97	2.28	5.53	.12	3/8-16 UNC	1 000	200	150
					138,9	64,3	153,2	3		4,45	0,89	0,67
14		4	SPC-400- <b>**</b> -K	1 / bag	5.47	2.53	6.03	.12	3/8-16 UNC	1 000	200	150
10		-		1 / han	164,3	77,0	178,6	3,6	0/0 10 100	4,45	0,89	0,67
40		5	SPC-500- <b>**</b> -K	1 / bag	6.47	3.03	7.03	.14	3/8-16 UNC	1 000	200	150
68		6	SPC-600- <b>**</b> -K	1 / bag	189,7	89,7	204,0	3,6	2/8 16 UNO	4,45	0,89	0,67
68		6	JL-000-本本-K	1 / bag	7.47	3.53	8.03	.14	3/8-16 UNC	1 000	200	150

* Minimum required for installation.

One clamp assembly is consisting of two carbon steel clamp halves (one with threaded stud), one thermoplastic cushion insert and one lock nut with Nylon insert. Channel rail not included. All threaded parts are only available with unified coarse (UNC) thread. Alternative materials and surface finishings are available upon request. Contact STAUFF for further information.



Clamp Assembly = Types STC / SPC

(for Use with Channel Rail SCS)



### **Standard Materials**



Cushion Insert **Thermoplastic Elastomer** (80 Shore-A) Colour: Black

The cushion material is compatible with most oils, chemicals and cleaning solvents and suitable for applications within a temperature range of -50 °C ... +125 °C (-58 °F ... +257 °F).

Alternative materials are available upon request. Please contact STAUFF for further information.

#### **Product Features**

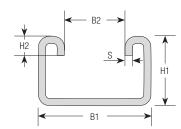
- Clamp assemblies designed to mount directly to 41,3 mm / 1-5/8 in wide strut channels, such as the STAUFF Channel Rail, type SCS
- Suitable for most Fluid Power applications ranging from mobile equipment to industrial machinery
- Reduced horizontal mounting space
- Easy installation and retro fit capabilityReduces shock and vibration while preventing
- galvanic corrosion



### **Ordering Codes**

Clamp Assem	bly *STC-*125-*	'W4-*K
* Type of clamp	STC (Tube diameters) SPC (Pipe diameters)	STC SPC
* Pipe / Tube O.D.	(according to dimension table)	125
* Material code	Carbon Steel, zinc-plated, blue-chromated	W32
	Stainless Steel V2A 1.4301 (AISI 304)	W4
	Stainless Steel V4A 1.4401 (AISI 316)	W5
Assembling	Components packed in kits	К

### Channel Rail • Type SCS



Dimensions ("""/in) B1	B2	H1	H2	S
41,3	22,2	25,4	7	2,7
1.63 (1-5/8)	.88 (7/8)	1.00	.28	.11

Alternative rail profiles, materials and surface finishings are available upon request. Contact STAUFF for further information.

### **Ordering Codes**

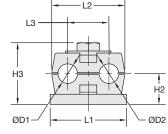
Strut Channel	*SCS-*048-*	*1-*PL
* Strut Channel		SCS
* Length of Rail	1,22 m / 4.00 ft / 48 in 3,05 m / 10.00 ft / 120 in	048 120
* Height of Rail	25,4 mm / 1.00 in	1
* Material code	Carbon Steel, uncoated Carbon Steel, green painted	PL GR

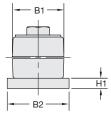




## **Compact Twin Series: Clamp Body Type DS**







Group	Outside Pipe / Tu Ø D1 / Ø		Nomina Pipe	al Bore Copper Tube ASTM B88	Ordering Codes (2 Clamp Halves)	Dime	ension	IS ( ^{mm} /	'in)				
STAUFF	(mm)	(in)	(in)	(in)		L1	L2	L3	H1	H2	H3	B1	B2
	6				106/06-PP-DS								
	6,4	1/4			106.4/06.4-PP-DS	07	0E E	200	5	15	20	25	20
DS 1	8	5/16			108/08-PP-DS	37	35,5		.20		30 1.18		30
	9,5	3/8		1/4	109.5/09.5-PP-DS	1.40	1.40	.79	.20	.59	1.10	.90	1.10
	10		1/8		110/110-PP-DS	]							

Additional outside diameters are available upon request. Please contact STAUFF for further information.

**Compact Twin Series: Metal Hardware** 

One clamp body is consisting of two clamp halves.

* Exact outside diameters Ø D1 / Ø D2 (mm)

* Clamp Body Material (Polypropylene)



**Ordering Codes** 

**Clamp Body** 

* STAUFF Group DS 1

* Compact Twin Series

## Weld Plate, Type SP-DS

*1-*06/06-*PP-*DS

1

06/06

PP DS

SP-DS-1-U-W2 Thread size: 1/4-20 UNC Carbon Steel, phosphated



**Cover Plate, Type US-DS** US-DS-1-W3



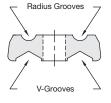
**Hexagon Bolt, Type AS** 

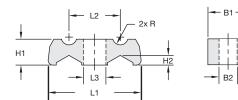
AS-1/4-20UNCx1-W3 Thread size: 1/4-20 UNC Carbon Steel, zinc/nickel-plated

All threaded parts are only available with unified coarse (UNC) thread. Rail mount and stacking assemblies as well as alternative materials and surface finishings are available upon request.

### **Agriculture Twin Series: Clamp Body** Type AG









Ν

Group	Min/Max Outs Pipe / Tube Radius Groov	side Diameters	V-Grooves		Ordering Codes (1 Clamp Body)											
STAUFF	(mm)	(in)	(mm)	(in)		L1	L2	L3	H1	H2	B1	B2	R			
2	3 10	.1239	4 15	.2659	215.8/09.6-PP-AG-BK-HV	57,5 2.26	31,7 1.25	14,0 .55	16,0 .63	7,1 .24	25,0 .98	11,0 .43	4,8 .19			
3	4 25	.1698	7 20	.2879	324.8/19.5-PP-AG-BK-HV	62,0 2.48	34,5 1.36	14,0 .55	19,0 .75	7,1 .28	32,0 1.26	11,0 .43	12,4 .49			

### **Standard Material**



### **Product Features**

- Flip the clamp body to choose between the radius grooved or the v-grooved design (suitable for a range of diameters) Use M10 or 3/8–16 UNC bolts or screws (preferably with

Additional outside diameters are available upon request. Please contact STAUFF for further information.

See pages 154 / 155 for properties and technical information.

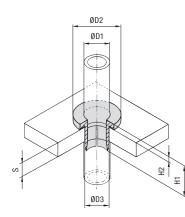
- washers) to fasten clamp bodies directly to the machine · Clamp bodies can be stacked for multi-level assembly

www.stauff.com/1/en/#150



Pipe / Tube Bushing - Type SRF

#### R STAUFF



Outside Diameter ØD1		Nominal Bore	Dimensions			Wall Thickness	Mounting Bore
(mm)	(in)	(in)	ØD2	H1	H2	S	ØD3
· · /	. ,	(11)	18	22	4	4 12	10
6	1/4		.71	.87	.16	.1647	.39
			20	22	4	4 12	12
8	5/16		.79	.87	.16	.1647	.47
		1/8 Pipe	22	22	4	4 12	14
10	3/8	1/4 Copper Tube (ASTM B88)	.87	.87	.16	.1647	.55
			24	22	4	412	16
12	1/2	3/8 Copper Tube (ASTM B88)	.94	.87	.16	.1647	.63
			26	22	4	412	18
14		1/4 Pipe	1.02	.87	.16	.1647	.71
			28	22	4	4 12	20
15			1.10	.87	.16	.1647	.79
	5.10		28	22	4	4 12	20
16	5/8	1/2 Copper Tube (ASTM B88)	1.10	.87	.16	.1647	.79
10			30	22	4	4 12	22
18			1.18	.87	.16	.1647	.87
00	0/4		32	22	4	4 12	24
20	3/4		1.26	.87	.16	.1647	.94
22	7/8	2/4 Coppositudes (ACTM DOO)	34	22	4	4 12	26
22	//0	3/4 Copper Tube (ASTM B88)	1.34	.87	.16	.1647	1.02
25	1		38	22	4	4 12	30
25	1		1.50	.87	.16	.1647	1.18
28		1 Copper Tube (ASTM B88)	41	22	4	4 12	33
20		T Copper Tube (ASTIVI BOO)	1.61	.87	.16	.1647	1.30
30			43	22	4	4 12	34
50			1.69	.87	.16	.1647	1.39
35		1-1/4 Copper Tube (ASTM B88)	48	22	4	4 12	40
55		1-1/4 Cohher Trine (ASTM DOO)	1.89	.87	.16	.1647	1.57
38	1-1/2		51	22	4	4 12	43
00	1-1/2		2.01	.87	.16	.1647	1.70
42		1-1/4 Pipe	55	22	4	4 12	47
42		1-1/2 Copper Tube (ASTM B88)	2.17	.87	.16	.1647	1.85



