

Rotary Fittings



Technical Information

HANSA-FLEX Ball Bearing Rotary Fittings

Ball Bearing Rotary Fittings

Ball bearing rotary fittings have been designed for working pressures up to 400 bar. The typical distinctions are a low starting torque and a favourable pressure – number of revolutions (rpm) ratio.

Surface

Zinc plated steel and yellow chromated (A3C).

Nominal temperatures

– 25°C bis + 100°C

Warehousing

Ball bearing rotary fittings can be stored for a 6 months duration. According to the store conditions from DIN 7716 their store duration can be up to 1 year.

Assembly instructions

besides working conditions, the life duration of rotary fittings depends considerably on a stress free line connection. Therefore the direct connection with tubes has to be avoided. For the hose connection lenght we recommend approximately a lenght of 5 times the hose outside diameter. Thus it absorbs also vibrations and pressure shocks. To connect the hoses we recommend the use of swivel nut fittings according to DIN 3865. No lateral stress has to be exerted.

Number of revolutions and starting torques table – indicative values

Ø	Permissible number of revolution U/min under a working pressure of*						Starting torque at 250 bar/Nm
	25 bar	64 bar	100 bar	160 bar	250 bar	400 bar	
6–8	1500	750	400	200	85	25	0,08
10–18	800	400	200	100	45	20	0,24
20–28	300	150	75	38	15	–	0,8
30–38	200	100	50	25	10	–	2,0

*) Please observe the pressure values for bite type fittings!

A minimum working pressure of 10 bar is necessary!

Technical Information

HANSA-FLEX Plain Bearing Rotary Fittings

Plain Bearing Rotary Fittings

Plain bearing rotary fittings have been designed for tubes and hoses with slow rotating, swinging or moving machine parts and for working pressures up to 64 bar (series L) or 160 bar (series S).

Surface

Zinc plated steel and yellow chromated (A3C).

Nominal temperature

By use of sealings in NBR: -25°C bis $+100^{\circ}\text{C}$

By use of sealings in FPM: -25°C bis $+120^{\circ}\text{C}$

Warehousing

Plain bearing rotary fittings can be stored for a 6 months duration. According to the store conditions from DIN 7716 their store duration can be up to 1 year.

Number of revolutions (rpm): Series Light – indicative values

Ø	6	8	10	12	15	18	22	28	35
permissible rpm U/min	28	28	21	17	13	10	10	7	7

Number of revolutions (rpm): Series Heavy – indicative values

Ø	6	8	10	12	14	16	20	25	30	38
permissible rpm U/min	11	11	9	7	5	5	4	4	3	3

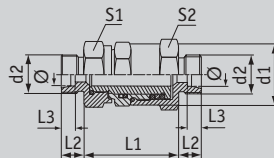
Assembly instructions

Besides working conditions, the life duration of rotary fittings depends considerably on a stress free line connection. Therefore the **direct connection** with tubes has to be avoided. For the hose connection lenght we recommend approximately a lenght of 5 times the hose outside diameter. Thus it absorbs also vibrations and pressure shocks. To connect the hoses we recommend the use of swivel nut fittings according to DIN 3865.

DG

Swivel Straight Couplings

Article category 5250



Designation	Series	Pressure	Ø	d2	L1	L2	L3	d1	S1	S2
DG NW 04 HL	L	*	6	M 12x1,5	39	10	7	24	22	24
DG NW 06 HL	L	*	8	M 14x1,5	39	10	7	24	22	24
DG NW 08 HL	L	*	10	M 16x1,5	50	11	7	32	22	32
DG NW 10 HL	L	*	12	M 18x1,5	50	11	7	32	22	32
DG NW 13 HL	L	*	15	M 22x1,5	50	12	7	32	30	32
DG NW 16 HL	L	*	18	M 26x1,5	58	12	7,5	41	36	41
DG NW 20 HL	L	*	22	M 30x2	56	14	7,5	41	36	41
DG NW 25 HL	L	*	28	M 36x2	74	14	7,5	60	55	60
DG NW 32 HL	L	*	35	M 45x2	72	16	10,5	60	55	60

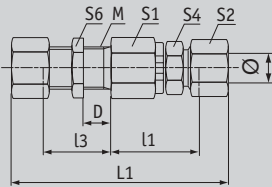
*) Please refer to table page 2.

Construction Series: LL = Very Light – L = Light – S = Heavy — Ø = Tube Outside Diameter — PN = Nominal Pressure — PB = Maximal Working Pressure

DG

Swivel Straight Couplings

Article category 5350



Designation	Series	Pressure	Ø	ID	l1	L1	S1	S2	S4
DG NW 03 HS	S	*	6	4	47	76	22	17	17
DG NW 04 HS	S	*	8	6	47	76	22	19	17
DG NW 08 HS	S	*	12	10	57	89	30	24	24
DG NW 13 HS	S	*	16	13	57	93	30	30	27
DG NW 16 HS	S	*	20	16	71	114	41	36	36
DG NW 20 HS	S	*	25	20	72	120	41	46	41
DG NW 25 HS	S	*	30	25	82	135	60	50	46
DG NW 32 HS	S	*	38	32	82	143	60	60	55

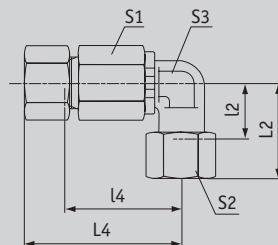
*) Please refer to table page 2.

Construction Series: LL = Very Light – L = Light – S = Heavy — Ø = Tube Outside Diameter — PN = Nominal Pressure — PB = Maximal Working Pressure

DG90

Swivel Banjo Couplings

Article category 5350



Designation	Series	Pressure	Ø	ID	L1	L2	L4	L4	S1	S2	S3
DG 90 NW 03 HS	S	*	6	4	16	31	44,5	59	22	17	17
DG 90 NW 04 HS	S	*	8	6	17	32	44,5	59	22	19	17
DG 90 NW 08 HS	S	*	12	10	21,5	38	55,5	72	30	24	22
DG 90 NW 13 HS	S	*	16	13	24,5	43	54,5	73	30	30	22
DG 90 NW 16 HS	S	*	20	16	26,5	48	72,5	94,5	41	36	36
DG 90 NW 20 HS	S	*	25	20	30	54	71	95,5	41	46	36
DG 90 NW 25 HS	S	*	30	25	35,5	62	89	116	60	50	50
DG 90 NW 32 HS	S	*	38	32	41	72	86,5	117	60	60	50

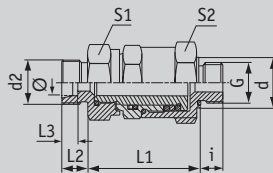
*) Please refer to table page 2.

