

HIGH PRESSURE FLOAT VALVES FOR REFRIGERA- TION

HSX

02.07.2026

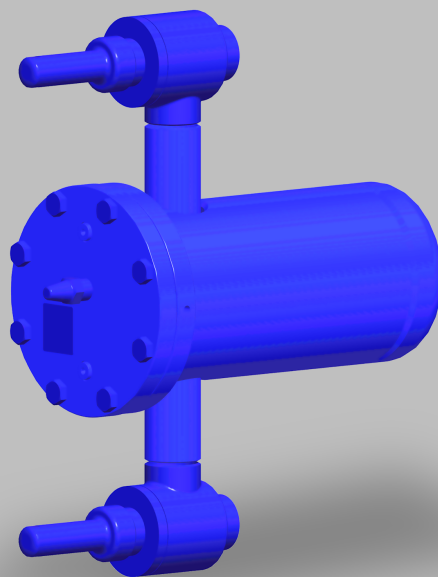


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1 HSX materials

HSX: High-pressure float regulator

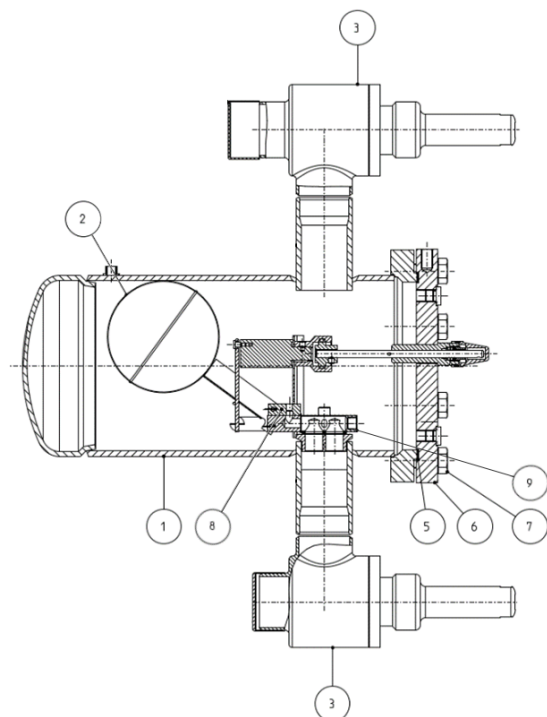
HSX	Connection	Form	Material	Valve type
HSX	Materials			
HSX PS40	Welding end			HSX AE
Information	Valve stem sealing system			
	Insulation thicknesses			
	HR / K Handwheel / Cap			
	Comparison of European/American materials			
	DIN-FL welding neck flanges - DIN			
	EN-FL welding neck flanges - EN			
	ANSI-FL welding neck flanges - smooth			
	AWP-FL welding neck flanges - AWP			
	Legal notices			

St = steel

2 HSX materials

Designation and materials

HSX - high-pressure float regulator

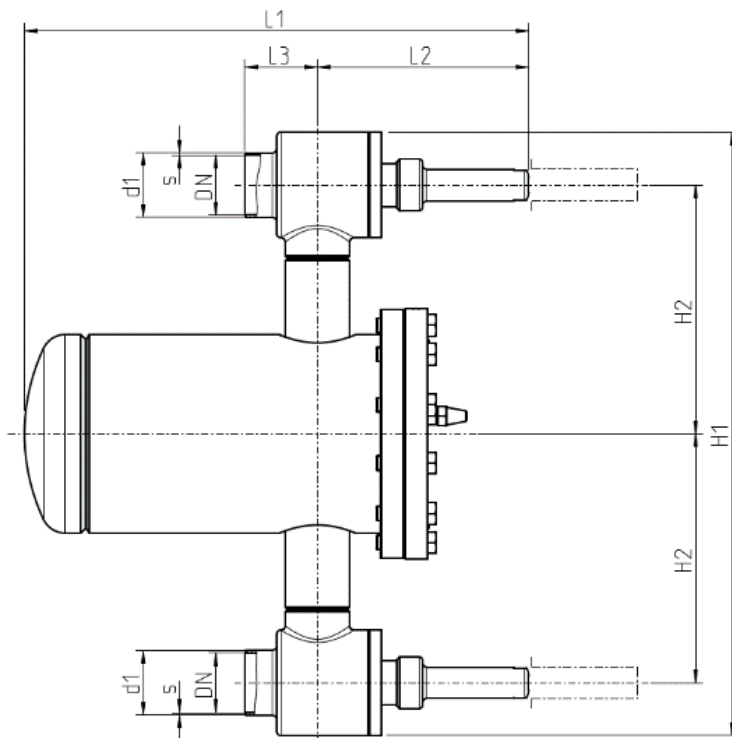


Part	Material for steel valves
1 Body	St 35.8/I, 1.0345
2 Float ball	St 12-03, 1.0330
3 Shut-off valve	See Chapter 2
5 Flat gasket	CENTELLENNP
6 Bonnet	St 35.8/I, 1.0345
7 Bonnet screws	A2-70, 1.4301
8 Control unit	42CrMo4 - TQ+T, 1.7225
9 Nozzle holder	11SMn PB 30+C, 1.0718

3 HSX AE

AE: Welding ends

HSX steel high-pressure float regulator for natural refrigerants (ammonia, NH₃, R717 & carbon dioxide, CO₂, R744)



Note: HSX high-pressure float regulators have a welded shut-off valve at the inlet and outlet and a transport lock / manual adjustment operable from the outside. Furthermore, service valves for drainage and for the discharge of non-condensable gases via two G $\frac{1}{4}$ " threaded connections as well as a vacuum nozzle can be installed. Depending on the designed throttle orifice, the refrigerant is expanded from the high-pressure to the low-pressure side of the refrigeration plant. The integrated N-ball is suitable for NH₃ and CO₂ applications. The mechanical design operates without electricity / electrical voltage and requires no regular maintenance cycles. When ordering, please state the throttle orifice (-X, -H, -M, -L), the refrigerant and the application (Q^o, t^o, t^c)! Pressure/temperature operating limits:

