

CONNECT METAL PIPES WITH **STRAUB-METAL-GRIP** and **STRAUB-GRIP**

STRAUB-METAL-GRIP
and STRAUB-GRIP
pipe couplings are pipe
connections with axial
restraint for all metal
pipes and rigid plastics.

There are countless possible uses on almost all pipe systems due to the universal connection solution. The installation is performed on smooth-ended pipes without any pipe end machining.

The compact design allows pipe routing in very confined spaces.

Unexpected secondary stresses and arising inaccuracies for the pipe routing on-site are accommodated by the couplings due to the flexible design. This enables simple and quick installation that results in noticeable cost savings.



STRAUB-METAL-GRIP

- Outside diameter: 30.0 up to 609.6mm
- Temperature: -30°C up to +100°C
- Sealing sleeve: EPDM, NBR



STRAUB-GRIP

- Outside diameter: 25.0 up to 711.2 mm
- Temperature: -20°C up to +180°C
- Sealing sleeve: EPDM, NBR, FPM/FKM



FIRE RESISTANT & SAFE

STRAUB-FIRE-FENCE

The original STRAUB fire protection system for applications where fire protection is required.

With ISO 19921 and ISO 19922, the STRAUB-FIRE-FENCE types meet the highest global standardised requirements for fire and temperature tests.

STRAUB FIRE-FENCE is the optimum solution for fire extinguishing equipment and for many different systems with increased fire protection requirements such as in civil engineering (tunnels), for shipyards for seagoing vessels with various requirements and other applications.

The STRAUB-FIRE-FENCE system is based on the standard types of the STRAUB-GRIP and STRAUB-FLEX series. An intumescent plastic is also firmly bonded to the outside of the casing. In the event of fire, this swells and protectively encloses the pipe coupling - and retains the complete functional capability in doing so.



Thus all advantages of the STRAUB pipe couplings are combined with fire protection and give the user a simple, space-saving, state-of-the-art pipe connection.

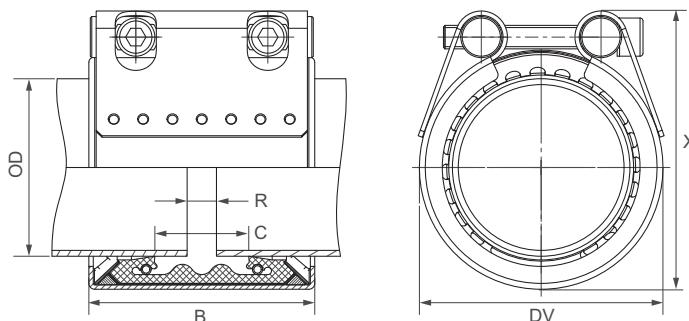
- Outside diameter: 26.9 up to 457.2 mm
- Temperature: -30°C up to +180°C
- Sealing sleeve: EPDM, NBR, FPM/FKM



Already installed STRAUB couplings can be easily and quickly converted to the STRAUB-FIRE-FENCE variant using the separately available retrofit kit; available for the STRAUB-GRIP, STRAUB-METAL-GRIP and STRAUB-FLEX product groups.

Components / Materials	W1	W2	W4	W5
Casing		AISI 316 L		AISI 316 L or similar
Bolts		AISI 4135		A4 - 80
Bars		AISI 12L14, galvanised		AISI 316 L or similar
Anchoring rings		AISI 301		AISI 301
Strip insert (option)		AISI 316 L or similar / PVDF		AISI 316 L or similar / PVDF

Sealing sleeve EPDM	Temp.: -30°C up to +100°C	Medium: all qualities of water, waste water, air, solids and chemical products
Sealing sleeve NBR	Temp.: -20°C up to +80°C	Medium: water, gas, oil, fuel and other hydrocarbons



