

Hydraulic & Offshore SUPPLIES

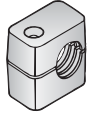
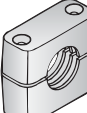





Stauff Clamps

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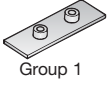
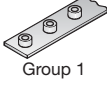





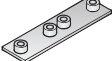
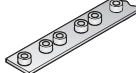






PIPE, TUBE AND HOSE CLAMPS		Page
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TECHNICAL APPENDIX	Design of Clamp Bodies Installation Information Standard Materials: Properties and Technical Information Special Materials: Properties and Technical Information Standard Property Classes for Bolts and Screws Thread Chart: Metric vs. UNC Thread Recommended Distance between Clamps Basic Mounting Instructions Tightening Torques and Maximum Loads in Pipe Direction	50 51 52 53 54 54 54 54 55
	Notes / General Information / Terms of Liability	55 / 56 / 57

according to **DIN 3015, Part 1**

ALSO AVAILABLE					CLAMP BODY consisting of two clamp halves	SINGLE WELD PLATE SP	ELONGATED WELD PLATE SPV	CHANNEL RAIL ADAPTOR CRA
Extensive range of special clamping systems and accessories, e.g. for noise and vibration reducing installation, for electric applications and cables or for particular mounting purposes see pages 28 to 32 Custom designed pipe clamps (machined and injection moulding versions) according to customer's specifications or based on STAUFF developments see pages 34 to 35					 Group 1  Group 1A -8	 Group 1  Group 1A -8	 Group 1  Group 1A -8	suitable for several types of channel rails, see page 12 
MATERIAL & SURFACE FINISHING CODE (ALL DISPLAYED OPTIONS ARE STANDARD DELIVERY)					SEE COMPONENT PART IDENTIFICATION	W2	W2	W3*
ORDERING INFORMATION					**** **	SP ****	SPV ****	CRA 1-8 ***
STAUFF GROUP	DIN GROUP	OUTSIDE DIAMETER PIPE / TUBE / HOSE IN MM	OUTSIDE DIAMETER PIPE / TUBE / HOSE IN INCH	NOMINAL BORE PIPE IN INCH	STAUFF GROUP ↓ OUTSIDE DIAMETER OF PIPE IN MM ↓ MATERIAL & DESIGN OF CLAMP BODY	SINGLE WELD PLATE SP ↓ STAUFF GROUP ↓ TYPE OF THREAD ↓ MATERIAL & SURFACE FINISHING	SINGLE WELD PLATE SPV ↓ STAUFF GROUP ↓ TYPE OF THREAD ↓ MATERIAL & SURFACE FINISHING	CHANNEL RAIL ADAPTOR CRA ↓ TYPE OF THREAD ↓ MATERIAL & SURFACE FINISHING
1	0	6			106 ***	SP 1 ***	SPV 1 ***	
		6,4	1/4		106,4 ***			
		8	5/16		108 ***			
		9,5	3/8		109,5 ***			
		10		1/8	110 ***			
1A	1	12			112 ***	SP 1A ***	SPV 1A ***	
		6			106A ***			
		6,4	1/4		106,4A ***			
		8	5/16		108A ***			
		9,5	3/8		109,5A ***			
2	2	10		1/8	110A ***	SP 2 ***	SPV 2 ***	
		12			112A ***			
		12,7	1/2		212,7 ***			
		13,5		1/4	213,5 ***			
		14			214 ***			
3	3	15			215 ***	SP 3 ***	SPV 3 ***	CRA 1-8 ***
		16	5/8		216 ***			
		17,2		3/8	217,2 ***			
		18			218 ***			
		19	3/4		319 ***			
4	4	20			320 ***	SP 4 ***	SPV 4 ***	
		21,3		1/2	321,3 ***			
		22	7/8		322 ***			
		25			325 ***			
		25,4	1		325,4 ***			
5	5	26,9		3/4	426,9 ***	SP 5 ***	SPV 5 ***	
		28			428 ***			
		30			430 ***			
		32	1 1/4		532 ***			
		33,7		1	533,7 ***			
6	6	35			535 ***	SP 6 ***	SPV 6 ***	
		38	1 1/2		538 ***			
		40			540 ***			
		42		1 1/4	542 ***			
		44,5	1 3/4		644,5 ***			
7	7	48,3		1 1/2	648,3 ***	SP 7 ***	SPV 7 ***	
		50,8	2		650,8 ***			
		57,2	2 1/4		757,2 ***			
		60,3		2	760,3 ***			
		63,5	2 1/2		763,5 ***			
8	8	70			770 ***	SP 8 ***	SPV 8 ***	
		73		2 1/2 except DIN EN 10220	773 ***			
		76,1	3	2 1/2 DIN EN 10220 only	776,1 ***			
		88,9	3 1/2	3	888,9 ***			
		102	4		8102L ***			



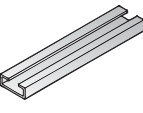

* zinc plated, blue chromated - Fe/Zn 8 B

according to **DIN 3015, Part 1**

TWIN WELD PLATE DSP	GROUP WELD PLATE RAP	COVER PLATE DP	HEXAGON HEAD BOLT AS	INSERT E	HEXAGON HEAD BOLT ASE	SOCKET CAP SCREW IS	SLOTTED HEAD SCREW LI	STACKING BOLT AF	
 Group 1	 Group 1	 Group 1	DIN 931/933 for use with COVER PLATE DP		no cover plate for use with INSERT E				
 Group 1A -6	 Group 1A -6	 Group 1A -8							
W2	W1	W3	W3	STEEL / PLASTIC	W3	W3	W3	W3	
DSP **/** **	RAP **/** **	DP **	AS **/** **	E *	ASE **/** **	IS **/** **	LI **/** **	AF **/** **	
TWIN WELD PLATE DSP ↓ STAUFF GROUP ↓ PIPE CENTER SPACING ↓ TYPE OF THREAD ↓ MATERIAL & SURFACE FINISHING	GROUP WELD PLATE RAP ↓ STAUFF GROUP ↓ PIPE CENTER SPACING ↓ NUMBER OF CLAMPS ↓ TYPE OF THREAD ↓ MATERIAL & SURFACE FINISHING	COVER PLATE DP ↓ STAUFF GROUP ↓ MATERIAL & SURFACE FINISHING	HEXAGON HEAD BOLT AS ↓ STAUFF GROUP ↓ TYPE OF THREAD ↓ MATERIAL & SURFACE FINISHING	INSERT E ↓ MATERIAL (S/P)	HEXAGON HEAD BOLT ASE ↓ STAUFF GROUP ↓ TYPE OF THREAD ↓ MATERIAL & SURFACE FINISHING	SOCKET HEAD SCREW IS ↓ STAUFF GROUP ↓ TYPE OF THREAD ↓ MATERIAL & SURFACE FINISHING	SLOTTED HEAD SCREW LI ↓ STAUFF GROUP ↓ TYPE OF THREAD ↓ MATERIAL & SURFACE FINISHING	STACKING BOLT AF ↓ STAUFF GROUP ↓ TYPE OF THREAD ↓ MATERIAL & SURFACE FINISHING	
DSP 1/40 ** *	RAP 1/31/10 ** *	DP 1 **	AS 1 M ** (M6 x 30)	E * S for Steel P for Plastic	ASE 1 M ** (M6 x 27)	IS 1 M ** (M6 x 20)	LI 1 M ** (M6 x 20)	AF 1 ** *	
DSP 1A/37 ** *	RAP 1A/37/10 ** *	DP 1A **	AS 1A M ** (M6 x 30)		ASE 1A M ** (M6 x 27)	IS 1A M ** (M6 x 20)	LI 1A M ** (M6 x 20)	AF 1A ** *	
DSP 2/44 ** *	RAP 2/44/10 ** *	DP 2 **	AS 2 M ** (M6 x 35)		ASE 2 M ** (M6 x 32)	IS 2 M ** (M6 x 25)	LI 2 M ** (M6 x 25)	AF 2 ** *	
DSP 3/52 ** *	RAP 3/52/10 ** *	DP 3 **	AS 3 M ** (M6 x 40)		ASE 3 M ** (M6 x 35)	IS 3 M ** (M6 x 30)	LI 3 M ** (M6 x 30)	AF 3 ** *	
DSP 4/60 ** *	RAP 4/60/5 ** *	DP 4 **	AS 4 M ** (M6 x 45)		ASE 4 M ** (M6 x 42)	IS 4 M ** (M6 x 35)	LI 4 M ** (M6 x 35)	AF 4 ** *	
DSP 5/75 ** *	RAP 5/75/5 ** *	DP 5 **	AS 5 M ** (M6 x 60)		ASE 5 M ** (M6 x 57)	IS 5 M ** (M6 x 50)	LI 5 M ** (M6 x 50)	AF 5 ** *	
DSP 6/90 ** *	RAP 6/90/5 ** *	DP 6 **	AS 6 M ** (M6 x 70)		ASE 6 M ** (M6 x 65)	IS 6 M ** (M6 x 60)	LI 6 M ** (M6 x 60)	AF 6 ** *	
---	---	DP 7 **	AS 7 M ** (M6 x 100)		---	---	IS 7 M ** (M6 x 90)	---	AF 7 ** *
---	---	DP 8 **	AS 8 M ** (M6 x 125)		---	---	IS 8 M ** (M6 x 110)	---	AF 8 ** *

▶ PLEASE TURN THE PAGE HERE

according to **DIN 3015, Part 1**

SAFETY WASHER SI	SAFETY LOCKING PLATE SIG	MOUNTING RAIL TS	HEXAGON RAIL NUT SM
DIN 93 for use with HEXAGON HEAD BOLT AS	 Group 1  Group 1A -6		
W3	W3	W1	W1
SI 6,4 **	SIG ** **	TS **-* **	SM1-8/1D ** **
SAFETY WASHER SI MATERIAL & SURFACE FINISHING	SAFETY LOCKING PLATE SIG STAUFF GROUP MATERIAL & SURFACE FINISHING	MOUNTING RAIL TS HEIGHT OF RAIL IN MM LENGTH OF RAIL IN M MATERIAL & SURFACE FINISHING	HEXAGON RAIL NUT SM TYPE OF THREAD MATERIAL & SURFACE FINISHING
SI 6,4 **	SIG 1 **	TS **-* ** available heights: 11, 14 and 30 mm available lengths: 1m and 2 m	SM1-8/1D ** **
	SIG 1A **		
	SIG 2 **		
	SIG 3 **		
	SIG 4 **		
	SIG 5 **		
	SIG 6 **		
	SIG 7 **		
SIG 8 **			

COMPONENT PART IDENTIFICATION FOR STANDARD SERIES CLAMP BODIES AND COMPONENTS			
CLAMP BODY			
MATERIAL	DESIGN	COLOUR	CODE
Polypropylene	profiled inside, with tension clearance	green	PP
Polypropylene	smooth inside, without tension clearance	green	PPH
Polyamide	profiled inside, with tension clearance	black	PA
Polyamide	smooth inside, without tension clearance	black	PAH
Santoprene	profiled inside, with tension clearance	black	SA
Santoprene	smooth inside, without tension clearance	black	SAH
Aluminium	profiled inside, with tension clearance	aluminium	AL
Aluminium is available up to STAUFF Group 6 only. Alternative materials, designs and colours in addition to the above stated standard are available upon request.			
METAL PARTS			
MATERIAL	SURFACE FINISHING	CODE	
carbon steel St37	untreated	W1	
carbon steel St37	phosphated	W2	
carbon steel St 37	zinc/nickel coated	W3	
stainless steel A2 - 1.4301 / 1.4305 (AISI 304/303)		W4	
stainless steel A4 - 1.4401 / 1.4571 (AISI 316/316Ti)		W5	
Alternative materials and surface finishings in addition to the above stated standard are available upon request.			
THREADED PARTS			
TYPE OF THREAD			CODE
Metric Thread			M
UNC Thread			U
All threaded parts are available with Metric or UNC Thread on request.			

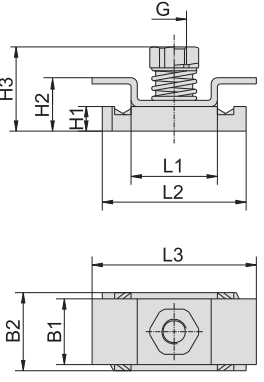
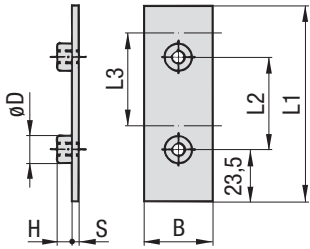
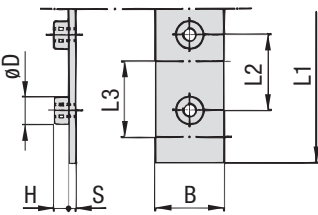
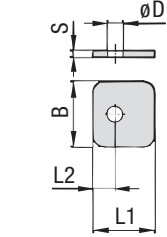
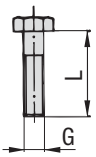
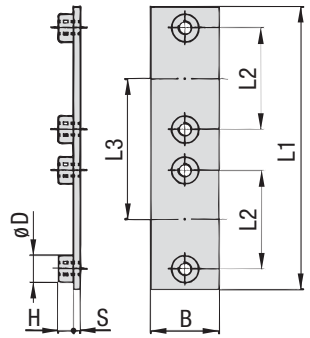
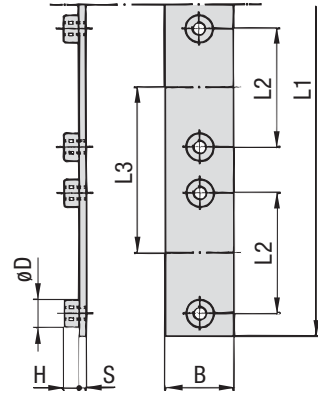
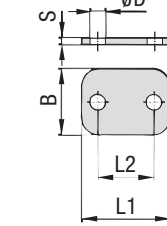
according to DIN 3015, Part 1

MATERIAL & SURFACE FINISHING OF METAL PARTS		CLAMP BODY consisting of two clamp halves	SINGLE WELD PLATE SP	ELONGATED WELD PLATE SPV
carbon steel St37, untreated	W1			
carbon steel St37, phosphated	W2			
carbon steel St37, zinc/nickel coated	W3			
stainless steel A2 - 1.4301/1.4305 (AISI304/303)	W4			
stainless steel A4 - 1.4401/1.4571 (AISI316/316Ti)	W5			
Alternative materials and surface finishings in addition to the above stated standard are available upon request.				

MATERIAL & SURFACE FINISHING CODE		SEE COMPONENT PART IDENTIFICATION								W2						W2					
-----------------------------------	--	-----------------------------------	--	--	--	--	--	--	--	-----------	--	--	--	--	--	-----------	--	--	--	--	--

STAUFF GROUP	DIN GROUP	OUTSIDE DIAMETER PIPE IN MM	Inside Surface																					
			L1	L2	profiled		H	S	H	Width	L1	L2	B	S	H	ØD	L1	L2	L3	B	S	H	ØD1	ØD2
					H	S																		
1	0	6	28	9,5	27	0,4 min.	26	30	30	31,5	10	30	3	6,5	12	58	24,5	44	30	3	6,5	12	6,5	
		6,4																						
		8																						
		9,5																						
		10																						
		12																						
1A	1	6	37	20	27	0,4 min.	26	30	30	36	20	30	3	6,5	12	64	20	50	30	3	6,5	12	6,5	
		6,4																						
		8																						
		9,5																						
		10																						
		12																						
2	2	12,7	42	26	33	0,6 min.	32	30	30	42	26	30	3	6,5	12	70	26	56	30	3	6,5	12	6,5	
		13,5																						
		14																						
		15																						
		16																						
		17,2																						
3	3	18	50	33	36	0,6 min.	35,5	30	30	50	33	30	3	6,5	12	78	33	64	30	3	6,5	12	6,5	
		19																						
		20																						
		21,3																						
		22																						
		25																						
4	4	25,4	59	40	42	0,6 min.	41,5	30	30	60	40	30	3	6,5	12	87	40	73	30	3	6,5	12	6,5	
		26,9																						
		28																						
		30																						
		32																						
		33,7																						
5	5	35	71	52	58	0,8 min.	56,5	30	30	71	52	30	3	6,5	12	100	52	86	30	3	6,5	12	6,5	
		38																						
		40																						
		42																						
		44,5																						
		48,3																						
6	6	50,8	86	66	66	0,8 min.	64,5	30	30	88	66	30	3	6,5	12	115	66	100	30	3	6,5	12	6,5	
		57,2																						
		60,3																						
		63,5																						
		70																						
		73																						
7	7	76,1	121	94	93	0,8 min.	92	30	30	122	94	30	5	6,5	12	150	94	136	30	5	6,5	12	6,5	
		76,1																						
		88,9																						
		102																						
		102																						
		102																						
8	8	102	147	120	118	0,8 min.	116	30	30	148	120	30	5	6,5	12	178	120	162	30	5	6,5	12	6,5	
		102																						
		102																						
		102																						
		102																						
		102																						

according to DIN 3015, Part 1

CHANNEL RAIL ADAPTOR CRA												TWIN WELD PLATE DSP					GROUP WELD PLATE RAP						COVER PLATE DP					HEXAGON HEAD BOLT AS	
suitable for several types of channel rails, see page 12 												 <p>Group 1</p>					 <p>Group 1</p>						 <p>Group 1</p>					DIN 931/933 for use with COVERPLATE DP 	
												 <p>Group 1A-6</p>					 <p>Group 1A-6</p>						 <p>Group 1A-8</p>						
W3*												W2					W1						W3					W3	
G	L1	L2	L3	B1	B2	H1	H2	H3	L1	L2	L3	B	S	H	ØD	L1	L2	L3	B	S	H	ØD	L1	L2	B	S	ØD	G x L	
									87	40	40	30	3	6,5	12	314	31	31	30	4	6,5	12	28	9,5	30	3	7	M6 x 30	
									77	20	37	30	3	6,5	12	373	20	37	30	4	6,5	12	34	20	30	3	7	M6 x 30	
									86	26	44	30	3	6,5	12	442	26	44	30	4	6,5	12	40,5	26	30	3	7	M6 x 35	
M6	21	35	40	16	19	6	13	20,5	102	33	52	30	3	6,5	12	521	33	52	30	4	6,5	12	48	33	30	3	7	M6 x 40	
									120	40	60	30	3	6,5	12	300	40	60	30	4	6,5	12	57	40	30	3	7	M6 x 45	
									145	52	75	30	3	6,5	12	378	52	75	30	4	6,5	12	70	52	30	3	7	M6 x 60	
									178	66	90	30	3	6,5	12	450	66	90	30	4	6,5	12	86	66	30	3	7	M6 x 70	
									---														118	94	30	5	7	M6 x 100	
									---														144	120	30	5	7	M6 x 125	

* zinc plated, blue chromated - Fe/Zn 8 B

according to DIN 3015, Part 1

INSERT E			HEXAGON HEAD BOLT ASE	SOCKET CAP SCREW IS		SLOTTED HEAD SCREW LI			STACKING BOLT AF					SAFETY WASHER SI	SAFETY LOCKING PLATE SIG				MOUNTING RAIL TS			HEXAGON RAIL NUT SM					
			<p>no cover plate for use with INSERT E</p>	ISO 4762 		ISO 1207 									Group 1 				TS 11 								
				Group 1A-8 				TS 14 			TS 30 																
STEEL / PLASTIC			W3	W3		W3			W3					W3	W3				W1			W1					
D1	D2	H	G x L	G x L	D	S	G x L	D	S	G	L1	L2	L3	SW	ØD	L	B1	B2	S	B1	B2	S	L	B	H1	H2	ØD
11,8	6,5	7,8 (S) 8,6 (P)	M6 x 27	M6 x 20	11	0,8	M6 x 20	11	0,8	M6	34	20	12 min.	11	6,4	16	32	11,2	1	28	11	2	25,5	10,2	13,5	5,5	12
		M6 x 27	M6 x 20	11	0,8	M6 x 20	11	0,8	M6	34	20	12 min.	11	33		28	11,2	1									
		M6 x 32	M6 x 25	11	0,8	M6 x 25	11	0,8	M6	40	25	12 min.	11	39		28	11,2	1									
		M6 x 35	M6 x 30	11	0,8	M6 x 30	11	0,8	M6	44	30	12 min.	11	47		28	11,2	1									
		M6 x 42	M6 x 35	11	0,8	M6 x 35	11	0,8	M6	49	35	12 min.	11	56		28	11,2	1									
		M6 x 57	M6 x 50	11	0,8	M6 x 50	11	0,8	M6	64	50	12 min.	11	69		28	11,2	1									
		M6 x 65	M6 x 60	11	0,8	M6 x 60	11	0,8	M6	74	60	12 min.	11	85		28	11,2	1									
---	---	---	M6 x 90	11	0,8	---	M6	99	85	12 min.	11	117	28	11,2	1												
---	---	---	M6 x 110	11	0,8	---	M6	124	110	12 min.	11	143	28	11,2	1												

according to DIN 3015, Part 1

① ***	② ***,*	③ ***	④ *** - **	⑤ *	⑥ W**	⑦ *
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① TYPE OF INSTALLATION

no code	without mounting plate, rail adaptor or rail nuts
SP	Single Weld Plate
SPV	Elongated Weld Plate
CRA	Channel Rail Adaptor
DSP *3	Twin Weld Plate
RAP *3	Group Weld Plate
SM	Hexagon Rail Nut

③ MATERIAL & DESIGN OF CLAMP BODY *1

PP	Polypropylene, profiled inside, with tension clearance
PPH	Polypropylene, smooth inside, without tension clearance
PA	Polyamide, profiled inside, with tension clearance
PAH	Polyamide, smooth inside, without tension clearance
SA	Santoprene, profiled inside, with tension clearance
SAH	Santoprene, smooth inside, without tension clearance
AL *2	Aluminium, profiled inside, with tension clearance

④ MOUNTING & FITTING COMBINATION

DP - AS	Cover Plate / Hexagon Head Bolt
DP - IS	Cover Plate / Socket Cap Screw
IS	Socket Cap Screw with washer
LI *3	Slotted Head Screw with washer
SIG - AF	Safety Locking Plate / Stacking Bolt
EP-AS	Insert EP / Hexagon Head Bolt (without Cover Plate)
ES-AS	Insert ES / Hexagon Head Bolt (without Cover Plate)

⑦ ASSEMBLING & PACKAGING

no code	components supplied separately (standard)
A	assembled (optional)
K	packed in kits (optional)

② STAUFF GROUP & SIZE OF CLAMP BODY

Group	Tube O.D. in mm	Tube O.D. in inch	Nominal Bore Pipe	Material Code	Clamp Body (both halves)
STAUFF 1 DIN 0	6				106
	6,4	1/4			106,4
	8	5/16			108
	9,5	3/8			109,5
	10		1/8		110
12					112
STAUFF 1A DIN 1	6				106A
	6,4	1/4			106,4A
	8	5/16			108A
	9,5	3/8			109,5A
	10		1/8		110A
12					112A
STAUFF 2 DIN 2	12,7	1/2			212,7
	13,5		1/4		213,5
	14				214
	15				215
	16	3/8			216
17,2		3/8		217,2	
18					218
STAUFF 3 DIN 3	19	3/4			319
	20				320
	21,3		1/2		321,3
22	7/8			322	
25					325
25,4	1				325,4
26,9		3/4			426,9
28					428
30					430

② STAUFF GROUP & SIZE OF CLAMP BODY CONTINUATION

Group	Tube O.D. in mm	Tube O.D. in inch	Nominal Bore Pipe	Material Code	Clamp Body (both halves)
STAUFF 5 DIN 5	32	1 1/4			532
	33,7		1		533,7
	35				535
	38	1 1/2			538
	40				540
42		1 1/4			542
6 6	44,5	1 3/4			644,5
	48,3		1 1/2		648,3
	50,8	2			650,8
	57,2	2 1/4			757,2
	60,3		2		760,3
STAUFF 7 DIN 7	63,5	2 1/2			763,5
	70	2 3/4			770
	73		2 1/2		773 *4
	76,1	3	2 1/2		776,1 *5
	88,9		3		888,9
102	4			8102L	

⑤ TYPE OF THREAD

M	Metric Thread
U	UNC Thread

⑥ MATERIAL & SURFACE FINISHING OF METAL PARTS *6

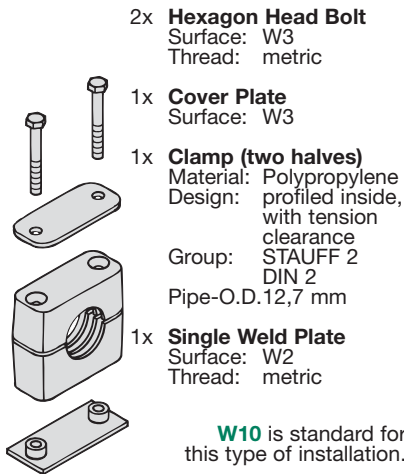
W1	all parts are untreated
W2	all parts are phosphated
W3	all parts are zinc/nickel coated
W4	all metal parts made of stainless steel A2 - 1.4301/1.4305 (AISI 304/303)
W5	all metal parts made of stainless steel A4 - 1.4401/1.4571 (AISI 316/316Ti)
W10	weld plate phosphated, all other parts zinc/nickel coated
W11	rail nut untreated, all other parts zinc/nickel coated

TECHNICAL NOTES

- *1 SEE MATERIAL PROPERTIES ON PAGE 52. OTHER CLAMP BODY MATERIALS AND COLOURS ARE AVAILABLE UPON REQUEST.
- *2 AVAILABLE FOR STAUFF GROUP 1A TO 6 ONLY. (DIN GROUP 1 TO 6).
- *3 AVAILABLE FOR STAUFF GROUP 1 TO 6 ONLY. (DIN GROUP 0 TO 6).
- *4 NOMINAL BORE, EXCEPT DIN EN 10220.
- *5 NOMINAL BORE, ONLY DIN EN 10220.
- *6 INDIVIDUAL COMBINATIONS OF ALTERNATIVE SURFACE FINISHINGS AND SPECIAL PROPERTY MATERIALS ARE AVAILABLE UPON REQUEST.

according to DIN 3015, Part 1

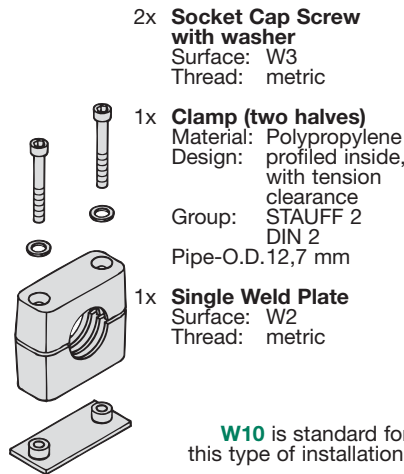
SP 212,7 PP-DP-AS M W10



- 2x **Hexagon Head Bolt**
Surface: W3
Thread: metric
- 1x **Cover Plate**
Surface: W3
- 1x **Clamp (two halves)**
Material: Polypropylene
Design: profiled inside, with tension clearance
Group: STAUFF 2 DIN 2
Pipe-O.D. 12,7 mm
- 1x **Single Weld Plate**
Surface: W2
Thread: metric

W10 is standard for this type of installation.