PS: Max. allowable operating pressure in bar

TS: Permissible operating temperature in °C corresponding to the permissible operating pressures (PS)

PN: Nominal pressure rating

DN / INCH	PN	-60	-10	+50	+75	TS [°C]
DN 50, DN 80 2", 3"	PN40	30	40	40	40	PS [bar]

Nominal size:		Welding ends acc. to:									
		ISO Series 1		ANSI Sched 40							
DN	INCH	d1	s	d1	s	L1	L2	L3	H1	H2	
50	2"	60.3	2.9	60.3	3.9	530	205	70	605	253	
80	3"	88.9	3.2	88.9	5.5	695	291	100	831	343	

Table 1: Dimensions

DN	INCH	NH ₃ +35/-10*	- X	- H	- M	- L
50	2"	1.148 kW	Q _o = 266 kW (to/c= -35/40°C)	Q _o = 401 kW (to/c= -30/35°C)	Q _o = 727 kW (to/c= -20/30°C)	Q _o = 1,080 kW (to/c= -15/30°C)

DN	INCH	NH3 +35/-10*	- X	- H	- M	- L
80	3"	2.992 kW	Qo= 845 kW (to/c= -30/35°C)	Qo= 1,373 kW (to/c= -25/30°C)	Qo= 1,990 kW (to/c= -20/25°C)	2,646 kW (to/c= -15/20°C)

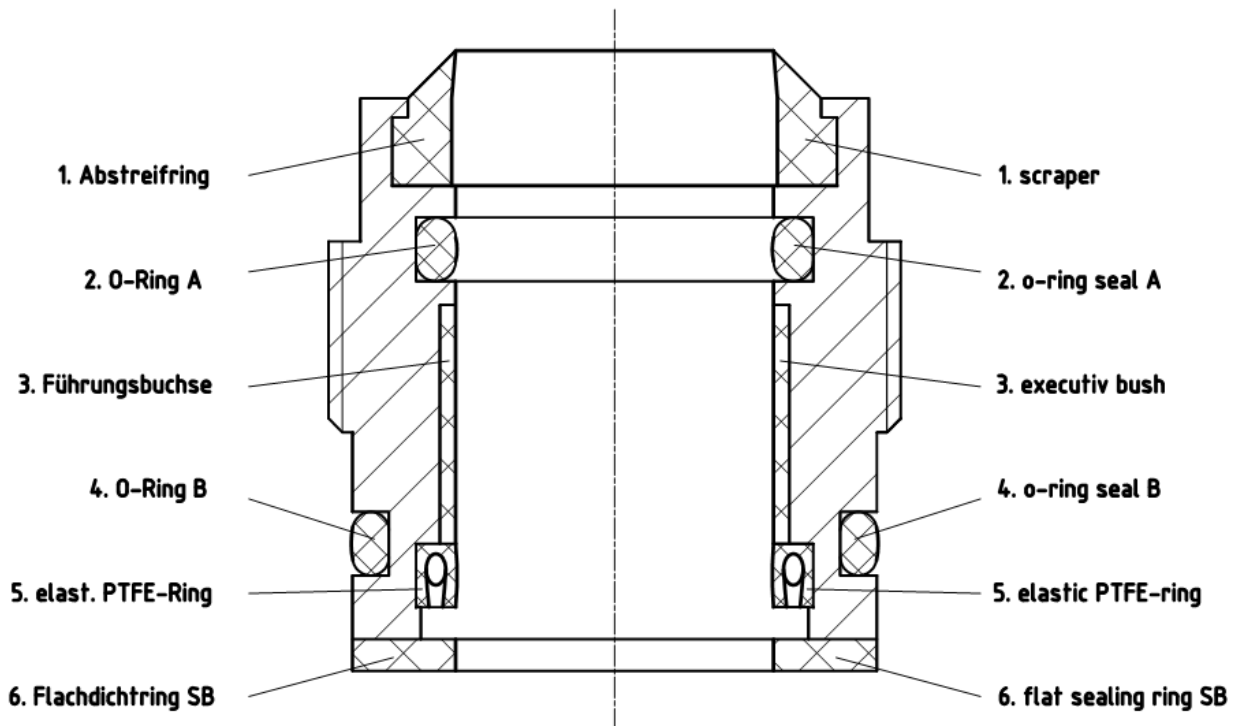
Table 2: Capacity in [kW]

*after update approx. Q3/2025

4 Valve stem sealing system

The valve stem sealing system is maintenance-free.

The sealing system consists of the following components:



1. Wiper ring

The wiper ring prevents the ingress of dirt and water from the outside.

2. O-ring A

O-ring A makes the valve vacuum-tight. (Valve operation in the vacuum range at low temperatures)

3. Guide bush

The guide bush prevents damage to the stem.

4. O-ring B

O-ring B seals the outer part of the sealing system in addition to the flat sealing ring SB.

5. Resilient PTFE ring

The resilient PTFE ring is the primary seal of the sealing system. It consists of a high-performance PTFE compound with a wound stainless steel spring. This seal seals the valve to the atmosphere.