Construction Series: LL = Very Light – L = Light – S = Heavy — Ø = Tube Outside Diameter — PN = Nominal Pressure — PB = Maximal Working Pressure

DGM

Swivel Male Stud Couplings

Article category 5250



Designation	Series	Pressure	Ø	M	L1	L2	L3	i	d	d2	S1	S2
DGM NW 04 HL	L	*	6	M 10x1	— auf Anfrage —							
DGM NW 04 HL 12	L	*	6	M 12x1,5	41	10	7	12	17	M 12x1,5	22	24
DGM NW 06 HL	L	*	8	M 12x1,5	41	10	7	12	17	M 14x1,5	22	24
DGM NW 06 HL 14	L	*	8	M 14x1,5	41	10	7	12	19	M 14x1,5	22	24
DGM NW 08 HL	L	*	10	M 14x1,5	41	11	7	12	19	M 16x1,5	22	24
DGM NW 08 HL 16	L	*	10	M 16x1,5	52	11	7	12	22	M 16x1,5	22	32
DGM NW 10 HL 18	L	*	12	M 18x1,5	53	11	7	12	24	M 18x1,5	22	32
DGM NW 10 HL 22	L	*	12	M 22x1,5	— auf Anfrage —							
DGM NW 13 HL	L	*	15	M 18x1,5	53	12	7	12	24	M 22x1,5	30	32
DGM NW 13 HL 22	L	*	15	M 22x1,5	— auf Anfrage —							
DGM NW 16 HL	L	*	18	M 22x1,5	53	12	7,5	14	27	M 26x1,5	30	32
DGM NW 20 HL	L	*	22	M 26x1,5	59	14	7,5	16	32	M 30x2	36	41

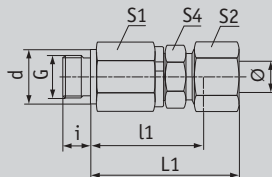
*) Please refer to table page 2.

Construction Series: LL = Very Light – L = Light – S = Heavy — Ø = Tube Outside Diameter — PN = Nominal Pressure — PB = Maximal Working Pressure

DGM

Swivel Male Stud Couplings

Article category 5350



Designation	Series	Pressure	Ø	ID	i	l1	L1	S1	S2	S4	d	G
DGM NW 03 HS 14	S	*	6	4	12	42	57	22	17	17	19	M 14x1,5
DGM NW 04 HS	S	*	8	6	12	42	57	22	19	17	19	M 14x1,5
DGM NW 08 HS	S	*	12	10	12	52,5	69	30	24	24	24	M 18x1,5
DGM NW 13 HS	S	*	16	13	14	51,5	70	30	30	27	27	M 22x1,5
DGM NW 16 HS	S	*	20	16	16	65,5	87,5	41	36	36	32	M 27x2
DGM NW 20 HS	S	*	25	20	18	66	90,5	41	46	41	40	M 33x2
DGM NW 25 HS	S	*	30	25	20	75,5	102	60	50	46	50	M 42x2
DGM NW 32 HS	S	*	38	32	22	76	107	60	60	55	55	M 48x2

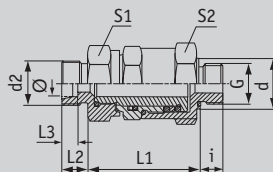
*) Please refer to table page 2.

Construction Series: LL = Very Light – L = Light – S = Heavy — Ø = Tube Outside Diameter — PN = Nominal Pressure — PB = Maximal Working Pressure

DGR

Swivel Male Stud Couplings

Article category 5250



Designation	Series Pressure		Ø	G	L1	L2	L3	i	d	d2	S1	S2
DGR NW 04 HL	L	*	6	G 1/8 A	41	10	7	8	14	M 12x1,5	22	24
DGR NW 04 HL 1/4	L	*	6	G 1/4 A	41	10	7	12	19	M 12x1,5	22	24
DGR NW 06 HL	L	*	8	G 1/4 A	41	10	7	12	19	M 14x1,5	22	24
DGR NW 08 HL	L	*	10	G 1/4 A	41	11	7	12	19	M 16x1,5	22	24
DGR NW 08 HL 3/8	L	*	10	G 3/8 A	53	11	7	12	22	M 16x1,5	22	32
DGR NW 10 HL 1/2	L	*	12	G 1/2 A	53	11	7	14	27	M 18x1,5	22	32
DGR NW 13 HL	L	*	15	G 1/2 A	53	12	7	14	27	M 22x1,5	30	32
DGR NW 13 HL 3/4	L	*	15	G 3/4 A	— auf Anfrage —							
DGR NW 16 HL	L	*	18	G 1/2 A	53	12	7,5	14	27	M 26x1,5	30	32
DGR NW 16 HL 3/4	L	*	18	G 3/4 A	— auf Anfrage —							
DGR NW 20 HL	L	*	22	G 3/4 A	59	14	7,5	16	32	M 30x2	36	41
DGR NW 20 HL 1/2	L	*	22	G 1/2 A	— auf Anfrage —							
DGR NW 20 HL 1	L	*	22	G 1 A	— auf Anfrage —							

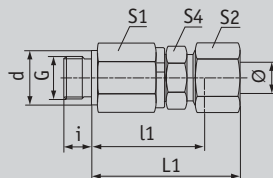
**) Please refer to table page 2.*

Construction Series: LL = Very Light – L = Light – S = Heavy — Ø = Tube Outside Diameter — PN = Nominal Pressure — PB = Maximal Working Pressure

DGR

Swivel Male Stud Couplings

Article category 5350



Designation	Series	Pressure	Ø	ID	i	l1	L1	S1	S2	S4	d	G
DGR NW 03 HS	S	*	6	4	12	42	57	22	17	17	19	G 1/4 A
DGR NW 04 HS	S	*	8	6	12	42	57	22	19	17	19	G 1/4 A
DGR NW 08 HS	S	*	12	10	12	52,5	69	30	24	24	22	G 3/8 A
DGR NW 13 HS	S	*	16	13	14	51,5	70	30	30	27	27	G 1/2 A
DGR NW 16 HS	S	*	20	16	16	65,5	87,5	41	36	36	32	G 3/4 A
DGR NW 20 HS	S	*	25	20	18	66	90,5	41	46	41	40	G 1 A
DGR NW 25 HS	S	*	30	25	20	75,5	102	60	50	46	50	G 1 1/4 A
DGR NW 32 HS	S	*	38	32	22	76	107	60	60	55	55	G 1 1/2 A

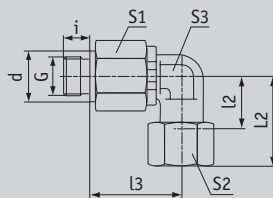
*) Please refer to table page 2.