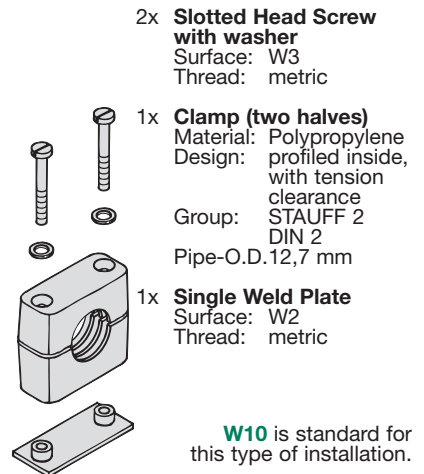
SP 212,7 PP-IS M W10



- 2x **Socket Cap Screw with washer**
Surface: W3
Thread: metric
- 1x **Clamp (two halves)**
Material: Polypropylene
Design: profiled inside, with tension clearance
Group: STAUFF 2 DIN 2
Pipe-O.D. 12,7 mm
- 1x **Single Weld Plate**
Surface: W2
Thread: metric

W10 is standard for this type of installation.

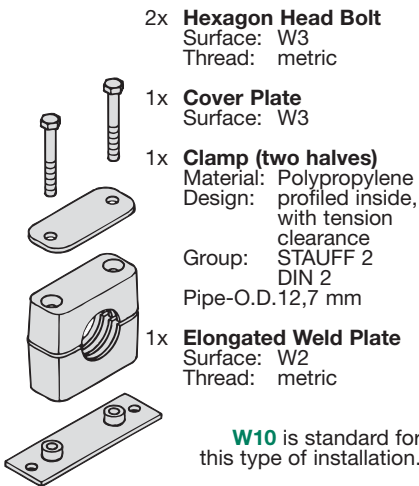
SP 212,7 PP-LI M W10



- 2x **Slotted Head Screw with washer**
Surface: W3
Thread: metric
- 1x **Clamp (two halves)**
Material: Polypropylene
Design: profiled inside, with tension clearance
Group: STAUFF 2 DIN 2
Pipe-O.D. 12,7 mm
- 1x **Single Weld Plate**
Surface: W2
Thread: metric

W10 is standard for this type of installation.

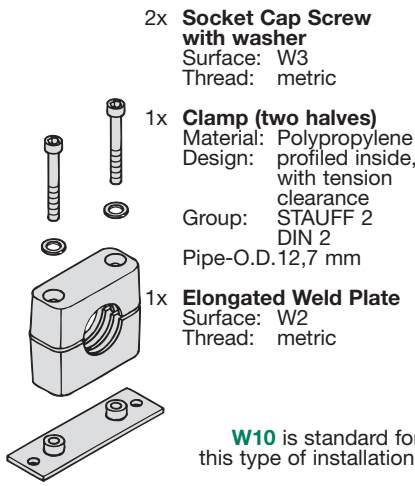
SPV 212,7 PP-DP-AS M W10



- 2x **Hexagon Head Bolt**
Surface: W3
Thread: metric
- 1x **Cover Plate**
Surface: W3
- 1x **Clamp (two halves)**
Material: Polypropylene
Design: profiled inside, with tension clearance
Group: STAUFF 2 DIN 2
Pipe-O.D. 12,7 mm
- 1x **Elongated Weld Plate**
Surface: W2
Thread: metric

W10 is standard for this type of installation.

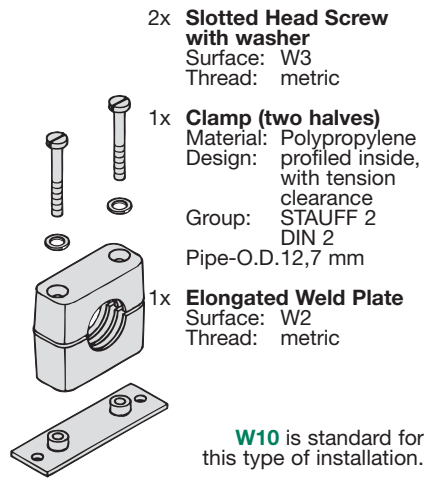
SPV 212,7 PP-IS M W10



- 2x **Socket Cap Screw with washer**
Surface: W3
Thread: metric
- 1x **Clamp (two halves)**
Material: Polypropylene
Design: profiled inside, with tension clearance
Group: STAUFF 2 DIN 2
Pipe-O.D. 12,7 mm
- 1x **Elongated Weld Plate**
Surface: W2
Thread: metric

W10 is standard for this type of installation.

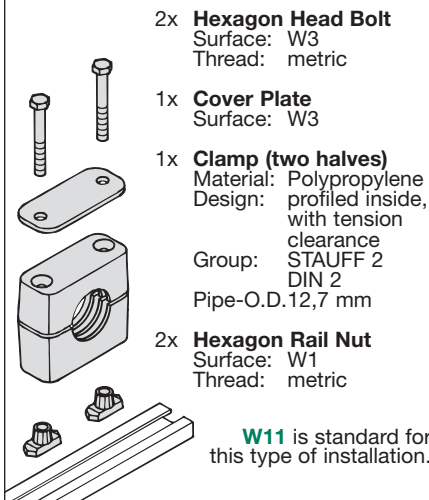
SPV 212,7 PP-LI M W10



- 2x **Slotted Head Screw with washer**
Surface: W3
Thread: metric
- 1x **Clamp (two halves)**
Material: Polypropylene
Design: profiled inside, with tension clearance
Group: STAUFF 2 DIN 2
Pipe-O.D. 12,7 mm
- 1x **Elongated Weld Plate**
Surface: W2
Thread: metric

W10 is standard for this type of installation.

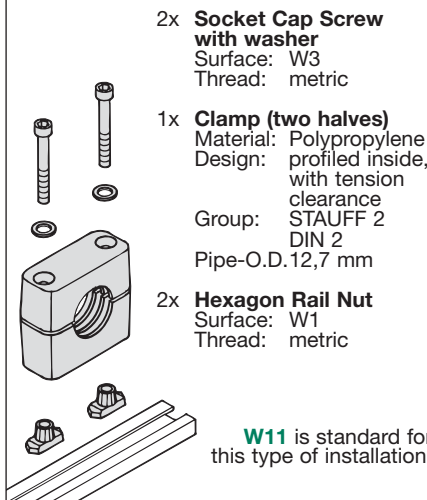
SM 212,7 PP-DP-AS M W11



- 2x **Hexagon Head Bolt**
Surface: W3
Thread: metric
- 1x **Cover Plate**
Surface: W3
- 1x **Clamp (two halves)**
Material: Polypropylene
Design: profiled inside, with tension clearance
Group: STAUFF 2 DIN 2
Pipe-O.D. 12,7 mm
- 2x **Hexagon Rail Nut**
Surface: W1
Thread: metric

W11 is standard for this type of installation.

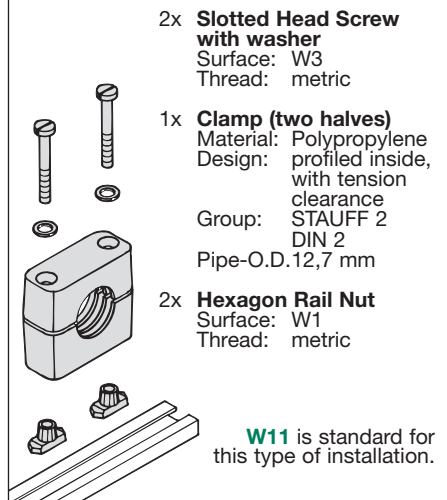
SM 212,7 PP-IS M W11



- 2x **Socket Cap Screw with washer**
Surface: W3
Thread: metric
- 1x **Clamp (two halves)**
Material: Polypropylene
Design: profiled inside, with tension clearance
Group: STAUFF 2 DIN 2
Pipe-O.D. 12,7 mm
- 2x **Hexagon Rail Nut**
Surface: W1
Thread: metric

W11 is standard for this type of installation.

SM 212,7 PP-LI M W11



- 2x **Slotted Head Screw with washer**
Surface: W3
Thread: metric
- 1x **Clamp (two halves)**
Material: Polypropylene
Design: profiled inside, with tension clearance
Group: STAUFF 2 DIN 2
Pipe-O.D. 12,7 mm
- 2x **Hexagon Rail Nut**
Surface: W1
Thread: metric

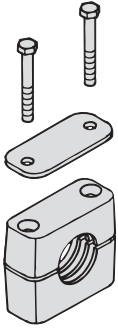
W11 is standard for this type of installation.

▶ PLEASE TURN THE PAGE HERE ▶

according to **DIN 3015, Part 1**

212,7 PP-DP-AS M W3

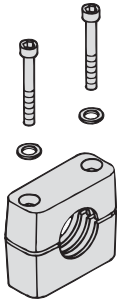
- 2x **Hexagon Head Bolt**
Surface: W3
Thread: metric
- 1x **Cover Plate**
Surface: W3
- 1x **Clamp (two halves)**
Material: Polypropylene
Design: profiled inside,
with tension
clearance
Group: STAUFF 2
DIN 2
Pipe-O.D.12,7 mm



W3 is standard for this type of installation.

212,7 PP-IS M W3

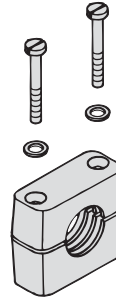
- 2x **Socket Cap Screw with washer**
Surface: W3
Thread: metric
- 1x **Clamp (two halves)**
Material: Polypropylene
Design: profiled inside,
with tension
clearance
Group: STAUFF 2
DIN 2
Pipe-O.D.12,7 mm



W3 is standard for this type of installation.

212,7 PP-LI M W3

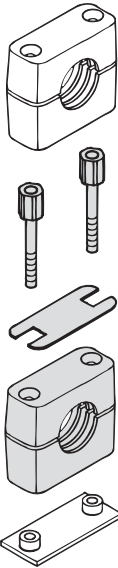
- 2x **Slotted Head Screw with washer**
Surface: W3
Thread: metric
- 1x **Clamp (two halves)**
Material: Polypropylene
Design: profiled inside,
with tension
clearance
Group: STAUFF 2
DIN 2
Pipe-O.D.12,7 mm



W3 is standard for this type of installation.

212,7 PP-SIG-AF M W3

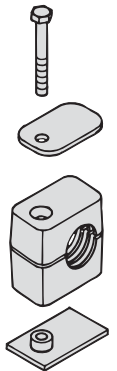
- 2x **Stacking Bolt**
Surface: W3
Thread: metric
- 1x **Safety Locking Plate**
Surface: W3
- 1x **Clamp (two halves)**
Material: Polypropylene
Design: profiled inside,
with tension
clearance
Group: STAUFF 2
DIN 2
Pipe-O.D.12,7 mm



W3 is standard for this type of installation.

SP 106 PP-DP-AS M W10

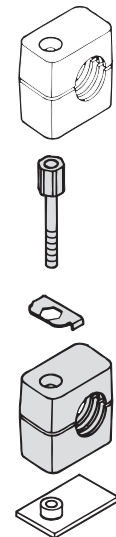
- 1x **Hexagon Head Bolt**
Surface: W3
Thread: metric
- 1x **Cover Plate**
Surface: W3
- 1x **Clamp (two halves)**
Material: Polypropylene
Design: profiled inside,
with tension
clearance
Group: STAUFF 1
DIN 0
Pipe-O.D.6 mm
- 1x **Single Weld Plate**
Surface: W2
Thread: metric



W10 is standard for this type of installation.

106 PP-SIG-AF M W3

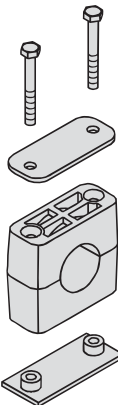
- 1x **Stacking Bolt**
Surface: W3
Thread: metric
- 1x **Safety Locking Plate**
Surface: W3
- 1x **Clamp (two halves)**
Material: Polypropylene
Design: profiled inside,
with tension
clearance
Group: STAUFF 1
DIN 0
Pipe-O.D.6 mm



W3 is standard for this type of installation.

SP 212,7 PPH-DP-AS M W10

- 2x **Hexagon Head Bolt**
Surface: W3
Thread: metric
- 1x **Cover Plate**
Surface: W3
- 1x **Clamp (two halves)**
Material: Polypropylene
Design: smooth inside,
without tension
clearance
Group: STAUFF 2
DIN 2
Pipe-O.D.12,7 mm



W10 is standard for this type of installation.

NOTES REGARDING THE USE OF THE CHANNEL RAIL ADAPTOR CRA

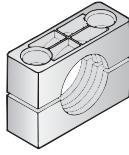
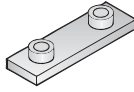
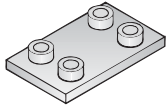
The CHANNEL RAIL ADAPTOR Type **CRA** is amongst others suitable for the following channel rails:

- UNISTRUT**-Rails
P 1000, P 1000T, P 1000V, P 1000VT, P 1001
P 2000, P 2000T
P 3003, P 3003T, P 3300V, P 3300VT, P 3301
P 4000, P 4000T
P 5000, P 5000T, P 5001, P 5500, P 5500T, P 5501


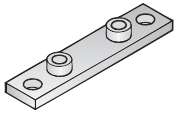
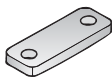
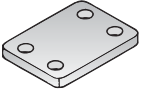



- HALFEN**-Rails
HM 41/41
HZA 41/22
HZM 41/41
HZM 41/22
HL 41/41, HL 41/B2

- HILTI**-Rails
MQ-21, MQ-41, MQ-52, MQ-72
MQ-21U, MQ-41U, MQ-72U
MQ-21D, MQ-41D, MQ-52-72D

according to **DIN 3015, Part 2**


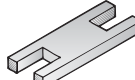
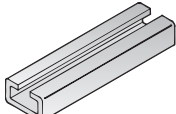

ALSO AVAILABLE					CLAMP BODY consisting of two clamp halves 	WELD PLATE FOR SINGLE CLAMPS SPAL 	WELD PLATE FOR DOUBLE CLAMPS SPAS 
Extensive range of special clamping systems and accessories, e.g. for noise and vibration reducing installation, for electric applications and cables or for particular mounting purposes see pages 28 to 32 Custom designed pipe clamps (machined and injection moulding versions) according to customer's specifications or based on STAUFF developments see pages 34 to 35							
MATERIAL & SURFACE FINISHING CODE (ALL DISPLAYED OPTIONS ARE STANDARD DELIVERY)					SEE COMPONENT PART IDENTIFICATION	3S- 7S: W2 8S-12S: W1	3S- 7S: W2 8S-12S: W1
ORDERING INFORMATION					*** **	SPAL *** **	SPAS *** **
STAUFF GROUP	DIN GROUP	O.D. OF PIPE / TUBE / HOSE IN MM	O.D. OF PIPE / TUBE / HOSE IN INCH	NOMINAL BORE PIPE IN INCH	STAUFF GROUP (SEE BELOW)	WELD PLATE FOR SINGLE CLAMPS SPAL	WELD PLATE FOR DOUBLE CLAMPS SPAS
					OUTSIDE DIAMETERS IN MM	MATERIAL & DESIGN OF CLAMP BODY	STAUFF GROUP
3S	1	6			3006 *** **	SPAL 3S *** **	SPAS 3S *** **
		6,4	1/4		3006,4 *** **		
		8	5/16		3008 *** **		
		9,5	3/8	1/8	3009,5 *** **		
		10			3010 *** **		
		12			3012 *** **		
		12,7	1/2	1/4	3012,7 *** **		
		13,5			3013,5 *** **		
		14			3014 *** **		
		15			3015 *** **		
16	5/8	3/8	3016 *** **				
17,2			3017,2 *** **				
18			3018 *** **				
4S	2	19	3/4		4019 *** **	SPAL 4S *** **	SPAS 4S *** **
		20		1/2	4020 *** **		
		21,3			4021,3 *** **		
		22	7/8		4022 *** **		
		25			4025 *** **		
		25,4	1	3/4	4025,4 *** **		
		26,9			4026,9 *** **		
		28			4028 *** **		
		30			4030 *** **		
		30			5030 *** **		
5S	3	32	1 1/4	1	5032 *** **	SPAL 5S *** **	SPAS 5S *** **
		33,7			5033,7 *** **		
		35			5035 *** **		
		38	1 1/2		5038 *** **		
		40			5040 *** **		
		42		1 1/4	5042 *** **		
		38	1 1/2	1 1/4	6038 *** **		
		42			6042 *** **		
		44,5	1 3/4	1 1/2	6044,5 *** **		
		48,3			6048,3 *** **		
50,8	2		6050,8 *** **				
55			6055 *** **				
57	2 1/4	2	6057 *** **				
60,3			6060,3 *** **				
63,5	2 1/2		6063,5 *** **				
65			6065 *** **				
70	2 3/4		6070 *** **				
7S	5	65			7065 *** **	SPAL 7S *** **	SPAS 7S *** **
		70		2 1/2 except DIN EN 10220	7070 *** **		
		73	2 7/8		7073 *** **		
		75			7075 *** **		
		76,1	3	2 1/2 DIN EN 10220 only	7076,1 *** **		
		80			7080 *** **		
		82,5	3 1/4		7082,5 *** **		
		88,9	3 1/2	3	7088,9 *** **		
		88,9	3 1/2	3	8088,9 *** **		
		100			8100 *** **		
8S	6	102			8102 *** **	SPAL 8S *** **	SPAS 8S *** **
		108	4 1/4	3 1/2	8108 *** **		
		114			8114 *** **		
		127	5	4	8127 *** **		
		133	5 1/4		8133 *** **		
		133	5 1/4		9133 *** **		
		140		5	9140 *** **		
		152	6		9152 *** **		
		159	6 1/4		9159 *** **		
		165	6 1/2		9165 *** **		
168			9168 *** **				
10S	8	168			10168 *** **	SPAL 10S *** **	SPAS 10S *** **
		177,8	7		10177,8 *** **		
		193,7	7 7/8		10193,7 *** **		
		216	8 1/2		10216 *** **		
		219		8	10219 *** **		
		219		8	11219 *** **		
11S	9	273		10	11273 *** **	SPAL 11S *** **	SPAS 11S *** **
		324		12	11324 *** **		
		356		14	12356 *** **		
12S	10	406		16	12406 *** **	SPAL 12S *** **	SPAS 12S *** **

according to **DIN 3015, Part 2**

CHANNEL RAIL ADAPTOR CRA	ELONGATED WELD PLATE FOR SINGLE CLAMPS SPAL/DUEB	COVER PLATE FOR SINGLE CLAMPS DPAL	COVER PLATE FOR DOUBLE CLAMPS DPAS	HEXAGON HEAD BOLT AS	SOCKET CAP SCREW IS	STACKING BOLT AF
suitable for several types of channel rails, see page 21  Group 3S - 6S						
W3*	3S- 7S: W2 8S-12S: W1	3S- 7S: W2 8S-12S: W1	3S- 7S: W2 8S-12S: W1	W1	W1	W2
CRA ** ** **	SPAL/DUEB ** ** **	DPAL ** ** **	DPAS ** ** **	AS ** ** **	IS ** ** **	AF ** ** **
CHANNEL-RAIL-ADAPTOR CRA	ELONGATED WELD PLATE FOR SINGLE CLAMPS SPAL/DUEB	COVER PLATE FOR SINGLE CLAMPS DPAL	COVER PLATE FOR DOUBLE CLAMPS DPAS	HEXAGON HEAD BOLT AS	SOCKET CAP SCREW IS	STACKING BOLT AF
STAUFF GROUP	STAUFF GROUP	STAUFF GROUP	STAUFF GROUP	STAUFF GROUP	STAUFF GROUP	STAUFF GROUP
TYPE OF THREAD	TYPE OF THREAD	TYPE OF THREAD	TYPE OF THREAD	TYPE OF THREAD	TYPE OF THREAD	TYPE OF THREAD
MATERIAL & SURFACE FINISHING	MATERIAL & SURFACE FINISHING	MATERIAL & SURFACE FINISHING	MATERIAL & SURFACE FINISHING	MATERIAL & SURFACE FINISHING	MATERIAL & SURFACE FINISHING	MATERIAL & SURFACE FINISHING
CRA 3S M ** for use with bolt M10 x 40	SPAL/DUEB 3S ** **	DPAL 3S **	DPAS 3S **	AS 3S M ** (M10 x 45)	IS 3S M ** (M10 x 30)	AF 3S ** **
CRA 4S M ** for use with bolt M10 x 55	SPAL/DUEB 4S ** **	DPAL 4S **	DPAS 4S **	AS 4S M ** (M10 x 60)	IS 4S M ** (M10 x 40)	AF 4S ** **
CRA 5S M ** for use with bolt M10 x 65	SPAL/DUEB 5S ** **	DPAL 5S **	DPAS 5S **	AS 5S M ** (M10 x 70)	IS 5S M ** (M10 x 50)	AF 5S ** **
CRA 6S M ** for use with bolt M12 x 100	SPAL/DUEB 6S ** **	DPAL 6S **	DPAS 6S **	AS 6S M ** (M12 x 100)	IS 6S M ** (M12 x 80)	AF 6S ** **
---	SPAL/DUEB 7S ** **	DPAL 7S **	DPAS 7S **	AS 7S M ** (M16 x 130)	---	AF 7S ** **
---	SPAL/DUEB 8S ** **	DPAL 8S **	DPAS 8S **	AS 8S M ** (M20 x 190)	---	AF 8S ** **
---	SPAL/DUEB 9S ** **	DPAL 9S **	DPAS 9S **	AS 9S M ** (M24 x 220)	---	AF 9S ** **
---	SPAL/DUEB 10S ** **	DPAL 10S **	DPAS 10S **	AS 10S M ** (M30 x 300)	---	AF 10S ** **
---	SPAL/DUEB 11S ** **	DPAL 11S **	DPAS 11S **	AS 11S M ** (M30 x 450)	---	---
---	SPAL/DUEB 12S ** **	DPAL 12S **	DPAS 12S **	AS 12S M ** (M30 x 560)	---	---

* zinc plated, blue chromated - Fe/Zn 8 B

according to **DIN 3015, Part 2**

SAFETY WASHER SI	SAFETY LOCKING PLATE SIP	MOUNTING RAIL STSV	MOUNTING RAIL NUT GMV
DIN 93 for use with HEXAGON HEAD BOLT AS 	 Group 3S - 10S	 up to Group 6S	 up to Group 6S
W3	3S- 7S: W2 8S-10S: W1	W1	W3
SI ** **	SIP ** **	STSV * **	GMV * ** **
SAFETY WASHER SI INNER DIAMETER MATERIAL & SURFACE FINISHING	SAFETY LOCKING PLATE SIP STAUFF GROUP MATERIAL & SURFACE FINISHING	MOUNTING RAIL STSV LENGTH OF RAIL IN M MATERIAL & SURFACE FINISHING	MOUNTING RAIL NUT GMV STAUFF GROUP (3-SS OR 6S) TYPE OF THREAD MATERIAL & SURFACE FINISHING
<i>SI 10,5 **</i>	<i>SIP 3S **</i>	STSV * ** available lengths: 1m and 2m	GMV 3-5S * **
<i>SI 10,5 **</i>	<i>SIP 4S **</i>		
<i>SI 10,5 **</i>	<i>SIP 5S **</i>		
<i>SI 13 **</i>	<i>SIP 6S **</i>		
<i>SI 17 **</i>	<i>SIP 7S **</i>	---	---
<i>SI 21 **</i>	<i>SIP 8S **</i>	---	---
<i>SI 25 **</i>	<i>SIP 9S **</i>	---	---
<i>SI 31 **</i>	<i>SIP 10S **</i>	---	---
<i>SI 31 **</i>	---	---	---
<i>SI 31 **</i>	---	---	---

COMPONENT PART IDENTIFICATION FOR HEAVY SERIES CLAMP BODIES AND COMPONENTS

CLAMP BODY

MATERIAL	DESIGN	COLOUR	CODE
Polypropylene	profiled inside, with tension clearance	green	PP
Polypropylene	smooth inside, without tension clearance	green	PPH
Polyamide	profiled inside, with tension clearance	black	PA
Polyamide	smooth inside, without tension clearance	black	PAH
Santoprene	profiled inside, with tension clearance	black	SA
Santoprene	smooth inside, without tension clearance	black	SAH
Aluminium	profiled inside, with tension clearance	aluminium	AL

PPH, PAH, SA and SAH are available up to STAUFF Group 6S only. Alternative materials, designs and colours in addition to the above stated standard are available upon request.