### **Ordering Codes**

Pipe / Tube Bushing	*SRF-*20-*PP
<ul> <li>Pipe / Tube Bushing</li> <li>Exact outside diameter Ø D1 (mn</li> <li>Material code (see below)</li> </ul>	n) 20 PP

### **Standard Materials**

Polypropylene Colour: Natural colour Material code: PP

Thermoplastic Elastomer (87 Shore-A) Colour: Black Material code: SA

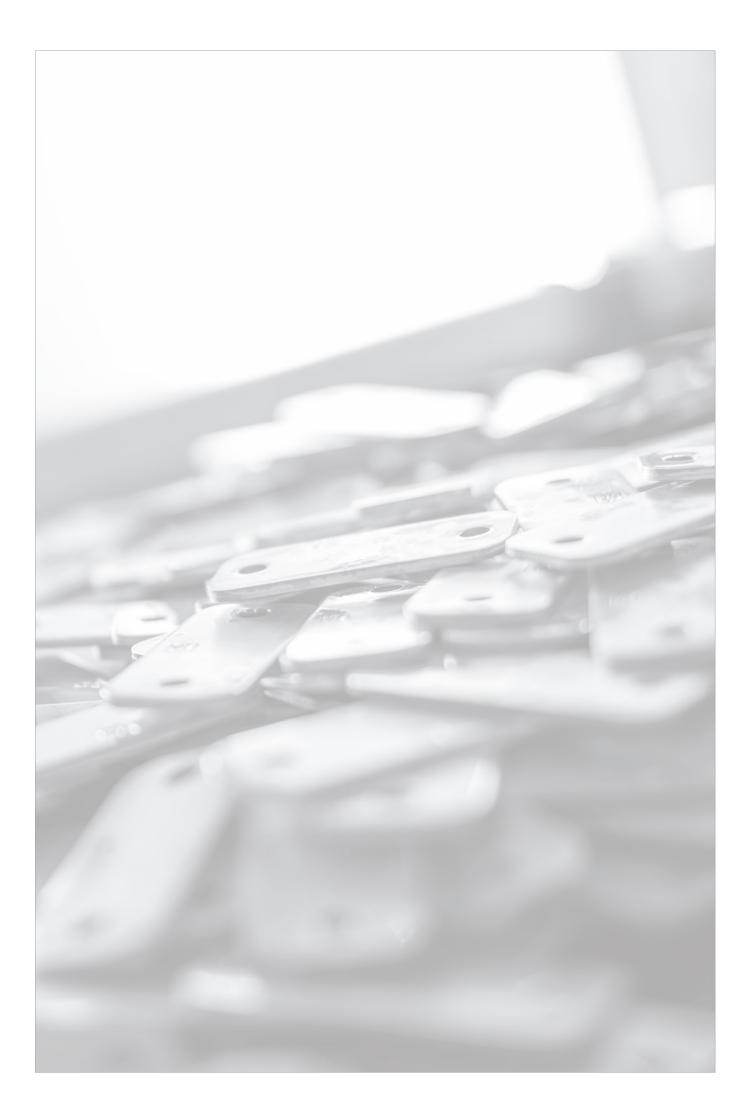
See pages 154 / 155 for material properties and technical information.

### **Product Features**

 Designed to centre the pipe or tube in a through-hole (e.g. for return lines entering the hydraulic reservoir)

- Vibration and noise absorbing element
- Available for all commonly used Metric and imperial pipe and tube diameters from 6  $\dots$  42 mm and 1/4 ... 1-1/2 in
- Easy plug-in installation





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#### R STALIEF

### **Standard Clamp Body Materials**









Material Code	РР	PA	AL	SA
Basic Material	Copolymeric Polypropylene	Polyamide	Aluminium AlSi12	Thermoplastic Elastomer
Standard Colour	Green	Black	Natural	Black

## Mechanical Properti

Mechanical Properties	Mechanical Properties				
Tensile E-Module	1073 N/mm² (ISO 527)	> 1400 N/mm² (ISO 527)	> 65000 N/mm²	113 N/mm² at +23 °C / +73.4 °F (ASTM D412)	
Notch Impact Strength	8 kJ/m ² at +23 °C / +73.4 °F (acc. to Charpy / ISO 179 / 1eU)	> 15 kJ/m² at 23 °C / +73.4 °F (acc. to Charpy / ISO 179 / 1eU)			
Low Temperature Notch Impact Strength	3 kJ/m ² at -20 °C / -4.0 °F (acc. to Charpy / ISO 179 / 1eU)	> 3 kJ/m ² at -30 °C / -22.0 °F (acc. to Charpy / ISO 179 / 1eU)			
Tensile Strength at Yield (Tensile Strength)	26 MPa (ISO 527-2)	> 55 MPa (ISO 527)	> 240 MPa (ISO EN 10002)	15,9 MPa (ASTM D412)	
Ball Indentation Hardness (Brinell Hardness)	45,4 MPa (ISO 2039-1)	> 65 MPa (ISO 2039-1)	> 70 HBS		
Shore Hardness				87 A (ISO 868) Alternative hardnesses are available upon request! Contact STAUFF for details.	

#### **Thermal Properties Temperature Resistance** -40 °C ... +120 °C / -40 °F ... +248 °F -30 °C ... +90 °C / -22 °F ... +194 °F up to +300 °C / up to +572 °F -40 °C ... +125 °C / -40 °F ... +257 °F (Brief exposure up to +140 $^\circ\text{C}$ / +284 $^\circ\text{F}$ ) (Min ... Max)

Chemical Properties				
Weak Acids	conditionally consistent	conditionally consistent	conditionally consistent	consistent
Solvents	conditionally consistent	conditionally consistent	conditionally consistent	conditionally consistent
Benzine	conditionally consistent	consistent	consistent	conditionally consistent
Mineral Oils	conditionally consistent	consistent	consistent	conditionally consistent
Other Oils	consistent	consistent	consistent	consistent
Alcohols	consistent	consistent	consistent	consistent
Seawater	consistent	consistent	consistent	consistent

### **Special Clamp Body Materials**

Please contact STAUFF for further details on fire-proof clamp body materials, tested and approved according to several international fire-protection standards (such as BS 6853, EN 45545-2, UL 94 and many more).

See pages 156 / 157 for material properties and technical information.

The information for the Polyamide material PA have been determined in a conditioned state according to ISO 1110. For Aluminium, the tensile strength (under reversed bending stress) and impact bending strength both rise constantly at decreasing temperatures whilst the value for breaking elongation decreases.

STAUFF preserves the right to supply products made from alternative, but comparable materials with matching technical characteristics.