Construction Series: LL = Very Light – L = Light – S = Heavy — Ø = Tube Outside Diameter — PN = Nominal Pressure — PB = Maximal Working Pressure

DGM90

Swivel Banjo Elbows

Article category 5350



Designation	Series	Pressure	Ø	ID	i	L2	L3	L2	S1	S2	S3	d	G
DGM 90 NW 03 HS 14	S	*	6	4	12	16	39,5	31	22	17	17	19	M 14x1,5
DGM 90 NW 04 HS	S	*	8	6	12	17	39,5	32	22	19	17	19	M 14x1,5
DGM 90 NW 08 HS	S	*	12	10	12	21,5	51	38	30	24	22	24	M 18x1,5
DGM 90 NW 13 HS	S	*	16	13	14	24,5	49	43	30	30	22	27	M 22x1,5
DGM 90 NW 16 HS	S	*	20	16	16	26,5	67	48	41	36	36	32	M 27x2
DGM 90 NW 20 HS	S	*	25	20	18	30	65	54	41	46	36	40	M 33x2
DGM 90 NW 25 HS	S	*	30	25	20	35,5	82,5	62	60	50	50	50	M 42x2
DGM 90 NW 32 HS	S	*	38	32	22	41	80,5	72	60	60	50	55	M 48x2

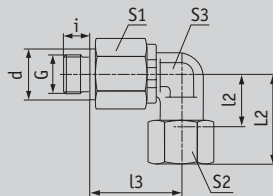
*) Please refer to table page 2.

Construction Series: LL = Very Light – L = Light – S = Heavy — Ø = Tube Outside Diameter — PN = Nominal Pressure — PB = Maximal Working Pressure

DGR90

Swivel Banjo Elbows

Article category 5350



Designation	Series	Pressure	Ø	ID	i	L2	L3	L2	S1	S2	S3	d	G
DGR 90 NW 03 HS	S	*	6	4	12	16	39,5	31	22	17	17	19	G 1/4 A
DGR 90 NW 04 HS	S	*	8	6	12	17	39,5	32	22	19	17	19	G 1/4 A
DGR 90 NW 08 HS	S	*	12	10	12	21,5	51	38	30	24	22	22	G 3/8 A
DGR 90 NW 13 HS	S	*	16	13	14	24,5	49	43	30	30	22	27	G 1/2 A
DGR 90 NW 16 HS	S	*	20	16	16	26,5	67	48	41	36	36	32	G 3/4 A
DGR 90 NW 20 HS	S	*	25	20	18	30	65	54	41	46	36	40	G 1 A
DGR 90 NW 25 HS	S	*	30	25	20	35,5	82,5	62	60	50	50	50	G 1 1/4 A
DGR 90 NW 32 HS	S	*	38	32	22	41	80,5	72	60	60	50	55	G 1 1/2 A

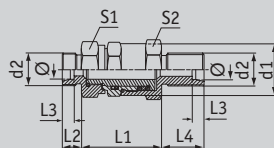
*) Please refer to table page 2.

Construction Series: LL = Very Light – L = Light – S = Heavy — Ø = Tube Outside Diameter — PN = Nominal Pressure — PB = Maximal Working Pressure

DGS

Swivel Straight Bulkhead Couplings

Article category 5250



Designation	Series	Pressure	Ø	d2	L1	L2	L3	L4	d1	S1	S2
DGS NW 06 HL	L	*	8	M 14x1,5	50	11	7	26	32	22	32
DGS NW 08 HL	L	*	10	M 16x1,5	50	11	7	26	32	22	32
DGS NW 10 HL	L	*	12	M 18x1,5	50	11	7	26	32	22	32
DGS NW 16 HL	L	*	18	M 26x1,5	58	12	7,5	27	41	36	41
DGS NW 20 HL	L	*	22	M 30x2	56	14	7,5	34	41	36	41
DGS NW 25 HL	L	*	28	M 36x2	74	14	7,5	34	60	55	60
DGS NW 32 HL	L	*	35	M 45x2	72	16	10,5	42	60	55	60

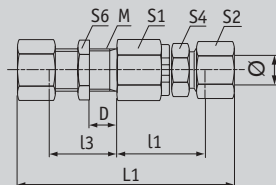
*) Please refer to table page 2.

Construction Series: LL = Very Light – L = Light – S = Heavy — Ø = Tube Outside Diameter — PN = Nominal Pressure — PB = Maximal Working Pressure

DGS

Swivel Straight Bulkhead Couplings

Article category 5350



Designation	Series		Pressure	Ø	ID	M	L3	L1	L1	S1	S2	S4	S6	D
DGS NW 03 HS	S	*	6	4	M 14x1,5	16	42	87	22	17	17	19	5	
DGS NW 04 HS	S	*	8	6	M 16x1,5	16	42	87	22	19	17	22	5	
DGS NW 08 HS	S	*	12	10	M 20x1,5	15,5	52,5	100	30	24	24	27	5	
DGS NW 13 HS	S	*	16	13	M 24x1,5	17,5	51,5	105	30	30	27	32	5	
DGS NW 16 HS	S	*	20	16	M 30x2	28,5	65,5	137	41	36	36	41	15	
DGS NW 20 HS	S	*	25	20	M 36x2	30	66	144	41	46	41	46	15	
DGS NW 25 HS	S	*	30	25	M 42x2	30,5	75,5	159	60	50	46	50	15	
DGS NW 32 HS	S	*	38	32	M 52x2	31	76	168	60	60	55	65	15	

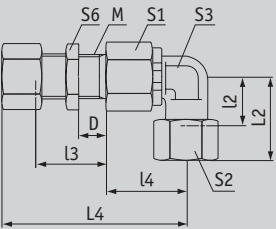
*) Please refer to table page 2.

Construction Series: LL = Very Light – L = Light – S = Heavy — Ø = Tube Outside Diameter — PN = Nominal Pressure — PB = Maximal Working Pressure

DGS90

Swivel Banjo Bulkhead Elbows

Article category 5350



Designation	Series	Pressure	Ø	ID	M	l3	l4	L4	l2	L2	S1	S2	S3	S6	D
DGS 90 NW 03 HS	S	*	6	4	M 14x1,5	16	39,5	70	16	31	22	17	17	19	5
DGS 90 NW 04 HS	S	*	8	6	M 16x1,5	16	39,5	70	17	32	22	19	17	22	5
DGS 90 NW 08 HS	S	*	12	10	M 20x1,5	15,5	51	83	21,5	38	30	24	22	27	5
DGS 90 NW 13 HS	S	*	16	13	M 24x1,5	17,5	49	85	24,5	43	30	30	22	32	5
DGS 90 NW 16 HS	S	*	20	16	M 30x2	28,5	67	117,5	26,5	48	41	36	36	41	15
DGS 90 NW 20 HS	S	*	25	20	M 36x2	30	65	119,5	30	54	41	46	36	46	15
DGS 90 NW 25 HS	S	*	30	25	M 42x2	30,5	82,5	140	35,5	62	60	50	50	50	15
DGS 90 NW 32 HS	S	*	38	32	M 52x2	31	80,5	142	41	72	60	60	50	65	15