METAL PARTS

MATERIAL	SURFACE FINISHING	CODE
carbon steel St37	untreated	W1
carbon steel St37	phosphated	W2
carbon steel St37	zinc/nickel coated	W3
stainless steel A2 - 1.4301 / 1.4305 (AISI 304/303)		W4
stainless steel A4 - 1.4401 / 1.4571 (AISI 316/316Ti)		W5

Alternative materials and surface finishings in addition to the above stated standard are available upon request

THREADED PARTS

TYPE OF THREAD	CODE
Metric Thread	M
UNC Thread	U

All threaded parts are available with Metric or UNC Thread on request.

according to DIN 3015, Part 2

MATERIAL & SURFACE FINISHING OF METAL PARTS			CLAMP BODY consisting of two clamp halves							WELD PLATE FOR SINGLE CLAMPS SPAL							WELD PLATE FOR DOUBLE CLAMPS SPAS																																																				
carbon steel St37, untreated	W1																																																																				
carbon steel St37, phosphated	W2																																																																				
carbon steel St37, zinc/nickel coated	W3																																																																				
stainless steel A2 - 1.4301/1.4305 (AISI304/303)	W4																																																																				
stainless steel A4 - 1.4401/1.4571 (AISI316/316T)	W5																																																																				
MATERIAL & SURFACE FINISHING CODE			SEE COMPONENT PART IDENTIFICATION							3S- 7S: W2 8S-12S: W1							3S- 7S: W2 8S-12S: W1																																																				
STAUFF GROUP	DIN GROUP	O.D. OF PIPE / TUBE / HOSE Ø D1 IN MM	L1		Inside Surface			Width	L1	L2	B	S	H	G	ØD1	L1	L2	B1	B2	S	H	G	ØD1																																														
			PP/PA	AL	L2	profiled	smooth																	H	S	H																																											
3S	1	6	55	56	33	32	0,6 min.	30,5	30,5	74	33	30	8	8	M10	18	74	33	60	30,5	8	8	M10	18																																													
		6,4																																																																			
		8																																																																			
		9,5																																																																			
		10																																																																			
		12																																																																			
		12,7																																																																			
		13,5																																																																			
		14																																																																			
		15																																																																			
16																																																																					
17,2																																																																					
18																																																																					
4S	2	19	70	70	45	48	0,6 min.	46,5	30,5	86	45	30	8	8	M10	18	86	45	60	30,5	8	8	M10	18																																													
		20																																																																			
		21,3																																																																			
		22																																																																			
		25																																																																			
		25,4																																																																			
		26,9																																																																			
		28																																																																			
		30																																																																			
		5S																							3	30	85	85	60	60	0,6 min.	58	30,5	100	60	30	8	8	M10	18	100	60	60	30,5	8	8	M10	18																					
32																																																																					
33,7																																																																					
35																																																																					
38																																																																					
40																																																																					
42																																																																					
6S	4		38	115	120	90	89	2 min.	87	45	140	90	45	10	8	M12	20	140	90	90	46	10	8	M12		20																																											
			42																																																																		
			44,5																																																																		
		48,3																																																																			
		50,8																																																																			
		55																																																																			
		57																																																																			
		60,3																																																																			
		63,5																																																																			
		65																																																																			
70																																																																					
7S	5	65	154	152	122	120	2 min.	60	180	122	60	10	12	M16	24	180	122	120	61	10	12	M16	24																																														
		70																																																																			
		73																																																																			
		75																																																																			
		76,1																																																																			
		80																																																																			
		82,5																																																																			
		88,9																																																																			
		88,9																																																																			
		8S																						6	100	206	208	168	168	2 min.	80	226	168	80	15	18	M20	30	226	168	160	81	15	18	M20	30																							
102																																																																					
108																																																																					
114																																																																					
127																																																																					
133																																																																					
9S	7		133	251	255	205	200	3 min.	91	270	205	90	15	21	M24	35	270	205	180	91	15	21	M24		35																																												
			140																																																																		
			152																																																																		
			159																																																																		
		165																																																																			
		168																																																																			
		10S	8																					168		336	326	265	270	3 min.	120	340	265	120	25	21	M30	45	340	265	240	121	25	21	M30	45																							
																								177,8																																													
																								193,7																																													
																								216																																													
219																																																																					
11S	9			219	470	470	395	410	8 min.	162	520	395	160	30	38	M30	50	520	395	324	166	30	38	M30	50																																												
				273																																																																	
				324																																																																	
				12S																																											10	324	630	630	534	530	20 min.	182	680	534	180	30	38	M30	50	680	534	364	186	30	38	M30	50
																																																356																					
		406																																																																			

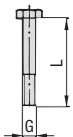
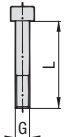
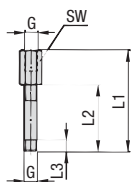

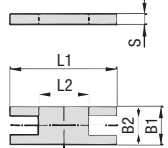
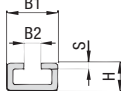
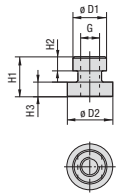
according to DIN 3015, Part 2

CHANNEL RAIL ADAPTOR CRA											ELONGATED WELD PLATE FOR SINGLE CLAMPS SPAL/DUEB							COVER PLATE FOR SINGLE CLAMPS DPAL					COVER PLATE FOR DOUBLE CLAMPS DPAS					
W3*											3S- 7S: W2 8S-12S: W1							3S- 7S: W2 8S-12S: W1					3S- 7S: W2 8S-12S: W1					
G	L1	L2	L3	B1	B2	H1	H2	H3	L1	L2	L3	B	S	H	G	øD1	øD2	L1	L2	B	S	øD	L1	L2	B1	B2	S	øD
M10	22	35	38	22	20,5	9,2	16,7	27,5	140	60	112	30	8	8	M10	18	13	85	60	30	8	11	83	60	60	30,5	8	11
M12	21,5	35	45	25	19	9,2	15,2	27,5	187	90	155	45	10	8	M12	20	16	115	90	45	10	14	116	90	90	46	10	14
				---					238	122	198	60	10	12	M16	24	21	152	122	60	10	19	153	122	120	61	10	19
				---					309	168	259	80	15	18	M20	30	26	206	168	80	15	22	206	168	160	81	15	22
				---					370	205	310	90	15	21	M24	35	31	251	205	90	15	26	251	205	180	91	15	26
				---					440	265	380	120	25	21	M30	45	31	320	265	120	25	35	320	265	240	121	25	35
				---					590	395	530	160	30	38	M30	50	31	470	395	160	30	35	470	395	321	166	30	35
				---					750	534	690	180	30	38	M30	50	31	630	534	180	30	35	630	534	361	186	30	35

*zinc plated, blue chromated - Fe/Zn 8 B

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according to DIN 3015, Part 2

HEXAGON HEAD BOLT AS	SOCKET CAP SCREW IS	STACKING BOLT AF	SAFETY WASHER SI	SAFETY LOCKING PLATE SIP	MOUNTING RAIL STSV	MOUNTING RAIL NUT GMV
DIN 931/933	ISO 4762		DIN 93 for use with HEXAGON HEAD BOLT AS			
						
Group 3S - 6S	Group 3S - 6S	Group 3S - 10S		Group 3S - 10S	up to Group 6S	up to Group 6S
W1	W1	W2	W3	3S- 7S: W2 8S-10S: W1	W1	W3
G x L	G x L	G L1 L2 L3 SW	øD	L1 L2 B1 B2 S	B1 B2 H S	øD1 øD2 H1 H2 H3 G
M10 x 45	M10 x 30	M10 49 25 15 min. 15	10,5	57 13 30 15,2 8		
M10 x 60	M10 x 40	M10 65 40 15 min. 15	10,5	70 26 30 15,2 8	40 13 22 5	17,8 24 21 7,6 7,4 M 10
M10 x 70	M10 x 50	M10 77 51 15 min. 15	10,5	85 40 30 15,2 8		
M12 x 100	M12 x 80	M12 110 82 18 min. 17	13,0	116 68 45 17,2 10		19,8 24 23 8,8 8,2 M 12
M16 x 130	---	M16 144 110 24 min. 21	17,0	153 96 60 22 10	---	---
M20 x 190	---	M20 200 150 30 min. 27	21,0	206 130 80 28 15	---	---
M24 x 220	---	M24 240 180 50 min. 30	25,0	251 166 90 31 15	---	---
M30 x 300	---	M30 331 256 62 min. 46	31,0	317 205 120 49 25	---	---
M30 x 450	---	---	31,0	---	---	---
M30 x 560	---	---	31,0	---	---	---

according to DIN 3015, Part 2

① ***
② *****,*
③ ***
④ ***** - **
⑤ *
⑥ W***
⑦ *

① TYPE OF INSTALLATION

<i>no code</i>	without mounting plate, rail adaptor or rail nuts
SPAL	Weld Plate for Single Clamps
SPAS	Weld Plate for Double Clamps
SPAL/DUEB	Elongated Weld Plate for Single Clamps
CRA *2*3	Channel Rail Adaptor
GMV *2	Mounting Rail Nut

③ MATERIAL & DESIGN OF CLAMP BODY *1

PP	Polypropylene, profiled inside, with tension clearance
PPH*2	Polypropylene, smooth inside, without tension clearance
PA	Polyamide, profiled inside, with tension clearance
PAH*2	Polyamide, smooth inside, without tension clearance
SA *2	Santoprene, profiled inside, with tension clearance
SAH*2	Santoprene, smooth inside, without tension clearance
AL	Aluminium, profiled inside, with tension clearance

④ MOUNTING & FITTING COMBINATION

DPAL - AS	Single Cover Plate / Hexagon Head Bolt
DPAS - AS	Double Cover Plate / Hexagon Head Bolt
DPAL - IS	Single Cover Plate / Socket Cap Screw
IS *2	Socket Cap Screw
SIP - AF*4	Safety Locking Plate / Stacking Bolt

⑦ ASSEMBLING & PACKAGING

<i>no code</i>	components supplied separately (standard)
A	assembled (optional)
K	packed in kits (optional)

② STAUFF GROUP & SIZE OF CLAMP BODY

Group	Tube O.D.		Nominal Bore Pipe	Material Code
	in mm	in inch		
STAUFF 3S DIN 1	6			3006
	6,4	1/4		3006,4
	8	5/16		3008
	9,5	3/8		3009,5
	10		1/8	3010
	12			3012
	12,7	1/2		3012,7
	13,5		1/4	3013,5
	14			3014
	15			3015
STAUFF 4S DIN 2	16	5/8		3016
	17,2	3/4		3017,2
	18			3018
	19	3/4		4019
	20			4020
	21,3		1/2	4021,3
	22	7/8		4022
	25			4025
	25,4	1		4025,4
	26,9	3/4		4026,9
STAUFF 5S DIN 3	28			4028
	30			4030
	30			5030
	32	1 1/4		5032
	33,7		1	5033,7
	35			5035
	38	1 1/2		5038
	40			5040
	42		1 1/4	5042
	STAUFF 6S DIN 4	38	1 1/2	
42			1 1/4	6042
44,5		1 3/4		6044,5
48,3			1 1/2	6048,3
50,8		2		6050,8
55				6055
12S 10	57	2 1/4		6057

② STAUFF GROUP & SIZE OF CLAMP BODY CONTINUATION

Group	Tube O.D.		Nominal Bore Pipe	Material Code
	in mm	in inch		
6S 4	60,3		2	6060,3
	63,5	2 1/2		6063,5
	65			6065
	70			6070
	65			7065
STAUFF 7S DIN 5	70			7070
	73	2 7/8	2 1/2	7073 *5
	75			7075
	76,1	3	2 1/2	7076,1 *6
	80			7080
STAUFF 8S DIN 6	82,5	3 1/4		7082,5
	88,9	3		7088,9
	88,9	3		8088,9
	100			8100
	102		3 1/2	8102
STAUFF 9S DIN 7	108	4 1/4		8108
	114		4	8114
	127	5		8127
	133	5 1/4		8133
	133	5 1/4		9133
10S 8	140		5	9140
	152	6		9152
	159	6 1/4		9159
	165	6 1/2		9165
	168		6	9168
11S 9	168		6	10168
	177,8	7		10177,8
	193,7	7 5/8		10193,7
	216	8 1/2		10216
	219		8	10219
12S 10	219		8	11219
	273		10	11273
	324		12	11324
	356		14	12356
406		16	12406	

⑤ TYPE OF THREAD

M	Metric Thread
U	UNC Thread

⑥ MATERIAL & SURFACE FINISHING OF METAL PARTS *7

W1	all parts are untreated
W2	all parts are phosphated
W3	all parts are zinc/nickel coated
W4	all metal parts made of stainless steel A2 - 1.4301/1.4305 (AISI 304/303)
W5	all metal parts made of stainless steel A4 - 1.4401/1.4571 (AISI 316/316Ti)
W10	weld plate phosphated, all other parts zinc/nickel coated
W12	weld plate and cover plate phosphated, bolts untreated
W13	rail nut zinc/nickel coated, cover plate phosphated, bolts untreated
W15	weld plate and cover plate phosphated, bolts zinc/nickel coated
W16	rail nut zinc/nickel coated, cover plate phosphated, bolts zinc/nickel coated
W17	safety locking plate phosphated, stacking bolts zinc/nickel coated
W18	safety locking plate untreated, stacking bolts phosphated
W19	cover plate phosphated, bolts untreated

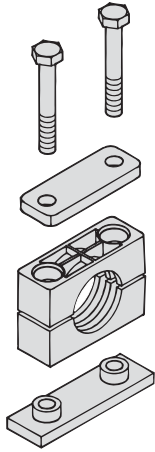
TECHNICAL NOTES

- *1 SEE MATERIAL PROPERTIES ON PAGE 52. OTHER CLAMP BODY MATERIALS AND COLOURS ARE AVAILABLE UPON REQUEST.
- *2 AVAILABLE FOR STAUFF GROUP 3S TO 6S ONLY (DIN GROUPS 1 TO 4).
- *3 SPECIAL BOLT LENGTHS REQUIRED. SUPPLIED WHEN ORDERED AS KITS.
- *4 AVAILABLE FOR STAUFF GROUP 3S TO 10S ONLY (DIN GROUPS 1 TO 8).
- *5 NOMINAL BORE, EXCEPT DIN EN 10220.
- *6 NOMINAL BORE, ONLY DIN EN 10220.
- *7 INDIVIDUAL COMBINATIONS OF ALTERNATIVE SURFACE FINISHINGS AND SPECIAL PROPERTY MATERIALS ARE AVAILABLE UPON REQUEST.

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according to DIN 3015, Part 2

SPAL 3006 PP-DPAL-AS M W12

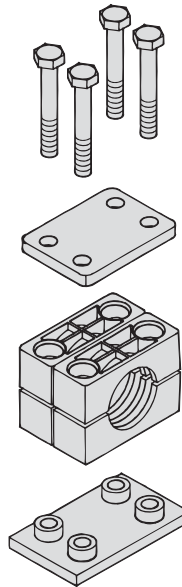


- 2x **Hexagon Head Bolt**
Surface: W1, untreated
Thread: metric
- 1x **Cover Plate for Single Clamps**
Surface: W2, phosphated
- 1x **Clamp (two halves)**
Material: Polypropylene
Design: profiled inside, with tension clearance

Group: STAUFF 3S / DIN 1
Pipe-O.D. 6 mm
- 1x **Weld Plate for Single Clamps**
Surface: W2, phosphated
Thread: metric

W12 (up to Group 7S) or W1 (Group 8S to 12S) are standards for this type of installation.

SPAS 3006 PP-DPAS-AS M W12

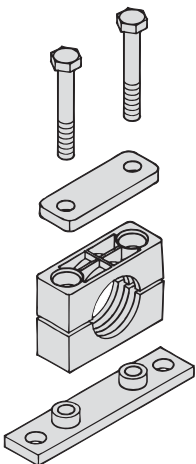


- 4x **Hexagon Head Bolt**
Surface: W1, untreated
Thread: metric
- 1x **Cover Plate for Double Clamps**
Surface: W2, phosphated
- 2x **Clamp (four halves)**
Material: Polypropylene
Design: profiled inside, with tension clearance

Group: STAUFF 3S / DIN 1
Pipe-O.D. 6 mm
- 1x **Weld Plate for Double Clamps**
Surface: W2, phosphated
Thread: metric

W12 (up to Group 7S) or W1 (Group 8S to 12S) are standards for this type of installation.

SPAL/DUEB 3006 PP-DPAL-AS M W12

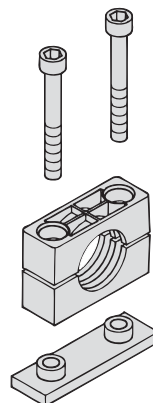


- 2x **Hexagon Head Bolt**
Surface: W1, untreated
Thread: metric
- 1x **Cover Plate for Single Clamps**
Surface: W2, phosphated
- 1x **Clamp (two halves)**
Material: Polypropylene
Design: profiled inside, with tension clearance

Group: STAUFF 3S / DIN 1
Pipe-O.D. 6 mm
- 1x **Elongated Weld Plate for Single Clamps**
Surface: W2, phosphated
Thread: metric

W12 (up to Group 7S) or W1 (Group 8S to 12S) are standards for this type of installation.

SPAL 3006 PP-IS M W12



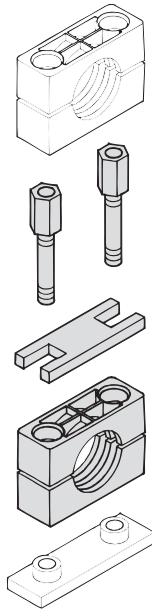
- 2x **Socket Cap Screw**
Surface: W1, untreated
Thread: metric
- 1x **Clamp (two halves)**
Material: Polypropylene
Design: profiled inside, with tension clearance

Group: STAUFF 3S / DIN 1
Pipe-O.D. 6 mm
- 1x **Weld Plate for Single Clamps**
Surface: W2, phosphated
Thread: metric

W12 (up to Group 6S) is standard for this type of installation.

according to DIN 3015, Part 2

3006 PP-SIP-AF M W2

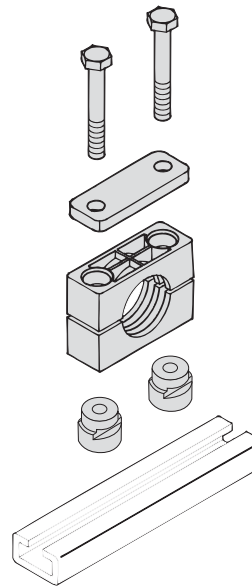


- 2x **Stacking Bolt**
Surface: W2, phosphated
Thread: metric
- 1x **Safety Locking plate**
Surface: W2, phosphated
- 1x **Clamp (two halves)**
Material: Polypropylene
Design: profiled inside,
with tension
clearance

Group: STAUFF 3S / DIN 1
Pipe-O.D. 6 mm

W2 (up to Group 7S) or W18 (Group 8S to 10S) are standards for this type of installation.

GMV 3006 PP-DPAL-AS M W13

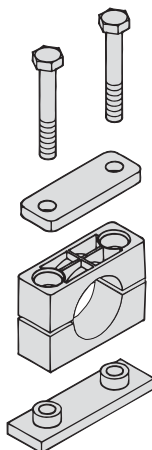


- 2x **Hexagon Head Bolt**
Surface: W1, untreated
Thread: metric
- 1x **Cover Plate for Single Clamps**
Surface: W2, phosphated
- 1x **Clamp (two halves)**
Material: Polypropylene
Design: profiled inside,
with tension
clearance

Group: STAUFF 3S / DIN 1
Pipe-O.D. 6 mm
- 2x **Mounting Rail Nut**
Surface: W3, zinc/nickel
coated
Thread: metric

W13 (up to Group 6S) is standard for this type of installation. This combination is available up to Group 6S only.

SPAL 3006 PPH-DPAL-AS M W12



- 2x **Hexagon Head Bolt**
Surface: W1, untreated
Thread: metric
- 1x **Cover Plate for Single Clamps**
Surface: W2, phosphated
- 1x **Clamp (two halves)**
Material: Polypropylene
Design: smooth inside,
without tension
clearance

Group: STAUFF 3S / DIN 1
Pipe-O.D. 6 mm
- 1x **Weld Plate for Single Clamps**
Surface: W2, phosphated
Thread: metric

W12 (up to Group 7S) or W1 (Group 8S to 12S) are standards for this type of installation.

NOTES REGARDING THE USE OF THE CHANNEL RAIL ADAPTOR CRA

The CHANNEL RAIL ADAPTOR Type **CRA** is amongst others suitable for the following channel rails:

UNISTRUT-Rails

- P 1000, P 1000T, P 1000V, P 1000VT, P 1001
- P 2000, P 2000T
- P 3003, P 3003T, P 3300V, P 3300VT, P 3301
- P 4000, P 4000T
- P 5000, P 5000T, P 5001, P 5500, P 5500T, P 5501

HALFEN-Rails

- HM 41/41
- HZA 41/22
- HZM 41/41
- HZM 41/22
- HL 41/41, HL 41/B2

HILTI-Rails

- MQ-21, MQ-41, MQ-52, MQ-72
- MQ-21U, MQ-41U, MQ-72U
- MQ-21D, MQ-41D, MQ-52-72D

according to **DIN 3015, Part 3**

ALSO AVAILABLE					CLAMP BODY consisting of two clamp halves	SINGLE WELD PLATE SP	GROUP WELD PLATE RAP	CHANNEL RAIL ADAPTOR CRA
Extensive range of special clamping systems and accessories, e.g. for noise and vibration reducing installation, for electric applications and cables or for particular mounting purposes see pages 28 to 32 Custom designed pipe clamps (machined and injection moulding versions) according to customer's specifications or based on STAUFF developments see pages 34 to 35								
MATERIAL & SURFACE FINISHING CODE (ALL DISPLAYED OPTIONS ARE STANDARD DELIVERY)					SEE COMPONENT PART IDENTIFICATION	W2	W1	W3*
ORDERING INFORMATION					***,*/***,***	SP *** **	RAP ***/***/**	CRA *** **
STAUFF GROUP	DIN GROUP	OUTSIDE DIAMETER PIPE / TUBE / HOSE IN MM	OUTSIDE DIAMETER PIPE / TUBE / HOSE IN INCH	NOMINAL BORE PIPE IN INCH	STAUFF GROUP OUTSIDE DIAMETERS OF BOTH PIPES IN MM MATERIAL & DESIGN OF CLAMP BODY	SINGLE WELD PLATE SP STAUFF GROUP TYPE OF THREAD MATERIAL & SURFACE FINISHING	GROUP WELD PLATE RAP STAUFF GROUP PIPE CENTER SPACING NUMBER OF CLAMPS TYPE OF THREAD MATERIAL & SURFACE FINISHING	CHANNEL RAIL ADAPTOR CRA STAUFF GROUP TYPE OF THREAD MATERIAL & SURFACE FINISHING
1D	1	6			106/06 ****	SP 1D ***	RAP 1D/40/5 ***	CRA 1D M ** for use with bolt M6 x 35
		6,4	1/4		106,4/06,4 ****			
		8	5/16		108/08 ****			
		9,5	3/8	1/8	109,5/09,5 ****			
		10			110/10 ****			
2D	2	12			112/12 ****	SP 2D ***	RAP 2D/58/5 ***	CRA 2D M ** for use with bolt M8 x 35
		12,7	1/2	1/4	212,7/12,7 ****			
		13,5			213,5/13,5 ****			
		14			214/14 ****			
		15	5/8	3/8	215/15 ****			
3D	3	16			216/16 ****	SP 3D ***	RAP 3D/72/5 ***	CRA 3D M ** for use with bolt M8 x 45
		17,2			217,2/17,2 ****			
		18			218/18 ****			
		19	3/4	1/2	319/19 ****			
		20			320/20 ****			
4D	4	21,3	7/8		321,3/21,3 ****	SP 4D ***	RAP 4D/90/5 ***	CRA 4D M ** for use with bolt M8 x 50
		22			322/22 ****			
		25			325/25 ****			
		25,4	1	3/4	325,4/25,4 ****			
		26,9			426,9/26,9 ****			
5D	5	28			428/28 ****	SP 5D ***	RAP 5D/112/5 ***	CRA 5D M ** for use with bolt M8 x 60
		30			430/30 ****			
		32			532/32 ****			
		33,7			533,7/33,7 ****			
		35			535/35 ****			
38			538/38 ****					
40			540/40 ****					
42			542/42 ****					

COMPONENT PART IDENTIFICATION FOR TWIN SERIES CLAMP BODIES AND COMPONENTS							
CLAMP BODY							
MATERIAL	DESIGN	COLOUR	CODE	MATERIAL	DESIGN	COLOUR	CODE
Polypropylene	profiled inside, with tension clearance	green	PP	Polyamide	profiled inside, with tension clearance	black	PA
Polypropylene	smooth inside, without tension clearance	green	PPH	Polyamide	smooth inside, without tension clearance	black	PAH
Alternative materials, designs and colours in addition to the above stated standard are available upon request.							

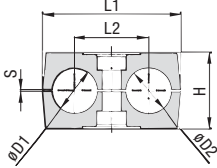
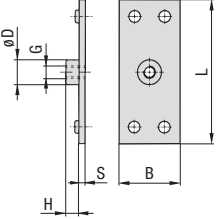
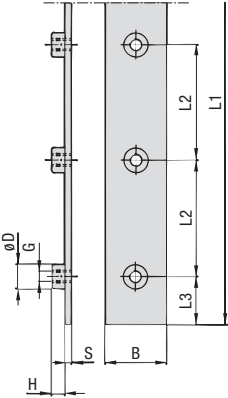
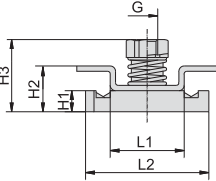
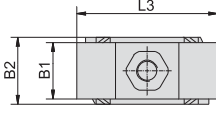


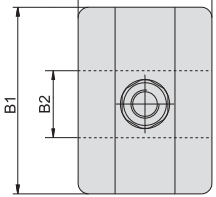
* zinc plated, blue chromated - Fe/Zn 8 B

according to **DIN 3015, Part 3**

COVER PLATE GD	HEXAGON HEAD BOLT AS	STACKING BOLT AF	SAFETY LOCKING PLATE SI	SAFETY LOCKING PLATE SIV	MOUNTING RAIL TS	HEXAGON RAIL NUT SM
	DIN 931/933 			for multi-level assembly, prevents upper clamp from turning Group 1D - 3D		 SM 1-8/1D SM 2-5D
W3	W3	W3	W3	W3	W1	W1 / W3
GD ***	AS ****	AF ****	SI *****	SIV *****	TS ***	SM ****
COVER PLATE GD ↓ STAUFF GROUP ↓ MATERIAL & SURFACE FINISHING	HEXAGON HEAD BOLT AS ↓ STAUFF GROUP ↓ TYPE OF THREAD ↓ MATERIAL & SURFACE FINISHING	STACKING BOLT AF ↓ STAUFF GROUP ↓ TYPE OF THREAD ↓ MATERIAL & SURFACE FINISHING	SAFETY LOCKING PLATE SI ↓ STAUFF GROUP (1D OR 2-5D ONLY) ↓ MATERIAL & SURFACE FINISHING	SAFETY LOCKING PLATE SIV ↓ STAUFF GROUP (1D OR 2-3D ONLY) ↓ MATERIAL & SURFACE FINISHING	MOUNTING RAIL TS ↓ HEIGHT OF RAIL IN MM ↓ LENGTH OF RAIL IN M ↓ MATERIAL & SURFACE FINISHING	HEXAGON RAIL NUT SM ↓ STAUFF GROUP (1-8/1D OR 2-5D ONLY) ↓ TYPE OF THREAD ↓ MATERIAL & SURFACE FINISHING
<i>GD 1D **</i>	<i>AS 1D M **</i> (M6 x 35)	<i>AF 1D ***</i>	<i>SI 1D **</i>	<i>SIV 1D **</i>		<i>SM 1-8/1D * W1</i>
<i>GD 2D **</i>	<i>AS 2D M **</i> (M8 x 35)	<i>AF 2D ***</i>		<i>SIV 2-3D **</i>	TS *** available heights: 11, 14 and 30 mm available lengths: 1m and 2 m	
<i>GD 3D **</i>	<i>AS 3D M **</i> (M8 x 45)	<i>AF 3D ***</i>	<i>SI 2-5D **</i>			<i>SM 2-5D * W3</i>
<i>GD 4D **</i>	<i>AS 4D M **</i> (M8 x 50)	<i>AF 4D ***</i>		---		
<i>GD 5D **</i>	<i>AS 5D M **</i> (M8 x 60)	<i>AF 5D ***</i>		---		

COMPONENT PART IDENTIFICATION FOR TWIN SERIES CLAMP BODIES AND COMPONENTS		
METAL PARTS	Alternative materials and surface finishings in addition to the below stated standard are available upon request	
MATERIAL	SURFACE FINISHING	CODE
carbon steel St37	untreated	W1
carbon steel St37	phosphated	W2
carbon steel St37	zinc/nickel coated	W3
stainless steel A2 - 1.4301/1.4305 (AISI 304/303)		W4
stainless steel A4 - 1.4401/1.4571 (AISI 316/316Ti)		W5
THREADED PARTS		
TYPE OF THREAD	CODE	
Metric Thread	M	
UNC Thread	U	
All threaded parts are available with Metric or UNC Thread on request.		

according to DIN 3015, Part 3

MATERIAL & SURFACE FINISHING OF METAL PARTS	CLAMP BODY consisting of two clamp halves	SINGLE WELD PLATE SP	GROUP WELD PLATE RAP	CHANNEL RAIL ADAPTOR CRA
carbon steel St37, untreated W1				
carbon steel St37, phosphated W2				
carbon steel St37, zinc/nickel coated W3				
stainless steel A2 - 1.4301/1.4305 (AISI304/303) W4				
stainless steel A4 - 1.4401/1.4571 (AISI316/316Ti) W5				
Alternative materials and surface finishings in addition to the above stated standard are available upon request.				