### **Standard Clamp Insert Materials**



STAUFF Group 4 and 6 (Standard Series) STAUFF Group 4S to 6S (Heavy Series)



STAUFF Group 7S to 10S (Heavy Series)

SA	EPDM	Material Code
Thermoplastic Elastomer	Ethylene Propylene Diene Monomer	Basic Material
Black	Black	Standard Colour

		Mechanical Properties
16 N/mm² at +23 °C / +73.4 °F (ASTM D412)		Tensile E-Module
		Notch Impact Strength
		Low Temperature Notch Impact Strength
8,3 MPa (ASTM D412)	9,0 MPa (DIN 53504)	Tensile Strength at Yield (Tensile Strength)
		Ball Indentation Hardness (Brinell Hardness)
73 A (ISO 868)	70 A (DIN 53505)	Shore Hardness

		mermai Properties
-40 °C +125 °C/ -40 °F +257 °F	-50 °C +120 °C / -58 °F +248 °F	Temperature Resistance (Min Max)

		Chemical Properties
consistent	consistent	Weak Acids
conditionally consistent	consistent	Solvents
conditionally consistent	conditionally consistent	Benzine
conditionally consistent	conditionally consistent	Mineral Oils
consistent	conditionally consistent	Other Oils
consistent	consistent	Alcohols
consistent	consistent	Seawater



### **Special Clamp Insert Materials**

Please contact STAUFF for further details on fire-proof clamp body materials, tested and approved according to several international fire-protection standards (such as BS 6853, EN 45545-2, UL 94 and many more).

See pages 156 / 157 for material properties and technical information.

STAUFF preserves the right to supply products made from alternative, but comparable materials with matching technical characteristics.

### R ISTAUFF

## **Special Clamp Body Materials (Selection)**

**Preventive Fire Protection** 



Material Code	PA-V0	PP-DA	PA-GF30-USR
Basic Material	Polyamide	Polypropylene	Polyamide
Standard Colour	Grey / Black	Weiss	Black

## Mechanical Propertie

Mechanical Properties			
Tensile E-Module	1500 MPa (ISO 527-2)	1614 N/mm² (ISO 527) bei +23 °C / +73.4 °F: 50 mm/min	8274 MPa (ASTM D638)
Notch Impact Strength	35 kJ/m² at +23 °C / +73.4 °F (acc. to Charpy / ISO 179 / 1eU)	13 kJ/m² at +23 °C / +73.4 °F (acc. to IZOD / ISO 179 / 1eA)	15 kJ/m² (ASTM D256)
Low Temperature Notch Impact Strength		1,5 kJ/m² at -25 °C / -13.0 °F (acc. to IZOD / ISO 179 / 1eA)	
Tensile Strength at Yield (Tensile Strength)	45 MPa (ISO 527-2)	12,4 MPa (ISO 527) at +23 °C / +73.4 °F: 50 mm/min	131 MPa (ASTM D638)
Ball Indentation Hardness (Brinell Hardness)	100 N/mm² (ISO 2039-1)		
Shore Hardness			

Thermal Properties			
Temperature Resistance (Min Max)	-30 °C +120 °C / -22 °F +248 °F	-25 °C +90 °C / -13 °F +194 °F	-30 °C +120 °C / -22 °F +248 °F

Features			
Approvals / Properties	Tested and approved acc. to UL94 ¹ (material thickness: 3 mm)	Tested and approved acc. to UL94 ¹ (material thickness: 3 mm)	Tested and approved acc. to ASTM D638 (material thickness: 1,5 mm)
	<ul> <li>Classification: V-0 (Vertical Burning Test)</li> </ul>	<ul> <li>Classification: V-0 (Vertical Burning Test)</li> </ul>	<ul> <li>Classification: V-0 (Vertical Burning Test)</li> </ul>
	Tested and approved acc. to EN 45545-2 (material thickness: 3,5 mm)	Tested and approved acc. to Def Stan 07-247 • Assessment: category B	Tested and approved acc. to NFPA 130 (material thickness: 3 mm)
	<ul> <li>Requirements set R22 / R23 / R24 / R26</li> <li>Hazard level HL1 - HL3</li> </ul>	Approved by the UK Ministry of Defence (MoD)	<ul> <li>no burning dripping</li> </ul>
	Tested and approved acc. to DIN 5510, Part 2 (material thickness: 3 mm)	Low Smoke Zero Halogen (LSZH)	Halogen Free Flame Retardant (HFFR)
	<ul> <li>Combustibility classification: S4</li> <li>Smoke development classification: SR2</li> <li>Dripping classification: ST2</li> </ul>		
	Tested and approved acc. to NF F 16-101 (material thickness: 3 mm)		
	Classification: I3 / F2		
	Low Smoke Zero Halogen (LSZH)		

¹ Successful testing and approval according to UL94 (classification V-0) is equivalent to EN 45545-2 (requirements set R26; hazard level HL3). The information for PA-V0 has been determined in a conditioned state according to ISO 1110.

STAUFF preserves the right to supply products made from alternative, but comparable materials with matching technical characteristics.





**Technical Appendix** 

## **Special Clamp Body Materials (Selection)**

**Preventive Fire Protection** 







PP6853	PP-V0	SA-V0	Material Code
Polypropylene	Polypropylene	Thermoplastic Elastomer	Basic Material
White	Black	Natural	Standard Colour

			Mechanical Properties
1264 MPa (ICE 60811-1-1)		113 N/mm ² at +23 °C / +73.4 °F (ASTM D412)	Tensile E-Module
17 kJ/m² at +23 °C / +73.4 °F (acc. to IZOD / ISO 179 / 1eA)	5 kJ/m² at +23 °C / +73.4 °F (acc. to ISO 180/A)		Notch Impact Strength
			Low Temperature Notch Impact Strength
25 MPa (ICE 60811-1-1)	24 MPa (ISO 527)	15,9 MPa (ASTM D412)	Tensile Strength at Yield (Tensile Strength)
			Ball Indentation Hardness (Brinell Hardness)
		86 A (ISO 868)	Shore Hardness

			Thermal Properties
-25 °C +90 °C / -13 °F +194 °F	-25 °C +90 °C / -13 °F +194 °F	-55 °C +90 °C / -67 °F +194 °F	Temperature Resistance (Min Max)

			Features
Tested and approved acc. to EN 45545-2 (material thickness: 3 mm) • Requirements set R22 / R23 / R24 / R26	Tested and approved acc. to UL94 ¹ (material thickness: 3 mm)	Tested and approved acc. to UL94 ¹ (material thickness: 3 mm)	Approvals / Properties
Hazard level HL1 - HL3	Classification: V-0 (Vertical Burning Test)	<ul> <li>Classification: V-0 (Vertical Burning Test)</li> </ul>	
<b>Tested and approved acc. to BS 6853</b> (Code of practice for fire precautions in the design /construction of passenger carrying trains) • Assessment: category 1a			
<b>Compliant to the requirements of</b> <b>London Underground / Metronet</b> (standard 2-01001-002: Fire Safety Performance of Materials)			
<b>Tested and approved acc. to DIN 5510, Part 2</b> (material thickness: 25 mm) • Combustibility classification: S4 • Smoke development classification: SR2 • Dripping classification: ST2			
Tested and approved acc. to Def Stan 07-247 ■ Assessment: category B			
Compliant to the requirements of JRMA (Japan Railway Rollingstock & Machinery Association) Classification: extremely incombustible			
Low Smoke Zero Halogen (LSZH)			

¹ Successful testing and approval according to UL94 (classification V-0) is equivalent to EN 45545-2 (requirements set R26; hazard level HL3).

STAUFF preserves the right to supply products made from alternative, but comparable materials with matching technical characteristics.