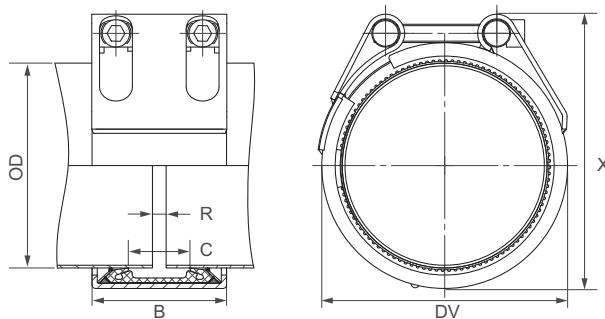
OD [mm]	Clamping range [mm]	PN [bar]	PN [bar]	B [mm]	C [mm]	DV [mm]	X [mm]	R without strip insert [mm]	R with strip insert [mm]	Torque rate [Nm]	Allen head [mm]	Thread M...
30.0	29.5 - 30.5	67	16	46/67	18	47	56	5	5	10	6	8
33.7	33.2 - 34.2	62	16	46/67	18	52	63	5	5	10	6	8
38.0	37.5 - 38.5	58	16	61	19	58	73	5	5 - 10	15	6	8
42.4	41.9 - 42.9	53	16	61	20	62	76	5	5 - 10	15	6	8
44.5	44.0 - 45.0	48	16	61	20	64	80	5	5 - 10	15	6	8
48.3	47.8 - 48.8	44	16	61	20	68	83	5	5 - 10	15	6	8
54.0	53.5 - 54.5	39	16	77	38	74	89	5	5 - 15	15	6	8
57.0	56.4 - 57.6	37	16	77	32	77	92	5 - 10	5 - 25	15	6	8
60.3	59.7 - 60.9	37	16	77	32	82	95	5 - 10	5 - 25	15	6	8
63.5	62.9 - 64.1	37	16	77	32	84	98	5 - 10	5 - 25	15	6	8
73.0	72.2 - 73.8	56	16	94	39	95	117	5 - 10	5 - 25	35	8	10
76.1	75.3 - 76.9	56	16	94	39	100	117	5 - 10	5 - 25	35	8	10
84.0	83.2 - 84.8	45	16	94	39	112	123	5 - 10	5 - 25	35	8	10
88.9	88.0 - 89.8	41	16	94	39	117	123	5 - 10	5 - 25	35	8	10
104.0	103.0 - 105.0	37	16	94	39	133	151	5 - 10	5 - 25	35	8	10
108.0	106.9 - 109.1	35	16	94	39	133	151	5 - 10	5 - 25	35	8	10
114.3	113.2 - 115.4	34	16	94	39	139	157	5 - 10	5 - 25	35	8	10
129.0	127.7 - 130.3	33	16	108	43	160	182	5 - 15	5 - 25	60	10	12
133.0	131.7 - 134.3	33	16	108	43	160	182	5 - 15	5 - 25	60	10	12
139.7	138.3 - 141.1	32	16	109	43	168	191	5 - 15	5 - 25	60	10	12
154.0	152.5 - 155.5	32	16	109	51	186	210	5 - 15	5 - 25	60	10	12
159.0	157.4 - 160.6	31	16	109	43	187	210	5 - 15	5 - 25	60	10	12
168.3	166.6 - 170.0	29	16	109	43	200	220	5 - 15	5 - 25	60	10	12
219.1	216.9 - 221.3	26	16	150	60	259	288	5 - 15	5 - 35	100	14	16

REFER TO MINIMUM WALL THICKNESS (see page 105)

Remarks:

- Follow fitting instructions
- PN (Icon) = working pressure considering the application loads
Test pressure = PN (Icon) x 1.5 (for example industry, water supply etc.)
- PN (Icon) = nominal pressure, includes four times safety factor (e.g. shipbuilding)
- The pressure values are valid on radial rigid carbon steel pipes under static loads
- Strip inserts are optional accessories (see page 87)
- Additional sealing sleeves and temperature ranges on request

Components / Materials	W1	W2	W4	W5
Casing	AISI A738, hot-dip galvanised			
Bolts	AISI 4135			
Bars	AISI 12L14, galvanised			
Anchoring rings	AISI 301			
Strip insert (option)	AISI 316 L or similar / PVDF			
Sealing sleeve EPDM	Temp.: -20°C up to +100°C Medium: all qualities of water, waste water, air, solids and chemical products			
Sealing sleeve NBR	Temp.: -20°C up to +80°C Medium: water, gas, oil, fuel and other hydrocarbons			



OD [mm]	Clamping range [mm]	PN [bar]	PN [bar]	B [mm]	C [mm]	DV [mm]	X [mm]	R without strip insert [mm]	R with strip insert [mm]	Torque rate [Nm]	Allen head [mm]	Thread M...
180.0	178.0 - 182.0	29	16	148	67	225	256	5 - 15	5 - 35	150	17	20
193.7	192.0 - 195.5	29	16	148	67	239	270	5 - 15	5 - 35	150	17	20
200.0	198.0 - 202.0	28	15	148	67	245	276	5 - 15	5 - 35	180	17	20
206.0	204.0 - 208.0	28	15	148	67	251	282	5 - 15	5 - 35	180	17	20
244.5	242.0 - 247.0	27	14	148	67	290	330	5 - 15	5 - 35	180	17	20
267.0	264.5 - 269.5	24	12	148	67	312	352	5 - 15	5 - 35	180	17	20
273.0	270.5 - 275.5	21	12	148	67	318	359	5 - 15	5 - 35	180	17	20
323.9	320.5 - 327.0	18	10	148	67	369	411	5 - 15	5 - 35	230	17	20
355.6	352.0 - 359.0	17	8	148	67	401	444	5 - 15	5 - 35	230	17	20
406.4	402.5 - 410.5	14	8	148	67	451	494	5 - 15	5 - 35	230	17	20
457.2	452.5 - 462.0	8	6	148	67	502	546	5 - 15	5 - 35	250	17	20
508.0	503.0 - 513.0	6	5	148	67	553	598	5 - 15	5 - 35	250	17	20
558.8	554.0 - 564.0	6	4.5	148	67	604	649	5 - 15	5 - 35	300	17	20
609.6	604.5 - 614.5	5	4	148	67	655	701	5 - 15	5 - 35	300	17	20

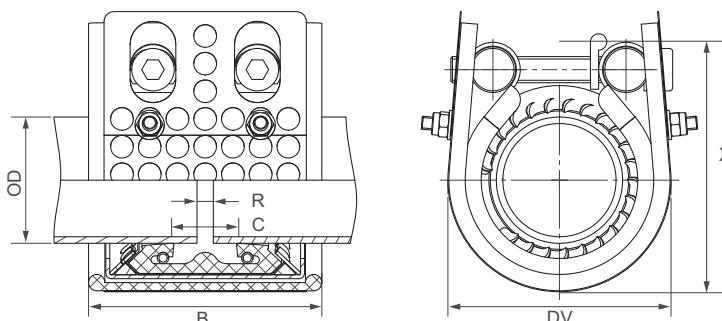
CONTINUOUSLY VARIABLE INTERMEDIATE SIZES FROM 180.0 TO 609.6 mm ARE AVAILABLE
REFER TO MINIMUM WALL THICKNESS (see page 105)