6. Flat sealing ring SB

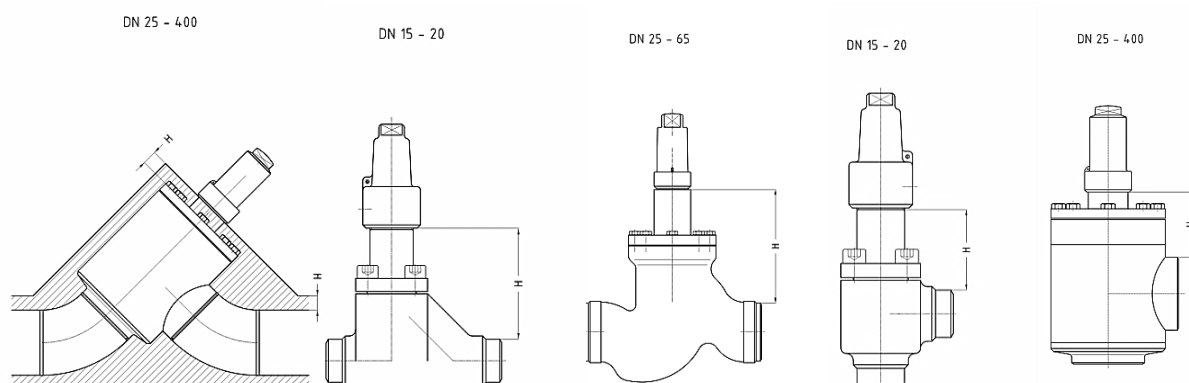
The flat sealing ring SB seals the outer part of the sealing system.

Note: GEA AWP valves have a back seal. Therefore, the removal and replacement of the sealing system is possible during operation of the plant. Please observe the instructions in our operating regulations regarding this.

5 Insulation thicknesses

AVR - shut-off valves

HRAR - control valves



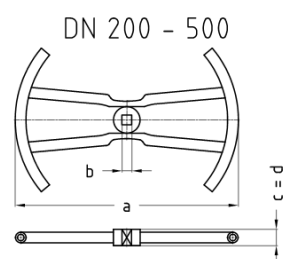
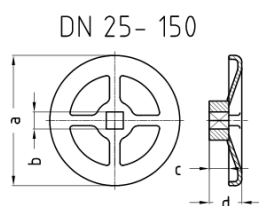
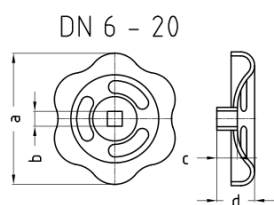
Nominal size		Straight-way valves				Nominal size		Angle valves	
		Angle-seat		Straight-seat				Angle type	
		AVR D	AVR D DV	AVR D	AVR D DV			AVR E	AVR E DV
		HRAR D	HRAR D DV	HRAR D	HRAR D DV			HRAR E	HRAR E DV
DN	INCH	H	H	H	H	DN	INCH	H	H
15	1/2"			52	84	15	1/2"	34	67
20	3/4"			69	106	20	3/4"	43	81
25	1"	21	81	84	144	25	1"	62	122
32	1 1/4"	21	81	81	141	32	1 1/4"	58	118
40	1 1/2"	14	74	88	148	40	1 1/2"	59	117
50	2"	14	74	82	142	50	2"	53	111
65	2 1/2"	9	79	102	170	65	2 1/2"	52	120
80	3"	21	80	144	203	80	3"	99	158
100	4"	9	90	144	225	100	4"	82	163
125	5"	29	129			125	5"	123	222
150	6"	5	105			150	6"	103	203
200	8"	11	102			200	8"	146	237
250	10"	100	100			250	10"	230	230
300	12"	107	107			300	12"	251	251
350	14"	107	107			350	14"	270	270
400	16"	112	112			400	16"	309	309

AVR / HRAR D = standard valves, AVR / HRAR D DV = valves with bonnet extension

6 HR / K

HR

Handwheel / Cap



for type: HRS AVR AVB HRAR HRAB RVA RVAK

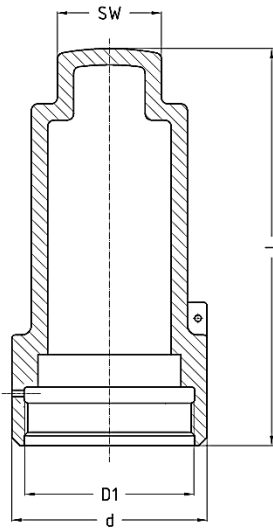
	Diameter	Hub square	Hub height	Height
DN	a	b	c	d
6-20	60	6	9	15
25-32	120	11	14	31.0
40-65	140	12	16	32.5
80-100	180	14	22	42.0
125	300	22	28	55
150	400	22	28	60
200-500	630	28	46	46

Table 3: Dimensions DN 6 - 500

K

Cap

DN 6 – 500



for type: AVR AVB HRAR HRAB RVA RVAK				
	Height	Diameter	Thread	Wrench size
DN	l	d	D1	SW
6-20	65	36	M27x2	19
25-32	99	45	M36x2	24
40-65	122	60	M52x3	32
80-100	148	72	M60x3	41
125-150	165	90	M76x3	50
200-350	260	100	M80x3	60
400	319	100	M80x3	90
500	325	100	M80x3	90

Table 4: Dimensions DN 6 - 500

7 Comparison of European / American materials

GEA AWP valves contain individual parts in different materials. The following table contains all materials that GEA AWP uses for pressure-retaining parts and lists the equivalent American materials.

European material			American equivalent material	
Material number	Short name	Standard	Material standard	Grade
Valves made of carbon steel				
1.0345	P235GH, TC1 +N	DIN EN 10216-2	ASTM A106	A + B
1.0038	S235JR +N	DIN EN 10025-2	ASTM A570	36
1.0425	P265GH	DIN EN 10028-2	ASTM A516	60
1.0577	S355J2 +N	DIN EN 10025-2	ASTM A516	65
1.0562	P355N	DIN EN 10028-3		
1.6220	G20Mn5 +QT	DIN EN 10213	ASTM A352	LCC
1.0460	C22.8	VdTÜV 350/3	ASTM A105	-
Valves made of low-temperature steel				
1.0451	P215NL +N	DIN EN 10216-4	ASTM A333	6
1.0452	P255QL +QT	DIN EN 10216-4		
1.0566	P355NL1 +N	DIN EN 10028-3 DIN 17103 VdTÜV 354/3	ASTM A662 ASTM A420 ASTM A350	B WPL6 LF2
1.0488	TStE 285	DIN 17103 VdTÜV 352/3	ASTM A662 ASTM A350	A LF2
1.6220	G20Mn5 +QT	DIN EN 10213	ASTM A352	LCC
Valves made of stainless steel				
1.4301	X5CrNi18-10	DIN EN 10216-5 DIN EN 10028-7 DIN EN 10222-5 DIN EN 1092-1	ASTM A312 ASTM A240 ASTM A182	TP304 304 F304
1.4581	GX5CrNiMoNb19-11-2	DIN EN 10213	ASTM A351	CF10M

Straight-way valves in non-standard design (e.g. deviating materials, third-party inspection) are only available in angle-seat form.