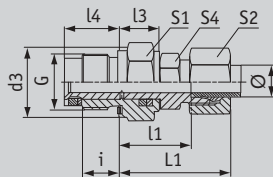
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GVM

Swivel Straight Couplings

Article category 5251, 5351



Designation	Series	Pressure	Ø	L1	l1	l3	l4	i	S1	S2	S4	d3	G
GVM NW 04 HL 14	L	PB 64	6	40	21	12	18	12	19	14	12	19	M 14x1,5
GVM NW 06 HL 14	L	PB 64	8	40	21	12	18	12	19	17	14	19	M 14x1,5
GVM NW 08 HL 18	L	PB 64	10	40	25	14,5	18	12	22	19	17	24	M 18x1,5
GVM NW 10 HL 22	L	PB 64	12	42	27	15	21	14	27	22	19	27	M 22x1,5
GVM NW 13 HL 27	L	PB 64	15	47	32	18	24	16	32	27	24	32	M 27x2
GVM NW 16 HL 27	L	PB 64	18	51	35	20	27,5	18	41	32	27	40	M 33x2
GVM NW 20 HL 33	L	PB 64	22	55	39	20	27,5	18	41	36	32	40	M 33x2
GVM NW 04 HS	S	PB 160	8	39	24	12	18	12	19	19	17	19	M 14x1,5
GVM NW 06 HS 18	S	PB 160	10	43	26,5	14,5	18	12	22	22	19	24	M 18x1,5

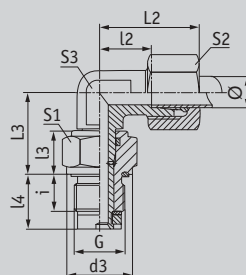
**) Please refer to table page 2.*

Construction Series: LL = Very Light – L = Light – S = Heavy — Ø = Tube Outside Diameter — PN = Nominal Pressure — PB = Maximal Working Pressure

GVM90

Swivel Banjo Couplings

Article category 5251, 5351



Designation	Series	Pressure	Ø	L2	L3	l2	l3	l4	i	S1	S2	S3	d3	G
GVM 90 NW 04 HL 14	L	PB 64	6	27	20	12	12	18	12	19	14	12	19	M 14x1,5
GVM 90 NW 06 HL 14	L	PB 64	8	29	21	14	12	18	12	19	17	12	19	M 14x1,5
GVM 90 NW 08 HL 18	L	PB 64	10	30	26	15	14,5	18	12	22	19	14	24	M 18x1,5
GVM 90 NW 10 HL 22	L	PB 64	12	32	27	17	15	21	14	27	22	17	27	M 22x1,5
GVM 90 NW 03 HS 14	S	PB 160	6	31	21	16	12	18	12	19	17	12	19	M 14x1,5
GVM 90 NW 04 HS	S	PB 160	8	32	22	17	12	18	12	19	19	14	19	M 14x1,5
GVM 90 NW 06 HS 18	S	PB 160	10	34	27	17,5	14,5	18	12	22	22	17	24	M 18x1,5
GVM 90 NW 08 HS 22	S	PB 160	12	38	28	21,5	15	21	14	27	24	17	27	M 22x1,5
GVM 90 NW 13 HS 27	S	PB 160	16	43	34	24,5	18	24	16	32	30	24	32	M 27x2
GVM 90 NW 16 HS 33	S	PB 160	20	48	39,5	26,5	20	27,5	18	41	36	27	40	M 33x2
GVM 90 NW 20 HS	S	PB 160	25	54	42,5	30	20	27,5	18	41	46	36	40	M 33x2
GVM 90 NW 25 HS	S	PB 160	30	62	48	35,5	20	31	20	50	50	41	50	M 42x2

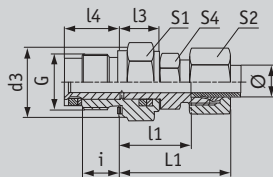
*) Please refer to table page 2.

Construction Series: LL = Very Light – L = Light – S = Heavy — Ø = Tube Outside Diameter — PN = Nominal Pressure — PB = Maximal Working Pressure

GVR

Swivel Straight Couplings

Article category 5251, 5351



Designation	Series	Pressure	Ø	L1	l1	l3	l4	i	S1	S2	S4	d3	G
GVR NW 04 HL 1/4	L	PB 64	6	40	21	12	18	12	19	14	12	19	G 1/4 A
GVR NW 06 HL	L	PB 64	8	40	21	12	18	12	19	17	14	19	G 1/4 A
GVR NW 08 HL 3/8	L	PB 64	10	40	25	14,5	18	12	22	19	17	22	G 3/8 A
GVR NW 10 HL 1/2	L	PB 64	12	42	27	15	21	14	27	22	19	27	G 1/2 A
GVR NW 13 HL 3/4	L	PB 64	15	47	32	18	24	16	32	27	24	32	G 3/4 A
GVR NW 16 HL 1	L	PB 64	18	51	35	20	27,5	18	41	32	27	40	G 1 A
GVR NW 20 HL 1	L	PB 64	22	55	39	20	27,5	18	41	36	32	40	G 1 A
GVR NW 04 HS	S	PB 160	8	39	24	12	18	12	19	19	17	19	G 1/4 A
GVR NW 06 HS	S	PB 160	10	43	26,5	14,5	18	12	22	22	19	22	G 3/8 A
GVR NW 08 HS 1/2	S	PB 160	12	45	28,5	15	21	14	27	24	22	27	G 1/2 A
GVR NW 13 HS 3/4	S	PB 160	16	52	33,5	18	24	16	32	30	27	32	G 3/4 A
GVR NW 16 HS 1	S	PB 160	20	60	38	20	27,5	18	41	36	32	40	G 1 A
GVR NW 20 HS	S	PB 160	25	65	40,5	20	27,5	18	41	46	41	40	G 1 A

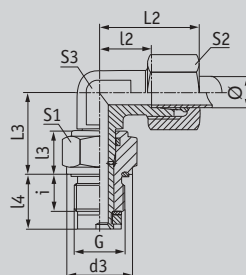
*) Please refer to table page 2.