Remarks:

- Follow fitting instructions
- PN (Factory symbol) = working pressure considering the application loads
Test pressure = PN (Factory symbol) x 1.5 (for example industry, water supply etc.)
- PN (Ship symbol) = nominal pressure, includes four times safety factor (e.g. shipbuilding)
- The pressure values are valid on radial rigid carbon steel pipes under static loads
- Strip inserts are optional accessories (see page 87)
- Additional sealing sleeves and temperature ranges on request

Components / Materials	W1	W2	W4	W5
Casing		AISI 316 L		AISI 316 L or similar
Bolts		AISI 4135		A4 - 80
Bars		AISI 12L14, galvanised		AISI 316 L or similar
Anchoring rings		AISI 301		AISI 301
Strip insert (option)		AISI 316 L or similar / PVDF		AISI 316 L or similar / PVDF

Sealing sleeve EPDM	Temp.: -30°C up to +100°C Medium: all qualities of water, waste water, air, solids and chemical products
Sealing sleeve NBR	Temp.: -20°C up to +80°C Medium: water, gas, oil, fuel and other hydrocarbons



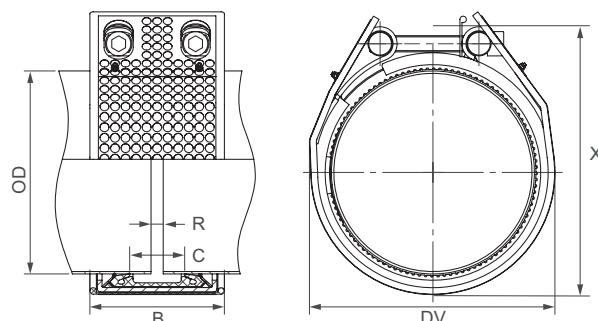
OD [mm]	Clamping range [mm]	PN [bar]	PN [bar]	B [mm]	C [mm]	DV [mm]	X [mm]	R without strip insert [mm]	R with strip insert [mm]	Torque rate [Nm]	Allen head [mm]	Thread M...
30.0	29.5 - 30.5	67	16	46/67	18	57	61	5	5	10	6	8
33.7	33.2 - 34.2	62	16	46/67	18	62	68	5	5	10	6	8
38.0	37.5 - 38.5	58	16	71	19	68	78	5	5 - 10	15	6	8
42.4	41.9 - 42.9	53	16	71	20	72	81	5	5 - 10	15	6	8
44.5	44.0 - 45.0	48	16	71	20	74	85	5	5 - 10	15	6	8
48.3	47.8 - 48.8	44	16	71	20	78	88	5	5 - 10	15	6	8
54.0	53.5 - 54.5	39	16	87	38	84	94	5	5 - 15	15	6	8
57.0	56.4 - 57.6	37	16	87	32	87	97	5 - 10	5 - 25	15	6	8
60.3	59.7 - 60.9	37	16	87	32	87	100	5 - 10	5 - 25	15	6	8
63.5	62.9 - 64.1	37	16	87	32	94	103	5 - 10	5 - 25	15	6	8
76.1	75.3 - 76.9	56	16	110	39	110	122	5 - 10	5 - 25	35	8	10
84.0	83.2 - 84.8	45	16	110	39	122	128	5 - 10	5 - 25	35	8	10
88.9	88.0 - 89.8	41	16	110	39	127	128	5 - 10	5 - 25	35	8	10
104.0	103.0 - 105.0	37	16	110	39	143	156	5 - 10	5 - 25	35	8	10
108.0	106.9 - 109.1	35	16	110	39	143	156	5 - 10	5 - 25	35	8	10
114.3	113.2 - 115.4	34	16	110	39	149	162	5 - 10	5 - 25	35	8	10
129.0	127.7 - 130.3	33	16	124	43	170	187	5 - 15	5 - 25	60	10	12
133.0	131.7 - 134.3	33	16	125	43	170	187	5 - 15	5 - 25	60	10	12
139.7	138.3 - 141.1	32	16	125	43	178	196	5 - 15	5 - 25	60	10	12
154.0	152.5 - 155.5	32	16	125	51	196	215	5 - 15	5 - 25	60	10	12
159.0	157.4 - 160.6	31	16	125	43	197	215	5 - 15	5 - 25	60	10	12
168.3	166.6 - 170.0	29	16	125	43	210	225	5 - 15	5 - 25	60	10	12
219.1	216.9 - 221.3	26	16	166	60	269	293	5 - 15	5 - 35	100	14	16

REFER TO MINIMUM WALL THICKNESS (see page 105)

Remarks:

- Follow fitting instructions
- PN () = working pressure considering the application loads
Test pressure = PN () x 1.5 (for example industry, water supply etc.)
- PN () = nominal pressure, includes four times safety factor (e.g. shipbuilding)
- The pressure values are valid on radial rigid carbon steel pipes under static loads
- Additional sealing sleeves and temperature ranges on request

Components / Materials	W1	W2	W4	W5
Casing	AISI A738, hot-dip galvanised			
Bolts	AISI 4135			
Bars	AISI 12L14, galvanised			
Anchoring rings	AISI 301			
Strip insert (option)	AISI 316 L or similar / PVDF			
Sealing sleeve EPDM	Temp.: -20°C up to +100°C Medium: all qualities of water, waste water, air, solids and chemical products			
Sealing sleeve NBR	Temp.: -20°C up to +80°C Medium: water, gas, oil, fuel and other hydrocarbons			