MATERIAL & SURFACE FINISHING CODE	SEE COMPONENT PART IDENTIFICATION	W2										W1						W3*					
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STAUFF GROUP	DIN GROUP	OUTSIDE DIAMETER PIPE / TUBE / HOSE Ø D1 / Ø D2 IN MM	Inside Surface						L	B	S	H	ØD	G	L1	L2	L3	B	S	H	ØD	G	G	L1	L2	L3	B1	B2	H1	H2	H3		
			gerippt		glatt		Breite																										
			L1	L2	H	S		H																									
1D	1	6																															
		6,4																															
		8	36	20	27	0,6 min.	26,5	30	37	30	3	6,5	12	M6	196	40	18	30	3	6,5	12	M6	M6	21	35	40	16	19	6	13	20,5		
		9,5																															
		10																															
2D	2	12																															
		12,7																															
		13,5																															
		14	53	29	27	0,7 min.	26,5	30	55	30	5	6	14	M8	288	58	28	30	5	6	14	M8											
		15																															
3D	3	16																															
		17,2																															
		18																						M8	21	35	38	53	19	9	17	23,5	
		19																															
		20																															
4D	4	21,3																															
		22																															
		25	67	36	37	0,7 min.	36,5	30	70	30	5	6	14	M8	358	72	35	30	5	6	14	M8											
		25,4																															
		26,9																															
5D	5	28	80	45	40	0,7 min.	38	30	85	30	5	6	14	M8	445	90	42	30	5	6	14	M8											
		30																															
		32																															
		33,7																							M8	21	35	38	80	19	9	17	23,5
		35																															
5D	5	38	106	56	53	0,7 min.	52	30	110	30	5	6	14	M8	558	112	55	30	5	6	14	M8											
		40																															
		42																															

* zinc plated, blue chromated - Fe/Zn 8 B

according to **DIN 3015, Part 3**

COVER PLATE GD	HEXAGON HEAD BOLT AS	STACKING BOLT AF	SAFETY LOCKING PLATE SI	SAFETY LOCKING PLATE SIV	MOUNTING RAIL TS	HEXAGON RAIL NUT SM																							
	DIN 931/933 			for multi-level assembly, prevents upper clamp from turning Group 1D - 3D	TS 11 TS 14 TS 30	SM 1-8/1D SM 2-5D																							
W3	W3	W3	W3	W3	W1	W1/W3																							
L	B	H	S	øD	G x L	G	L1	L2	L3	SW	L	B1	B2	S	L	B1	B2	S	H	Nominal Size	B1	B2	S	L	B	H1	H2	øD	G
34	30	7	3	7	M6 x 35	M6	34	20	12 min.	11	27	22	11,2	0,5	27	28	11,1	1	7					25,5	10,2	13,5	5,5	12	M6
52	30	7	3	9	M8 x 35	M8	33	20	12 min.	12	27	22	12,2	0,5	45	28	12,1	1	7										
65	30	7	3	9	M8 x 45	M8	44	29	12 min.	12	27	22	12,2	0,5	45	28	12,1	1	7	TS 11 TS 14 TS 30	28	11	2	25,5	10,4	13	5	14	M8
79	30	7	3	9	M8 x 50	M8	49	34	12 min.	12	27	22	12,2	0,5	---														
102	30	7	3	9	M8 x 60	M8	61	46	12 min.	12	27	22	12,2	0,5	---														

according to DIN 3015, Part 3

① ****	② ****,*/**,*	③ ****	④ ** - **	⑤ *	⑥ W**	⑦ *
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① TYPE OF INSTALLATION

no code	without mounting plate, rail adaptor or rail nuts
SP	Single Weld Plate
RAP	Group Weld Plate
CRA	Channel Rail Adaptor
SM	Hexagon Rail Nut

③ MATERIAL & DESIGN OF CLAMP BODY *1

PP	Polypropylene, profiled inside, with tension clearance
PPH	Polypropylene, smooth inside, without tension clearance
PA	Polyamide, profiled inside, with tension clearance
PAH	Polyamide, smooth inside, without tension clearance

④ MOUNTING & FITTING COMBINATION

GD - AS	Cover Plate / Hexagon Head Bolt
SI - AF	Safety Locking Plate / Stacking Bolt

⑦ ASSEMBLING & PACKAGING

no code	components supplied separately (standard)
A	assembled (optional)
K	packed in kits (optional)

② STAUFF GROUP & SIZE OF CLAMP BODY *3

Group	Tube O.D. in mm	Tube O.D. in inch	Nominal Bore Pipe	Material Code
	6			106/06
STAUFF 1D DIN 1	6,4	1/4		106,4/06,4
	8	5/16		108/08
	9,5	3/8		109,5/09,5
	10		1/8	110/10
STAUFF 2D DIN 2	12			112/12
	12,7	1/2		212,7/12,7
	13,5		1/4	213,5/13,5
	14			214/14
	15			215/15
STAUFF 3D DIN 3	16	5/8		216/16
	17,2		3/8	217,2/17,2
	18			218/18
	19	3/4		319/19
4D 4	20			320/20
	21,3		1/2	321,3/21,3
	22	7/8		322/22
	25			325/25
STAUFF 5D DIN 5	25,4	1		325,4/25,4
	26,9		3/4	426,9/26,9
	28			428/28
	30			430/30
	32			532/32
	33,7			533,7/33,7
	35			535/35
38			538/38	
40			540/40	
42			542/42	

⑤ TYPE OF THREAD

M	Metric Thread
U	UNC Thread

⑥ MATERIAL & SURFACE FINISHING OF METAL PARTS *2

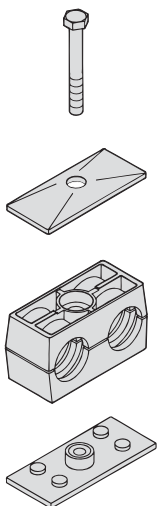
W1	all parts are untreated
W2	all parts are phosphated
W3	all parts are zinc/nickel coated
W4	all metal parts made of stainless steel A2 - 1.4301/1.4305 (AISI 304/303)
W5	all metal parts made of stainless steel A4 - 1.4401/1.4571 (AISI 316/316Ti)
W10	weld plate phosphated, all other parts zinc/nickel coated
W11	rail nut untreated, all other parts zinc/nickel coated

TECHNICAL NOTES

- *1 SEE MATERIAL PROPERTIES ON PAGE 52. OTHER CLAMP BODY MATERIALS AND COLOURS ARE AVAILABLE UPON REQUEST.
- *2 INDIVIDUAL COMBINATIONS OF ALTERNATIVE SURFACE FINISHINGS AND SPECIAL PROPERTY MATERIALS ARE AVAILABLE UPON REQUEST.
- *3 TWIN CLAMPS WITH DIFFERENT OUTSIDE DIAMETERS ARE ALSO AVAILABLE ON REQUEST.

according to DIN 3015, Part 3

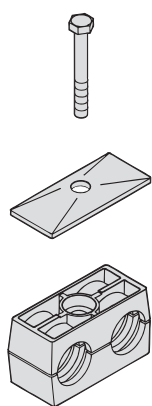
SP 106/06 PP-GD-AS M W10



- 1x **Hexagon Head Bolt**
Surface: W3, zinc/nickel coated
Thread: metric
- 1x **Cover Plate**
Surface: W3, zinc/nickel coated
- 1x **Clamp (two halves)**
Material: Polypropylene
Design: profiled inside, with tension clearance
Group: STAUFF 1D / DIN 1
Pipe-O.D. both 6 mm
- 1x **Weld Plate**
Surface: W2, phosphated
Thread: metric

W10 is standard for this type of installation.

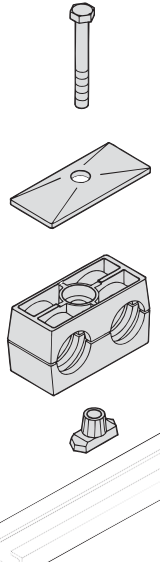
106/06 PP-GD-AS M W3



- 1x **Hexagon Head Bolt**
Surface: W3, zinc/nickel coated
Thread: metric
- 1x **Cover Plate**
Surface: W3, zinc/nickel coated
- 1x **Clamp (two halves)**
Material: Polypropylene
Design: profiled inside, with tension clearance
Group: STAUFF 1D / DIN 1
Pipe-O.D. both 6 mm

W3 is standard for this type of installation.

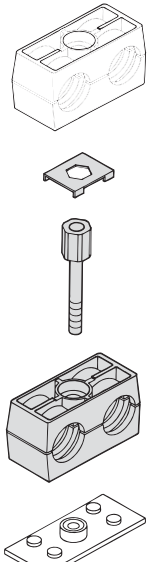
SM 106/06 PP-GD-AS M W11



- 1x **Hexagon Head Bolt**
Surface: W3, zinc/nickel coated
Thread: metric
- 1x **Cover Plate**
Surface: W3, zinc/nickel coated
- 1x **Clamp (two halves)**
Material: Polypropylene
Design: profiled inside, with tension clearance
Group: STAUFF 1D / DIN 1
Pipe-O.D. both 6 mm
- 1x **Mounting Rail Nut**
Surface: W1, untreated
Thread: metric

W11 (Group 1D) or W3 (Group 2D-5D) are standards for this type of installation.

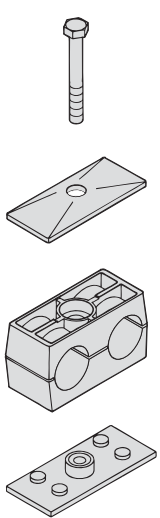
106/06 PP-SI-AF M W3



- 1x **Safety Locking Plate**
Surface: W3, zinc/nickel coated
- 1x **Stacking Bolt**
Surface: W3, zinc/nickel coated
Thread: metric
- 1x **Clamp (two halves)**
Material: Polypropylene
Design: profiled inside, with tension clearance
Group: STAUFF 1D / DIN 1
Pipe-O.D. both 6 mm

W3 is standard for this type of installation.

SP 106/06 PPH-GD-AS M W10



- 1x **Hexagon Head Bolt**
Surface: W3, zinc/nickel coated
Thread: metric
- 1x **Cover Plate**
Surface: W3, zinc/nickel coated
- 1x **Clamp (two halves)**
Material: Polypropylene
Design: smooth inside, without tension clearance
Group: STAUFF 1D / DIN 1
Pipe-O.D. both 6 mm
- 1x **Weld Plate**
Surface: W2, phosphated
Thread: metric

W10 is standard for this type of installation.

NOTES REGARDING THE USE OF THE CHANNEL RAIL ADAPTOR CRA

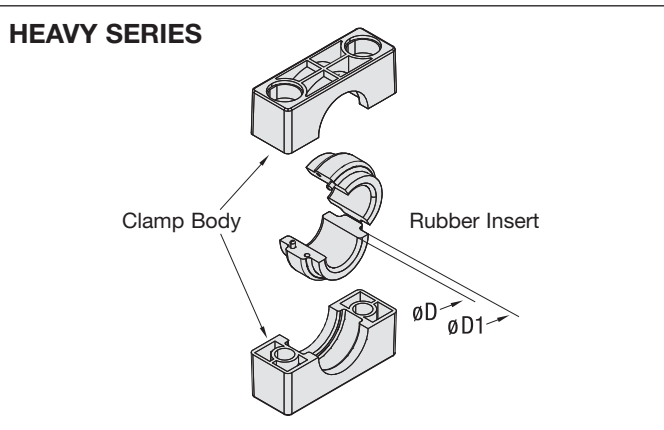
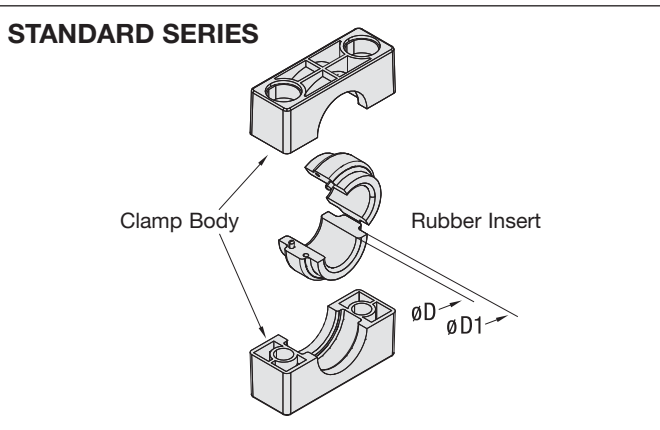
The CHANNEL RAIL ADAPTOR Type **CRA** is amongst others suitable for the following channel rails:

UNISTRUT-Rails
P 1000, P 1000T, P 1000V, P 1000VT, P 1001
P 2000, P 2000T
P 3003, P 3003T, P 3300V, P 3300VT, P 3301
P 4000, P 4000T
P 5000, P 5000T, P 5001, P 5500, P 5500T, P 5501

HALFEN-Rails
HM 41/41
HZA 41/22
HZM 41/41
H2M 41/22
HL 41/41, HL 41/B2

HILTI-Rails
MQ-21, MQ-41, MQ-52, MQ-72
MQ-21U, MQ-41U, MQ-72U
MQ-21D, MQ-41D, MQ-52-72D

RI-CLAMPS (Pipe Clamps with Rubber Insert)



STAUFF Group	DIN Group	Pipe-O.D.		Order Code		
		ØD [mm]	ØD1 [mm]	Rubber Insert	Clamp Body	Rubber Insert + Clamp Body
4	4	25	6	RI 06 (4+4S)	4 xxR	406 xxR
			8	RI 08 (4+4S)	4 xxR	408 xxR
			10	RI 10 (4+4S)	4 xxR	410 xxR
			12	RI 12 (4+4S)	4 xxR	412 xxR
			12,7	RI 12,7 (4+4S)	4 xxR	412,7 xxR
			14	RI 14 (4+4S)	4 xxR	414 xxR
			15	RI 15 (4+4S)	4 xxR	415 xxR
			16	RI 16 (4+4S)	4 xxR	416 xxR
			17,2	RI 17,2 (4+4S)	4 xxR	417,2 xxR
			18	RI 18 (4+4S)	4 xxR	418 xxR
19	RI 19 (4+4S)	4 xxR	419 xxR			
6	6	38	20	RI 20 (6+5S)	6 xxR	620 xxR
			21,3	RI 21,3 (6+5S)	6 xxR	621,3 xxR
			22	RI 22 (6+5S)	6 xxR	622 xxR
			25	RI 25 (6+5S)	6 xxR	625 xxR
			26,9	RI 26,9 (6+5S)	6 xxR	626,9 xxR
			28	RI 28 (6+5S)	6 xxR	628 xxR
			30	RI 30 (6+5S)	6 xxR	630 xxR
			32	RI 32 (6+5S)	6 xxR	632 xxR

STAUFF Group	DIN Group	Pipe-O.D.		Order Code		
		ØD [mm]	ØD1 [mm]	Rubber Insert	Clamp Body	Rubber Insert + Clamp Body
4S	2	25	06	RI 06 (4+4S)	4S xxR	4006 xxR
			08	RI 08 (4+4S)	4S xxR	4008 xxR
			10	RI 10 (4+4S)	4S xxR	4010 xxR
			12	RI 12 (4+4S)	4S xxR	4012 xxR
			12,7	RI 12,7 (4+4S)	4S xxR	4012,7 xxR
			14	RI 14 (4+4S)	4S xxR	4014 xxR
			15	RI 15 (4+4S)	4S xxR	4015 xxR
			16	RI 16 (4+4S)	4S xxR	4016 xxR
			17,2	RI 17,2 (4+4S)	4S xxR	4017,2 xxR
			18	RI 18 (4+4S)	4S xxR	4018 xxR
19	RI 19 (4+4S)	4S xxR	4019 xxR			
5S	3	38	20	RI 20 (6+5S)	5S xxR	5020 xxR
			21,3	RI 21,3 (6+5S)	5S xxR	5021,3 xxR
			22	RI 22 (6+5S)	5S xxR	5022 xxR
			25	RI 25 (6+5S)	5S xxR	5025 xxR
			26,9	RI 26,9 (6+5S)	5S xxR	5026,9 xxR
			28	RI 28 (6+5S)	5S xxR	5028 xxR
			30	RI 30 (6+5S)	5S xxR	5030 xxR
			32	RI 32 (6+5S)	5S xxR	5032 xxR

Other diameters are available on request.

Other sizes and diameters are available on request.

Clamp Body	Material XX
	Polypropylene PP Polyamide PA
Elastomer Insert	Material
	Thermoplastic Elastomer (TPE)
Elastomer Insert	Material Properties
Mechanical Properties	
Shore Hardness:	73 A
Modulus of Elasticity:	16 N/mm ² at 23°C (acc. to ASTM D 412)
Tensile Stress:	8,3 N/mm ² (acc. to ASTM D 412)
Temperature Properties	
Temperature Resistance:	-40°C - +125°C
Chemical Properties	
weak acids, solvents	consistent
benzine, mineral oils	conditionally consistent
alcohol, other oils, seawater	consistent

6S	4	64	32	RI 32 (6S)	6S xxR	6032 xxR
			33,7	RI 33,7 (6S)	6S xxR	6033,7 xxR
			35	RI 35 (6S)	6S xxR	6035 xxR
			38,7	RI 38,7 (6S)	6S xxR	6038,7 xxR
			40	RI 40 (6S)	6S xxR	6040 xxR
			42	RI 42 (6S)	6S xxR	6042 xxR
			45,5	RI 45,5 (6S)	6S xxR	6045,5 xxR
			48	RI 48 (6S)	6S xxR	6048 xxR
			51	RI 51 (6S)	6S xxR	6051 xxR
			53,4	RI 53,4 (6S)	6S xxR	6053,4 xxR
56,4	RI 56,4 (6S)	6S xxR	6056,4 xxR			
7S	5	88	55	RI 55 (7S)	7S xxR	7055 xxR
			57	RI 57 (7S)	7S xxR	7057 xxR
			60	RI 60 (7S)	7S xxR	7060 xxR
			65	RI 65 (7S)	7S xxR	7065 xxR
			70	RI 70 (7S)	7S xxR	7070 xxR
			72	RI 72 (7S)	7S xxR	7072 xxR
8S	6	114	80	RI 80 (8S)	8S xxR	8080 xxR
			88,9	RI 88,9 (8S)	8S xxR	8088,9 xxR

Other sizes and diameters are available on request.

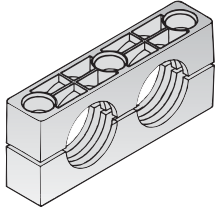
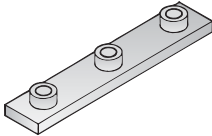
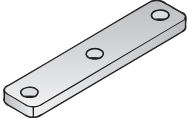

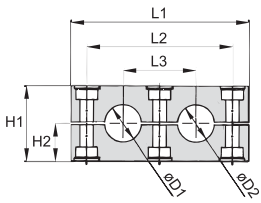
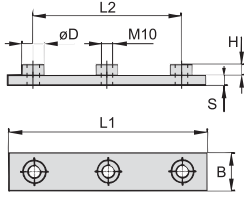
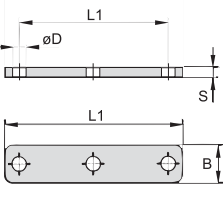
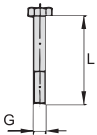
Attention!

The relation between tube O.D. and RI-clamp size does not match with that of standard series (profiled and smooth bore).

For dimensions of clamp bodies please refer to the dimensional tables of the standard series, respectively heavy series.

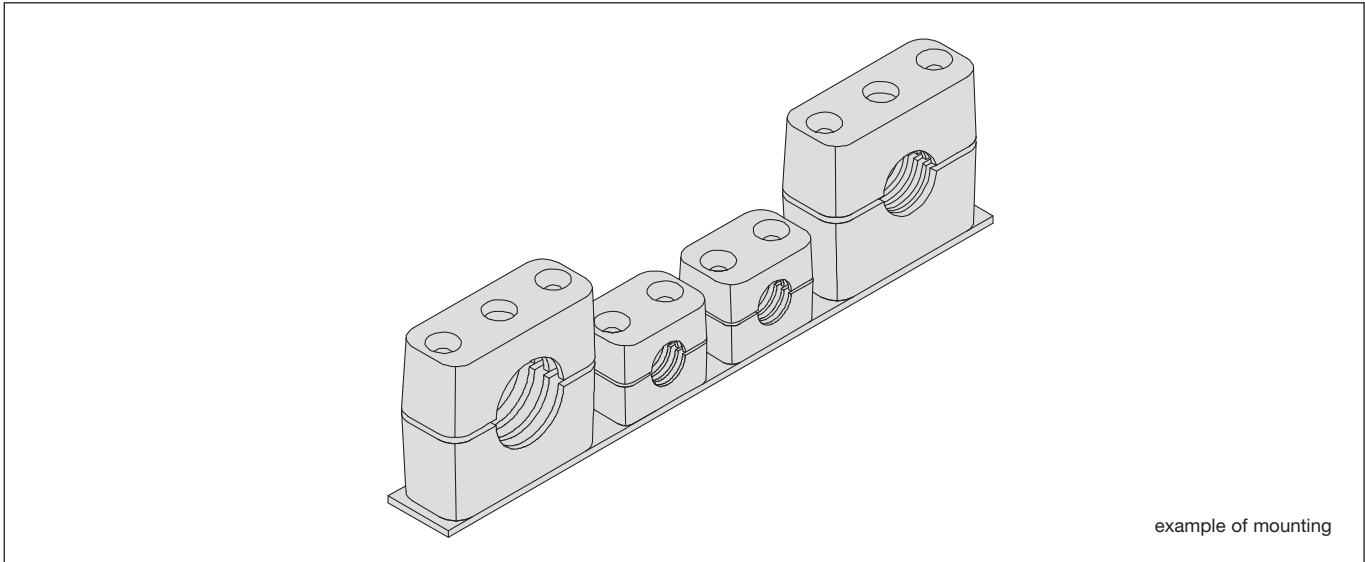
HEAVY SERIES - TWIN DESIGN

ORDER CODES / DIMENSIONS

MATERIAL & DESIGN OF CLAMP BODY				CLAMP BODY consisting of two clamp halves	WELD PLATE				COVER PLATE				HEXAGON HEAD BOLT AS								
Polypropylene, profiled inside, with tension clearance		PP			SPAD				DPAD				DIN 931/933								
Polyamide, profiled inside, with tension clearance		PA			DPAD																
MATERIAL & SURFACE FINISHING OF METAL PARTS					W1				W1					W1							
carbon steel St37, untreated		W1	SEE COMPONENT PART IDENTIFICATION				W1				W1										
carbon steel St37, phosphated		W2	ORDERING INFORMATION				SPAD *** ** WELD PLATE SPAD FIRST 2 DIGITS OF STAUFF GROUP (SEE BELOW) TYPE OF THREAD MATERIAL & SURFACE FINISHING				AS *** ** HEXAGON HEAD BOLT AS FIRST 2 DIGITS OF STAUFF GROUP (SEE BELOW) TYPE OF THREAD MATERIAL & SURFACE FINISHING										
carbon steel St37, zinc/nickel coated		W3	***,*/***, ** FIRST DIGIT OF STAUFF GROUP (SEE BELOW)	OUTSIDE DIAMETERS OF PIPES IN MM	MATERIAL & DESIGN OF CLAMP BODY	DPAD *** ** COVER PLATE DPAD FIRST 2 DIGITS OF STAUFF GROUP (SEE BELOW) MATERIAL & SURFACE FINISHING				W1											
stainless steel A2 - 1.4301/1.4305 (AISI304)		W4	STAUFF GROUP	OUTSIDE DIAMETER PIPE / TUBE / HOSE Ø D1/D2 IN MM	NOMINAL BORE PIPE IN INCH	AS *** ** HEXAGON HEAD BOLT AS FIRST 2 DIGITS OF STAUFF GROUP (SEE BELOW) TYPE OF THREAD MATERIAL & SURFACE FINISHING				W1											
stainless steel A4 - 1.4401/1.4571 (AISI316/316Ti)		W5	FIRST 2 DIGITS OF STAUFF GROUP (SEE BELOW)	OUTSIDE DIAMETER PIPE / TUBE / HOSE Ø D1/D2 IN INCH	NOMINAL BORE PIPE IN INCH	AS *** ** HEXAGON HEAD BOLT AS FIRST 2 DIGITS OF STAUFF GROUP (SEE BELOW) TYPE OF THREAD MATERIAL & SURFACE FINISHING				W1											
Metric Thread		M	STAUFF GROUP	OUTSIDE DIAMETER PIPE / TUBE / HOSE Ø D1/D2 IN MM	NOMINAL BORE PIPE IN INCH	AS *** ** HEXAGON HEAD BOLT AS FIRST 2 DIGITS OF STAUFF GROUP (SEE BELOW) TYPE OF THREAD MATERIAL & SURFACE FINISHING				W1											
UNC Thread		U	STAUFF GROUP	OUTSIDE DIAMETER PIPE / TUBE / HOSE Ø D1/D2 IN MM	NOMINAL BORE PIPE IN INCH	AS *** ** HEXAGON HEAD BOLT AS FIRST 2 DIGITS OF STAUFF GROUP (SEE BELOW) TYPE OF THREAD MATERIAL & SURFACE FINISHING				W1											
MATERIAL & SURFACE FINISHING (STANDARD DELIVERY / DETAILS ABOVE)			***,*/***, ** FIRST DIGIT OF STAUFF GROUP (SEE BELOW)				SPAD *** ** WELD PLATE SPAD FIRST 2 DIGITS OF STAUFF GROUP (SEE BELOW) TYPE OF THREAD MATERIAL & SURFACE FINISHING				AS *** ** HEXAGON HEAD BOLT AS FIRST 2 DIGITS OF STAUFF GROUP (SEE BELOW) TYPE OF THREAD MATERIAL & SURFACE FINISHING										
ORDERING INFORMATION			***,*/***, ** FIRST DIGIT OF STAUFF GROUP (SEE BELOW)				SPAD *** ** WELD PLATE SPAD FIRST 2 DIGITS OF STAUFF GROUP (SEE BELOW) TYPE OF THREAD MATERIAL & SURFACE FINISHING				AS *** ** HEXAGON HEAD BOLT AS FIRST 2 DIGITS OF STAUFF GROUP (SEE BELOW) TYPE OF THREAD MATERIAL & SURFACE FINISHING										
4S-D	19/19	3/4 / 3/4	4019/19 **				SPAD 4S ***				DPAD 4S **				AS 4S M ** (M10 x 60)						
	20/20		4020/20 **																		
	21,3/21,3	1/2 / 1/2	4021,3/21,3 **																		
	22/22	7/8 / 7/8	4022/22 **																		
	25,4/25,4	1 / 1	4025,4/25,4 **																		
	26,9/26,9	3/4 / 3/4	4026,9/26,9 **																		
5S-D	32/32	1 1/4 / 1 1/4	5032/32 **				SPAD 5S ***				DPAD 5S **				AS 5S M ** (M10 x 70)						
	33,7/33,7	1 / 1	5033,7/33,7 **																		
	38/38	1 1/2 / 1 1/2	5038/38 **																		
	40/40		5040/40 **																		
	42/42	1 1/4 / 1 1/4	5042/42 **																		
																					