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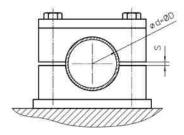
### **Standard Clamp Body Designs**



### **Profiled Design**

### **Profiled Inside Surface with Tension Clearance**

- Available in the Standard, Heavy, Twin and Heavy Twin Series
- Recommended for the safe installation of rigid pipes or tubes
- Available for all commonly used outside diameters and nominal sizes
- Vibration/noise reducing and impact absorbing effect towards the direction of the line provided by the grooves on the inside of the clamp bodies
- Clearance S between the clamp halves provides tension of the tube or pipe
- To be used as fixed point clamp preventing the line from sliding (see page 161 for Maximum Loads in Pipe Direction)



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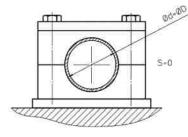
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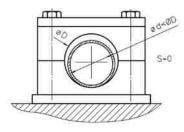


### Type H (Smooth)

### Smooth Inside Surface w/o Tension Clearance

- Available in the Standard, Heavy and Twin Series
- Recommended for the safe installation of hoses or cables
- Available for all commonly used outside diameters and nominal sizes
- Smooth inside surface and chamfered edges avoid damaging of the hose or cable
- Choose the diameter ØD of the clamp body slightly larger (in accordance to your specific requirements) than the outside diameter Ød of the pipe, tube, hose or cable in order to use it as a longitudinal guide allowing the line to slide







### **Type RI (with Elastomer Insert)**

- Available in the Standard, Heavy and Heavy Twin Series
- Recommended for the extra-gentle installation of pipes, tubes, hoses or cables
- Available for all commonly used outside diameters and nominal sizes
- Elastomer insert made of Thermoplastic Elastomer with a hardness of 73 Shore-A provides most effective reduction of vibration and noise caused by vibration



### **Rectangular Design = Type VK**

- Available in the Standard Series (STAUFF Group 5)
- Recommended for the safe installation of proximity switches according to DIN EN 60947-5-2 or similar, rectangular construction, with a square of 40 mm x 40 mm (1.57 in x 1.57 in) or 40 mm x 36 mm (1.57 in x 1.42 in)



### **Materials and Surface Finishings of Metal Parts**

### **Materials**

Unless otherwise stated, all metal parts (e.g. weld plates, cover plates, bolts, rail nuts etc.) are made of **Carbon Steel** (surface finishing according to material code).

Besides that, all metal parts are also available **ex stock** in two different stainless steel qualities:

#### Stainless Steel V2A

- 1.4301 / 1.4305 (AISI 304 / 303)
- Material code: W4



- Stainless Steel V4A
- 1.4401 / 1.4571 (AISI 316 / 316 Ti)
  Material code: W5
- Aluminium
- Aluminium EN AW-6060
- Material code: W85

Alternative materials (e.g. Aluminium) are available upon request. Contact STAUFF for further information.

#### **Surface Finishings**

Unless otherwise stated, all metal parts made of Carbon Steel are available with the following standard surface finishings:

#### Carbon Steel, uncoated

Material code: W1

#### Carbon Steel, phosphated

- Fe/Znph r 10 according to DIN EN 12476
  Material code: W2

#### Carbon Steel, zinc/nickel-plated

- More than 1200 hours resistance against red rust / base metal corrosion in the salt spray test to DIN EN ISO 9227
- Free of hexavalent chromium Cr(VI)
  RoHS compliant according to 2002/95/EC
- (Restrictions of the Use of Hazardous Substances) ELV compliant according to 2000/53/EC
- (End of Life Vehicles Directive)
- Material code: W3

Alternative surface finishings are available upon request. Contact STAUFF for further information.



Original STAUFF Cover Plate with Zinc/Nickel-Coating: No signs of corrosion after <u>1200 hours</u> in the salt spray chamber!



Original STAUFF Cover Plates with alternative surface finishings widely-used by competitors in the market (from left to right):

- Galvanisation and blue-chromating after 96 hours

**Property Classes / Grades of Bolts and Screws** 

- Galvanisation and yellow-chromating after <u>192 hours</u>
- Zinc-coating, thick-film passivation and sealing after <u>192 hours</u>

In all three cases, signs of white and red rust / base metal corrosion are quite clearly visible! Please do not hesitate to contact STAUFF and ask for a detailed report.

### **Thread Conversion Chart**

### Metric ISO vs. Unified Coarse (UNC) Thread



Unless otherwise stated, all threaded parts available with Metric ISO thread or unified coarse (UNC) thread.

#### Standard Series (DIN 3015, Part 1)

Group		Thread		В
STAUFF	DIN	Metric ISO	Unified Coarse	
1 to 8	0 to 8	M6	1/4-20 UNC	

#### Heavy Series (DIN 3015, Part 2)

Group		Thread	
STAUFF	DIN	Metric ISO	<b>Unified Coarse</b>
3S to 5S	1 to 3	M10	3/8-16 UNC
6S	4	M12	7/16-14 UNC
7S	5	M16	5/8-11 UNC
8S	6	M20	3/4-10 UNC
9S	7	M24	7/8–9 UNC
10S	8	M30	1-1/8-7 UNC
11S to 12S	9 to 10	M30	1-1/4-7 UNC

#### Twin Series (DIN 3015, Part 3)

Group		Thread	
STAUFF	DIN	Metric ISO	<b>Unified Coarse</b>
1D	1	M6	1/4-20 UNC
2D to 5D	2 to 5	M8	5/16-18 UNC

**Hexagon Head Bolt** 

Socket Cap Screw

**Slotted Head Screw** 

Bolt / Screw Type	Material Code	Property Class / Grade Metric ISO Threaded Bolts / Screws	Unified Coarse Threaded Bolts / Screws
	W1, W2, W3	8.8 (according to DIN EN ISO 898)	5 (according to SAE J429)
Hexagon Head Bolt Type AS	W4	A2-70 (according to DIN EN ISO 3506)	AISI 304 / B8 (according to ASTM A193)
	W5	A4-70 (according to DIN EN ISO 3506)	AISI 316 / B8M (according to ASTM A193)
	W1, W2, W3	8.8 (according to DIN EN ISO 898)	5 (according to SAE J429)
Socket Cap Screw Type IS	W4	A2-70 (according to DIN EN ISO 3506)	AISI 304 / B8 (according to ASTM A193)
	W5	A4-70 (according to DIN EN ISO 3506)	AISI 316 / B8M (according to ASTM A193)
	W1, W2, W3	4.8 (according to DIN EN ISO 898)	2 (according to SAE J429)
Slotted Head Screw Type Ll	W4	A2-70 (according to DIN EN ISO 3506)	AISI 304 / B8 (according to ASTM A193)
	W5	A4-70 (according to DIN EN ISO 3506)	AISI 316 / B8M (according to ASTM A193)

Unless otherwise stated, the above mentioned property classes / grades apply as standards for bolts and screws supplied by STAUFF. The information indicate the minimum requirements; higher property classes are available upon request. Contact STAUFF for details.



## **Basic Installation Instructions**



### **Installation on Weld Plate**

Different types of weld plates are available for all STAUFF Clamps according to DIN 3015 as well as for most of the other series and many custom-designed special clamps.

- · Place weld plates in their designated positions. Please make sure these positions are suitable for the expected loads
- · Mark the positions of the weld plates to ensure best alignment
- · Weld the weld plates into position. Elongated weld plates can also be mounted to their positions by using screws or bolts.
- Push bottom clamp half onto weld plate.
- Insert pipe, tube, hose, cable or any other type of line.
- · Place second clamp half and cover plate (optional) on top and mount clamp assembly by using screws or bolts.

Unless otherwise stated, the bolt lengths indicated for clamps according to DIN 3015 refer to the installation on weld plages and mouting rails as well as multi-level (stacking) installation. For direct installation, different lengths may be required.



#### Installation on Mounting Rail

STAUFF Mounting Rails are available in different heights. STAUFF Rail Nuts are available for all STAUFF Clamps according to DIN 3015 (Heavy Series up to STAUFF Group 6S only) as well as for many custom-designed special clamps.

- · Place mounting rails in their designated positions. Please make sure these bases are suitable for the expected loads.
- · Mark the positions of the mounting rails to ensure best alignment.
- Weld the mounting rails into position. Mounting rails can also be mounted to their positions by using side-mounting brackets with screws or bolts.
- Insert rail nuts into mounting rail and turn until stop to lock (Standard and Twin Series) or slide in rail nut (Heavy Series). Push bottom clamp half onto rail nuts.
- Insert pipe, tube, hose, cable or any other type of line.
- Place second clamp half and cover plate (optional) on top and mount clamp assembly by using screws or bolts.

The exact positions of the clamp assemblies can still be adjusted before being firmly bolted.



### **Multi-Level (Stacking) Installation**

Stacking bolts permit the multi-level assembly of clamps of identical group sizes. Safety locking plates inserted between the levels prevent the stacking bolts from turning. The Twin Series also allows stacking of different group sizes (STAUFF Groups 2D to 5D).