8 Coding of connections for small and service valves

GEA AWP valves can be manufactured with a variety of connection variants:

DN	Thread	Code	Welding ends		Dimensions	Code
DN8	M12x1.5 RA6	AL	DN6	R1	Ø10.2x1.6	C0
DN8	M12x1.5-taper	AY		ANSI 40	Ø1/8"x1.7	C1
DN8	M14x1.5 RA8	A4		ANSI 80	Ø1/8"x2.4	C2
DN8	M16x1.5 RA8	A5				
DN8	M16x1.5 RA10	A6	DN8	R1	Ø13.5x1.8	D0
DN8	M16x1.5-i	AZ		ANSI 40	Ø1/4"x2.2	D1
DN8	M16x1.5-taper	AC		ANSI 80	Ø1/4"x3.0	D2
DN8	M18x1.5 RA10	A7		12x2	Ø12x2.0	D3
DN8	M18x1.5 RA12	A8		12x3	Ø12x3.0	D4
DN8	M20x1.5 RA12	A9		R1 ext. L2=130 Niro	Ø13.5x1.8	D5
DN8	M22x1.5 RA14	AA		R1 ext. L2=130 C-St.	Ø13.5x1.8	D6
DN8	M22x1.5 RA15	AB				
DN8	M22x1.5	A0	DN10	R1	Ø17.2x1.8	E0
DN8	M22x1.5-taper	AD		ANSI 40	Ø3/8"x2.3	E1
DN20	M26x1.5 RA18	AS		ANSI 80	Ø3/8"x3.2	E2
DN20	M30x2 RA22	AT		R2	Ø15x2.5	E3
DN8	G1/4"	AF		18x3	Ø18x3.0	E4
DN8	G1/4"-taper	AG		R1 ext. L2=130 Niro	Ø17.2x1.8	E5
DN8	G1/4"-i	AH		R1 ext. L2=130 C-St.	Ø17.2x1.8	E6
DN8	G3/8"	AK		16x4 ext.L2=130 NIRO	Ø16x4.0	E7
DN8	G3/8"-i	AM		17,2x2	Ø17.2x2.0	E8
DN8	G3/8" RA10	AJ		R1 ext. L2=120 C-St.	Ø17.2x1.8	E9
DN8	G1/2"	A1		R1 ext. L2=140 Niro	Ø17.2x1.8	EA
DN8	G1/2"-LH	A2		R1 ext. L2=140 C-St.	Ø17.2x1.8	EB
DN8	G1/2" RA12	AN		R1 ext. L2=60 Niro	Ø17.2x1.8	EC
DN8	G1/2"-i	AU		R1 ext. L2=60 C-St.	Ø17.2x1.8	ED
DN8	G1/2" UM *)	AV		18x4 ext.L2=140 Niro	Ø18x4.0	EE
DN8	G1/2" **)	AW		18x4 ext.L2=140C- St	Ø18x4.0	EF
DN8	G1/2"-taper	AX		18x4 ext.L2=60 Niro	Ø18x4.0	EG
DN20	G3/4"	AE		18x4 ext.L2=60 C- St.	Ø18x4.0	EH
DN20	G3/4" RA18	AP				
DN8	1/4"NPT-male	A3	DN15	R1	Ø21.3x2.0	F0

DN	Thread	Code	Welding ends		Dimensions	Code
DN8	1/4"NPT-female	AR		ANSI 40	Ø1/2"x2.8	F1
DN8	3/8"NPT-male	AI		ANSI 80	Ø1/2"x3.7	F2
DN8	3/8"NPT-female	B2		R2	Ø20x2.5	F3
DN8	1/2"NPT-male	B0		R1 ext. L2=130 Niro	Ø21.3x2.0	F5
DN8	1/2"NPT-female	B1		R1 ext. L2=130 C-St.	Ø21.3x2.0	F6
DN20	3/4"NPT-male	B3		R1 ext. L2=180 NIRO	Ø21.3x2.0	F7
DN8	M10-a	B4		ANSI 80 L2=130 C-St	Ø21.3x3.7	F8
DN20	G1"	B6	*) rotatable, welded to body			
DN8	G3/8" BSPT-male	B7				
DN8	G3/8" BSPT-female	B8	**) for one-piece blind nut			
DN8	3/8-18 NPTF-male	B9				
DN8	R3/8"-taper	BA				

i = female thread, a = male thread

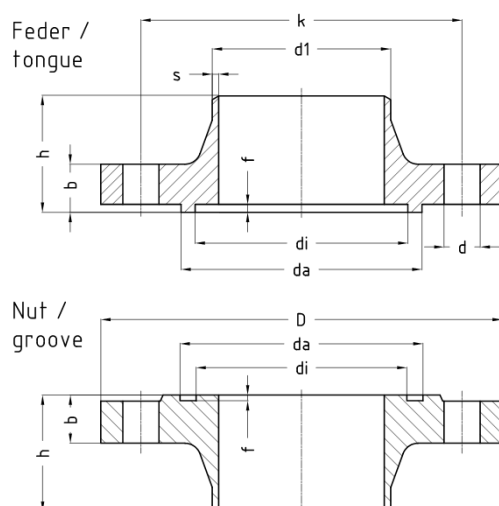
These connections can be equipped with accessories.