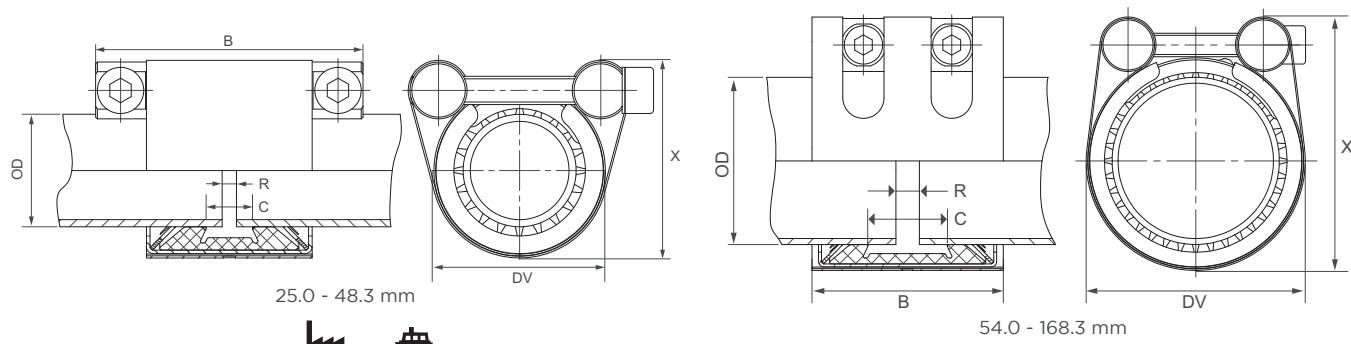
REFER TO MINIMUM WALL THICKNESS (see page 105)

Remarks:

- Follow fitting instructions
- PN (❑) = working pressure considering the application loads
Test pressure = PN (❑) x 1.5 (for example industry, water supply etc.)
- PN (❑) = nominal pressure, includes four times safety factor (e.g. shipbuilding)
- The pressure values are valid on radial rigid carbon steel pipes under static loads
- Strip inserts are optional accessories (see page 87)
- Additional sealing sleeves and temperature ranges on request

Components / Materials	W1	W2	W4	W5
Casing				AISI 316 L / LDX 2101
Bolts				A4 - 80
Bars				AISI 316 L or similar
Anchoring rings				AISI 301
Strip insert (option)				AISI 316 L / PVDF

Sealing sleeve EPDM	Temp.: -20°C up to +100°C	Medium: all qualities of water, waste water, air, solids and chemical products
Sealing sleeve NBR	Temp.: -20°C up to +80°C	Medium: water, gas, oil, fuel and other hydrocarbons
Sealing sleeve FPM/FKM	Temp.: -20°C up to +180°C	Medium: ozone, oxygen, acids, gas, oil and fuel (only with strip insert)



OD [mm]	Clamping range [mm]	PN [bar]	PN [bar]	B [mm]	C [mm]	DV [mm]	X [mm]	R without strip insert [mm]	R with strip insert [mm]	Torque rate [Nm]	Allen head [mm]	Thread M...
21.3	21.0 - 21.6	36	16	46	18	43	56	5	5 - 10	9	5	6
25.0	24.5 - 25.5	64	16	46.5 / 75	18	41	53	5	5 - 10	10	6	8
26.9	26.4 - 27.4	58	16	46.5 / 75	18	44	56	5	5 - 10	10	6	8
28.0	27.5 - 28.5	50	16	46.5 / 75	18	45	57	5	5 - 10	10	6	8
30.0	29.5 - 30.5	42	16	46.5 / 75	18	47	60	5	5 - 10	10	6	8
33.7	33.2 - 34.2	39	16	46.5 / 75	18	51	65	5	5 - 10	10	6	8
35.0	34.5 - 35.5	37	16	46.5 / 75	18	52	66	5	5 - 10	12	6	8
38.0	37.5 - 38.5	36	16	46.5 / 75	18	55	69	5	5 - 10	12	6	8
40.0	39.5 - 40.5	35	16	46.5 / 75	18	57	71	5	5 - 10	12	6	8
42.4	41.9 - 42.9	33	16	46.5 / 75	18	60	74	5	5 - 10	12	6	8
44.5	44.0 - 45.0	30	16	46.5 / 75	18	62	76	5	5 - 10	12	6	8
48.3	47.8 - 48.8	28	16	46.5 / 75	18	65	81	5	5 - 10	12	6	8
54.0	53.5 - 54.5	24	16	65	24	71	87	5	5 - 15	15	6	8
57.0	56.4 - 57.6	23	16	65	24	74	90	5	5 - 15	15	6	8
60.3	59.7 - 60.9	23	16	65	24	77	93	5	5 - 15	15	6	8
63.0	62.4 - 63.6	23	16	65	24	80	96	5	5 - 15	15	6	8
66.6	64.9 - 67.3	22	16	65	24	84	100	5	5 - 15	15	6	8
70.0	68.9 - 70.7	22	16	65	24	87	104	5	5 - 15	15	6	8
73.0	72.3 - 73.7	21	16	65	24	90	107	5	5 - 15	15	6	8
76.1	75.3 - 76.9	35	16	100	40	100	122	5 - 10	5 - 25	20	8	10
79.5	78.7 - 80.3	32	16	100	40	103	125	5 - 10	5 - 25	20	8	10
84.0	83.2 - 84.8	29	16	100	40	107	130	5 - 10	5 - 25	20	8	10
88.9	88.0 - 89.8	26	16	100	40	112	134	5 - 10	5 - 25	20	8	10
95.0	94.0 - 96.0	24	16	100	40	117	139	5 - 10	5 - 25	25	8	10
98.0	97.0 - 99.0	24	16	100	40	121	143	5 - 10	5 - 25	25	8	10
100.6	99.6 - 101.6	23	16	100	40	124	146	5 - 10	5 - 25	25	8	10
101.6	100.6 - 102.6	23	16	100	40	125	146	5 - 10	5 - 25	25	8	10
104.0	103.0 - 105.0	23	16	100	40	127	148	5 - 10	5 - 25	25	8	10
104.8	103.8 - 105.8	23	16	100	40	128	150	5 - 10	5 - 25	25	8	10
108.0	106.9 - 109.1	22	16	100	40	132	154	5 - 10	5 - 25	25	8	10
114.3	113.2 - 115.4	22	16	100	40	138	160	5 - 10	5 - 25	25	8	10
118.0	116.9 - 119.1	22	16	100	40	142	166	5 - 10	5 - 25	25	8	10
125.0	123.7 - 126.3	21	16	115	53	152	174	5 - 10	5 - 30	40	10	12
127.0	125.7 - 128.3	21	16	115	53	154	176	5 - 10	5 - 30	40	10	12
129.0	127.7 - 130.3	21	16	115	53	156	178	5 - 10	5 - 30	40	10	12
130.2	128.9 - 131.5	21	16	115	53	157	179	5 - 10	5 - 30	40	10	12
133.0	131.7 - 134.3	21	16	115	53	160	182	5 - 10	5 - 30	40	10	12
139.7	138.3 - 141.1	20	16	115	53	166	189	5 - 10	5 - 30	40	10	12
141.3	139.9 - 142.7	20	16	115	53	168	190	5 - 10	5 - 30	40	10	12
144.0	142.6 - 145.4	20	16	115	53	171	183	5 - 10	5 - 30	50	10	12
154.0	152.5 - 155.5	18	16	115	53	181	203	5 - 10	5 - 30	50	10	12
159.0	157.4 - 160.6	18	16	115	53	186	208	5 - 10	5 - 30	50	10	12
165.0	163.4 - 166.6	16	16	115	53	192	214	5 - 10	5 - 30	50	10	12
168.3	166.6 - 170.0	16	16	115	53	195	217	5 - 10	5 - 30	50	10	12