- · Push bottom clamp half onto weld plate or rail nuts.
- Insert pipe, tube, hose, cable or any other type of line.
- · Place second clamp half.
- Insert stacking bolts into the clamp assembly and tighten using the following tightening torques (or in a way that the clamp halves are in contact with the line over the entire internal contact surface):
- Standard Series 1 ... 2 N·m / .75 ... 1.5 ft·lb (hand-tightened) Heavy Series 5 N·m / 3.75 ft·lb
- Twin Series 1 ... 2 N·m / .75 ... 1.5 ft·lb (hand-tightened) Place safety locking plate on top of clamp assembly.
- · Proceed with next levels. Top level to be assembled with cover plate and hexagon head bolts using the tightening torques as indivated on page 161.

STAUFF multi-level clamp assemblies can be mounted both to weld plates or to mounting rails (with rail nuts).

### **Recommended Distance between Clamps**



Please note: The recommended distances between clamps stated below are standard values and valid for static loads only.

Outside Diameter		Distance A		Outsid	e Diamete	Distance A			
	(mm)	(in)	(m)	(ft)	(mm)		(in)	(m)	(ft)
	6,0 12,7	.2350	1,00	3,28	114,0.	168,0	4.50 6.60	5,00	16,40
	12,7 22,0	.5086	1,20	3,94	168,0.	219,0	6.60 8.60	6,00	19,68
	22,0 32,0	.86 1.25	1,50	4,92	219,0.	324,0	8.60 12.70	6,70	21,98
	32,0 38,0	1.25 1.50	2,00	6,56	324,0.	356,0	12.70 14.00	7,00	22,96
	38,0 57,0	1.5 2.25	2,70	8,86	356,0.	406,0	14.00 16.00	7,50	24,60
	57,0 75,0	2.25 2.95	3,00	9,84	406,0.	419,0	16.00 16.50	8,20	26,90
	75,0 76,1	2.95 3.00	3,50	11,48	419,0.	508,0	16.50 20.00	8,50	27,88
	76,1 88,9	3.00 3.50	3,70	12,14	508,0.	521,0	20.00 20.50	9,00	29,52
	88,9 102,0	3.50 4.00	4,00	13,12	521,0.	558,0	20.50 22.00	10,00	32,80
	102,0 114,0	4.00 4.50	4,50	14,76	558,0.	800,0	22.00 31.50	12,50	41,00

## Installation next to Pipe Bends, **Connectors / Couplings and Valves**



Please note the following information on the installation of STAUFF Clamps next to pipe bends, connectors / couplings and valves:

#### **Pipe Bends**

Pipe bends should be supported by STAUFF Clamps as close to the bends as possible. Furthermore, it is recommended to design these clamps as fixed point clamps.

#### **Connections / Couplings**

The first clamp should be placed directly next to the connector / coupling. This protects the connector / coupling from vibrations.

#### Valves

If valves are incorporated in the pipelines, it is recommended that support is provided in front of and behind these valves.

Contact STAUFF for further information.

#### 

## **Tightening Torques and Maximum Loads In Pipe Direction**



#### Standard Series (DIN 3015-1:1999)

All tightening torques and maximum loads in pipe direction refer to STAUFF Clamp Bodies (profiled inside surface with tension clearance) with Cover Plates, Weld Plates and Hexagon Head Bolts according to DIN EN ISO 4014/4017 (DIN 931/933).

The max. load in pipe direction (according to DIN 3015-10:1999) is an average value, determined by three tests at +23 °C / +73.4 °F with a steel pipe according to DIN EN 10220, St37 – rolled surface – taking static friction into consideration.

#### Sliding starts when the shown values (F) are reached.

Group	Hexagon Head Bol		olt	Polyprop	Polypropylene (PP)			Polyamide (PA)				Aluminiu	Aluminium (AL)			
		DIN EN ISO 4014/4017 (DIN 931/933) Metric Unified Coarse		Tiahteni			Maximum Load in Pipe Direction F		Tightening Torque		Maximum Load in Pipe Direction F		Tightening Torgue		ım Load Direction F	
STAUFF	DIN	ISO Thread	(UNC) Thread	(N·m)	(ft·lb)	(kN)	(lbf)	(N·m)	(ft·lb)	(kN)	(lbf)	(N·m)	(ft·lb)	(kN)	(lbf)	
1	0	M6	1/4-20 UNC	8	6	0,6	135	10	7	0,6	135	12	9	3,5	787	
1A	1	M6	1/4-20 UNC	8	6	1,1	247	10	7	0,7	157	12	9	4,2	944	
2	2	M6	1/4-20 UNC	8	6	1,3	292	10	7	0,8	180	12	9	4,3	967	
3	3	M6	1/4-20 UNC	8	6	1,4	315	10	7	1,6	360	12	9	4,9	1101	
4	4	M6	1/4-20 UNC	8	6	1,5	337	10	7	1,7	382	12	9	5,0	1124	
5	5	M6	1/4-20 UNC	8	6	1,9	427	10	7	2,0	450	12	9	7,3	1641	
6	6	M6	1/4-20 UNC	8	6	2,0	450	10	7	2,5	562	12	9	8,9	2000	
7	7	M6	1/4-20 UNC	8	6	2,3	517	10	7	3,2	719			÷		
8	8	M6	1/4-20 UNC	8	6	2,6	585	10	7	3,5	787					

### Heavy Series (DIN 3015-2:1999)

Group		Hexagon Head Bolt		Polyprop	Polypropylene (PP)			Polyamide (PA)				Aluminium (AL)			
		Metric	EN ISO 4014/4017 (DIN 931/933) ric Unified Coarse		ng Torque	Maximur in Pipe D	irection F	Tightening Torque		Maximum Load in Pipe Direction F		Tightening Torque		Maximum Load in Pipe Direction F	
STAUFF	DIN	ISO Thread	(UNC) Thread	(N·m)	(ft·lb)	(kN)	(lbf)	(N·m)	(ft·lb)	(kN)	(lbf)	(N·m)	(ft·lb)	(kN)	(lbf)
3S	1	M10	3/8-16 UNC	12	9	1,6	360	20	15	4,2	944	30	22	12,1	2720
4S	2	M10	3/8-16 UNC	12	9	2,9	652	20	15	4,5	1044	30	22	15,1	3395
5S	3	M10	3/8-16 UNC	15	11	3,3	742	25	18	5,1	1146	35	26	15,5	3485
6S	4	M12	7/16-14 UNC	30	22	8,2	1843	40	30	9,3	2090	55	41	29,5	6609
7S	5	M16	5/8-11 UNC	45	33	11,0	2472	55	41	15,8	3551	120	86	34,9	7845
8S	6	M20	3/4-10 UNC	80	59	14,0	3147	150	111	21,0	4720	220	162	50,0	11240
9S	7	M24	7/8–9 UNC	110	81	28,0	6300	200	148	32,0	7193	250	184	70,6	15871
10S	8	M30	1-1/8-7 UNC	180	133	40,0	8992	350	258	48,0	10790	500	369	84,5	18996
11S	9	M30	1-1/4-7 UNC	200	148	119,0	26752	370	273	125,0	27650	500	369	181,5	40802
12S	10	M30	1-1/4-7 UNC	270	199	168,0	37767	450	332	180,0	40465	600	443	244,5	54965

### Twin Series (DIN 3015-2:1999)

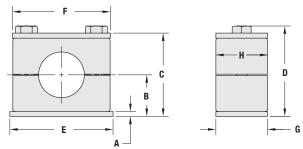
Group		Hexagon Head Bo	lt	Polypropylene (PP)				Polyamide (PA)			
		DIN EN ISO 4014/4017 (DIN 931/933)					d			Maximum Load	
		Metric Unified Coarse		Tightening Torque		in Pipe Direction F		Tightening Torque		in Pipe Direction F	
STAUFF	DIN	ISO Thread	(UNC) Thread	(N·m)	(ft·lb)	(kN)	(lbf)	(N·m)	(ft·lb)	(kN)	(lbf)
1D	1	M6	1/4-20 UNC	5	4	0,9	202	5	4	0,9	202
2D	2	M8	5/16-18 UNC	12	9	2,1	472	12	9	2,2	495
3D	3	M8	5/16-18 UNC	12	9	1,9	427	12	9	2,0	450
4D	4	M8	5/16-18 UNC	12	9	2,7	607	12	9	2,9	652
5D	5	M8	5/16-18 UNC	8	6	1,7	382	8	6	2,5	562

Only for the standard clamp body materials which are listed on page 154. In case of doubt, please contact STAUFF in advance.