Accessories		Short designation	Code
UM+ST	Union nut with welding nipple	UM+ST	1
BM	Blind nut	BM	2
DM	Double nut left/right	DM	3
UM+SKB	Union nut with weld ball nipple	UM+SKB	4
UM+SR	Union nut with cutting ring	UM+SR	5
UM+SLT	Union nut with hose nipple	UM+SLT	6
DM+adapter	Double nut with adapter G1/2"-a/G1/4"-i	DM+adapter	7
UM+KKR	Union nut with clamping ring	UM+KKR	9

9 Welding neck flanges - DIN 2634/2635

- DIN-FL
- DIN-FL N
- DIN-FL F
- DIN-FL C
- DIN-FL D
- FL - flange
- Form N - groove, DIN 2512
- Form F - tongue, DIN 2512
- Form C - smooth flange facing, (Rz 160) DIN 2526
- Form D - smooth flange facing (Rz 40) DIN 2526

DN 10-150 DIN 2635 PN 40,
DN 200 DIN 2634 PN 25



DIN2634 PN25 DN10-150 / DIN 2635 PN40 DN10-400																				
Welding ends					Flange facing design											Screws DIN 931			Sealing ring DIN 2691	
Series 1		Series 2			Groove											Tongue				
DN	d1	s	d1	s	b	k	h	d	D	di	da	f	di	da	f	Quantity	Thread	Length	di	da
10	17.2	1.8	15.0	2.5	16	60	35	14	90	23	35	2.5	24	34	4.0	4	M 12	45	24	34
15	21.3	2.0	20.0	2.5	16	65	38	14	95	28	40	2.5	29	39	4.0	4	M 12	45	29	39
20	26.9	2.3	25.0	2.5	18	75	40	14	105	35	51	2.5	36	50	4.0	4	M 12	50	36	50
25	33.7	2.6	32.0	3.0	18	85	40	14	115	42	58	2.5	43	57	4.0	4	M 12	50	43	57
32	42.4	2.6	38.0	3.0	18	100	42	18	140	50	66	2.5	51	65	4.0	4	M 16	55	51	65
40	48.3	2.6	45.0	3.0	18	110	45	18	150	60	76	2.5	61	75	4.0	4	M 16	55	61	75
50	60.3	2.9	57.0	3.2	20	125	48	18	165	72	88	2.5	73	87	4.0	4	M 16	60	73	87
65	76.1	2.9	76.1	3.6	22	145	52	18	185	94	110	2.5	95	109	4.0	8	M 16	60	95	109
80	88.9	3.2	88.9	4.0	24	160	58	18	200	105	121	2.5	106	120	4.0	8	M 16	65	106	120
100	114.3	3.6	108.0	4.0	24	190	65	22	235	128	150	3.0	129	149	4.5	8	M 20	70	129	149
125	139.7	4.0	133.0	4.0	26	220	68	26	270	154	176	3.0	155	175	4.5	8	M 24	80	155	175
150	168.3	4.5	159.0	4.5	28	250	75	26	300	182	204	3.0	183	203	4.5	8	M 24	80	183	203

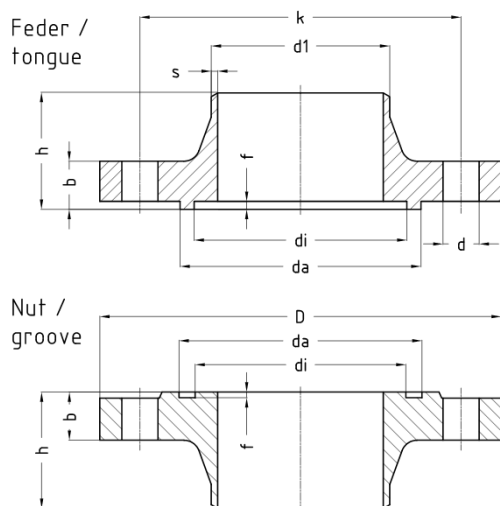
DIN2634 PN25 DN10-150 / DIN 2635 PN40 DN10-400																					
200	219.1	6.3			34	320	88	30	375	238	260	3.0	239	259	4.5	12		M 27	100	239	259
250	273.0	7.1			38	385	105	33	450	291	313	3.0	292	312	4.5	12		M 30	110	292	312
300	323.9	8.0			42	450	115	33	515	342	364	3.0	343	363	4.5	16		M 30	120	343	363
350	355.6	8.8			46	510	125	36	580	394	422	3.5	395	421	5.0	16		M 33	130	395	421
400	406.4	11.0			50	585	135	39	660	446	474	3.5	447	473	5.0	16		M 36	140	447	473

Table 5: Installation lengths

10 Welding neck flanges - DIN 2634/2635

- DIN-FL
- DIN-FL N
- DIN-FL F
- DIN-FL C
- DIN-FL D
- FL - flange
- Form N - groove, DIN 2512
- Form F - tongue, DIN 2512
- Form C - smooth flange facing, (Rz 160) DIN 2526
- Form D - smooth flange facing (Rz 40) DIN 2526