Construction Series: LL = Very Light – L = Light – S = Heavy — Ø = Tube Outside Diameter — PN = Nominal Pressure — PB = Maximal Working Pressure

GVR90

Swivel Banjo Couplings

Article category 5251, 5351



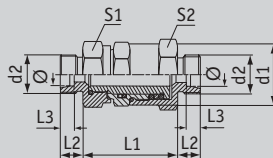
Designation	Series Pressure		Ø	L2	L3	L2	L3	L4	i	S1	S2	S3	d3	G
GVR 90 NW 04 HL 1/4	L	PB 64	6	27	20	12	12	18	12	19	14	12	19	G 1/4 A
GVR 90 NW 06 HL	L	PB 64	8	29	21	14	12	18	12	19	17	12	19	G 1/4 A
GVR 90 NW 08 HL 3/8	L	PB 64	10	30	26	15	14,5	18	12	22	19	14	22	G 3/8 A
GVR 90 NW 10 HL 1/2	L	PB 64	12	32	27	17	15	21	14	27	22	17	27	G 1/2 A
GVR 90 NW 13 HL 3/4	L	PB 64	15	— auf Anfrage —										G 3/4 A
GVR 90 NW 16 HL 3/4	L	PB 64	18	— auf Anfrage —										G 1/4 A
GVR 90 NW 16 HL 1	L	PB 64	18	— auf Anfrage —										G 1 A
GVR 90 NW 20 HL 1	L	PB 64	22	44	39,5	27,5	20	27,5	18	41	36	27	40	G 1 A
GVR 90 NW 25 HL 1 1/4	L	PB 64	28	47	44	30,5	20	31	20	50	41	36	50	G 1 1/4 A
GVR 90 NW 32 HL 1 1/2	L	PB 64	35	56	54	34,5	24	35	22	55	50	41	55	G 1 1/2 A
GVR 90 NW 03 HS	S	PB 160	6	31	21	16	12	18	12	19	17	12	19	G 1/4 A
GVR 90 NW 04 HS	S	PB 160	8	32	22	17	12	18	12	19	19	14	19	G 1/4 A
GVR 90 NW 06 HS	S	PB 160	10	34	27	17,5	14,5	18	12	22	22	17	22	G 3/8 A
GVR 90 NW 06 HS 1/4	S	PB 160	10	— auf Anfrage —										G 1/4 A
GVR 90 NW 08 HS 1/2	S	PB 160	12	38	28	21,5	15	21	14	27	24	17	27	G 1/2 A
GVR 90 NW 13 HS 3/4	S	PB 160	16	43	34	24,5	18	24	16	32	30	24	32	G 3/4 A
GVR 90 NW 16 HS 1/2	S	PB 160	20	— auf Anfrage —										G 1/2 A
GVR 90 NW 16 HS 1	S	PB 160	20	48	39,5	26,5	20	27,5	18	41	36	27	40	G 1 A
GVR 90 NW 20 HS	S	PB 160	25	54	42,5	30	20	27,5	18	41	46	36	40	G 1 A
GVR 90 NW 20 HS 3/4	S	PB 160	25	— auf Anfrage —										G 3/4 A
GVR 90 NW 25 HS	S	PB 160	30	62	48	35,5	20	31	20	50	50	41	50	G 1 1/4 A
GVR 90 NW 32 HS	S	PB 160	38	72	55	41	24	35	22	55	60	50	55	G 1 1/2 A
*) Please refer to table page 2.														

Construction Series: LL = Very Light – L = Light – S = Heavy — Ø = Tube Outside Diameter — PN = Nominal Pressure — PB = Maximal Working Pressure

DG-H

Swivel Straight Couplings

Article category 5350



Designation	Series	Pressure	Ø	d2	L1	L2	L3	d1	S1	S2
DG NW 03 HS H	S	PN 400*	6	M 14x1,5	39	12	7	24	22	24
DG NW 04 HS H	S	PN 400*	8	M 16x1,5	39	12	7	32	22	32
DG NW 06 HS H	S	PN 400*	10	M 18x1,5	50	12	7,5	32	22	32
DG NW 08 HS H	S	PN 400*	12	M 20x1,5	50	12	7,5	32	30	32
DG NW 10 HS H	S	PN 400*	14	M 22x1,5	50	14	8	32	30	32
DG NW 13 HS H	S	PN 400*	16	M 24x1,5	50	14	8,5	32	30	32
DG NW 16 HS H	S	PN 250	20	M 30x2	56	16	10,5	41	36	41
DG NW 20 HS H	S	PN 250	25	M 36x2	56	18	12	60	36	41
DG NW 25 HS H	S	PN 250	30	M 42x2	72	20	13,5	60	55	60
DG NW 32 HS H	S	PN 250	38	M 52x2	70	22	16	60	55	60

*) with safety factor 2

Number of revolutions and starting torques.

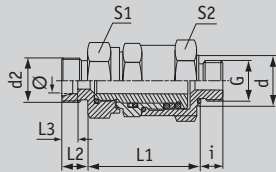
Ø	ca. 200 bar	ca. 400 bar	starting torques
6 – 10	50	25	0,5 Nm
12 – 18	40	20	2,8 Nm
20 – 28	15	–	3,0 Nm
30 – 38	8	–	7 Nm
42	4	–	7 Nm

Construction Series: LL = Very Light – L = Light – S = Heavy — Ø = Tube Outside Diameter — PN = Nominal Pressure — PB = Maximal Working Pressure

DGM-H

Swivel Male Stud Couplings

Article category 5350



Designation	Series	Pressure	Ø	M	L1	L2	L3	i	d	d2	S1	S2
DGM NW 03 HS 12 H	S	PN 400*	6	M 12x1,5	41	12	7	12	17	M 14x1,5	22	24
DGM NW 06 HS 18 H	S	PN 400*	10	M 18x1,5	52	12	7,5	12	22	M 18x1,5	22	32
DGM NW 06 HS H	S	PN 400*	10	M 16x1,5	52	12	7,5	12	22	M 18x1,5	22	32
DGM NW 20 HS 27 H	S	PN 400*	25	M 27x2	59	18	12	18	40	M 36x2	36	41

*) with safety factor 2

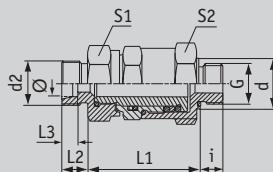
Regarding the revolutions please refer page 20.