STAUFF GROUP	OUTSIDE DIAMETER PIPE / TUBE / HOSE Ø D1/D2 IN MM	OUTSIDE DIAMETER PIPE / TUBE / HOSE Ø D1/D2 IN INCH	NOMINAL BORE PIPE IN INCH	L1	L2	L3	H1	H2	Width	L1	L2	B	S	H	ØD	L1	L2	B	S	ØD	G x L
4S-D	19/19	3/4 / 3/4		115	90	45	48	24	30	130	90	30	8	8,5	18	115	90	30	8	11	M10 x 60
	20/20																				
	21,3/21,3	1/2 / 1/2																			
	22/22	7/8 / 7/8																			
	25,4/25,4	1 / 1																			
26,9/26,9	3/4 / 3/4																				
5S-D	32/32	1 1/4 / 1 1/4		145	120	60	60	30	30	160	120	30	8	8,5	18	145	120	30	8	11	M10 x 70
	33,7/33,7	1 / 1																			
	38/38	1 1/2 / 1 1/2																			
	40/40																				
42/42	1 1/4 / 1 1/4																				

Multi Group Weld Plate RAP-MGR

for Standard Series Clamps, Groups 2 and 5



example of mounting

Clamp Body

	Group	ØD	Group																			
		in mm																				
	2	8	208 **	<table border="1"> <thead> <tr> <th>Group</th> <th>L1</th> <th>L2</th> <th>L3</th> <th>H</th> <th>s</th> </tr> </thead> <tbody> <tr> <td>2</td> <td>42</td> <td>26</td> <td>-</td> <td>33</td> <td>0,4</td> </tr> <tr> <td>5</td> <td>71</td> <td>52</td> <td>26</td> <td>58</td> <td>0,8</td> </tr> </tbody> </table>	Group	L1	L2	L3	H	s	2	42	26	-	33	0,4	5	71	52	26	58	0,8
		Group	L1		L2	L3	H	s														
		2	42		26	-	33	0,4														
		5	71		52	26	58	0,8														
		10	210 **																			
		12	212 **																			
		12,7	212,7 **																			
		13,5	213,5 **																			
	14	214 **																				
	15	215 **																				
	16	216 **																				
	17,2	217,2 **																				
	18	218 **																				
	20	520 ** - MGR																				
	21,3	521,3 ** - MGR																				
	22	522 ** - MGR																				
	23	523 ** - MGR																				
	25	525 ** - MGR																				
	26,9	526,9 ** - MGR																				
	28	528 ** - MGR																				
30	530 ** - MGR																					
32	532 ** - MGR																					
33,7	533,7 ** - MGR																					
35	535 ** - MGR																					
38	538 ** - MGR																					
40	540 ** - MGR																					
42	542 ** - MGR																					

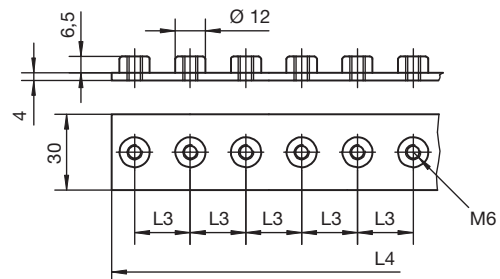
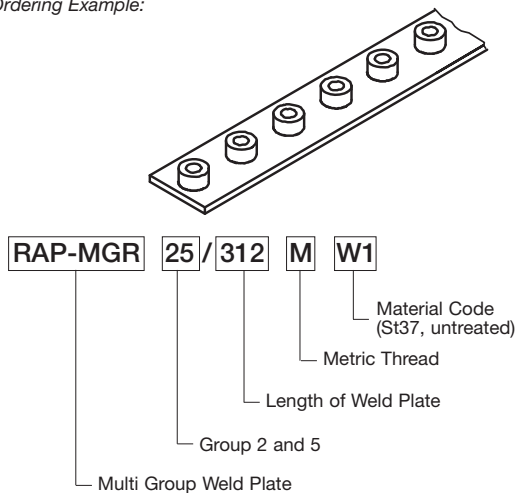
** = Clamp Body Material: PP Polypropylene PA Polyamide

Other diameters / materials / designs upon request.

All dimensions in mm.

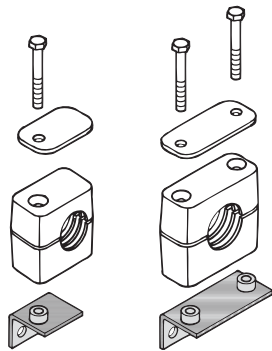
Multi Group Weld Plate

Ordering Example:



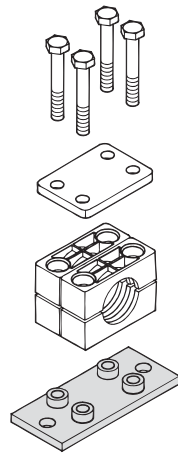
All dimensions in mm.	Number of Weld Nuts	L3	L4
RAP-MGR 25/156	6	26	156
RAP-MGR 25/234	9		234
RAP-MGR 25/312	12		312
RAP-MGR 25/390	15		390
RAP-MGR 25/520	20		520
RAP-MGR 25/700	27		700

Also available ...

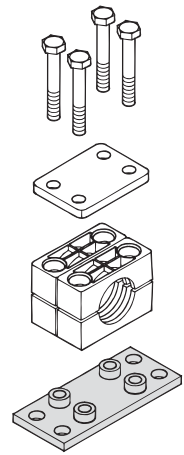


ANGLED WELD PLATES
TYPE WSP

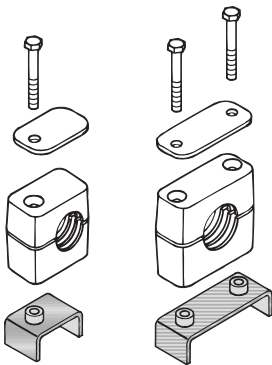
Group 3S - 9S



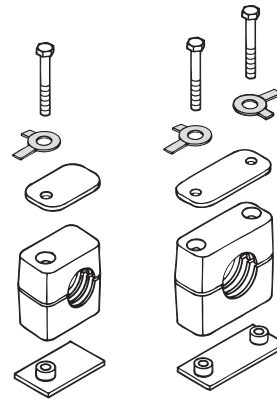
Group 10S - 12S



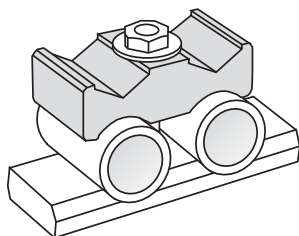
ELONGATED WELD PLATES FOR DOUBLE CLAMPS
TYPE SPAS/DUEB



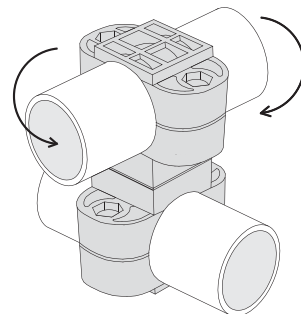
BRIDGE WELD PLATES
TYPE BSP



SAFETY WASHERS
TYPE SI-6,4 DIN 463 W3



AGRICULTURAL CLAMPS
TYPE AG



ADJUSTMENT CLAMPS

CONSULT STAUFF FOR FURTHER DETAILS.

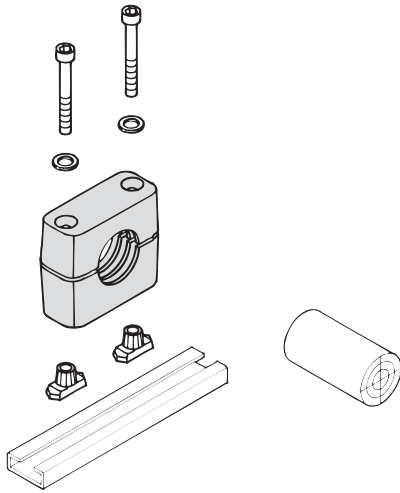
Clamps For Industrial Electric Applications And Electric Cables

ORDER CODE

430 PP (clamp body only)

(or other Standard-Series clamps with the corresponding diameter)

Accessories see Standard Series



For proximity switches according to DIN EN 60947-5-2 or similar

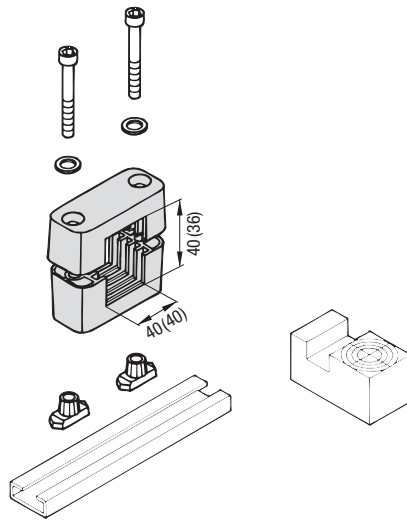
Proximity switch – **round** construction, 30 mm diameter – fastened with a Group 4 Standard-Series clamp mounted on mounting rail with hexagon rail nuts. Loosening of the bolts provides **axial and horizontal position adjustment**.

ORDER CODE

540-40 PP-VK (clamp body only)

540-36 PP-VK (clamp body only)

Accessories see Standard Series



For proximity switches according to DIN EN 60947-5-2 or similar

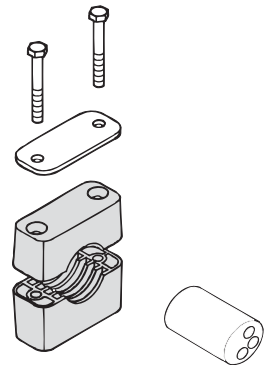
Proximity switch – **rectangular** construction, 40 mm square – fastened with Group 5 Standard-Series clamp mounted on mounting rail with hexagon rail nuts. Loosening of the bolts provides **axial and horizontal position adjustment**.

ORDER CODE

620-50 PP (Standard-Series)

6040-72 PP (Heavy-Series)

Accessories see Standard Series and Heavy Series



For clamping of electric cables:
STAUFF-Oval Clamps

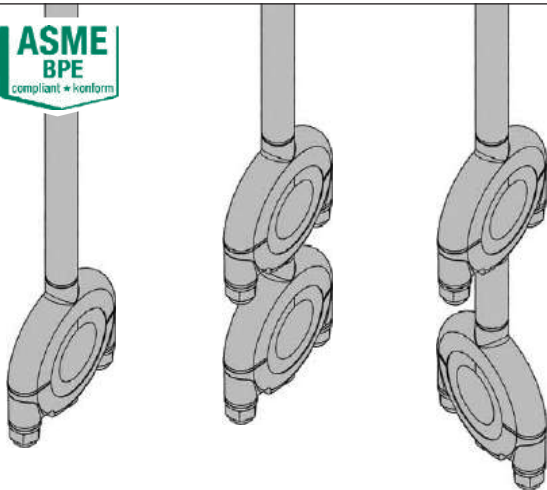
Group 6 Standard-Series for cable diameters between 20 and 50 mm.
Group 6 S Heavy-Series for cable diameters between 40 and 72 mm.

Bolt types:

Standard-Series: Hexagon Head Bolt in conjunction with cover plate. Socket Cap Screw with washer. Slotted Head Screw with washer.

Heavy Series: Hexagon Head Bolt in conjunction with cover plate. For varying cable diameters only the bolt length needs to be varied.

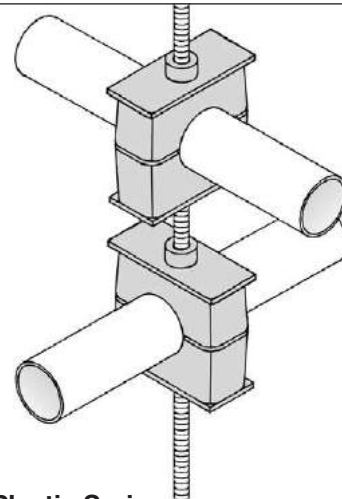
Hi-Clean Clamps for Industrial Clean Rooms



Hi-Clean Stainless Steel Series

- clamping of industrial pipes, tubes and other lines with outer diameters between 6,4 mm and 168,4 mm
- appropriately rounded-off edges and corners to prevent dirt adhesion; no exposed threads; plastic components, which comply with the specifications of the FDA (Food and Drug Administration of the United States)
- all metal components are manufactured from corrosion-resistant stainless steel, upon request with electrolytically high-gloss polished material surfaces

Please consult **STAUFF** for further details.



Hi-Clean Plastic Series

- clamping of industrial pipes, tubes and other lines with outer diameters between 6,4 mm and 152 mm
- smooth surfaces to prevent dirt adhesion
- all plastic components optionally available in Polypropylene (blue) and Santoprene (natural)
- all metal components are manufactured from corrosion-resistant stainless steel, upon request with electrolytically high-gloss polished material surfaces

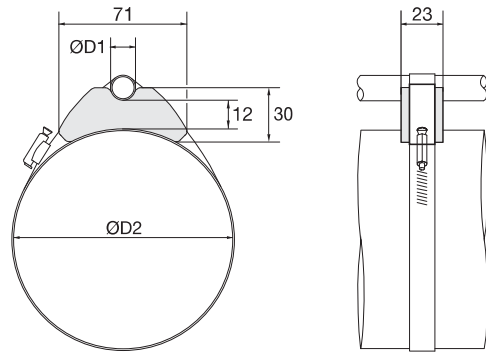
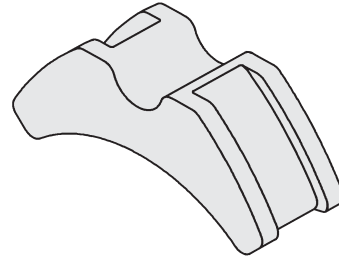
Please consult **STAUFF** for further details.

Saddle Clamps For Cylinder Supply Lines (Order Code ZR 518)

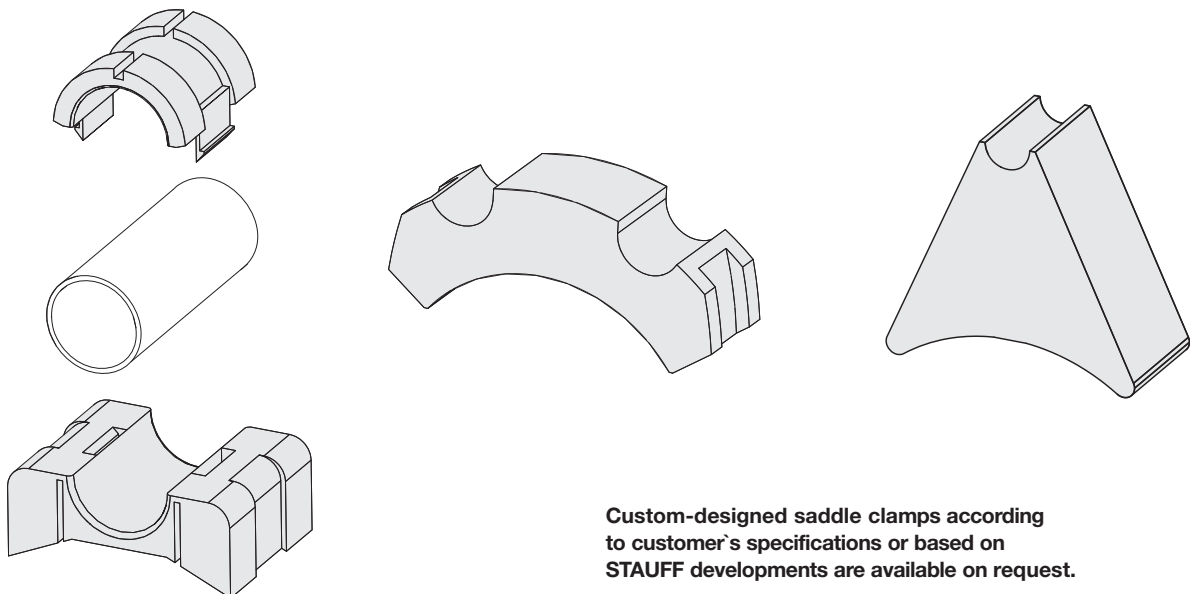
Material: **Thermoplastic Elastomer (TPE)**
 Shore Hardness: **75±5 A**
 Colour: **Black (Standard)**
 Order Code: **ZR 518**

Outer Diameter of Pipes in mm		Steel Strap Dimensions in mm	
ØD1	ØD2	Length	Width
10 - 22 Depending on ØD2	50 - 70	196 - 254	13
	60 - 80	225 - 284	13
	70 - 90	254 - 314	13
	80 - 105	284 - 359	13
	90 - 120	314 - 404	13
	105 - 140	359 - 464	13
	125 - 160	419 - 525	13
	145 - 180	479 - 586	13
	165 - 200	540 - 647	13

Steel Strap is not included in scope of delivery.



Saddle Clamps for Cylinder Supply Lines (Custom Designs)



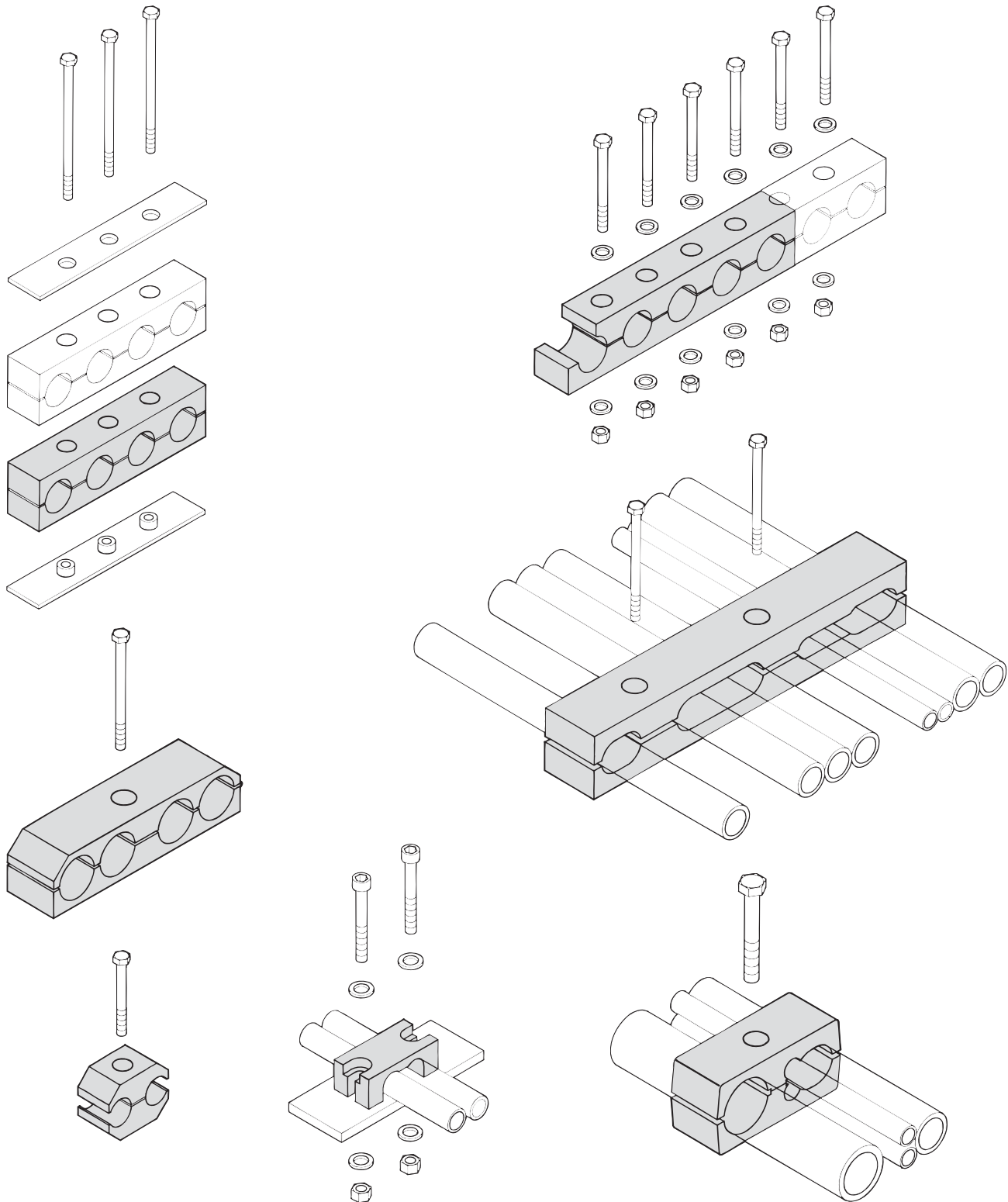
Custom-designed saddle clamps according to customer's specifications or based on STAUFF developments are available on request.

Custom-designed pipe clamps / hose clamps in addition to the Original-STAUFF-Clamp range according to customer's specifications or based on STAUFF developments.

MACHINED VERSION

Dimensions and designs acc. to customer's specifications.

Materials: plastics, metals, non-ferrous metals

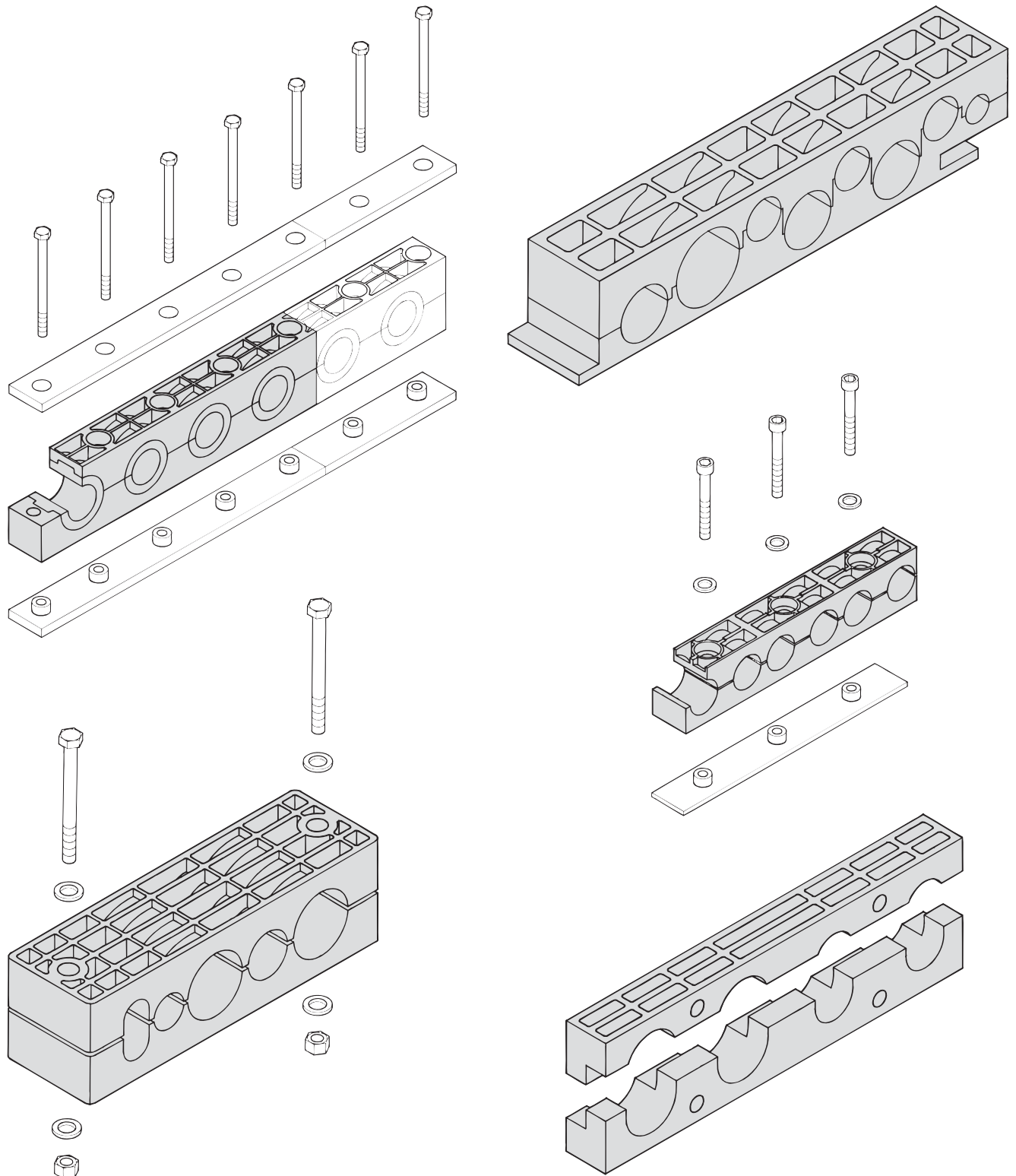


Accessories such as weld plates, cover plates, bolts as well as rubber inserts are available on request.