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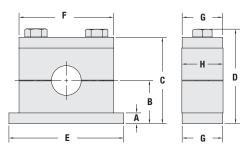
#### R ISTAUFF

## **Dimensions and Weights of Clamp Assemblies**



### Standard Series (DIN 3015, Part 1)

Group		Dimensio	ons ( ^{mm} / _{in} )										Weight per 100 Pcs.
			В	В			D						SP-**-PP-DP-AS
STAUFF	DIN	A	Profiled Design	Type H (Smooth)	Profiled Design	Type H (Smooth)	Profiled Design	Type H (Smooth)	E	F	G	Н	( ^{kg} / _{lbs} )
4	0	3	16,5	16	33	32	37	36	31,5	28	30	30	6,20
1	0	.12	.65	.63	1.30	1.26	1.46	1.42	1.24	1.10	1.18	1.18	13,64
1A	4	3	16,5	16	33	32	37	36	36	34	30	30	8,10
IA	1	.12	.65	.63	1.30	1.26	1.46	1.42	1.41	1.33	1.18	1.18	17.82
<u>.</u>	0	3	19,5	19	39	38	43	42	42	40,5	30	30	9,40
2	2	.12	.77	0.75	1.54	1.50	1.69	1.65	1.65	1.59	1.18	1.18	20.68
3	3	3	21	20,75	42	41,5	46	45,5	50	48	30	30	11,20
		.12	.83	.82	1.65	1.64	1.81	1.80	1.96	1.88	1.18	1.18	24.64
4	4	3	24	23,75	48	47,5	52	51,5	60	57	30	30	13,70
4	4	.12	.94	.94	1.89	1.87	2.05	2.03	2.36	2.24	1.18	1.18	30.14
5	5	3	32	31,25	64	62,5	68	66,5	71	70	30	30	17,10
5	5	.12	1.26	1.23	2.52	2.46	2.68	2.62	2.79	2.75	1.18	1.18	37.62
6	6	3	36	35,25	72	70,5	76	74,5	88	86	30	30	21,30
0	0	.12	1.42	1.39	2.83	2.78	2.99	2.94	3.46	3.38	1.18	1.18	46.86
7	7	5	51,5	51	103	102	107	106	122	118	30	30	42,10
1	1	.20	2.03	2.01	4.06	4.02	4.21	4.17	4.81	4.65	1.18	1.18	92.62
8	8	5	64	63	128	126	132	130	148	144	30	30	44,00
0	0	.20	2.52	2.48	5.04	4.96	5.20	5.12	5.83	5.67	1.18	1.18	96.80

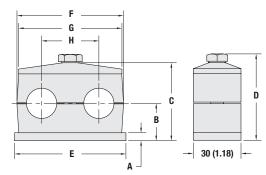


### Heavy Series (DIN 3015, Part 2)

Group		Dimensi	ons ( ^{mm} /in)											Weight per 1 Pc.
			В		С		D			F				SPAL-**-PP-DPAL-A
STAUFF	DIN	А	Profiled Design	Type H (Smooth)	Profiled Design	Type H (Smooth)	Profiled Design	Type H (Smooth)	E	PP/PA/SA	AL	G	Н	( ^{kg} / _{lbs} )
3S	4	8	24	23,25	48	46,5	54,4	52,9	74	55	56	30	30,5	0,32
35	1	.31	.94	.92	1.89	1.83	2.14	2.09	2.91	2.16	2.20	1.18	1.20	.70
4S	0	8	32	31,25	64	62,5	70,4	68,9	86	70	70	30	30,5	0,40
45	2	.31	1.26	1.23	2.52	2.46	2.77	2.72	3.39	2.76	2.76	1.18	1.20	.88
5S	0	8	38	37	76	74	82,4	80,4	100	85	85	30	30,5	0,49
55	3	.31	1.50	1.46	2.99	2.91	3.24	3.17	3.94	3.35	3.35	1.18	1.20	1.08
6S		10	54,5	53,5	109	107	116,5	114,5	140	115	120	45	45	1,21
	4	.39	2.15	2.11	4.29	4.21	4.59	4.51	5.51	4.53	4.72	1.77	1,77	2.66
-0	5	10	70		140		150		180	154	152	60	60	2,30
7S		.39	2.76		5.51		5.91		7.09	6.06	5.98	2.36	2,36	5.06
<u></u>		15	99		198		210,5		226	206	208	80	80	5,56
8S	6	.59	3.90		7.80		8.29		8.90	8.11	8.19	3.15	3.15	12.26
<u></u>	-	15	115		230		245		270	251	255	90	91	7,97
9S	1	.59	4.53		9.06		9.65		10.63	9.88	10.04	3.54	3.58	17.58
100	0	25	160		320		338,7		340	336	326	120	120	22,16
10S	8	.98	6.30		12.60		13.33		13.39	13.22	12.83	4.72	4.72	48.75
110	0	30	235		470		488,7		520	470	470	160	162	54,11
11S	9	1.18	9.25		18.50		19.24		20.47	18.50	18.50	6.30	6.38	119.04
100	10	30	295		590		608,7		680	630	630	180	182	77,40
12S	10	1.18	11.61		23.23		23.96		26.77	24.80	24.80	7.09	7.16	170.28



### **Dimensions & Weights of Clamp Assemblies**



#### Twin Series (DIN 3015, Part 3)

Group		Dimensions	( ^{mm} /in)										Weight per 100 Pcs.
			В		C		D						SP- <b>**</b> / <b>**</b> -PP-GD-AS
STAUFF	DIN	Α	Profiled Design	Type H (Smooth)	Profiled Design	Type H (Smooth)	Profiled Design	Type H (Smooth)	E	F	G	Н	( ^{kg} / _{lbs} )
1D	1	3	16,5	16,25	37	36,5	41	40,5	37	36	34	20	7,60
ID		.12	.65	.64	1.46	1.44	1.61	1.59	1.46	1.42	1.34	.79	16.72
2D	2	5	18,5	18,25	39	38,5	44	43,5	55	53	52	29	13,50
20		.20	.73	.72	1.54	1.52	1.73	1.71	2.17	2.09	2.05	1.14	29.70
3D	3	5	23,5	23,25	49	48,5	54	53,5	70	67	65	36	17,70
30	3	.20	.93	.92	1.93	1.91	2.13	2.11	2.76	2.64	2.56	1.42	38.94
4D	4	5	25	24	52	50	57	55	85	80	79	45	20,40
40	4	.20	.98	.94	2.05	1.97	2.24	2.17	3.35	3.15	3.11	1.77	44.88
5D	5	5	31,5	31	65	64	70	69	110	106	102	56	27,70
50	5	.20	1.24	1.22	2.56	2.52	2.76	2.72	4.33	4.17	4.02	2.20	60.94

### Standard Series (DIN 3015, Part 1)

#### Clamp Bodies (Polypropylene / Polyamide)

Group STAUFF	DIN	Quantity per Bag (in Pcs.)	Gr ST
1 - 6	0 - 6	25	35
7 + 8	7 + 8	10	7S 8S

#### **Clamp Bodies** (Aluminium)

Group		Quantity per Bag				
STAUFF	DIN	(in Pcs.)				
1 - 5	0 - 5	25				
6	6	10				

#### Weld Plates (Type SP) Cover Plates (Type DP)

Group STAUFF	DIN	Quantity per Bag (in Pcs.)
1 - 6	0 - 6	25
7 + 8	7 + 8	10

#### Hexagon Rail Nut (Type SM) Channel Rail Adaptor (Type CRA)

Group STAUFF	DIN	Quantity per Bag (in Pcs.)
1 - 8	0 - 8	50

### Heavy Series (DIN 3015, Part 2)

#### Clamp Bodies (Polypropylene / Polyamide)

Group		Quantity per Bag			
STAUFF	DIN	(in Pcs.)			
3S - 6S	1 - 4	20			
7S	5	10			
8S - 12S	6 - 10	1			