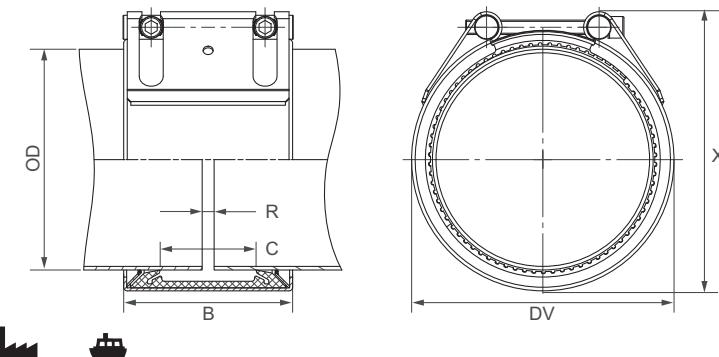
REFER TO MINIMUM WALL THICKNESS (see page 105)

- Follow fitting instructions
- According to DIN 86128
- PN () = working pressure considering the application loads
Test pressure = PN () x 1.5 (for example industry, water supply etc.)
- PN () = nominal pressure, includes four times safety factor (e.g. shipbuilding)
- The pressure values are valid on radial rigid carbon steel pipes under static loads
- Strip inserts are optional accessories (see page 87)
- Additional sealing sleeves and temperature ranges on request

Typing errors may occur. Technical details are subject to change.

Components / Materials	W1	W2	W4	W5
Casing		AISI 316 L or similar		AISI 316 L or similar
Bolts		AISI 4135		A4 - 80
Bars		AISI 12L14, galvanised		AISI 316 L
Anchoring rings		AISI 301		AISI 301
Strip insert (option)		AISI 316 L or similar / HDPE		AISI 316 L or similar / HDPE

Sealing sleeve EPDM	Temp.: -20°C up to +100°C Medium: all qualities of water, waste water, air, solids and chemical products
Sealing sleeve NBR	Temp.: -20°C up to +80°C Medium: water, gas, oil, fuel and other hydrocarbons
Sealing sleeve FPM/ FKM	Temp.: -20°C up to +180°C Medium: ozone, oxygen, acids, gas, oil and fuel (only with strip insert)