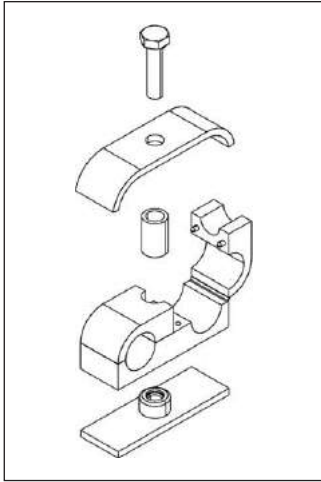
Custom-designed pipe, clamps / hose clamps in addition to the Original-STAUFF-Clamp range according to customer's specifications or based on STAUFF developments.

INJECTION MOULDING VERSIONS

Max. dimensions: Length 1000 mm · Height 80 mm · Width 70 mm
 Materials: Polypropylene, Polyamide
 Other thermoplastics on request.



Accessories such as weld plates, cover plates, bolts as well as rubber inserts are available on request.



FEATURES

- compact design
- quick and easy installation
- vibration and noise reducing
- UV, ozone and weathering resistant

MATERIALS AND SURFACES

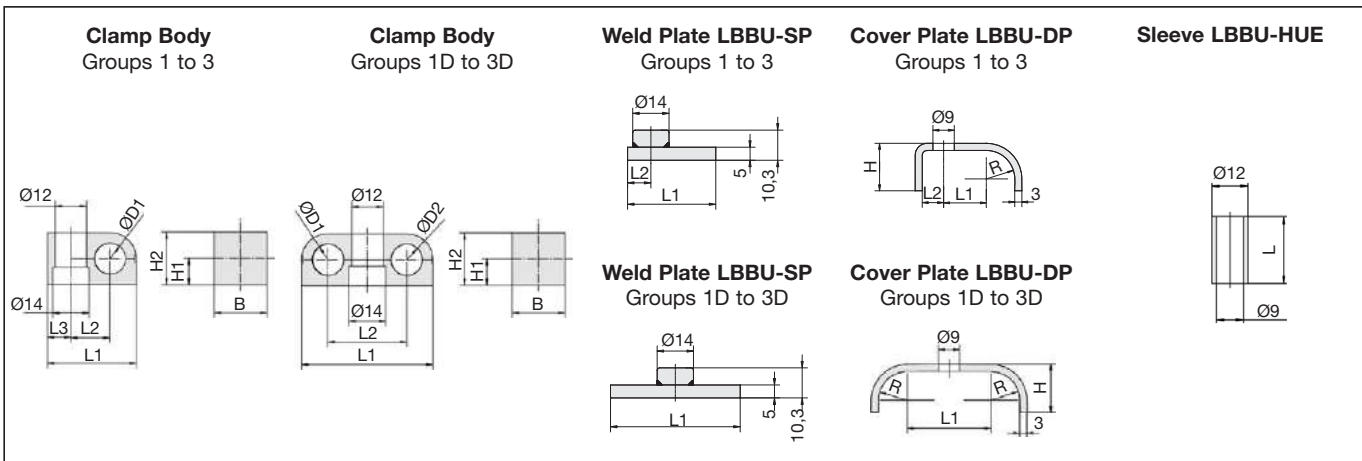
- **Clamp Body:** thermoplastic elastomer (87 Shore-A)
- **Weld Plate:** steel, phosphated (W2)
- **Hexagon Rail:** steel, untreated (W1)
- **Cover Plate and Accessories:** steel, zinc/nickel coated (W3)
- Further materials and surface finishings are available upon request.

TYPES


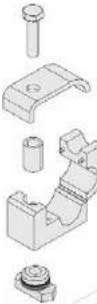
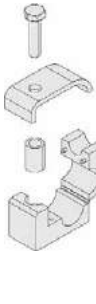
- **STAUFF Groups 1, 2 and 3:** single-line clamps
- **STAUFF Group 1D, 2D and 3D:** double-line clamps with identical diameters, also available with different diameters (upon request)
- also available with anti-twist feature

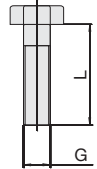
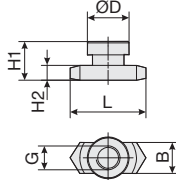
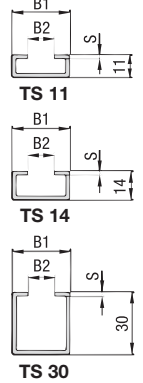
APPLICATIONS

- perfect for the vibration and noise reducing installation of pipes, tubes, hoses and cables for applications in which space is limited (Hydraulics and Pneumatics, Mechanical and Plant Engineering, Instrumentation)



MATERIALS & SURFACES (Delivery Standard)		Clamp Body with Film Hinge SA 87 Shore-A						Weld Plate LBBU-SP W2 steel, phosphated				Cover Plate LBBU-DP W3 steel, zinc/nickel coated					Sleeve LBBU-HUE W3 steel, zinc/nickel coated	
STAUFF Group	diameter ØD1 / ØD2 in mm (inch)	L1	L2	L3	H1	H2	B	Thread	L1	L2	Width	L1	L2	R	H	Width	L	
1	6 - 6,4 (1/4) - 8 (5/16) 9,5 (3/8) - 10 - 11 12 - 12,7	34	15	9	10	20	20	M8 (UNC 5/16"-18 on request)	34	9	20	15	9	10	16	20	Type of Mounting SP: 13,5 Type of Mounting SM: 12,8 Type of Mounting PM: 18,8	
2	4 - 6 - 6,4 (1/4) - 8 (5/16) 9,5 (3/8) - 10 - 11 - 12 12,7 (1/2) - 13,5 - 14 - 15 16 (5/8) - 17,2 - 18 19 (3/4) - 20	39	18	9	12	24	20	M8 (UNC 5/16"-18 on request)	39	9	20	18	9	12	20	20	Type of Mounting SP: 17,5 Type of Mounting SM: 16,8 Type of Mounting PM: 22,7	
3	21,3 - 22 (7/8) - 23 25 - 25,4 (1) - 28 30 - 32 (1 1/4)	57,5	23,5	15	20	40	30	M8 (UNC 5/16"-18 on request)	57,5	15	30	23,5	15	19,5	28	30	Type of Mounting SP: 33,5 Type of Mounting SM: 32,8 Type of Mounting PM: 38,8	
1D	4 - 6 - 6,4 (1/4) 8 (5/16) - 9,5 (3/8) - 10 11 - 12 - 12,7 (1/2)	50	30	-	10	20	20	M8 (UNC 5/16"-18 on request)	50	-	20	30	-	10	16	20	Type of Mounting SP: 13,5 Type of Mounting SM: 12,8 Type of Mounting PM: 18,8	
2D	4 - 6 - 8 (5/16) - 9,5 (3/8) 10 - 11 - 12 - 12,7 (1/2) 13,5 - 14 - 15 - 16 (5/8) 17,2 - 18 - 19 (3/4) - 20	59	35	-	12	24	20	M8 (UNC 5/16"-18 on request)	59	-	20	35	-	12	20	20	Type of Mounting SP: 17,5 Type of Mounting SM: 16,8 Type of Mounting PM: 22,7	
3D	21,3 - 22 (7/8) - 23 25 - 25,4 (1) - 28 30 - 32 (1 1/4)	86	47	-	20	40	30	M8 (UNC 5/16"-18 on request)	86	-	30	47	-	19,5	28	30	Type of Mounting SP: 33,5 Type of Mounting SM: 32,8 Type of Mounting PM: 38,8	

<p>TYPE OF MOUNTING SP with Weld Plate LBBU-SP</p>  <p><u>Ordering Codes for Clamp Combinations</u></p> <ul style="list-style-type: none"> example for STAUFF Group 2: LBBU SP 216 SA-DP-AS M8 W10 example for STAUFF Group 2D: LBBU SP 216/16 SA-DP-AS M8 W10 <p>consisting of: Hexagon Head Bolt AS Cover Plate LBBU-DP Sleeve LBBU-HUE Clamp Body LBBU Weld Plate LBBU-SP</p>	<p>TYPE OF MOUNTING SM with Hexagon Rail Nut SM</p>  <p><u>Ordering Codes for Clamp Combinations</u></p> <ul style="list-style-type: none"> example for STAUFF Group 2: LBBU SM 216 SA-DP-AS M8 W3 example for STAUFF Group 2D: LBBU SM 216/16 SA-DP-AS M8 W3 <p>consisting of: Hexagon Head Bolt AS Cover Plate LBBU-DP Sleeve LBBU-HUE Clamp Body LBBU Hexagon Rail Nut SM</p> <p>Mounting Rail to be ordered separately.</p>	<p>TYPE OF MOUNTING PM for Panel Mounting*</p>  <p><u>Ordering Codes for Clamp Combinations</u></p> <ul style="list-style-type: none"> example for STAUFF Group 2: LBBU PM 216 SA-DP-AS M8 W3 example for STAUFF Group 2D: LBBU PM 216/16 SA-DP-AS M8 W3 <p>consisting of: Hexagon Head Bolt AS Cover Plate LBBU-DP Sleeve LBBU-HUE Clamp Body LBBU</p> <p>without Weld Plate without Hexagon Rail Nut</p>
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Hexagon Head Bolt AS	Hexagon Rail Nut SM						Mounting Rail TS			
DIN EN 4014/4017 (DIN 931/933)	identical to Twin Series Hexagon Rail Nut SM 2-5D according to DIN 3015, Part 3									
										
W3 steel, zinc/nickel coated	W3 steel, zinc/nickel coated						W1 steel, untreated			
G x L	L	B	H1	H2	ØD	G	Nominal Size	B1	B2	S
Types of Mounting SP and SM: M8 x 25 (UNC 5/16"-18x1" on request)	25,5	10,4	13	5	14	M8	TS 11	28	11	2
Type of Mounting PM: M8 x 30 (UNC 5/16"-18x1"1/4 on request)							TS 14			
Types of Mounting SP and SM: M8 x 28 (UNC 5/16"-18x1"1/8 on request)							TS 30			
Type of Mounting PM: M8 x 35 (UNC 5/16"-18x1"3/8 on request)										
Types of Mounting SP and SM: M8 x 45 (UNC 5/16"-18x1"3/4 on request)										
Type of Mounting PM: M8 x 50 (UNC 5/16"-18x2" on request)										
Types of Mounting SP and SM: M8 x 25 (UNC 5/16"-18x1" on request)										
Type of Mounting PM: M8 x 30 (UNC 5/16"-18x1"1/4 on request)										
Types of Mounting SP and SM: M8 x 28 (UNC 5/16"-18x1"1/8 on request)										
Type of Mounting PM: M8 x 35 (UNC 5/16"-18x1"3/8 on request)										
Types of Mounting SP and SM: M8 x 45 (UNC 5/16"-18x1"3/4 on request)										
Type of Mounting PM: M8 x 50 (UNC 5/16"-18x2" on request)										

ORDERING CODES

Clamp Body	LBBU 2 15/15 SA M8	Clamp Body LBBU	STAUFF Group	Diameter ØD in mm	Material	Through Hole for Bolts M8
Weld Plate	LBBU-SP 2D M8 W2	Weld Plate LBBU-SP	STAUFF Group	Thread Type (M8)	Material & Surface	
Cover Plate	LBBU-DP 2D M8 W3	Cover Plate LBBU-DP	STAUFF Group	Through Hole for Bolts M8	Material & Surface	
Sleeve	LBBU-HUE 2/2D SP M8 W3	Sleeve LBBU-HUE	STAUFF Group	Type of Mounting (SP, SM or PM)	Through Hole for Bolts M8	Material & Surface
Hexagon Head Bolt	AS M8x28 W3	Hexagon Head Bolt AS	Bolt Dimensions G x L	Material & Surface		
Hexagon Rail Nut	SM 2-5D M W3	Hexagon Rail Nut SM	Thread Type (M8)	Material & Surface		
Mounting Rail	TS 11 - 1 W1	Mounting Rail TS	Height in mm	Length in m (1m or 2m)	Material & Surface	

MATERIAL - CLAMP BODY
SA thermoplastic elastomer (87 Shore-A)

MATERIALS & SURFACES - METAL PARTS
W1 steel, untreated
W2 steel, phosphated
W3 steel, zinc/nickel coated

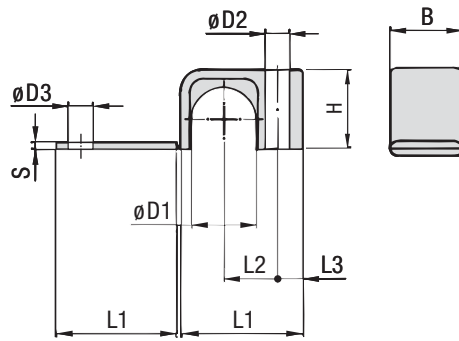
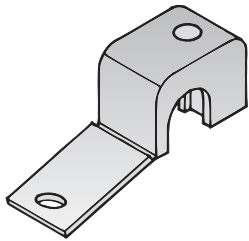
THREADS AND THROUGH HOLES
M8 Metric Thread M8 for parts without thread; through hole suitable for M8

U5/16
UNC Thread 5/16"-18 (on request) for parts without thread; through hole suitable for 5/16"-18 UNC

* Note: PM bolt lengths designed for a substructure integrated thread.

Applications: Pneumatics, Instrumentation and Automotive Technology, Machine Tool Industry, Lubrication, Mechanical Engineering

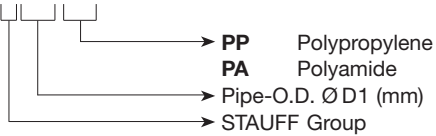
Type LB



STAUFF Group	Outside diameter Tube or Hose Ø D1 mm	inch	Nominal bore Pipe inch	L1	L2	L3	B	H	S	øD2	øD3	Clamp Material XX	Colour
1	03,2		1/8	22	9	6,5	12	10,5	2	6,8	7	PP PA	black yellow
	06												
	06,4	1/4											
	08												
2	09,5		3/8	27	11	7	16	15	2	6,8	7	PP PA	black yellow
	10		1/8										
	11,1												
	12												
3	12,7		1/2	34	15	7	20	22,5	2	6,8	7	PP PA	black yellow
	13,5		1/4										
	14												
	15												
	16	5/8											
	17,2		3/8										
18													
4	19		3/4	42	19	7	20	30	2	6,8	7	PP PA	black yellow
	20												
	21,3		1/2										
	22												
	25												
	25,4	1											

ORDER CODE

LB * xx**

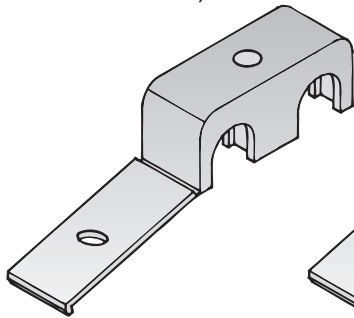


Other thermoplastics and diameters on request.

Applications: Pneumatics, Instrumentation and Automotive Technology, Machine Tool Industry, Lubrication, Mechanical Engineering

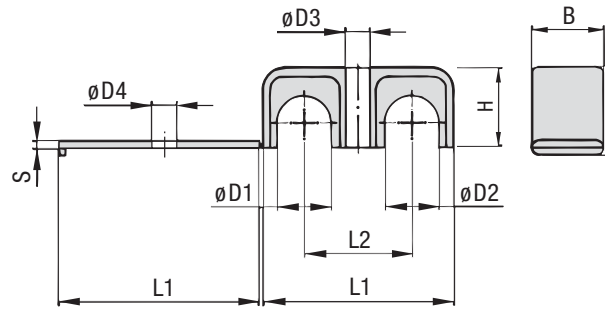
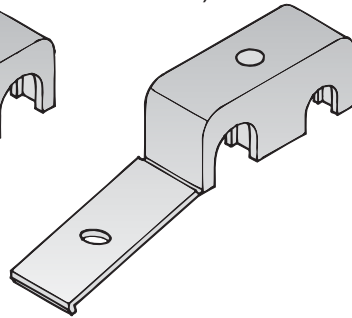
Type LBG

(identical diameters)



Type LBU

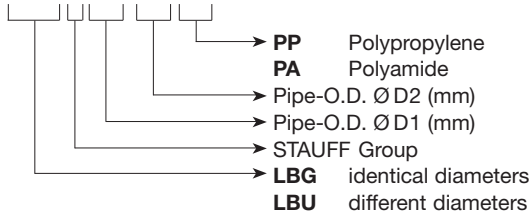
(different diameters)



STAUFF Group	Outside diameter Tube or Hose $\varnothing D1/D2$ mm		Nominal bore Pipe inch	L1	L2	B	H	S	$\varnothing D3$	$\varnothing D4$	Clamp Material XX	Colour
1	03,2/03,2	$1/8 / 1/8$		31	18	12	10,5	2	6,8	7	PP PA	black yellow
	06/06											
	06,4/06,4	$1/4 / 1/4$										
	08/08											
2	09,5/09,5	$3/8 / 3/8$		39	22	16	14,5	2	6,8	7	PP PA	black yellow
	10/10		$1/8 / 1/8$									
	11,1/11,1											
	12/12											
3	12,7/12,7	$1/2 / 1/2$		53	30	20	22,5	2	6,8	7	PP PA	black yellow
	13,5/13,5		$1/4 / 1/4$									
	14/14											
	15/15											
	16/16	$5/8 / 5/8$										
	17,2/17,2		$3/8 / 3/8$									
4	19/19	$3/4 / 3/4$		70	38	20	30	2	6,8	7	PP PA	black yellow
	20/20											
	21,3/21,3		$1/2 / 1/2$									
	22/22											
	25/25											
	25,4/25,4	1 / 1										

ORDER CODE

LBx */** xx**



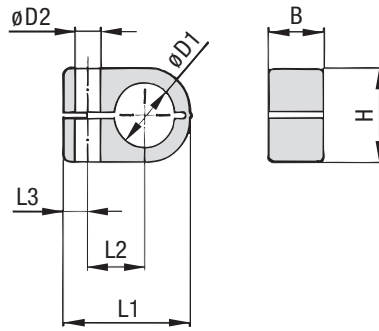
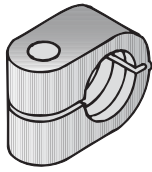
Type

- LBG** Double pipe clamp for two identical diameters
- LBU** Double pipe clamp for two different diameters

Other thermoplastics and diameters on request.

Applications: Pneumatics, Instrumentation and Automotive Technology, Machine Tool Industry, Lubrication, Mechanical Engineering. Also suitable for cables and hoses.

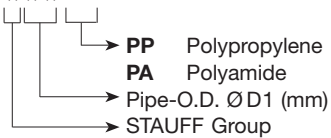
Type LN



STAUFF Group	Outside diameter Tube or Hose ØD1 mm	Nominal bore Pipe inch	L1	L2	L3	B	H	ØD2	Clamp Material XX	Colour
1	06		22	9	7	14,5	13,5	6,8	PP PA	green black
	06,4	1/4								
	08									
2	08		27	11	7	14,5	18,5	6,8	PP PA	green black
	09,5	3/8								
	10	1/8								
	12									
	12,7	1/2								
3	10	1/8	33	15	7	14,5	23,5	6,8	PP PA	green black
	12									
	12,7	1/2								
	13,5	1/4								
	14									
	16	5/8								
4	14		40	19	7	14,5	30,5	6,8	PP PA	green black
	15									
	16	5/8								
	17,2	3/8								
	18									
	19	3/4								
	20									
	21,3	1/2								
22										

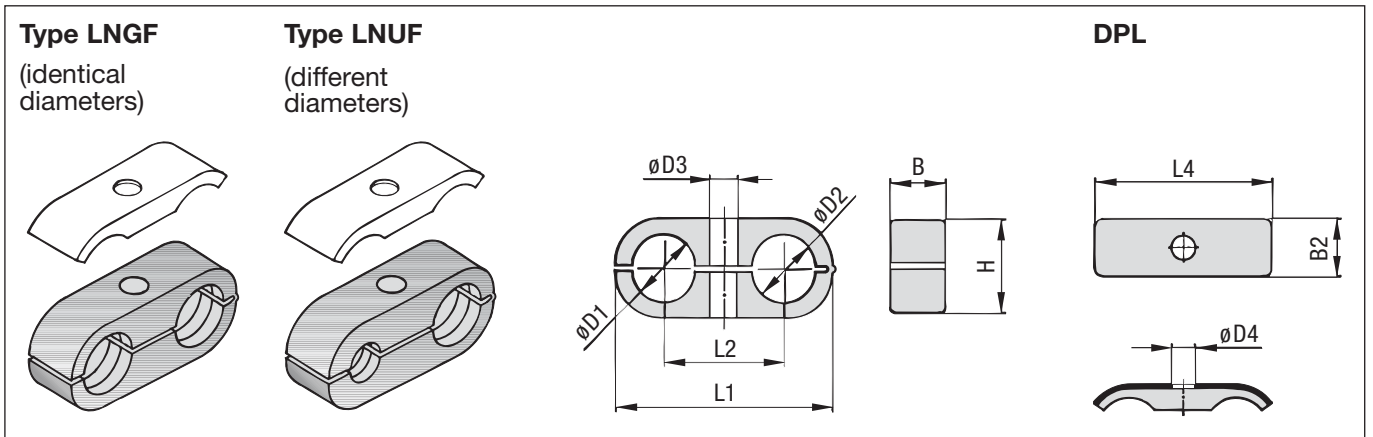
ORDER CODE

LN * xx**



Other thermoplastics and diameters on request.

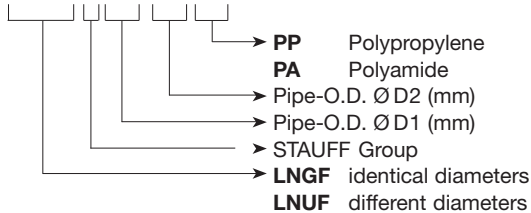
Applications: Pneumatics, Instrumentation and Automotive Technology, Machine Tool Industry, Lubrication, Mechanical Engineering. Also suitable for cables and hoses.



STAUFF Group	Outside diameter Tube or Hose Ø D1/D2		Nominal bore Pipe inch	L1	L2	B	H	øD3	L4	B2	øD4	Clamp Material XX	Colour	Cover Plate
	mm	inch												
1	06/06			32	18	14,5	13,5	6,8	29,5	15,5	6,8	PP PA	green black	DPL1
	06,4/06,4	1/4 / 1/4												
	08/08													
2	08/08			41	22	14,5	18,5	6,8	40	15,5	6,8	PP PA	green black	DPL2
	09,5/09,5	3/8 / 3/8												
	10/10		1/8 / 1/8											
	12/12													
3	12,7/12,7	1/2 / 1/2		54	30	14,5	23,5	6,8	51	16	6,8	PP PA	green black	DPL3
	10/10		1/8 / 1/8											
	12/12													
	13,5/13,5		1/4 / 1/4											
	14/14													
	15/15													
4	16/16	5/8 / 5/8		70	38	14,5	30,5	6,8	63,5	16	6,8	PP PA	green black	DPL4
	14/14													
	15/15													
	17,2/17,2		3/8 / 3/8											
	18/18													
	19/19	3/4 / 3/4												
	20/20													
	21,3/21,3		1/2 / 1/2											
22/22														

ORDER CODE

LNxF */** xx**



Type

LNGF Double pipe clamp for two identical diameters
LNUF Double pipe clamp for two different diameters (on request only)

Accessories

Cover Plate DPL
 Steel, zinc/nickel coated

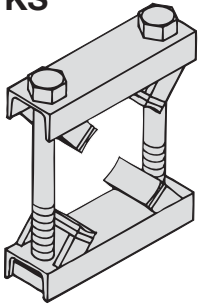
Information

Max. tightening torque: 2,5 Nm

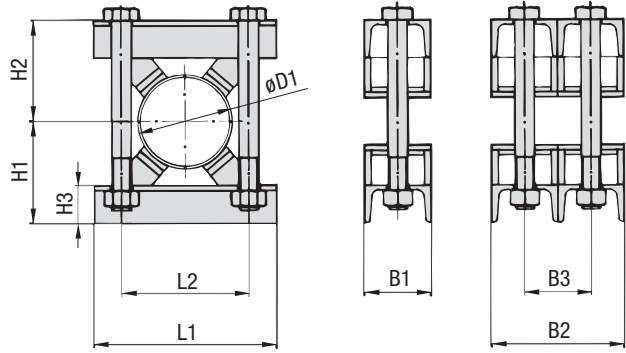
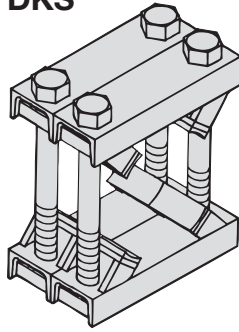
Other thermoplastics and diameters on request.