DN 10-150 DIN 2635 PN 40,
DN 200 DIN 2634 PN 25



DIN 2634 PN25 DN200-500																		
	Welding ends							Flange facing design						Screws DIN 931			Sealing ring DIN 2691	
	Series 1										Groove							
DN	d1	s	b	k	h	d	D	di	da	f	di	da	f	Quantity	Thread	Length	di	da
200	219.1	6.3	30	310	80	26	360	238	260	3.0	239	259	4.5	12	M 24	90	239	259
250	273.0	7.1	32	370	88	30	425	291	313	3.0	292	312	4.5	12	M 27	90	292	312
300	323.9	8.0	34	430	92	30	485	342	364	3.0	343	363	4.5	16	M 27	100	343	363
350	355.6	8.0	38	490	100	33	555	394	422	3.5	395	421	5.0	16	M 30	110	395	421
400	406.4	8.8	40	550	110	36	620	446	474	3.5	447	473	5.0	16	M 33	120	447	473
500	508.0	10.0	44	660	125	36	730	548	576	3.5	549	575	5.0	20	M 33	130	549	575
DIN2636 PN63 DN10-40 / DIN 2637 PN100 DN10-40																		
DN	d1	s	b	k	h	d	D	di	da	f	di	da	f	Quantity	Thread	Length	di	Da
10	17.2	2.0	20	70	45	14	100	23	35	2.5	24	34	4.0	4	M 12	55	24	34
15	21.3	2.0	20	75	45	14	105	28	40	2.5	29	39	4.0	4	M 12	55	29	39
20	26.9	2.6	22	90	48	18	130	35	51	2.5	36	50	4.0	4	M 16	60	36	50
25	33.7	2.6	24	100	58	18	140	42	58	2.5	43	57	4.0	4	M 16	65	43	57

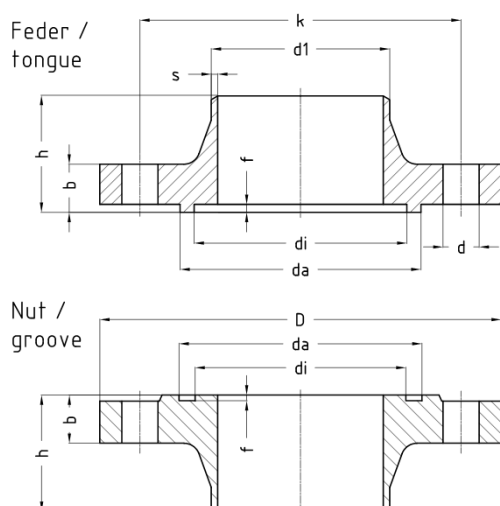
DIN 2634 PN25 DN200-500																			
32	42.4	2.9	24	110	60	22	155	50	66	2.5	51	65	4.0	4		M 20	70	51	65
40	48.3	2.9	26	125	62	22	170	60	76	2.5	61	75	4.0	4		M 20	70	61	75
DIN 2636 PN63 DN50-125																			
DN	d1	S	b	k	h	d	D	di	da	f	di	da	f	Quantity	Thread	Length	di	da	
50	60.3	2.9	26	135	62	22	180	72	88	2.5	73	87	4.0	4	M 20	75	73	87	
65	76.1	3.2	26	160	68	22	205	94	110	2.5	95	109	4.0	8	M 20	75	95	109	
80	88.9	3.6	28	170	72	22	215	105	121	2.5	106	120	4.0	8	M 20	75	106	120	
100	114.3	4.0	30	200	78	26	250	128	150	3.0	129	149	4.5	8	M 24	90	129	149	
125	139.7	4.5	34	240	88	30	295	154	176	3.0	155	175	4.5	8	M 27	100	155	175	

Table 6: Installation lengths

11 Welding neck flanges - DIN EN 1092-1

- DIN EN-FL
- DIN EN-FL D
- DIN EN-FL C
- DIN EN-FL B1
- DIN EN-FL B2
- FL - flange
- Form D - groove, DIN EN 1092-1
- Form C - tongue, DIN EN 1092-1
- Form B1 - raised face (Rz 50) DIN EN 1092-1
- Form B2 - raised face (Rz 12.5) DIN EN 1092-1

DN 10-150 DIN 2635 PN 40,
DN 200 DIN 2634 PN 25



DIN EN 1092-1 PN25 DN10-150 / PN40 DN10-400																				
	Welding ends									Flange facing design						Screws DIN 931			Sealing ring DIN 2691	
	Series 1		Series 2							Groove			Tongue							
DN	d1	s	d1	s	b	k	h	d	D	di	da	f	di	da	f	Quantity	Thread	Length	di	da
10	17.2	1.8	15.0	2.5	16	60	35	14	90	23	35	4.0	24	34	4.5	4	M 12	45	24	34
15	21.3	2.0	20.0	2.5	16	65	38	14	95	28	40	4.0	29	39	4.5	4	M 12	45	29	39
20	26.9	2.3	25.0	2.5	18	75	40	14	105	35	51	4.0	36	50	4.5	4	M 12	50	36	50
25	33.7	2.6	32.0	3.0	18	85	40	14	115	42	58	4.0	43	57	4.5	4	M 12	50	43	57
32	42.4	2.6	38.0	3.0	18	100	42	18	140	50	66	4.0	51	65	4.5	4	M 16	55	51	65
40	48.3	2.6	45.0	3.0	18	110	45	18	150	60	76	4.0	61	75	4.5	4	M 16	55	61	75
50	60.3	2.9	57.0	3.2	20	125	48	18	165	72	88	4.0	73	87	4.5	4	M 16	60	73	87
65	76.1	2.9	76.1	3.6	22	145	52	18	185	94	110	4.0	95	109	4.5	8	M 16	60	95	109
80	88.9	3.2	88.9	4.0	24	160	58	18	200	105	121	4.0	106	120	4.5	8	M 16	65	106	120
100	114.3	3.6	108.0	4.0	24	190	65	22	235	128	150	4.5	129	149	5.0	8	M 20	70	129	149
125	139.7	4.0	133.0	4.0	26	220	68	26	270	154	176	4.5	155	175	5.0	8	M 24	80	155	175
150	168.3	4.5	159.0	4.5	28	250	75	26	300	182	204	4.5	183	203	5.0	8	M 24	80	183	203