OD [mm]	Clamping range [mm]	PN [bar]	PN [bar]	B [mm]	C [mm]	DV [mm]	X [mm]	R without strip insert [mm]	R with strip insert [mm]	Torque rate [Nm]	Allen head [mm]	Thread M...
180.0	178.0 - 182.0	16	10	141	80	205	233	5 - 10	5 - 35	50	10	12
193.7	192.0 - 195.5	16	10	141	80	224	243	5 - 10	5 - 35	50	10	12
200.0	198.0 - 202.0	15	10	141	80	230	249	5 - 10	5 - 35	50	10	12
204.0	202.0 - 206.0	14	10	141	80	234	253	5 - 10	5 - 35	50	10	12
206.0	204.0 - 208.0	14	5.5	141	80	234	253	5 - 10	5 - 35	50	10	12
219.1	216.9 - 221.3	16	10	142	80	250	269	5 - 10	5 - 30	60	10	12
244.5	242.0 - 247.0	9	5.5	141	80	275	294	5 - 10	5 - 35	50	10	12
250.0	247.5 - 252.5	9	5.5	141	80	280	299	5 - 10	5 - 35	50	10	12
254.0	251.5 - 256.5	9	5.5	141	80	284	303	5 - 10	5 - 35	50	10	12
256.0	253.5 - 258.5	9	5.5	141	80	284	303	5 - 10	5 - 35	50	10	12
267.0	264.5 - 269.5	8	5	141	80	297	316	5 - 10	5 - 35	50	10	12
273.0	270.5 - 275.5	7	4	141	80	303	322	5 - 10	5 - 35	60	10	12
273.0	270.5 - 275.5	16	4	141	80	303	326	5 - 10	5 - 35	80	14	16
306.0	303.0 - 309.0	6	3	141	80	334	353	5 - 10	5 - 35	60	10	12
323.9	320.5 - 327.0	5	3	141	80	354	373	5 - 10	5 - 35	60	10	12
323.9	320.5 - 327.0	13	3	141	80	354	377	5 - 10	5 - 35	90	14	16
355.6	352.0 - 359.0	10	2.5	141	80	386	405	5 - 10	5 - 35	90	14	16
406.4	402.5 - 410.5	7	2	141	80	436	455	5 - 10	5 - 35	100	14	16
457.2	452.5 - 461.5	5	-	141	80	487	506	5 - 10	5 - 35	100	14	16
508.0	503.5 - 512.5	4	-	141	80	538	557	5 - 10	5 - 35	110	14	16
558.8	554.5 - 563.5	3	-	141	80	589	608	5 - 10	5 - 35	110	14	16
609.6	605.5 - 614.0	2	-	141	80	640	659	5 - 10	5 - 35	120	14	16
711.2	707.0 - 715.0	1	-	141	80	742	761	5 - 10	5 - 35	120	14	16

CONTINUOUSLY VARIABLE INTERMEDIATE SIZES FROM 180.0 TO 711.2 mm ARE AVAILABLE / REFER TO MINIMUM WALL THICKNESS (see page 105)

STRAUB-GRIP stepped coupling

Ø 48.3 - 168.3 mm

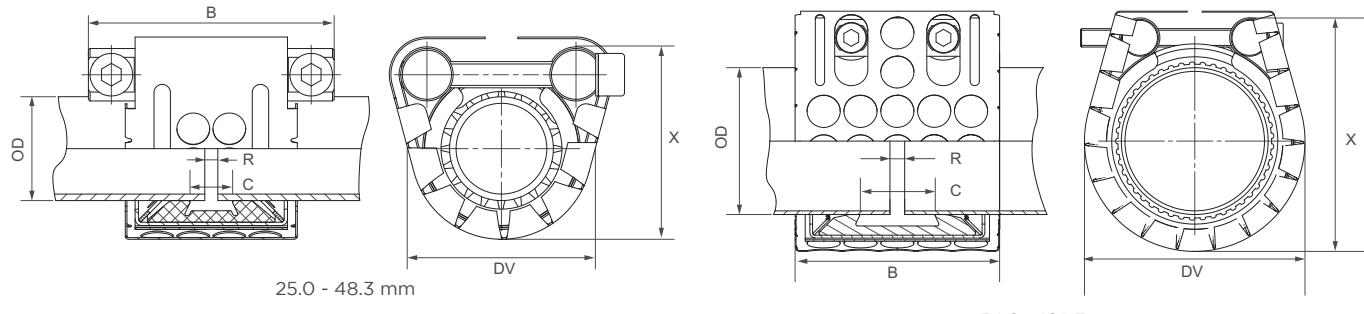
Pipe 1 [mm]	OD	Pipe 2 [mm]	Clamping range OD 1 [mm]	OD 2 [mm]	PN [bar]	B [wmm]	C [mm]	DV [mm]	R without strip insert [mm]	R with strip insert [mm]	Torque rate [Nm]	Allen head [mm]	Thread M...
50.8	48.3	50.3 - 51.3	47.8 - 48.8	24	76	37	76	5	5 - 10	7.5	6	8	
54.0	50.8	53.5 - 54.5	50.3 - 51.3	24	76	37	76	5 - 10	5 - 10	7.5	6	8	
60.3	57.0	59.7 - 60.9	56.4 - 57.6	24	76	37	79	5 - 10	5 - 15	7.5	6	8	
76.1	73.0	75.3 - 76.9	72.3 - 73.7	24	95	41	98	5 - 10	5 - 25	12	6	8	
88.9	84.0	88.0 - 89.8	83.2 - 84.8	22	95	41	111	5 - 10	5 - 25	12	6	8	
104.0	101.6	103.0 - 105.0	100.6 - 102.6	22	95	35	132	5 - 10	5 - 25	12	6	8	
108.0	104.8	106.9 - 109.1	103.8 - 105.8	21	95	41	130	5 - 10	5 - 25	12	6	8	
114.3	108.0	113.2 - 115.4	106.9 - 109.1	16	95	41	136	5 - 10	5 - 25	12	6	8	
139.7	133.0	138.3 - 141.1	131.7 - 134.3	16	110	54	164	5 - 10	5 - 30	20	8	10	
159.0	154.0	157.4 - 160.6	152.5 - 155.5	16	110	54	183	5 - 10	5 - 30	20	8	10	
168.3	159.0	166.6 - 170.0	157.4 - 160.6	16	110	54	192	5 - 10	5 - 30	20	8	10	

- Follow fitting instructions
- PN ((ship)) = nominal pressure, includes four times safety factor (e.g. shipbuilding)
- PN (boat) = working pressure considering the application loads
- Test pressure = PN (boat) x 1.5 (for example industry, water supply etc.)