Two-part-weld-construction with plastic pads

KS

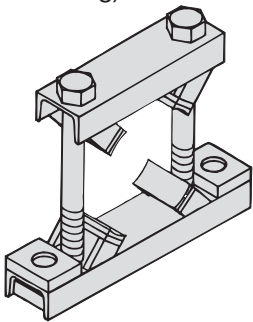


DKS



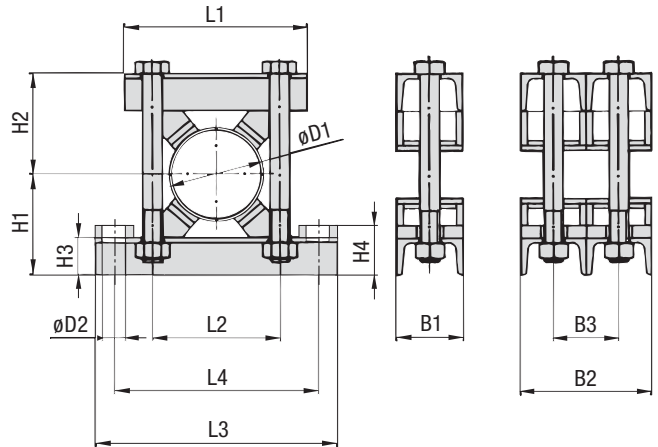
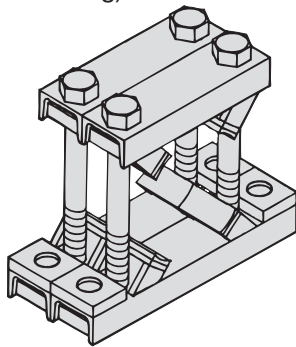
KSV

(for anchor bolt fastening)



DKSV

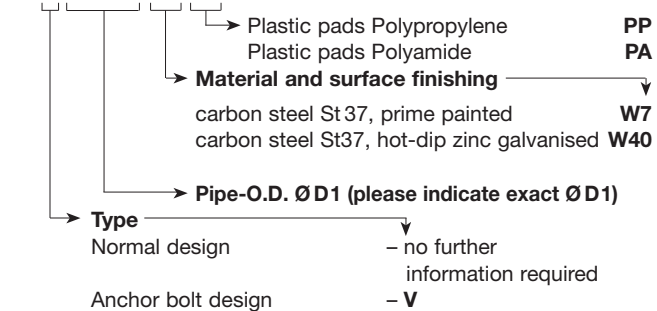
(for anchor bolt fastening)



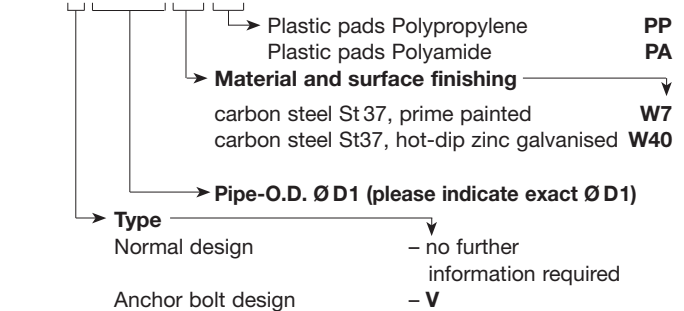
Pipe-O.D. Ø D1 in mm	L1	L2	L3	L4	H1	H2	H3	H4	B1	B2	B3	D2	Hexagon Head Bolt	Number of plastic pads
220 to 275	420	330	580	490	220	220	60	90	140	290	150	35	M30 x 420	4
276 to 325	460	370	620	530	240	240	60	90	140	290	150	35	M30 x 460	4
326 to 370	510	420	670	580	260	260	60	90	140	290	150	35	M30 x 500	4
371 to 425	570	480	750	640	290	290	60	90	140	290	150	35	M30 x 560	4
426 to 485	620	530	800	730	305	305	60	90	140	290	150	35	M30 x 590	4
486 to 550	680	590	860	790	370	370	60	90	140	290	150	35	M30 x 720	4
551 to 630	760	670	940	870	410	410	60	90	140	290	150	35	M30 x 800	5
631 to 715	845	755	1025	955	452	452	60	90	140	290	150	35	M30 x 884	5
716 to 800	940	850	1120	1050	495	495	60	90	140	290	150	35	M30 x 970	5

ORDER CODES

KSx ** xx xx**

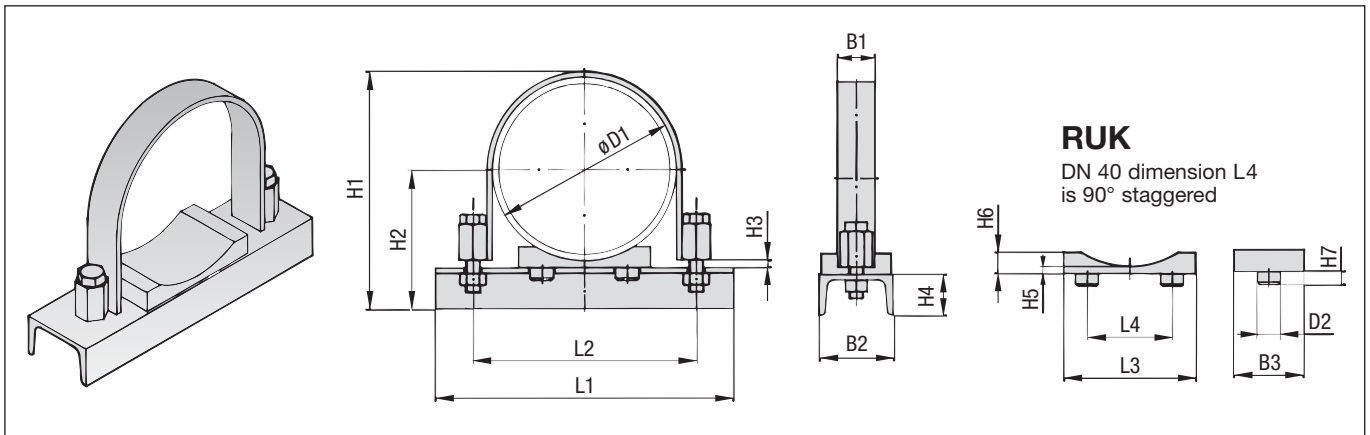


DKSx ** xx xx**



Other materials, surface finishings and diameters on request.

with plastic pipe saddle Type RUK and U-profile (to be used as fixed point clamps only!)

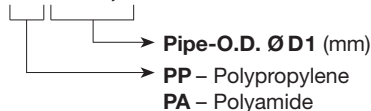


DN	Pipe-O.D. ØD1		Flat Steel U-Bolt Clamp FB						U-profile	Plastic Pipe Saddle RUK							Accessories															
	mm	Nominal Bore inch	L1	L2	H1	H2	H3	B1 Flat Steel	B2 x H4	L3	L4	B3	D2	H5	H6	H7	Hexagon Head Bolts															
40	48,3	1 1/2	100	76	95	67	5	20 x 3	DIN 1026 50 x 38	24	25	35	8	5	8	5	M10 x 40															
50	57	2	115	85	103	71,5				38	25	50	10		10	6																
	60,3			88	106	73,2				75	40	70	15		17																	
65	76,1	2 1/2	132	104	122	81	8	40 x 4	DIN 1026 80 x 45	140	90	75	25	8	26	10	M16 x 75															
80	88,9	3	160	122	146	97,5												40 x 6	210	165	190	119,5	172	197	123	320	260	277	161			
	100	108	4	180	147	171																								110	40 x 8	267
125	133	5	210	165	190	119,5												40 x 8	318	440	375	384	212	323,9	450	382	390	215	220	150		
	150			159	6	265																									201	220
175	193,7	8	320	260	277	161												40 x 8	320	260	277	161	267	380	325	328	186,5	273	385	330	334	189,5
	200			216	10	385																										
250	267	10	385	330	334	189,5												12	60 x 8	DIN 1026 100 x 50	220	150	75	30	8	32	10	M24 x 100				
	300			318	12	450																							382	390	215	12
350	355,6	14	480	420	421	236												12	60 x 8	DIN 1026 100 x 50	220	150	75	30	8	32	10	M24 x 100				
	400			406,4	16	550	470	472	261	12	60 x 8	DIN 1026 100 x 50	220	150	75	30	8												32	10	M24 x 100	
500	419	18	585	482	485	267,5	12	60 x 8	DIN 1026 100 x 50									220	150	75	30	8	32	10	M24 x 100							
	500			508	20	630				570	574	312	12	60 x 8	DIN 1026 100 x 50	220	150									75	30	8	32	10	M24 x 100	
500	521		640	585	587	319	12	60 x 8	DIN 1026 100 x 50	220	150	75						30	8	32	10	M24 x 100										

ORDER CODES

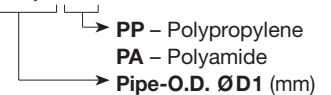
FB + RUK complete

FB + RUK/xx *,* W1**



Plastic Pipe Saddle

RUK *,* xx**



Clamp consisting of: (for FB + RUK only)

- 1 x Flat steel U-bolt clamp
- 1 x RUK/xx
- 1 x U-profile c/w nuts
- 2 x Hexagon head bolts DIN EN ISO 4014/4017

Material

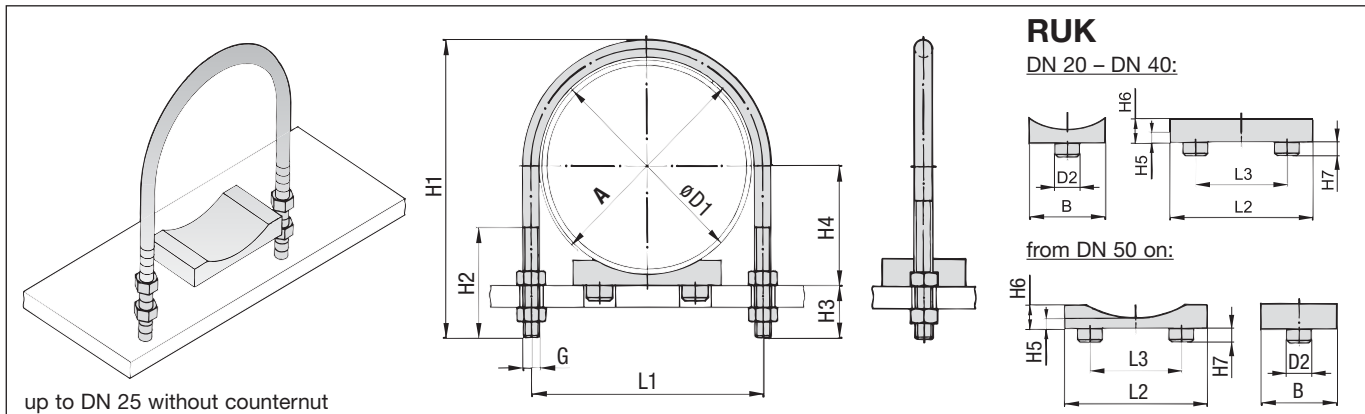
Metal parts: **W1:** carbon steel St 37, untreated

Other materials and surface finishings on request.

Information

Items are supplied non-assembled.

with plastic pipe saddle - short - RUK



up to DN 25 without counternut

DN	Pipe-O.D. ØD1		Round Steel U-Bolt RB							Plastic Pipe Saddle RUK						
	mm	Nominal Bore inch	A	L1	H1	H2	H3	H4	G	L2	L3	B	H5	H6	H7	D2
20	25		30	40	73,5	41	30	17,5	M10	35	25	24	5	8	5	8
	26,9	3/4						18,5								
25	30		38	48	81	48	30	20	M10	35	25	24	5	8	5	8
	33,7	1						22								
32	38		46	56	89	48	30	24	M10	35	25	24	5	8	5	8
	42,4	1 1/4						26,2								
40	44,5		52	62	100	55	35	27,2	M10	35	25	24	5	8	5	8
	48,3	1 1/2						29								
50	57		64	76	118	63	39	33,5	M12	38	25	24	5	8	5	8
	60,3	2						35,2								
65	76,1	2 1/2	82	94	135	77	43		M12	38	25	24	5	8	5	8
80	88,9	3	94	106	152	82	41	52,5	M12	38	25	24	5	8	5	8
100	108		120	136	190	105	49	62	M16	75	40	70	17	10	6	10
	114,3	4						65								
125	133		148	164	217	105	49	74,5	M16	75	40	70	17	10	6	10
	139,7	5						78								
150	159		176	192	247	105	51	87,5	M16	75	40	70	17	10	6	10
	168,3	6						92								
175	193,7		202	218	273	105	105		M16	75	40	70	17	10	6	10
200	216		228	248	311	125	59	116	M20	140	90	75	17	10	6	10
	219,1	8						117,5								
250	267		282	302	364	125	59	141,5	M20	140	90	75	17	10	6	10
	273	10						144,5								
300	318		332	352	418	125	62	167	M20	140	90	75	17	10	6	10
	323,9	12						170								
350	355,6		378	402	475	125	62	186	M20	140	90	75	17	10	6	10
	368	14						192								
400	406,4		428	452	526	145	70	211	M24	220	150	75	32	10	6	10
	419	16						217,5								
500	508		530	554	627	145	70	262	M24	220	150	75	32	10	6	10
	521	20						269								

ORDER CODES

RB + RUK complete
RBxx RUK/xx *,***

→ Pipe-O.D. ØD1 (mm)
 → PP - Polypropylene
 → PA - Polyamide

Material and surface finishing

- carbon steel St37, untreated **W1**
- carbon steel St37, zinc plated, thick film passivated **W66**
- stainless steel A4 - 1.4401/1.4571 (AISI 316/316Ti) **W5**
- carbon steel St 37, plastic coated **W6**

Clamp consisting of:
 1 x Round Steel U-Bolt, 4 x Nuts DIN EN ISO 4032,
 1 x Plastic Pipe Saddle RUK/xx

Round Steel U-Bolt
RBxx A * kompl**

→ Dimension A

Material and surface finishing

- carbon steel St37, untreated **W1**
- carbon steel St37, zinc plated, thick film passivated **W66**
- stainless steel A4 - 1.4401/1.4571 (AISI 316/316Ti) **W5**
- carbon steel St 37, plastic coated **W6**

Clamp consisting of:
 1 x Round Steel U-Bolt
 4 x Nuts DIN EN ISO 4032

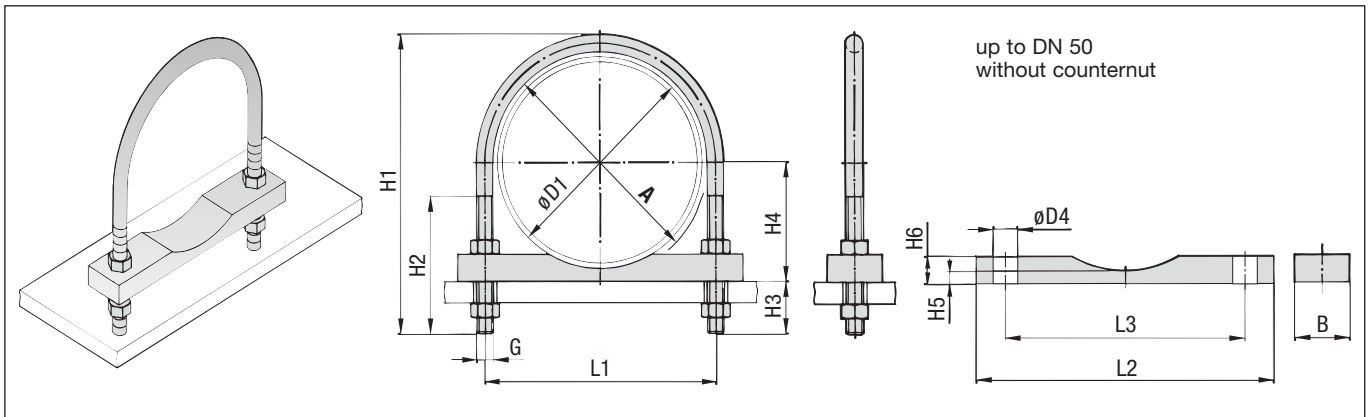
Plastic Pipe Saddle
RUK *,* xx**

→ PP - Polypropylene
 → PA - Polyamide
 → Pipe-O.D. ØD1 (mm)

Information

Items are supplied non-assembled. Other materials and surface finishings on request.

with plastic pipe saddle - long - RUL



DN	Pipe-O.D. ØD1		Round Steel U-Bolt RB							Plastic Pipe Saddle RUL					
	mm	Nominal Bore inch	A	L1	H1	H2	H3	H4	G	L2	L3	B	H5	H6	øD4
20	25	3/4	30	40	73,5	41	30	17,5	M10	75	40	30	12	11	
	18,5														
25	30	1	38	48	81	48	30	20	M10	80	48	30	5	12	
	22														
32	38	1 1/4	46	56	89	48	30	24	M10	90	56	30	5	12	
	26,2														
40	44,5	1 1/2	52	62	100	55	35	27,2	M12	95	62	35	5	15	
	29														
50	57	2	64	76	118	63	39	33,5	M12	110	76	35	5	15	
	35,2														
65	76,1	2 1/2	82	94	135	77	39	43	M12	135	94	35	5	15	
	54,5														
80	88,9	3	94	106	152	82	39	54,5	M12	145	106	35	5	15	
	64														
100	108	4	120	136	190	105	47	67	M16	190	136	40	10	20	
	76,5														
125	133	5	148	164	217	105	47	80	M16	220	164	40	10	20	
	91,5														
150	159	6	176	192	247	105	47	96	M16	250	192	40	10	20	
	109														
175	193,7	6	202	218	273	105	47	120	M20	315	248	40	10	20	
	121,5														
200	216	8	228	248	311	125	55	145,5	M20	370	302	40	10	20	
	148,5														
250	267	10	282	302	364	125	55	174	M20	420	352	40	10	20	
	177														
300	318	12	332	352	418	125	55	193	M24	480	402	40	10	20	
	199														
350	355,6	14	378	402	475	145	63	218	M24	540	452	40	10	20	
	224,5														
400	406,4	16	428	452	526	145	63	269	M24	640	554	40	10	20	
	276														
500	508	20	530	554	627	145	63	269	M24	640	554	40	10	20	
	276														

ORDER CODES

RB + RUL complete

RBxx RUL/xx *,***

- Pipe-O.D. ØD1 (mm)
- **PP** - Polypropylene
- **PA** - Polyamide

Material and surface finishing

- carbon steel St 37, untreated **W1**
- carbon steel St 37, zinc plated, thick film passivated **W66**
- stainless steel A4 - 1.4401/1.4571 (AISI 316/316Ti) **W5**
- carbon steel St 37, plastic coated **W6**

Clamp consisting of:

1 x Round Steel U-Bolt, 4 x Nuts DIN EN ISO 4032,
1 x Plastic Pipe Saddle RUL/xx

Round Steel U-Bolt

RBxx A * kompl**

- Dimension A

Material and surface finishing

- carbon steel St 37, untreated **W1**
- carbon steel St 37, zinc plated, thick film passivated **W66**
- stainless steel A4 - 1.4401/1.4571 (AISI 316/316Ti) **W5**
- carbon steel St 37, plastic coated **W6**

Clamp consisting of:

1 x Round Steel U-Bolt
4 x Nuts DIN EN ISO 4032

Plastic Pipe Saddle

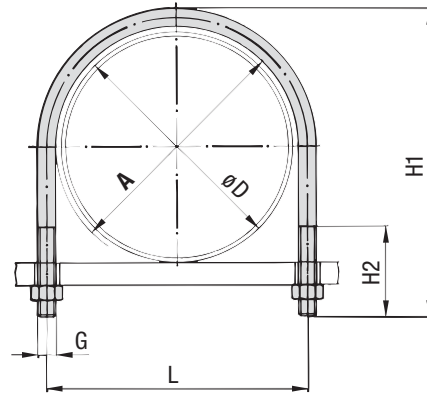
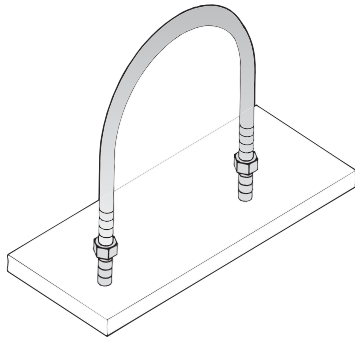
RUL *,* xx**

- **PP** - Polypropylene
- **PA** - Polyamide
- Pipe-O.D. ØD1 (mm)

Information

Items are supplied non-assembled. Other materials and surface finishings on request.

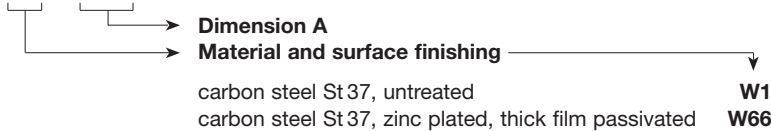
according to **DIN 3570, Type A**



DN	Pipe-O.D. ØD		Round Steel U-Bolt RBD				
	mm	Nominal Bore inch	A	L	H1	H2	G
20	25		30	40	70	40	M10
	26,9	3/4					
25	30		38	48	76		
	33,7	1					
32	38		46	56	86	50	
	42,4	1 1/4					
40	44,5		52	62	92		
	48,3	1 1/2					
50	57		64	76	109		M12
	60,3	2					
65	76,1	2 1/2	82	94	125		
80	88,9	3	94	106	138		
100	108		120	136	171	60	M16
	114,3	4					
125	133		148	164	191		
	139,7	5					
150	159		176	192	217		
	168,3	6					
175	193,7		202	218	249		
200	216		228	248	283	70	M20
	219,1	8					
250	267		282	302	334		
	273	10					
300	318		332	352	385		
	323,9	12					
350	355,6	14	378	402	435		
	368						
400	406,4	16	428	452	487	M24	
	419						
500	508	20	530	554	589		
	521						

ORDER CODE

RBDxx A * kompl**



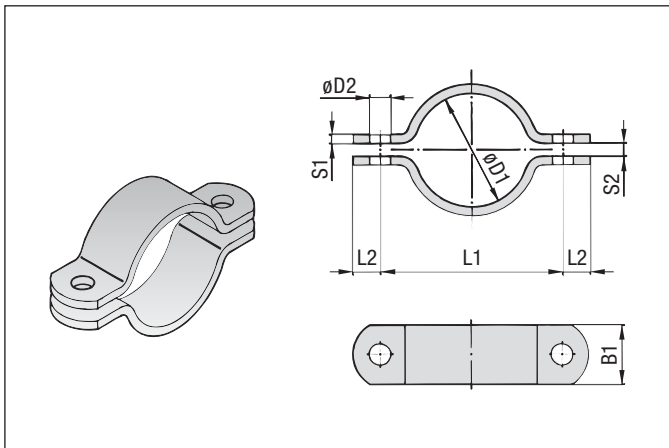
Clamp consisting of:
 1 x Round Steel U-Bolt
 2 x Nuts DIN EN ISO 4032

Information
 Items are supplied non-assembled.

Other materials and surface finishings on request.

METAL PIPE CLAMPS

according to **DIN 3567, Type A**



STAUFF Group ØD1	Nominal Size		L1	L2	S1	S2	D2	B1	Accessories Hexagon Head Bolts Hexagon Nuts						
	mm	Pipe inch													
20	15		57	15	5	7	11,5	30	M10 x 30 M10						
22			59												
25			62												
27	3/4	66													
30	25	1	68												
34			72												
38	32	1 1/4	76												
43			82												
45	40	1 1/2	84												
49			88												
57	50	2	104	18	6	9	14	40	M12 x 35 M12						
61			108												
77			65							2 1/2	122				
89	80	3	136												
108	100	4	172							24	8	11	18	50	M16 x 45 M16
115			178												
133	125		196												
140			204												
159			222												
169	150		232												
194			258												
216	200		280												
220			284												
267	250		342	30	8	14	23	60	M20 x 50 M20						
273			348												
318	300		392												
324			398												
368	350		444												
407	400		498							36	10	18	27	70	M24 x 60 M24
419			510												
521			500												

ORDER CODE

DIN 3567 A - * xx**

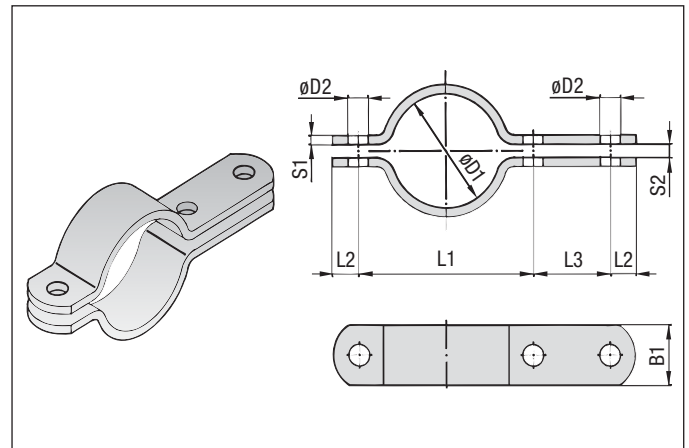
→ Material and surface finishing
→ STAUFF Group ØD1

MATERIAL AND SURFACE FINISHING

STAUFF Group 20–521 **W1** carbon steel St 37, untreated
1 clamp is consisting of 2 clamp halves

Other materials, surface finishings and diameters on request.
Bolts and nuts do not belong to the delivery standard.

according to **DIN 3567, Type B**



STAUFF Group ØD1	Nominal Size		L1	L2	L3	S1	S2	D2	B1	Accessories Hexagon Head Bolts Hexagon Nuts							
	mm	Pipe inch															
20	15		57	15	46	5	7	11,5	30	M10 x 30 M10							
22			59														
25			62														
27	20	3/4	66														
30	25	1	68														
34			72														
38	32	1 1/4	76														
43			82														
45	40	1 1/2	84														
49			88														
57	50	2	104	18	54	6	9	14	40	M12 x 35 M12							
61			108														
77			65								2 1/2	122					
89	80	3	136														
108	100	4	172								24	70	8	11	18	50	M16 x 45 M16
115			178														
133	125		196														
140			204														
159			222														
169	150		232														
194			258														
216	200		280														
220			284														
267	250		342	30	86	8	14	23	60	M20 x 50 M20							
273			348														
318	300		392														
324			398														
368	350		444														
407	400		498								36	104	10	18	27	70	M24 x 60 M24
419			510														
521			500														

ORDER CODE

DIN 3567 B - * xx**

→ Material and surface finishing
→ STAUFF Group ØD1

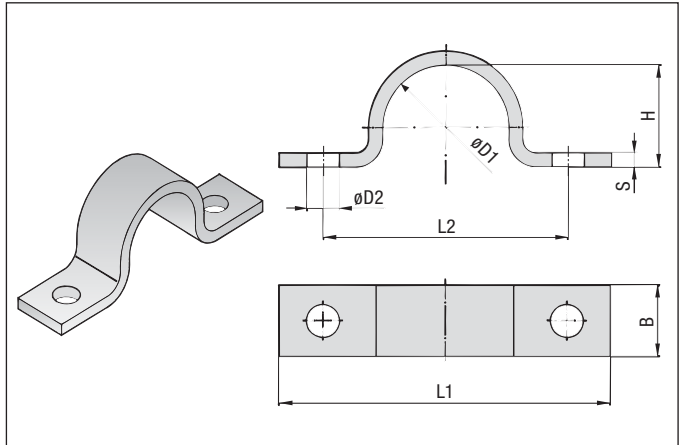
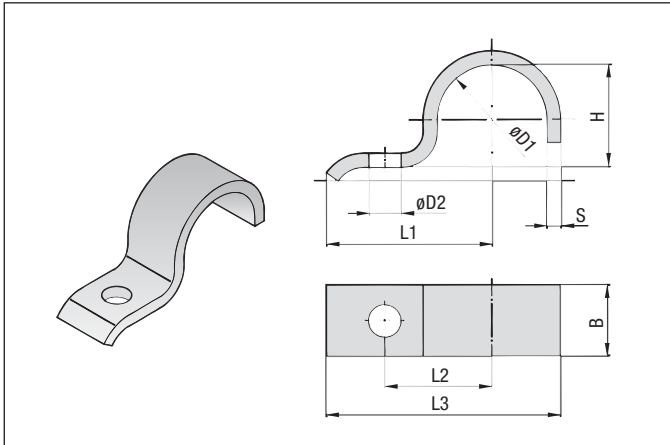
MATERIAL AND SURFACE FINISHING

STAUFF Group 20–521 **W1** carbon steel St 37, untreated
1 clamp is consisting of 2 clamp halves

Other materials, surface finishings and diameters on request.
Bolts and nuts do not belong to the delivery standard.

according to **DIN 1592**

according to **DIN 1593**



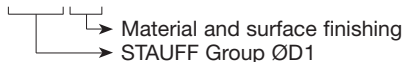
STAUFF Group ØD1	Diameter range	L1	L2	L3	H	D2	B	S
7	5,5 – 7	22	14	27,5	5	6,6	16	2
9	7 – 9	27	18	33,5	6		20	
13	9,5 – 13	40	25	49,5	9	11	25	3
15,5	13 – 15,5	41	26	52	12			
19	15,5 – 19	43	28	55,5	15			
23	20 – 23	51	35	67	19	14	30	5
26	23 – 26	52	36	70	22			
28,5	26 – 28,5	53	37	73	24			
31	28,5 – 31	55	39	75,5	27			
36	33 – 36	57	41	81	32	14	40	5
39	36 – 39	59	43	83,5	34			
43	39 – 43	68	48	94,5	38	18	40	5
46	43 – 46	70	50	98	41			
49	46 – 49	73	53	105,5	44	18	40	8
52*	49 – 52	76	56	110	47			
58	53 – 58	78	58	115	52			
61	58 – 61	80	60	118,5	57			

STAUFF Group ØD1	Diameter range	L1	L2	H	D2	B	S
7	5,5 – 7	44	28	5	6,6	16	2
9	7 – 9	48	32	6	6,6	20	2
13	9,5 – 13	52	36	9			
15,5	13 – 15,5	56	40	12			
19	15,5 – 19	60	44	15	11	25	3
23	20 – 23	82	56	19			
26	23 – 26	84	58	22			
28,5	26 – 28,5	90	64	24			
31	28,5 – 31			27			
36	33 – 36	106	80	32	11	30	5
39	36 – 39	110	84	34			
43	39 – 43	120	88	38	14	40	5
46	43 – 46	122	90	41			
49	46 – 49			44			
58	53 – 58	142	110	52	14	40	5
61	58 – 61			57			
71	67 – 71	152	120	66	18	40	8
77	73 – 77	176	136	72			
81	77 – 81	184	144	76	18	40	8
91	86 – 91	198	158	85			
103	99 – 103	214	174	98			
109	105 – 109	220	180	104			
115	110 – 115	226	186	109			

* similar to DIN 1592

ORDER CODE

DIN 1592-* xx**



MATERIAL AND SURFACE FINISHING

STAUFF Group 7 – 49 **W66** carbon steel St 37, zinc plated, thick film passivated
 STAUFF Group 52 – 61 **W1** carbon steel St 37, untreated (Surface finishing on request only)

Other materials, surface finishings and diameters on request.