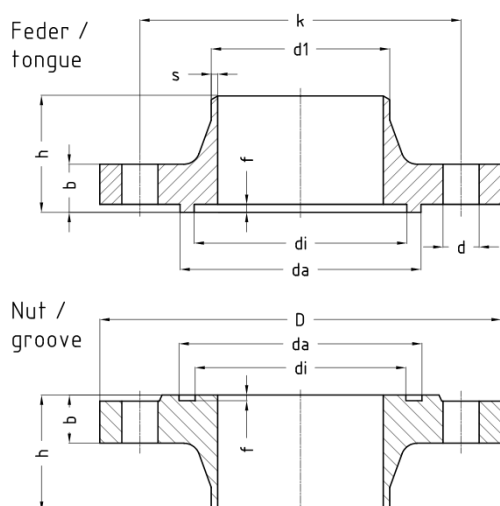
DIN EN 1092-1 PN25 DN10-150 / PN40 DN10-400																					
200	219.1	6.3			34	320	88	30	375	238	260	4.5	239	259	5.0	12		M 27	100	239	259
250	273.0	7.1			38	385	105	33	450	291	313	4.5	292	312	5.0	12		M 30	110	292	312
300	323.9	8.0			42	450	115	33	515	342	364	4.5	343	363	5.0	16		M 30	120	343	363
350	355.6	8.8			46	510	125	36	580	394	422	5.0	395	421	5.5	16		M 33	130	395	421
400	406.4	11.0			50	585	135	39	660	446	474	5.0	447	473	5.5	16		M 36	140	447	473

Table 7: Installation lengths

12 Welding neck flanges - DIN EN 1092-1

- DIN EN-FL
- DIN EN-FL D
- DIN EN-FL C
- DIN EN-FL B1
- DIN EN-FL B2
- FL - flange
- Form D - groove, DIN EN 1092-1
- Form C - tongue, DIN EN 1092-1
- Form B1 - raised face, (Rz 50) DIN EN 1092-1
- Form B2 - raised face, (Rz 12.5) DIN EN 1092-1

DN 10-150 DIN 2635 PN 40,
DN 200 DIN 2634 PN 25



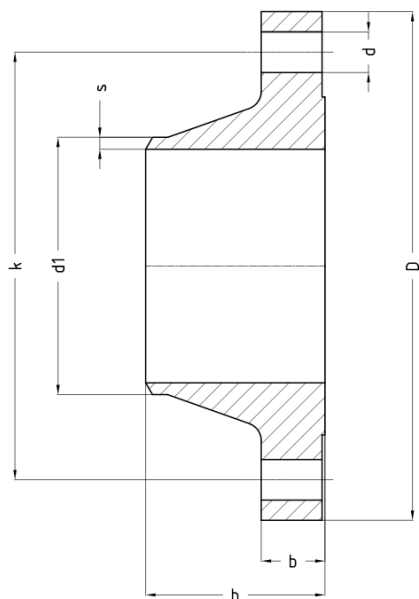
DIN EN 1092-1 PN25 DN200-500																		
Welding ends			Flange facing design											Screws DIN 931			Sealing ring DIN 2691	
Series 1			Groove											Tongue				
DN	d1	s	b	k	h	d	D	di	da	f	di	da	f	Quantity	Thread	Length	di	da
200	219.1	6.3	30	310	80	26	360	238	260	4.5	239	259	5.0	12	M 24	90	239	259
250	273.0	7.1	32	370	88	30	425	291	313	4.5	292	312	5.0	12	M 27	90	292	312
300	323.9	8.0	34	430	92	30	485	342	364	4.5	343	363	5.0	16	M 27	100	343	363
350	355.6	8.0	38	490	100	33	555	394	422	5.0	395	421	5.5	16	M 30	110	395	421
400	406.4	8.8	40	550	110	36	620	446	474	5.0	447	473	5.5	16	M 33	120	447	473
500	508.0	10.0	44	660	125	36	730	548	576	5.0	549	575	5.5	20	M 33	130	549	575
DIN EN 1092-1 PN63 DN10-40 / PN100 DN10-40																		
DN	d1	s	b	k	h	d	D	di	da	F	di	da	f	Quantity	Thread	Length	di	Da
10	17.2	2.0	20	70	45	14	100	23	35	4.0	24	34	4.5	4	M 12	55	24	34
15	21.3	2.0	20	75	45	14	105	28	40	4.0	29	39	4.5	4	M 12	55	29	39
20	26.9	2.6	22	90	48	18	130	35	51	4.0	36	50	4.5	4	M 16	60	36	50
25	33.7	2.6	24	100	58	18	140	42	58	4.0	43	57	4.5	4	M 16	65	43	57

DIN EN 1092-1 PN25 DN200-500																		
32	42.4	2.9	24	110	60	22	155	50	66	4.0	51	65	4.5	4	M 20	70	51	65
40	48.3	2.9	26	125	62	22	170	60	76	4.0	61	75	4.5	4	M 20	70	61	75
DIN EN 1092-1 PN63 DN50-125																		
DN	d1	S	b	k	h	d	D	di	da	f	di	da	F	Quantity	Thread	Length	di	da
50	60.3	2.9	26	135	62	22	180	72	88	4.0	73	87	4.5	4	M 20	75	73	87
65	76.1	3.2	26	160	68	22	205	94	110	4.0	95	109	4.5	8	M 20	75	95	109
80	88.9	3.6	28	170	72	22	215	105	121	4.0	106	120	4.5	8	M 20	75	106	120
100	114.3	4.0	30	200	78	26	250	128	150	4.5	129	149	5.0	8	M 24	90	129	149
125	139.7	4.5	34	240	88	30	295	154	176	4.5	155	175	5.0	8	M 27	100	155	175