- The pressure values are valid on radial rigid carbon steel pipes under static loads
- Strip inserts are optional accessories (see page 87)
- Additional sealing sleeves and temperature ranges on request

Components / Materials	W1	W2	W4	W5
Casing				AISI 316 L or similar
Bolts				A4 - 80
Bars				AISI 316 L or similar
Anchoring rings				AISI 301
Strip insert (option)				AISI 316 L / PVDF

Sealing sleeve EPDM	Temp.: -20°C up to +100°C Medium: all qualities of water, waste water, air, solids and chemical products
Sealing sleeve NBR	Temp.: -20°C up to +80°C Medium: water, gas, oil, fuel and other hydrocarbons
Sealing sleeve FPM/FKM	Temp.: -20°C up to +180°C Medium: ozone, oxygen, acids, gas, oil and fuel (only with strip insert)



OD [mm]	Clamping range [mm]	PN [bar]	PN [bar]	B [mm]	C [mm]	DV [mm]	X [mm]	R without strip insert [mm]	R with strip insert [mm]	Torque rate [Nm]	Allen head [mm]	Thread M...
25.0	24.5 - 25.5	64	16	46.5/75	18	51	58	5	5 - 10	10	6	8
26.9	26.4 - 27.4	58	16	46.5/75	18	54	61	5	5 - 10	10	6	8
28.0	27.5 - 28.5	50	16	46.5/75	18	55	62	5	5 - 10	10	6	8
30.0	29.5 - 30.5	42	16	46.5/75	18	57	65	5	5 - 10	10	6	8
33.7	33.2 - 34.2	39	16	46.5/75	18	61	70	5	5 - 10	10	6	8
35.0	34.5 - 35.5	37	16	46.5/75	18	62	71	5	5 - 10	12	6	8
38.0	37.5 - 38.5	36	16	46.5/75	18	65	74	5	5 - 10	12	6	8
40.0	39.5 - 40.5	35	16	46.5/75	18	67	76	5	5 - 10	12	6	8
42.4	41.9 - 42.9	33	16	46.5/75	18	70	79	5	5 - 10	12	6	8
44.5	44.0 - 45.0	30	16	46.5/75	18	72	81	5	5 - 10	12	6	8
48.3	47.8 - 48.8	28	16	46.5/75	18	75	86	5	5 - 10	12	6	8
54.0	53.5 - 54.5	24	16	65	24	81	92	5	5 - 15	15	6	8
57.0	56.4 - 57.6	23	16	65	24	84	95	5	5 - 15	15	6	8
60.3	59.7 - 60.9	23	16	65	24	87	98	5	5 - 15	15	6	8
63.0	62.4 - 63.6	23	16	65	24	90	101	5	5 - 15	15	6	8
66.6	64.9 - 67.3	22	16	65	24	94	105	5	5 - 15	15	6	8
70.0	68.9 - 70.7	22	16	65	24	97	109	5	5 - 15	15	6	8
73.0	72.3 - 73.7	21	16	65	24	100	112	5	5 - 15	15	6	8
76.1	75.3 - 76.9	35	16	100	40	110	127	5 - 10	5 - 25	20	8	10
79.5	78.7 - 80.3	32	16	100	40	113	130	5 - 10	5 - 25	20	8	10
84.0	83.2 - 84.8	29	16	100	40	117	135	5 - 10	5 - 25	20	8	10
88.9	88.0 - 89.8	26	16	100	40	122	139	5 - 10	5 - 25	20	8	10
95.0	94.0 - 96.0	24	16	100	40	127	144	5 - 10	5 - 25	25	8	10
98.0	97.0 - 99.0	24	16	100	40	131	148	5 - 10	5 - 25	25	8	10
100.6	99.6 - 101.6	23	16	100	40	134	151	5 - 10	5 - 25	25	8	10
101.6	100.6 - 102.6	23	16	100	40	135	151	5 - 10	5 - 25	25	8	10
104.0	103.0 - 105.0	23	16	100	40	137	153	5 - 10	5 - 25	25	8	10
104.8	103.8 - 105.8	23	16	100	40	138	155	5 - 10	5 - 25	25	8	10
108.0	106.9 - 109.1	22	16	100	40	142	159	5 - 10	5 - 25	25	8	10
114.3	113.2 - 115.4	22	16	100	40	148	165	5 - 10	5 - 25	25	8	10
118.0	116.9 - 119.1	22	16	100	40	152	171	5 - 10	5 - 25	25	8	10
125.0	123.7 - 126.3	21	16	115	53	162	179	5 - 10	5 - 30	40	10	12
127.0	125.7 - 128.3	21	16	115	53	164	181	5 - 10	5 - 30	40	10	12
129.0	127.7 - 130.3	21	16	115	53	166	183	5 - 10	5 - 30	40	10	12
130.2	128.9 - 131.5	21	16	115	53	167	184	5 - 10	5 - 30	40	10	12
133.0	131.7 - 134.3	21	16	115	53	170	187	5 - 10	5 - 30	40	10	12
139.7	138.3 - 141.1	20	16	115	53	176	194	5 - 10	5 - 30	40	10	12
141.3	139.9 - 142.7	20	16	115	53	178	195	5 - 10	5 - 30	40	10	12
144.0	142.6 - 145.4	20	16	115	53	181	188	5 - 10	5 - 30	50	10	12
154.0	152.5 - 155.5	18	16	115	53	191	208	5 - 10	5 - 30	50	10	12
159.0	157.4 - 160.6	18	16	115	53	196	213	5 - 10	5 - 30	50	10	12
165.0	163.4 - 166.6	16	16	115	53	202	219	5 - 10	5 - 30	50	10	12
168.3	166.6 - 170.0	16	16	115	53	205	222	5 - 10	5 - 30	50	10	12