ORDER CODE

DIN 1593-* xx**



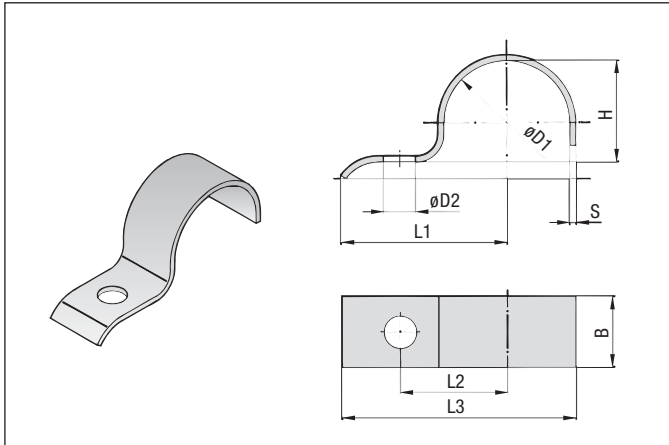
MATERIAL AND SURFACE FINISHING

STAUFF Group 7 – 77 **W66** carbon steel St 37, zinc plated, thick film passivated
 STAUFF Group 81 – 115 **W1** carbon steel St 37, untreated (Surface finishing on request only)

Other materials, surface finishings and diameters on request.

LIGHT SADDLES

according to **DIN 1596**

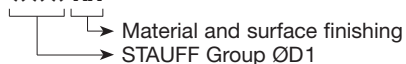


STAUFF Group ØD1	Diameter range	L1	L2	L3	H	D2	B	S
7	5,5 – 7	26	14	31,5	5	6,6	16	2
9	7 – 9	28	16	34,5	6			
13	9,5 – 13	30	18	38,5	9	6,6	20	2
15,5	13 – 15,5	32	20	41,75	12			
19	15,5 – 19	34	22	45,5	15	9	25	3
23	20 – 23	43	28	57,5	19			
26	23 – 26	44	29	60	22	11	30	3
28,5	26 – 28,5	47	32	64,25	24			
31	28,5 – 31			65,5	27			
33*	31 – 33	56	36	75,5	29	11	30	3
36	33 – 36	57	40	78	32			
39	36 – 39	59	42	81,5	34	14	40	4
43	39 – 43	61	44	85,5	38			
46	43 – 46	62	45	88	41	14	40	4
49	46 – 49	67	48	95,5	44			
52*	49 – 52	72	53	102	47	11	30	3
58	53 – 58	74	55	107	52			
61	58 – 61	77	58	111,5	56	11	30	3

* similar to DIN 1596

ORDER CODE

DIN 1596 - * XX**

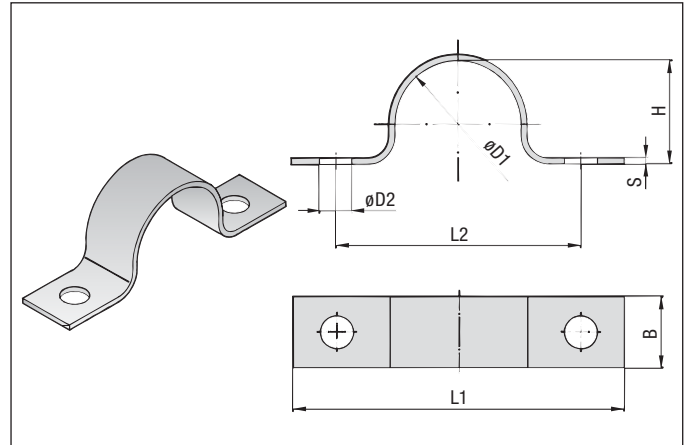


MATERIAL AND SURFACE FINISHING

STAUFF Group 7 – 61 **W66** carbon steel St 37, zinc plated, thick film passivated

Other materials, surface finishings and diameters on request.

according to **DIN 1597**

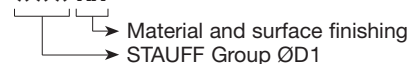


STAUFF Group ØD1	Diameter range	L1	L2	H	D2	B	S
7	5,5 – 7	44	28	5	5,5	16	1,5
9	7 – 9	48	32	6			
13	9,5 – 13	52	36	9	5,5	16	1,5
15,5	13 – 15,5	56	40	12			
19	15,5 – 19	60	44	15	6,6	20	2
23	20 – 23	76	56	19			
26	23 – 26	78	58	22	9	25	3
28,5	26 – 28,5	84	64	24			
31	28,5 – 31			27			
33*	31 – 33	92	72	29	9	25	3
36	33 – 36	104	80	32			
39	36 – 39	108	84	34	11	30	3
43	39 – 43	112	88	38			
46	43 – 46	114	90	41	11	30	3
49	46 – 49	118	90	44			
52*	49 – 52	134	106	47	11	30	3
58	53 – 58	138	110	52			
61	58 – 61			56			

* similar to DIN 1597

ORDER CODE

DIN 1597 - * XX**



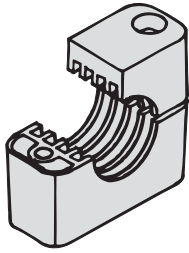
MATERIAL AND SURFACE FINISHING

STAUFF Group 7 – 61 **W66** carbon steel St 37, zinc plated, thick film passivated

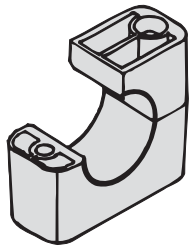
Other materials, surface finishings and diameters on request.

Design of Clamp Bodies

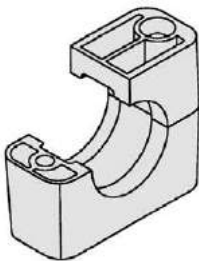
STANDARD SERIES



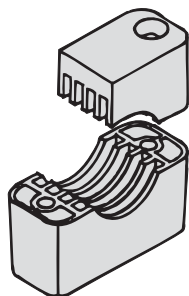
Standard design
– profiled inside –



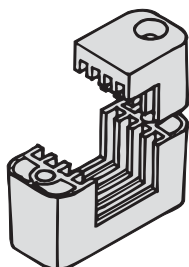
H-design
– smooth inside –
(recommended for hoses)



RI-design
for rubber inserts

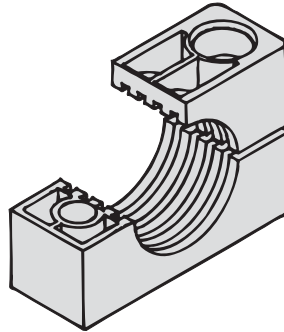


Oval design

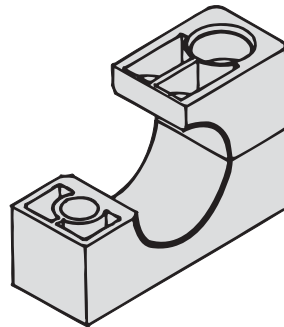


Rectangular design

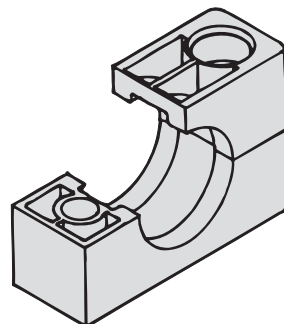
HEAVY SERIES



Standard design
– profiled inside –

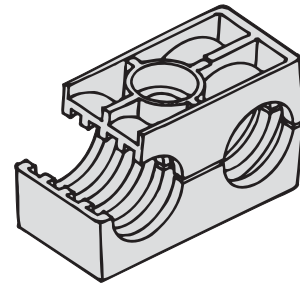


H-design
– smooth inside –
(recommended for hoses)

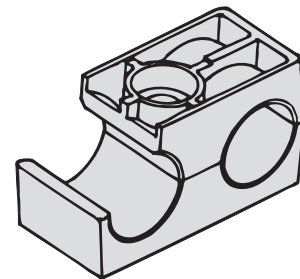


RI-design
for rubber inserts

TWIN SERIES



Standard design
– profiled inside –



H-design
– smooth inside –
(recommended for hoses)

Installation Information

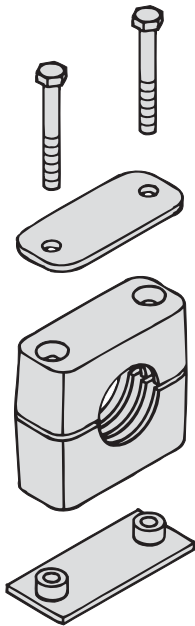
INSTALLATION ON WELD PLATES

STAUFF weld plates are available for the following Series:

- Standard Series
- Heavy Series
- Twin Series
- Special Clamps

For best alignment of STAUFF clamps it is recommended to mark their location first. Weld plates, push on bottom half of clamp, install pipe, mount top half of clamp and cover plate and bolt unit together.

In order to avoid damage to the clamp bodies it is recommended to mount the plastic clamp bodies after having welded the weld plates.



INSTALLATION ON MOUNTING RAILS

STAUFF mounting rails can be used with the following Series:

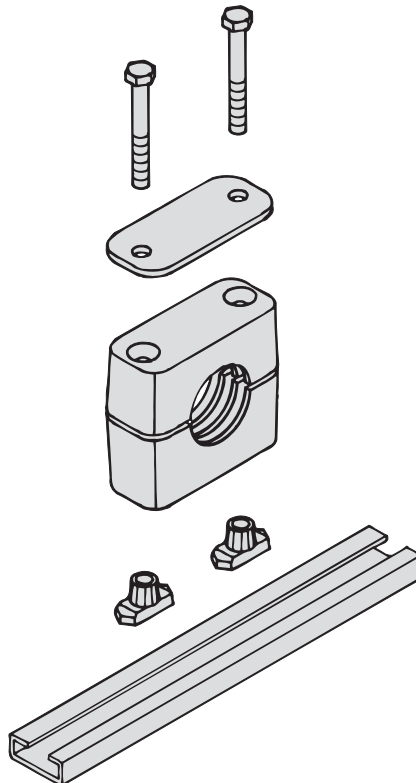
- Standard Series
- Heavy Series (Group 3S – 6S)
- Twin Series
- Special Clamps

STAUFF mounting rails are available in four different height sizes. The rails are either welded or bolted to the supporting construction.

For Standard and Twin Series insert hexagon rail nut and turn to lock.

For Heavy Series slide in rail nut. Push on bottom half of clamp, install pipe, mount top half of clamp and cover plate and bolt unit together.

Clamp units can be adjusted before being firmly bolted.



MULTI-LEVEL ASSEMBLY

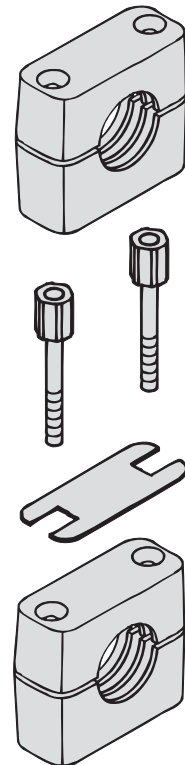
STAUFF multi-level pipe clamps permit easy stacking of several tubes or pipes of the same group.

(Twin Clamps group 2 – 5 allow stacking of different group sizes.)





The clamps are connected by stacking bolts (AF).

Safety plates (SIG/SIP/SI) inserted between the clamps prevent stacking bolts from turning.





STAUFF stacking assembly can be fitted to weld plates or to rails.



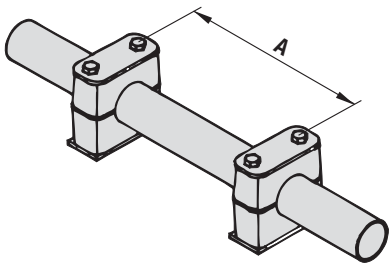
Standard Materials: Properties and Technical Information

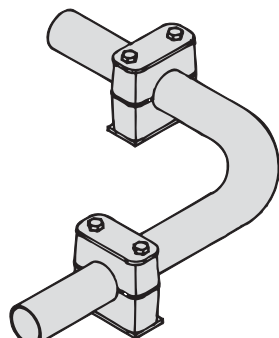
CLAMP BODIES				
MATERIAL	PP	PA	AL	SA
	POLYPROPYLENE Copolymeric	POLYAMIDE *1	ALUMINIUM AlSi12	THERMOPLASTIC ELASTOMER
COLOUR	 GREEN	 BLACK	 NATURAL	 BLACK
MECHANICAL PROPERTIES				
Tensile E-Module	1073 N/mm ² (ISO 527)	> 1400 N/mm ² (ISO 527)	> 65000 N/mm ²	113 N/mm ² at 23°C (ASTM D 412)
Notch Impact Strength	7,5 kJ/m ² at 23°C (acc. to Charpy / ISO 179/1eA)	> 15 kJ/m ² at 23°C (acc. to Charpy / ISO 179/1eA)	---	---
Low Temperature Notch Impact Strength	3,1 kJ/m ² at -30°C (acc. to Charpy / ISO 179/1eA)	> 3 kJ/m ² at -30°C (acc. to Charpy / ISO 179/1eA)	---	---
Tensile Strength at Yield (Tensile Strength)	25 N/mm ² (ISO 527)	> 55 N/mm ² (ISO 527)	> 150 N/mm ² (DIN EN 10002)	15,9 N/mm ² (ASTM D 412)
Ball Indentation Hardness (Brinell Hardness)	45,4 N/mm ² (ISO 2039-1)	> 65 N/mm ² (ISO 2039-1)	> 55 HBS	---
Shore Hardness	---	---	---	87A (ISO 868)
THERMAL PROPERTIES				
Recommended Temperature Range (Minimum / Maximum)	-30°C ... +90°C	-40°C ... +120°C	up to 300°C *2	-40°C ... +125°C
CHEMICAL PROPERTIES				
Weak Acids, Solvents	conditionally consistent	conditionally consistent	conditionally consistent	consistent
Benzine, Mineral Oils	conditionally consistent	consistent	consistent	conditionally consistent
Alcohol, Other Oils, Seawater	consistent	consistent	consistent	consistent
NOTES	<p>*1 The stated information has been defined for conditions according to ISO 1110.</p> <p>*2 Tensile strengths, fatigue strength (under reversed bending stress) and impact bending toughness rise constantly at decreasing temperature level, the breaking elongation normally decreases at a decreasing temperature level.</p> <p>The above stated information is shown without any obligation and does not release you from own test arrangements. Tightening Torques and Maximum Loads need to be considered (see page 55).</p>			
METAL PARTS				
Unless otherwise stated, all metal parts are made of carbon steel St37, surface finishing according to order code.				
Surface Finishings				
In addition to the standard surface finishings stated (if zinc/nickel coated usually Fe/Zn Ni (12...16) 4/A/T2 according to DIN 50962, if phosphated usually Fe/Znph r 10 according to DIN EN 12476) several alternative finishings are also available on request.				
Stainless Steel Metal Parts				
All metal parts are also available ex stock in two different stainless steel qualities:				
	Stainless Steel	A2 - 1.4301/1.4305 (AISI 304/303)		
	Stainless Steel	A4 - 1.4401/1.4571 (AISI 316/316 Ti)		
Threads				
All threaded parts are available with UNC-threads on request (see thread-chart on page 54).				

Special Materials: Properties and Technical Information

CLAMP BODIES			
PAVO	PA-FF	PPDA	PP6853
POLYAMIDE *1	POLYAMIDE *1	POLYPROPYLENE	POLYPROPYLENE
 GREY	 BLACK	 WHITE	 WHITE
MECHANICAL PROPERTIES			
1500 N/mm ² (ISO 527-1/-2)	1100 N/mm ² (ISO 527-1/-2)	2200 N/mm ² (ISO 527 / bei 23°C 50 mm/min)	1440 N/mm ² (ICE 60811-1-1)
35 kJ/m ² at 23°C (acc. to Charpy / ISO 179/1eA)	20 kJ/m ² at 23°C (acc. to Charpy / ISO 179/1eA)	11,8 kJ/m ² at 23°C (acc. to IZOD / ISO 180/1A)	16 kJ/m ² at 23°C (acc. to IZOD / ISO 179/1eU)
- - -	- - -	4,9 kJ/m ² bei -25°C (acc. to IZOD / ISO 180/1A)	- - -
45 N/mm ² (ISO 527-1/-2)	50 N/mm ² (ISO 527-1/-2)	15,1 N/mm ² (ISO 527 / bei 23°C 50 mm/min)	20,4 N/mm ² (ICE 60811-1-1)
100 N/mm ² (ISO 2039-1)	100 N/mm ² (ISO 2039-1)	- - -	- - -
- - -	- - -	- - -	- - -
THERMAL PROPERTIES			
-30°C ... +120°C	-30°C ... +120°C	-25°C ... +90°C	-25°C ... +90°C
SPECIAL PROPERTIES			
<p>PREVENTIVE FIRE PROTECTION</p> <p>Tested and approved according to UL94 ("Vertical Burning Test") - classification: 94V-0 (thickness: 0,4mm)</p> <p>Tested and approved according to DIN 5510, Part 2 - combustibility classification: S3 - smoke development classification: SR2 - dripping classification: ST2</p> <p>Tested and approved according to NF F 16-101 - classification: I3 / F2</p>	<p>PREVENTIVE FIRE PROTECTION</p> <p>Tested and approved according to DIN 5510, Part 2 - combustibility classification: S4 - smoke development classification: SR2 - dripping classification: ST2</p>	<p>PREVENTIVE FIRE PROTECTION</p> <p>Tested and approved according to Def Stan 07-247 - assessment: category B</p> <p>Approved by the UK MoD</p>	<p>PREVENTIVE FIRE PROTECTION</p> <p>Tested and approved according to BS 6853 - assessment: category 1a</p> <p>Compliant with the requirements of London Underground / Metronet (standard 2-01001-002: "Fire Safety Performance of Materials")</p> <p>Tested and approved according to DIN 5510, Part 2 - combustibility classification: S3 - smoke development classification: SR2 - dripping classification: ST2</p> <p>Tested and approved according to Def Stan 07-247 - assessment: category B</p>
NOTES			
*1 The stated information has been defined for conditions according to ISO 1110.			

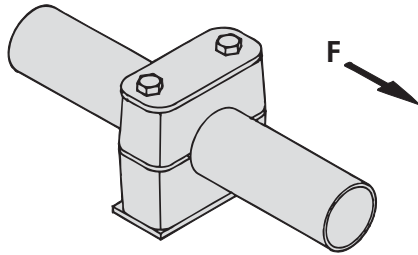
STANDARD PROPERTY CLASSES FOR BOLTS AND SCREWS			
Unless otherwise stated, the following property classes apply as standard for bolts and screws offered by STAUFF:			
Bolt type	Designation	Material and surface finishings	Standard property class
Hexagon Head Bolt	AS	W1, W2, W3	8.8
		W4	A2-70
		W5	A4-70
Socket Cap Screw	IS	W1, W2, W3	8.8
		W4	A2-70
		W5	A4-70
Slotted Head Screws	LI	W1, W2, W3	4.8
		W4	A2-70
		W5	A4-70
This information indicates the minimum requirements. Higher property classes are tolerable and available on request. Please consult STAUFF for further information.			

RECOMMENDED DISTANCE BETWEEN CLAMPS			
 <p>The recommended distances between clamps stated below are standard values and are valid for static loads.</p>			
Pipe-O.D. [mm]	Distance A [m]	Pipe-O.D. [mm]	Distance A [m]
6,0 – 12,7	1,0	114,0 – 168,0	5,0
12,7 – 22,0	1,2	168,0 – 219,0	6,0
22,0 – 32,0	1,5	219,0 – 324,0	6,7
32,0 – 38,0	2,0	324,0 – 356,0	7,0
38,0 – 57,0	2,7	356,0 – 406,0	7,5
57,0 – 75,0	3,0	406,0 – 419,0	8,2
75,0 – 76,1	3,5	419,0 – 508,0	8,5
76,1 – 88,9	3,7	508,0 – 521,0	9,0
88,9 – 102,0	4,0	521,0 – 558,0	10,0
102,0 – 114,0	4,5	558,0 – 800,0	12,5

BASIC MOUNTING INSTRUCTIONS	
	<p>Pipe bends should be supported by STAUFF clamps as near to the bends as possible.</p> <p>Furthermore, it is recommended to design these clamps as fixed point clamps.</p> <p>The first clamp should be placed directly behind the threaded connection or coupling. This protects the threaded connection or coupling from vibrations.</p> <p>If valves are incorporated in the pipelines, it is recommended that support is provided in front of and behind these valves</p>

THREAD CHART		
Metric vs. UNC Thread		
STANDARD SERIES		
STAUFF Group	Metric Thread	UNC Thread
1	M 6	1/4 – 20 UNC
1A		
2		
3		
4		
5		
6		
7		
8		
HEAVY SERIES		
STAUFF Group	Metric Thread	UNC Thread
3S	M 10	3/8 – 16 UNC
4S		
5S		
6S	M 12	7/16 – 14 UNC
7S	M 16	5/8 – 11 UNC
8S	M 20	3/4 – 10 UNC
9S	M 24	7/8 – 9 UNC
10S	M 30	1 1/8 – 7 UNC
11S	M 30	1 1/4 – 7 UNC
12S		
TWIN SERIES		
STAUFF Group	Metric Thread	UNC Thread
1D	M 6	1/4 – 20 UNC
2D	M 8	5/16 – 18 UNC
3D		
4D		
5D		

Tightening Torques And Maximum Loads In Pipe Direction



All tightening torques and maximum loads in pipe direction refer to clamps with cover plates and hexagon head bolts acc. to DIN EN ISO 4014/4017 (DIN 931/933).

The max. load in pipe direction (acc. to DIN 3015, part 10) is an average value, determined by three tests at 23° C with a steel pipe acc. to DIN EN 10220, St 37 – rolled surface – taking static friction into consideration.

Sliding starts when the shown values (F) are reached.

STANDARD SERIES (according to DIN 3015, part 1)

STAUFF Group	Hexagon Head Bolt DIN EN ISO 4014/4017 (DIN 931/933)	Polypropylene		Polyamide		Aluminum	
		Tightening torque [Nm]	Max. load in pipe direction F [kN]	Tightening torque [Nm]	Max. load in pipe direction F [kN]	Tightening torque [Nm]	Max. load in pipe direction F [kN]
1	M 6	8	0,6	10	0,6	12	3,5
1A		8	1,1	10	0,7	12	4,2
2		8	1,3	10	0,8	12	4,3
3		8	1,4	10	1,6	12	4,9
4		8	1,5	10	1,7	12	5,0
5		8	1,9	10	2,0	12	7,3
6		8	2,0	10	2,5	12	8,9

HEAVY SERIES (according to DIN 3015, part 2)

STAUFF Group	Hexagon Head Bolt DIN EN ISO 4014/4017 (DIN 931/933)	Polypropylene		Polyamide		Aluminum	
		Tightening torque [Nm]	Max. load in pipe direction F [kN]	Tightening torque [Nm]	Max. load in pipe direction F [kN]	Tightening torque [Nm]	Max. load in pipe direction F [kN]
3S	M 10	12	1,6	20	4,2	30	12,1
4S		12	2,9	20	4,5	30	15,1
5S		15	3,3	25	5,1	35	15,5
6S	M 12	30	8,2	40	9,3	55	29,4
7S	M 16	45	11,0	55	15,8	120	34,9
8S	M 20	80	14,0	150	21,0	220	50,0
9S	M 24	110	28,0	200	32,0	250	70,6
10S	M 30	180	40,0	350	48,0	500	84,5
11S		200	119,0	370	125,0	500	181,5
12S		270	168,0	450	180,0	600	244,5

TWIN SERIES (according to DIN 3015, part 3)

STAUFF Group	Hexagon Head Bolt DIN EN ISO 4014/4017 (DIN 931/933)	Polypropylene		Polyamide	
		Tightening torque [Nm]	Max. load in pipe direction F [kN]	Tightening torque [Nm]	Max. load in pipe direction F [kN]
1D	M 6	5	0,9	5	0,9
2D	M 8	12	2,1	12	2,2
3D		12	1,9	12	2,0
4D		12	2,7	12	2,9
5D		8	1,7	8	2,5

General Information / Terms of Liability

The outlined particulars are approximate values and are only valid as references, which are not binding, also with regard to possible protection of third parties, and they do not exempt you from your own examination of suitability of the products delivered by us. Therefore, these values can only be used in a limited sense for construction purposes. The application of the products is carried out outside our control possibilities and, therefore, is exclusively subject to your own area of responsibility. If, however, liability should be possible, it would be limited for all damages to the value of the goods supplied by us and in use by you. It goes without saying, that we guarantee the perfect quality of our products according to our general sales and delivery conditions.

Because of technical advances, dimensions subject to change without notification.
This catalog supersedes all previous catalogues.

Hydraulic & Offshore SUPPLIES



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