Table 8: Installation lengths

13 Welding neck flanges - ANSI B16.5 raised face

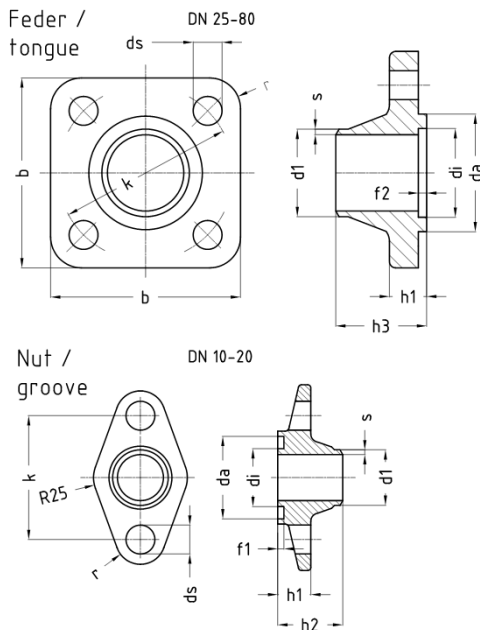
- ANSI-FL
- ANSI-FL 150lbs RF
- ANSI-FL 300lbs RF
- FL - flange
- Facing with large and small male / female
- Facing with large and small tongue / groove according to ANSI B16.5



Nominal size		Welding ends acc. to:													
		ANSI		ANSI-FL 150lbs RF / sq. in				Screws DIN 931		ANSI-FL 300lbs RF / sq. in				Screws DIN 931	
DN	INCH	d1	s	b	k	h	d	D	Quantity	b	k	h	d	D	Quantity
15	1/2"	21.3	2.8	11.2	60.5	47.8	15.7	88.9	4	14.2	66.5	52.3	15.7	95.2	4
20	3/4"	26.7	2.9	12.7	69.9	52.3	15.7	98.6	4	15.7	82.5	57.1	19.0	117.3	4
25	1"	33.4	3.4	14.2	79.2	55.6	15.7	108.0	4	17.5	88.9	62.0	19.0	123.9	4
32	1 1/4"	42.2	3.6	15.7	88.9	57.2	15.7	117.3	4	19.0	98.5	65.0	19.0	133.3	4
40	1 1/2"	48.3	3.7	17.5	98.6	62.0	15.7	127.0	4	20.6	114.3	68.3	22.3	155.4	4
50	2"	60.3	3.9	19.1	120.7	63.5	19.1	152.4	4	22.3	127.0	69.8	19.0	165.1	6
65	2 1/2"	73.0	5.2	22.4	139.7	69.9	19.1	177.8	4	25.4	149.3	76.2	22.3	190.5	8
80	3"	88.9	5.5	23.9	152.4	69.9	19.1	190.5	4	28.4	168.1	79.2	22.3	209.5	8
100	4"	114.3	6.0	23.9	190.5	76.2	19.1	228.6	8	31.7	200.1	85.8	22.3	254.0	8
125	5"	141.3	6.6	23.9	215.9	88.9	22.4	254.0	8	35.0	234.9	98.5	22.3	279.4	8
150	6"	168.3	7.1	25.4	241.3	88.9	22.4	279.4	8	36.5	269.7	98.5	22.3	317.5	12
200	8"	219.1	8.2	28.4	298.5	101.6	22.4	342.9	8	41.1	330.2	111.2	25.4	381.0	12
250	10"	273.0	9.3	30.2	362.0	101.6	25.4	406.4	12	47.7	387.3	117.3	28.4	444.5	16
300	12"	323.8	10.3	31.8	431.8	114.3	25.4	482.6	12	50.8	450.8	130.0	31.7	520.7	16
350	14"	355.6	11.1	35.1	476.3	127.0	28.4	533.4	12	53.8	514.3	142.7	31.7	584.2	20
400	16"	406.4	12.7	36.6	539.8	127.0	28.4	596.9	16	57.1	571.5	146.0	35.0	647.7	20

14 Welding neck flanges - AWP

- AWP-FL
- AWP-FL N
- AWP-FL F
- FL - flange
- N - groove
- F - tongue



AWP-FL PN25 DN10-20 / PN40 DN25-80																								
	Welding ends										Flange facing design								Screws DIN 931			Sealing ring DIN 2691		
	Series 1		Series 2		ANSI						Groove				Tongue				Quantity	Thread	Length			
DN	d1	s	d1	s	d1	s	b	k	r	h1	ds	di	da	f1	h2	di	da	f2	h3				di	da
10	17.2	1.8	15.0	2.5	17.1	2.3	88	60	13	16	14	28	40	3	31.5	29	39	4	32.0	2	M 12	45	29	39
15	21.3	2.0	20.0	2.5	21.3	2.8	88	60	13	16	14	28	40	3	31.5	29	39	4	32.0	2	M 12	45	29	39
20	26.9	2.3	25.0	2.5	26.7	2.9	88	60	13	16	14	28	40	3	31.5	29	39	4	32.0	2	M 12	45	29	39
25	33.7	2.6	32.0	3.0	33.4	3.4	92	85	15	18	14	42	58	3	44.0	43	57	4	44.0	4	M 12	50	43	57
32	42.4	2.6	38.0	3.0	42.2	3.6	92	85	15	18	14	42	58	3	44.0	43	57	4	44.0	4	M 12	50	43	57
40	48.3	2.6	45.0	3.0	48.3	3.7	92	85	15	18	14	42	58	3	38.5	43	57	4	38.5	4	M 12	50	43	57
50	60.3	2.9	57.0	3.2	60.3	3.9	132	135	20	28	18	84	96	3	43.0	85	95	4	43.0	4	M 16	75	A85x95*	
65	76.1	2.9	76.1	3.6	73.0	5.2	132	135	20	28	18	84	96	3	53.5	85	95	4	53.5	4	M 16	75	A85x95*	
80	88.9	3.2	88.9	4.0	88.9	5.5	132	135	20	28	18	84	96	3	53.5	85	95	4	53.5	4	M 16	75	A85x95*	

Table 9: Installation lengths

* = acc. to DIN 7603

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