#### Clamp Bodies (Aluminium)

Group		Quantity per Bag			
STAUFF	DIN	(in Pcs.)			
3S - 6S	1 - 4	20			
7S	5	10			
8S - 12S	6 - 10	1			

### Weld Plates (Type SPAL) Cover Plates (Type DPAL)

Group		Quantity per Bag
STAUFF	DIN	(in Pcs.)
3S - 6S	1 - 4	20
7S	5	10
8S - 12S	6 - 10	1

### Mounting Rail Nut (Type GMV) Channel Rail Adaptor (Type CRA)

Group STAUFF	DIN	Quantity per Bag (in Pcs.)
3S - 6S	1 - 4	40

## Twin Series (DIN 3015, Part 3)

**Packaging Units (Selection)** 

Clamp Bodies (Polypropylene / Polyamide)

Group STAUFF DIN		Quantity per Bag (in Pcs.)
1D - 4D	1 - 4	25
5D	5	10

#### Weld Plates (Type SP) Cover Plates (Type GD)

# Group Quantity per Bag

STAUFF	DIN	(in Pcs.)
1D - 4D	1 - 4	25
5D	5	10

#### Hexagon Rail Nut (Type SM) Channel Rail Adaptor (Type CRA)

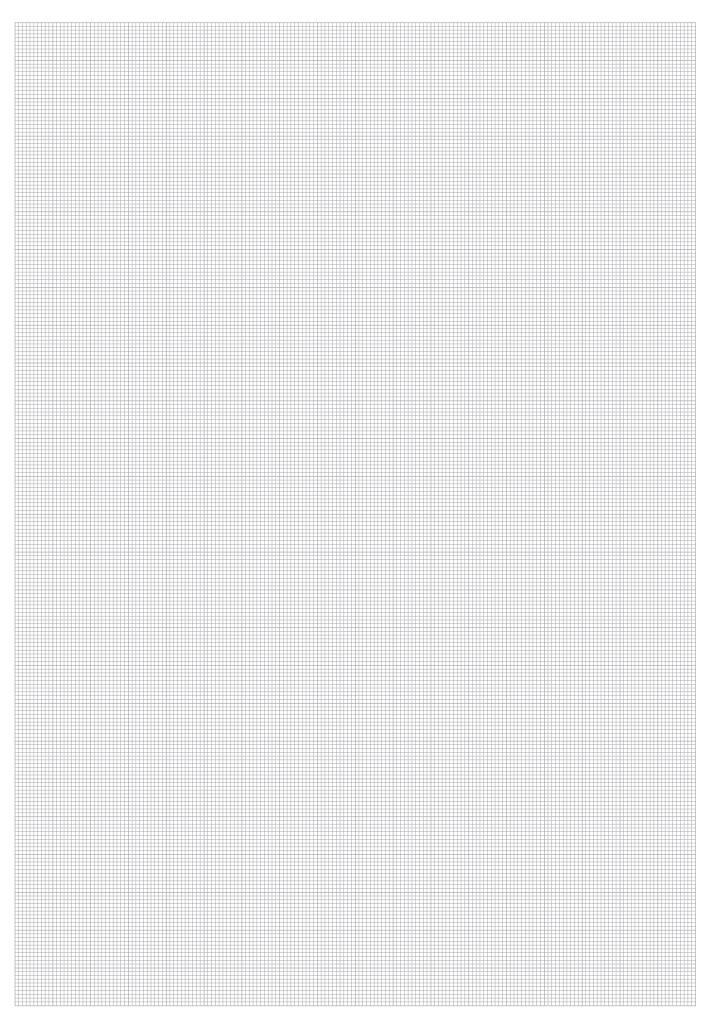
Group STAUFF	DIN	Quantity per Bag (in Pcs.)
1D	1	50
2D - 5D	2 - 5	25

Contact STAUFF and ask for standard packaging units for further components or special packaging options.