Construction Series: LL = Very Light – L = Light – S = Heavy — Ø = Tube Outside Diameter — PN = Nominal Pressure — PB = Maximal Working Pressure

DGR-H

Swivel Male Stud Couplings

Article category 5350



Designation	Series	Pressure	Ø	M	L1	L2	L3	i	d	d2	S1	S2
DGR NW 03 HS H	S	PN 400*	6	G 1/4 A	41	12	7	12	19	M 14x1,5	22	24
DGR NW 04 HS H	S	PN 400*	8	G 1/4 A	41	12	7	12	19	M 16x1,5	22	32
DGR NW 06 HS H	S	PN 400*	10	G 3/8 A	53	12	7,5	12	22	M 18x1,5	22	32
DGR NW 08 HS 1/2 H	S	PN 400*	12	G 1/2 A	53	12	7,5	12	22	M 20x1,5	22	32
DGR NW 08 HS H	S	PN 400*	12	G 3/8 A	53	12	7,5	12	22	M 20x1,5	22	32
DGR NW 10 HS H	S	PN 400*	14	G 1/2 A	53	14	8	14	27	M 22x1,5	30	32
DGR NW 13 HS H	S	PN 400*	16	G 1/2 A	53	14	8,5	14	27	M 24x1,5	30	32
DGR NW 16 HS 1 H	S	PN 250	20	G 1 A	59	16	10,5	16	32	M 30x2	36	41
DGR NW 16 HS H	S	PN 250	20	G 3/4 A	59	16	10,5	16	32	M 30x2	36	41
DGR NW 20 HS 3/4 H	S	PN 250	25	G 3/4 A	59	18	12	18	40	M 36x2	36	41
DGR NW 20 HS H	S	PN 250	25	G 1 A	59	18	12	18	40	M 36x2	36	41

**) with safety factor 2*

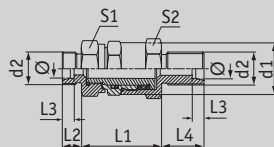
Regarding the revolutions please refer page 20.

Construction Series: LL = Very Light – L = Light – S = Heavy — Ø = Tube Outside Diameter — PN = Nominal Pressure — PB = Maximal Working Pressure

DGS-H

Swivel Straight Bulkhead Couplings

Article category 5350



Designation	Series	Pressure	Ø	d2	L1	L2	L3	L4	d1	S1	S2
DGS NW 04 HS H	S	PN 400*	8	M 16x1,5	39	12	7	25	32	22	32
DGS NW 08 HS H	S	PN 400*	12	M 20x1,5	50	12	7,5	27	32	22	32
DGS NW 13 HS H	S	PN 400*	16	M 24x1,5	50	14	8,5	29	32	30	32
DGS NW 16 HS H	S	PN 250	20	M 30x2	56	16	10,5	32	41	36	41
DGS NW 20 HS H	S	PN 250	25	M 36x2	56	18	12	38	60	36	41
DGS NW 25 HS H	S	PN 250	30	M 42x2	72	20	13,5	40	60	55	60

*) with safety factor 2

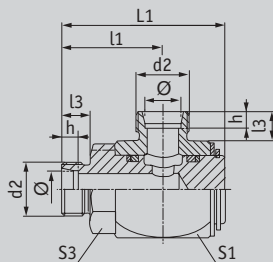
Regarding the revolutions please refer page 20.

Construction Series: LL = Very Light – L = Light – S = Heavy — Ø = Tube Outside Diameter — PN = Nominal Pressure — PB = Maximal Working Pressure

GV90-H

Swivel Elbow Couplings

Article category 5251



Designation	Series	Pressure	Ø	L1	l1	l2	l3	h	d2	S1	S3
GV 90 NW 04 HL H	L	PN 250	6	49	31	23	10	7	M 12x1,5	27	19
GV 90 NW 06 HL H	L	PN 250	8	54	33	25	10	7	M 14x1,5	30	22
GV 90 NW 08 HL H	L	PN 250	10	57	36	27	11	7	M 16x1,5	32	24
GV 90 NW 10 HL H	L	PN 250	12	63	39	29	11	7	M 18x1,5	36	27
GV 90 NW 13 HL H	L	PN 250	15	68	42	32	12	7	M 22x1,5	40	32
GV 90 NW 16 HL H	L	PN 160	18	75	46	34	12	7,5	M 26x1,5	45	36
GV 90 NW 20 HL H	L	PN 160	22	89	54	41	14	7,5	M 30x2	55	41
GV 90 NW 25 HL H	L	PN 160	28	103	62	46	14	7,5	M 36x2	65	50
GV 90 NW 32 HL H	L	PN 160	35	115	69	53	16	10,5	M 45x2	75	55
GV 90 NW 40 HL H	L	PN 160	42	147	90	61	16	11	M 52x2	90	70
GV 90 NW 03 HS H	S	PN 400	6	51	33	25	12	7	M 14x1,5	27	19
GV 90 NW 04 HS H	S	PN 400	8	51	33	25	12	7	M 16x1,5	27	19
GV 90 NW 06 HS H	S	PN 400	10	56	35	27	12	7,5	M 18x1,5	30	22
GV 90 NW 08 HS H	S	PN 400	12	58	37	28	12	7,5	M 20x1,5	32	24
GV 90 NW 10 HS H	S	PN 400	14	66	42	32	14	8	M 22x1,5	36	27
GV 90 NW 13 HS H	S	PN 400	16	70	44	34	14	8,5	M 24x1,5	40	32
GV 90 NW 16 HS H	S	PN 250	20	79	50	38	16	10,5	M 30x2	45	36
GV 90 NW 20 HS H	S	PN 250	25	93	58	45	18	12	M 36x2	55	41
GV 90 NW 25 HS H	S	PN 250	30	109	68	52	20	13,5	M 42x2	65	50
GV 90 NW 32 HS H	S	PN 250	38	121	75	59	22	16	M 52x2	75	55

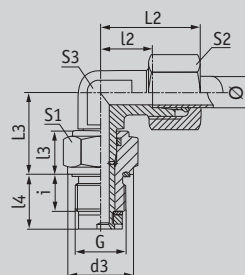
Regarding the revolutions please refer page 20.

Construction Series: LL = Very Light – L = Light – S = Heavy — Ø = Tube Outside Diameter — PN = Nominal Pressure — PB = Maximal Working Pressure