REFER TO MINIMUM WALL THICKNESS (see page 105)

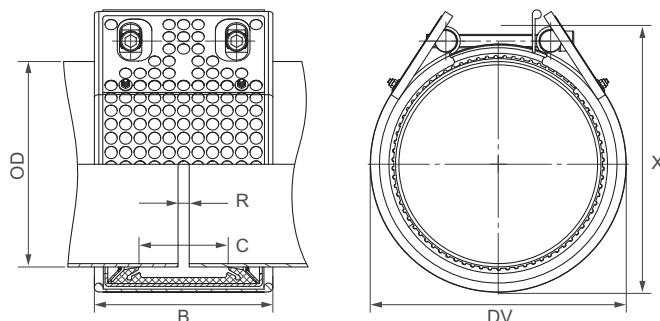
Typing errors may occur. Technical details are subject to change.

- Follow fitting instructions
- According to DIN 86128

- PN () = working pressure considering the application loads
Test pressure = PN () x 1.5 (for example industry, water supply etc.)
- PN () = nominal pressure, includes four times safety factor (e.g. shipbuilding)
- The pressure values are valid on radial rigid carbon steel pipes under static loads
- Strip inserts are optional accessories (see page 87)
- Additional sealing sleeves and temperature ranges on request

Components / Materials	W1	W2	W4	W5
Casing		AISI 316 L or similar		AISI 316 L or similar
Bolts		AISI 4135		A4 - 80
Bars		AISI 12L14, galvanised		AISI 316 L or similar
Anchoring rings		AISI 301		AISI 301
Strip insert (option)		AISI 316 L or similar / HDPE		AISI 316 L or similar / HDPE

Sealing sleeve EPDM	Temp.: -20°C up to +100°C	Medium: all qualities of water, waste water, air, solids and chemical products
Sealing sleeve NBR	Temp.: -20°C up to +80°C	Medium: water, gas, oil, fuel and other hydrocarbons
Sealing sleeve FPM / FKM	Temp.: -20°C up to +180°C	Medium: ozone, oxygen, acids, gas, oil and fuel (only with strip insert)



OD [mm]	Clamping range [mm]	PN [bar]	PN [bar]	B [mm]	C [mm]	DV [mm]	X [mm]	R without strip insert [mm]	R with strip insert [mm]	Torque rate [Nm]	Allen head [mm]	Thread M...
180.0	178.0 - 182.0	16	10	158	80	260	238	5 - 10	5 - 35	50	10	12
193.7	192.0 - 195.5	16	10	158	80	275	248	5 - 10	5 - 35	50	10	12
200.0	198.0 - 202.0	15	10	158	80	280	254	5 - 10	5 - 35	50	10	12
204.0	202.0 - 206.0	14	10	158	80	285	258	5 - 10	5 - 35	50	10	12
206.0	204.0 - 208.0	14	5.5	158	80	234	258	5 - 10	5 - 35	50	10	12
219.1	216.9 - 221.3	16	10	142	80	250	274	5 - 10	5 - 30	60	10	12
244.5	242.0 - 247.0	9	5.5	158	80	325	299	5 - 10	5 - 35	50	10	12
250.0	247.5 - 252.5	9	5.5	158	80	330	304	5 - 10	5 - 35	50	10	12
254.0	251.5 - 256.5	9	5.5	158	80	330	308	5 - 10	5 - 35	50	10	12
256.0	253.5 - 258.5	9	5.5	158	80	284	308	5 - 10	5 - 35	50	10	12
267.0	264.5 - 269.5	8	5	158	80	345	321	5 - 10	5 - 35	50	10	12
273.0	270.5 - 275.5	7	4	158	80	350	327	5 - 10	5 - 35	60	10	12
304.0	301.0 - 307.0	6	4	158	80	380	331	5 - 10	5 - 35	60	10	12
306.0	303.0 - 309.0	6	3	158	80	334	358	5 - 10	5 - 35	60	10	12
323.9	320.5 - 327.0	5	3	158	80	400	378	5 - 10	5 - 35	60	10	12
355.6	352.0 - 359.0	10	2.5	158	67	430	410	5 - 10	5 - 35	90	14	16
406.4	402.5 - 410.5	7	2	158	67	475	460	5 - 10	5 - 35	100	14	16

REFER TO MINIMUM WALL THICKNESS (see page 105)

Remarks:

- Follow fitting instructions
- PN (Icon) = working pressure considering the application loads
Test pressure = PN (Icon) x 1.5 (for example industry, water supply etc.)
- PN (Icon) = nominal pressure, includes four times safety factor (e.g. shipbuilding)
- The pressure values are valid on radial rigid carbon steel pipes under static loads
- Strip inserts are optional accessories (see page 87)
- Additional sealing sleeves and temperature ranges on request