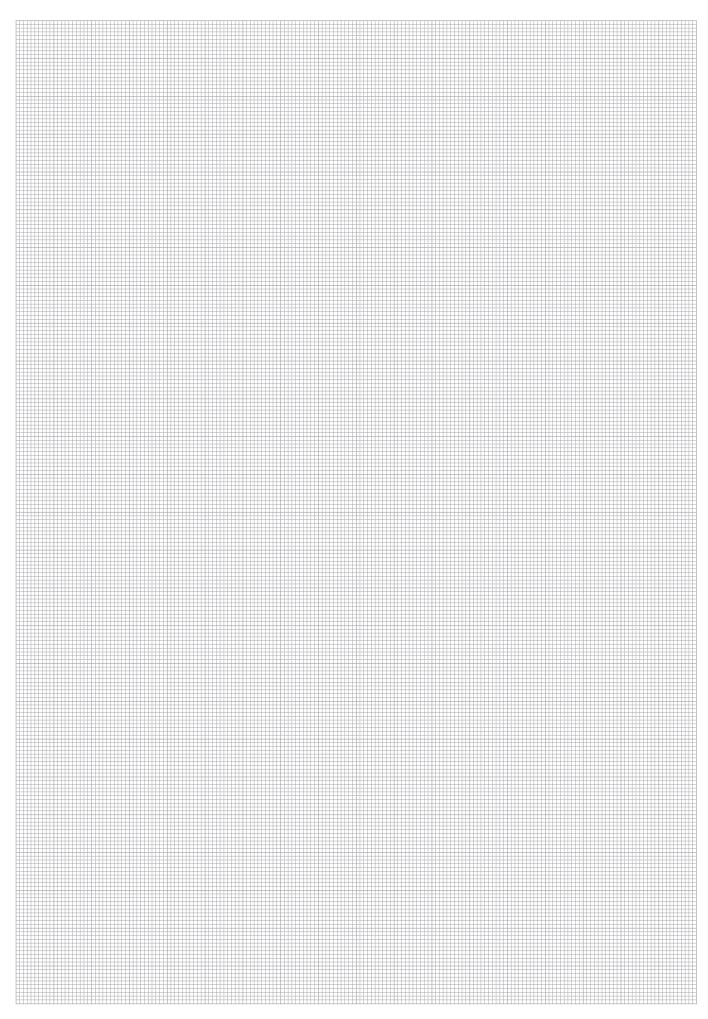
www.stauff.com/1/en/#163

### Catalogue 1 - Edition 08/2019

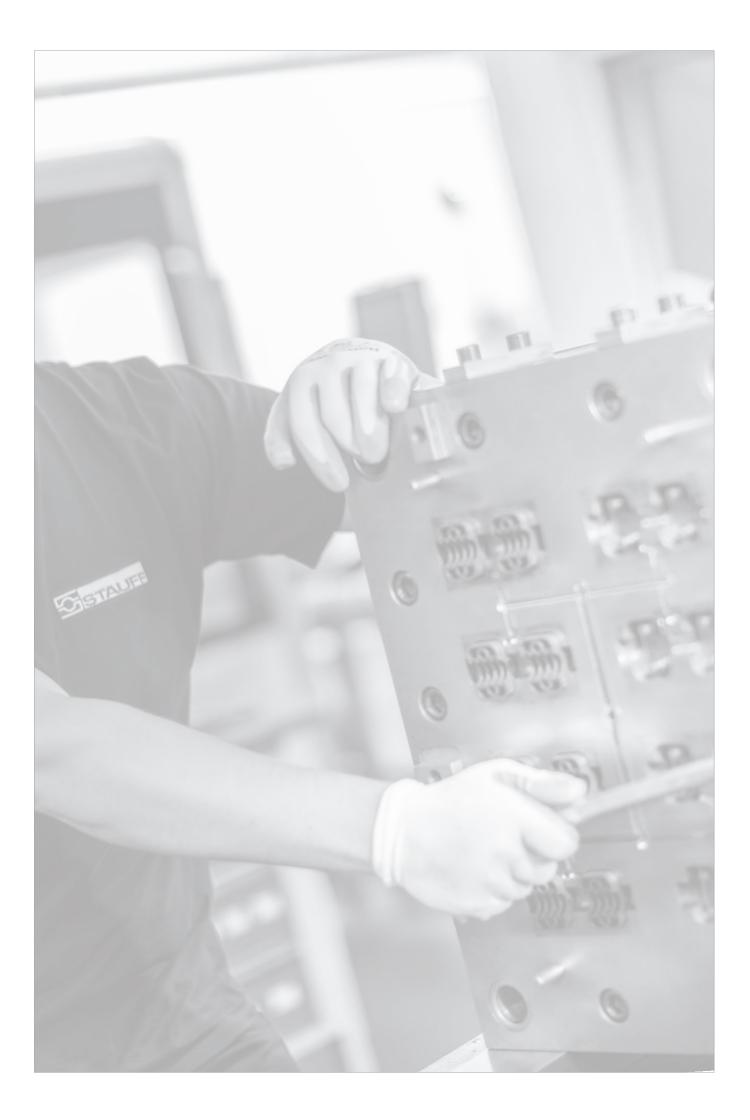








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### 

## **Product-Specific Abbreviations**

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AF	Standard Series according to DIN 3015, Part 1	Stacking Bolt	29
AF	Heavy Series according to DIN 3015, Part 2	Stacking Bolt	47
AF	Twin Series according to DIN 3015, Part 3	Stacking Bolt	61
AF	Heavy Twin Series	Stacking Bolt	68
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AS	Heavy Series according to DIN 3015, Part 2	Hexagon Head Bolt	45
AS	Twin Series according to DIN 3015, Part 3	Hexagon Head Bolt	59
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CRA	Standard Series according to DIN 3015, Part 1	Channel Rail Adaptor	25
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DKSV	Construction Series	Construction Series Clamp (for Anchor Bolt Fastening)	145
DP	Standard Series according to DIN 3015, Part 1	Cover Plate	26
DPAL	Heavy Series according to DIN 3015, Part 2	Cover Plate for Single Clamps	44
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IS	Standard Series according to DIN 3015, Part 1	Socket Cap Screw	28
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LBBU-HUE	Light Series	Sleeve World Plate	114
LBBU-SP	Light Series	Weld Plate	114
LB	Light Series	Clamp Body - Single Design	116
LBG	Light Series	Clamp Body - Twin Design	117
LBU	Light Series	Clamp Body - Twin Design	117
LI	Standard Series according to DIN 3015, Part 1	Slotted Head Screw	28
LN	Light Series	Clamp Body - Single Design	118
LNGF LNUF	Light Series	Clamp Body - Twin Design Clamp Body - Twin Design	119 119



## **Product-Specific Abbreviations**

Abbreviation	Product Category	Product Description	Page
PA	Technical Appendix	Standard Clamp Body Material	154
PA-V0	Technical Appendix	Special Clamp Body Material	156
PP	Technical Appendix	Standard Clamp Body Material	154
PP6853	Technical Appendix	Special Clamp Body Material	156
PP-DA	Technical Appendix	Special Clamp Body Material	156
PP-V0	Technical Appendix	Special Clamp Body Material	156
RAP	Standard Series according to DIN 3015, Part 1	Group Weld Plate	21
RAP	Twin Series according to DIN 3015, Part 3	Group Weld Plate	55
RAP-MGR	Standard Series according to DIN 3015, Part 1	Multi-Group Weld Plate	23
RB	Flat Steel and Round Steel U-Bolt Clamps	Round Steel U-Bolt	128
RBD	Flat Steel and Round Steel U-Bolt Clamps	Round Steel U-Bolt (DIN 3570, Type A)	132
RF	Other Types of Clamps	Pipe / Tube Bushing	151
RI	Standard Series according to DIN 3015, Part 1	Elastomer Insert	16
RI	Heavy Series according to DIN 3015, Part 2	Elastomer Insert	39
RI	Heavy Twin Series	Clamp Body with Elastomer Inserts	66
RUK	Flat Steel and Round Steel U-Bolt Clamps	Plastic Pipe Saddle (Short) for Flat Steel U-Bolts	126
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RUL	Flat Steel and Round Steel U-Bolt Clamps	Plastic Pipe Saddle (Long) for Round Steel U-Bolts	130
SA	Technical Appendix	Standard Clamp Body Material	154
SA	Technical Appendix	Standard Clamp Insert Materials	155
SA-V0	Technical Appendix	Special Clamp Body Material	156
SBD	STAUFF Bond: Adhesive Bonded Fastening	Manual Adhesive Dispenser	101
SBDS-81	STAUFF Bond: Adhesive Bonded Fastening	Dispenser Slide	101
SBMT	STAUFF Bond: Adhesive Bonded Fastening	Mixing Tip	101
SBP SCS	STAUFF Bond: Adhesive Bonded Fastening Other Types of Clamps	STAUFF Bond Plate for DIN 3015 Clamps Channel Rail	<u> </u>
SI	Standard Series according to DIN 3015, Part 1	Safety Washer	27
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SI	Twin Series according to DIN 3015, Part 2	Safety Locking Plate	60
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SIP	Heavy Twin Series	Safety Locking Plate	68
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SMG	Twin Series according to DIN 3015, Part 3	Hexagon Rail Nut	56
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SP	Twin Series according to DIN 3015, Part 3	Single Weld Plate	55
SPAD	Heavy Twin Series	Weld Plate	67
SPAL	Heavy Series according to DIN 3015, Part 2	Weld Plate for Single Clamps	40
SPAL-DUEB	Heavy Series according to DIN 3015, Part 2	Elongated Weld Plate for Single Clamps	41
SPAS-DUEB	Heavy Series according to DIN 3015, Part 2	Weld Plate for Double Clamps	40
SPAS-DUEB	Heavy Series according to DIN 3015, Part 2	Elongated Weld Plate for Double Clamps	41
SPC	Other Types of Clamps	Cushion Clamp	148
SPV	Standard Series according to DIN 3015, Part 1	Elongated Weld Plate	20
STC	Other Types of Clamps	Cushion Clamp	148
STSV	Heavy Series according to DIN 3015, Part 2	Mounting Rail	42
STSV	Heavy Twin Series	Mounting Rail	68
SWG-AGS	STAUFF SWG: Stud Welding System	Distance Adaptor	95
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SWG-GC	STAUFF SWG: Stud Welding System	Ground Cable	95
SWG-SF	STAUFF SWG: Stud Welding System	Weld Stud with Female Thread	92
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SWG-WI06	STAUFF SWG: Stud Welding System	Weld Inverter	94
SWG-WI06-Starterkit	STAUFF SWG: Stud Welding System	Starterkit	94
TS	Standard Series according to DIN 3015, Part 1	Mounting Rail	24
TS	Twin Series according to DIN 3015, Part 3	Mounting Rail	57
VK	Standard Series according to DIN 3015, Part 1	Clamp Body - Rectangular Design for Proximity Switches	19
WSP	Standard Series according to DIN 3015, Part 1	Angled Weld Plate	22
ZR	Saddle / Piggyback Clamps	Custom-Designed Saddle / Piggyback Clamps	122



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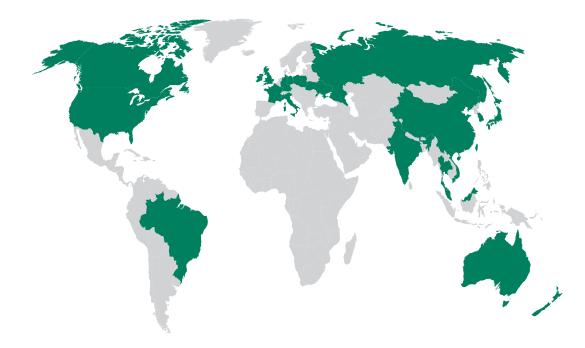
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Custom-Designed Special Clamps

Saddle / Piggyback Clamps

Flat Steel and Round Steel U-Bolt Clamps

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