GVM90-H

Swivel Banjo Couplings

Article category 5251, 5351



Designation	Series	Pressure	Ø	M	L1	L3	i	l1	h	d	d2	S1	S3
GVM 90 NW 04 HL 12 H	L	PN 250	6	M 12x1,5	41	22	12	23	7	17	M 12x1,5	27	19
GVM 90 NW 04 HL H	L	PN 250	6	M 10x1	40	21	8	23	7	14	M 12x1,5	27	17
GVM 90 NW 06 HL H	L	PN 250	8	M 12x1,5	41	22	12	23	7	17	M 14x1,5	27	19
GVM 90 NW 08 HL 16 H	L	PN 250	10	M 16x1,5	48	27	12	27	7	22	M 16x1,5	32	24
GVM 90 NW 08 HL H	L	PN 250	10	M 14x1,5	46	25	12	26	7	19	M 16x1,5	30	22
GVM 90 NW 10 HL 18 H	L	PN 250	12	M 18x1,5	55	30	12	29	7	24	M 18x1,5	36	27
GVM 90 NW 10 HL H	L	PN 250	12	M 16x1,5	48	27	12	27	7	22	M 18x1,5	32	24
GVM 90 NW 13 HL 22 H	L	PN 250	15	M 22x1,5	55	30	14	30	7	24	M 22x1,5	36	27
GVM 90 NW 13 HL H	L	PN 250	15	M 18x1,5	55	30	12	30	7	24	M 22x1,5	36	27
GVM 90 NW 16 HL H	L	PN 160	18	M 22x1,5	59	33	14	32	7,5	27	M 26x1,5	40	32
GVM 90 NW 20 HL H	L	PN 160	22	M 26x1,5	66	35	16	36	7,5	32	M 30x2	45	36
GVM 90 NW 25 HL H	L	PN 100	28	M 33x2	78	41	18	41	7,5	40	M 36x2	55	41
GVM 90 NW 32 HL H	L	PN 100	35	M 42x2	92	51	20	48	10,5	50	M 45x2	65	50
GVM 90 NW 40 HL H	L	PN 100	42	M 48x2	102	56	22	53	11	55	M 52x2	75	55
GVM 90 NW 03 HS 14 H	S	PN 400	6	M 14x1,5	41	22	12	25	7	19	M 14x1,5	27	19
GVM 90 NW 03 HS H	S	PN 400	6	M 12x1,5	41	22	12	25	7	17	M 14x1,5	27	19
GVM 90 NW 04 HS H	S	PN 400	8	M 14x1,5	41	22	12	25	7	19	M 16x1,5	27	19
GVM 90 NW 06 HS H	S	PN 400	10	M 16x1,5	46	25	12	27	7,5	22	M 18x1,5	30	22
GVM 90 NW 08 HS H	S	PN 400	12	M 18x1,5	48	27	12	28	7,5	24	M 20x1,5	32	24
GVM 90 NW 10 HS 18 H	S	PN 400	14	M 18x1,5	55	30	14	32	8	26	M 22x1,5	36	27
GVM 90 NW 10 HS H	S	PN 400	14	M 20x1,5	55	30	14	32	8	26	M 22x1,5	36	27
GVM 90 NW 13 HS H	S	PN 400	16	M 22x1,5	59	33	14	34	8,5	27	M 24x1,5	40	32
GVM 90 NW 16 HS H	S	PN 250	20	M 27x2	66	35	16	38	10,5	32	M 30x2	45	36
GVM 90 NW 20 HS H	S	PN 160	25	M 36x2	42	30	25	28	43	18	M 33x2	41	36
GVM 90 NW 25 HS H	S	PN 160	30	M 42x2	92	51	20	52	13,5	50	M 42x2	65	50
GVM 90 NW 32 HS H	S	PN 160	38	M 48x2	102	56	22	59	16	55	M 52x2	75	55

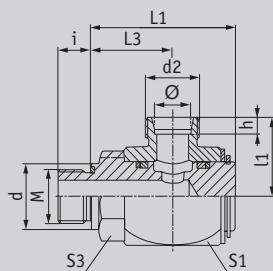
Regarding the revolutions please refer page 20.

Construction Series: LL = Very Light – L = Light – S = Heavy — Ø = Tube Outside Diameter — PN = Nominal Pressure — PB = Maximal Working Pressure

GVR90-H

Swivel Banjo Couplings

Article category 5251, 5351



Designation	Series	Pressure	Ø	G	L1	L3	i	l1	h	d	d2	S1	S3
GVR 90 NW 04 HL H	L	PN 250	6	G 1/8 A	40	21	8	23	7	14	M 12x1,5	27	17
GVR 90 NW 06 HL H	L	PN 250	8	G 1/4 A	46	25	12	25	7	19	M 14x1,5	30	22
GVR 90 NW 08 HL H	L	PN 250	10	G 1/4 A	46	25	12	26	7	19	M 16x1,5	30	22
GVR 90 NW 10 HL H	L	PN 250	12	G 3/8 A	48	27	12	27	7	22	M 18x1,5	32	24
GVR 90 NW 13 HL H	L	PN 250	15	G 1/2 A	59	33	14	32	7	27	M 22x1,5	40	32
GVR 90 NW 16 HL H	L	PN 160	18	G 1/2 A	59	33	14	32	7,5	27	M 26x1,5	40	32
GVR 90 NW 20 HL 1 H	L	PN 160	22	G 1 A	66	35	18	36	7,5	40	M 30x2	55	41
GVR 90 NW 20 HL H	L	PN 160	22	G 3/4 A	66	35	16	36	7,5	32	M 30x2	45	36
GVR 90 NW 25 HL H	L	PN 100	28	G 1 A	78	41	18	41	7,5	40	M 36x2	55	41
GVR 90 NW 40 HL H	L	PN 100	42	G 1 1/2 A	102	56	22	53	11	55	M 52x2	75	55
GVR 90 NW 03 HS H	S	PN 400	6	G 1/4 A	41	22	12	25	7	19	M 14x1,5	27	19
GVR 90 NW 04 HS H	S	PN 400	8	G 1/4 A	41	22	12	25	7	19	M 16x1,5	27	19
GVR 90 NW 06 HS H	S	PN 400	10	G 3/8 A	46	25	12	27	7,5	22	M 18x1,5	30	22
GVR 90 NW 08 HS H	S	PN 400	12	G 3/8 A	48	27	12	28	7,5	22	M 20x1,5	32	24
GVR 90 NW 10 HS H	S	PN 400	14	G 1/2 A	55	30	14	32	8	27	M 22x1,5	36	27
GVR 90 NW 13 HS H	S	PN 400	16	G 1/2 A	59	33	14	34	8,5	27	M 24x1,5	40	32
GVR 90 NW 16 HS 1 H	S	PN 250	20	G 1 A	66	35	18	38	10,5	40	M 30x2	55	41
GVR 90 NW 16 HS H	S	PN 250	20	G 3/4 A	66	35	16	38	10,5	32	M 30x2	45	36
GVR 90 NW 20 HS H	S	PN 250	25	G 1 A	78	41	18	45	12	40	M 36x2	55	41
GVR 90 NW 25 HS H	S	PN 250	30	G 1 1/4 A	92	51	20	52	13,5	50	M 42x2	65	50
GVR 90 NW 32 HS H	S	PN 250	38	G 1 1/2 A	102	56	22	59	16	55	M 52x2	75	55

Regarding the revolutions please refer page 20.

Construction Series: LL = Very Light – L = Light – S = Heavy — Ø = Tube Outside Diameter — PN = Nominal Pressure — PB = Maximal Working Pressure

Non return Valves



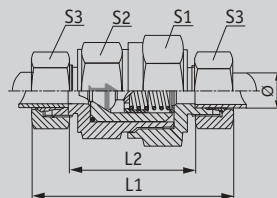
RD

Non-return Valves, Tube/Tube

Opening Pressure about 1 Bar

Available with P= 0,5; 2;3 bar

Article category 5261, 5361



Designation	Series	Pressure	Ø	L1	L2	S1	S2	S3	O-Ring
RD NW 04 HL	L	PB 250	6	61	32	19	17	14	—
RD NW 06 HL	L	PB 250	8	62,5	33,5	22	19	17	11x1,5
RD NW 08 HL	L	PB 250	10	69,5	40,5	22	19	19	11x1,5
RD NW 10 HL	L	PB 250	12	70,5	41,5	27	24	22	15x1
RD NW 13 HL	L	PB 250	15	85	55	32	32	27	19x1,5
RD NW 16 HL	L	PB 160	18	86	54	36	36	32	19x1,5
RD NW 20 HL	L	PB 160	22	83,5	61,5	46	41	36	29,5x1,5
RD NW 25 HL	L	PB 100	28	99,5	66,5	55	50	41	30x2
RD NW 32 HL	L	PB 100	35	117	74	65	60	50	39x2,5
RD NW 40 HL	L	PB 100	42	124	78	65	60	60	39x2,5
RD NW 03 HS	S	PB 400	6	66	36	19	19	17	—
RD NW 04 HS	S	PB 400	8	66,5	37,5	22	19	19	11x1,5
RD NW 06 HS	S	PB 400	10	73,5	41,5	22	19	22	11x1,5
RD NW 08 HS	S	PB 400	12	74,5	42,5	27	24	24	15x1
RD NW 10 HS	S	PB 400	14	91	55	32	30	27	19x1,5
RD NW 13 HS	S	PB 400	16	86,5	50,5	36	32	30	19x1,5
RD NW 16 HS	S	PB 400	20	102,5	59,5	46	41	36	29,5x1,5
RD NW 20 HS	S	PB 250	25	110,5	62,5	50	46	46	29,5x1,5
RD NW 25 HS	S	PB 250	30	124	71	60	55	50	39x2,5
RD NW 32 HS	S	PB 250	38	138,5	76,5	65	60	60	39x2,5

Construction Series: LL = Very Light – L = Light – S = Heavy — Ø = Tube Outside Diameter — PN = Nominal Pressure — PB = Maximal Working Pressure

HVM-ED

Non-return Valves with Captive Seal (Perbunan)

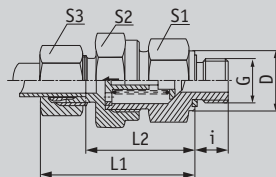
Flow direction: from screwed plug

Thread: metric parallel

Opening Pressure: 1 bar

Available with P= 0,5; 2;3 bar

Article category 5262, 5362



Designation	Series	Pressure	Ø	G	L1	L2	i	S1	S2	S3	D
HVM NW 04 HL ED	L	PB 250	6	M 10x1	43	28	8	17	17	14	13,9
HVM NW 06 HL ED	L	PB 250	8	M 12x1,5	44	29	12	17	19	17	16,9
HVM NW 08 HL ED	L	PB 250	10	M 14x1,5	53	38,5	12	22	24	19	18,9
HVM NW 10 HL ED	L	PB 250	12	M 16x1,5	57	42,5	12	27	30	22	21,9
HVM NW 13 HL ED	L	PB 250	15	M 18x1,5	61	45,5	12	27	30	27	23,9
HVM NW 16 HL ED	L	PB 160	18	M 22x1,5	66	50	14	36	36	32	26,9
HVM NW 20 HL ED	L	PB 160	22	M 26x1,5	71	55	16	41	46	36	31,9
HVM NW 25 HL ED	L	PB 160	28	M 33x2	80	63	18	50	55	41	39,9
HVM NW 32 HL ED	L	PB 100	35	M 42x2	91	69	20	60	60	50	49,9
HVM NW 40 HL ED	L	PB 100	42	M 48x2	104	81	22	80	90	60	54,9
HVM NW 03 HS ED	S	PB 400	6	M 12x1,5	46	31,5	12	19	19	17	16,9
HVM NW 04 HS ED	S	PB 400	8	M 14x1,5	46	31,5	12	19	22	19	18,9
HVM NW 06 HS ED	S	PB 400	10	M 16x1,5	54	38	12	24	27	22	21,9
HVM NW 08 HS ED	S	PB 400	12	M 18x1,5	57	41	12	27	30	24	23,9
HVM NW 10 HS ED	S	PB 400	14	M 20x1,5	62	44,5	14	27	32	27	25,9
HVM NW 13 HS ED	S	PB 400	16	M 22x1,5	66	48	14	32	36	30	26,9
HVM NW 16 HS ED	S	PB 400	20	M 27x2	74	52	16	41	46	36	31,9
HVM NW 20 HS ED	S	PB 250	25	M 33x2	79	54,5	18	46	50	46	39,9
HVM NW 25 HS ED	S	PB 250	30	M 42x2	91	64	20	55	60	50	49,9
HVM NW 32 HS ED	S	PB 250	38	M 48x2	100	69,5	22	65	70	60	54,9

Construction Series: LL = Very Light – L = Light – S = Heavy — Ø = Tube Outside Diameter — PN = Nominal Pressure — PB = Maximal Working Pressure

HVR-ED

Non-return Valves with Captive Seal (Perbunan)

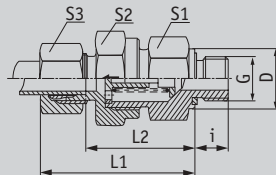
Flow direction: from screwed plug

Thread: BSP parallel

Opening Pressure: 1 bar

Available with P= 0,5; 2;3 bar

Article category 5262, 5362



Designation	Series	Pressure	Ø	G	L1	L2	S1	S2	S3	i	D	O-Ring
HVR NW 04 HL ED	L	PB 250	6	G 1/8"	44	29,5	19	14	17	8	14	—
HVR NW 06 HL ED	L	PB 250	8	G 1/4"	46,5	31,5	22	17	19	12	18,7	11x1,5
HVR NW 08 HL ED	L	PB 250	10	G 1/4"	52,5	37,5	22	19	19	12	18,7	11x1,5
HVR NW 10 HL ED	L	PB 250	12	G 3/8"	54	39	27	22	22	12	22	15x1
HVR NW 13 HL ED	L	PB 250	15	G 1/2"	57	52	32	27	27	14	26,7	19x1,5
HVR NW 16 HL ED	L	PB 160	18	G 1/2"	69	51,5	36	32	32	14	26,7	19x1,5
HVR NW 20 HL ED	L	PB 160	22	G 3/4"	73,5	57	46	36	41	16	32	29,5x1,5
HVR NW 25 HL ED	L	PB 100	28	G 1"	78,5	62	55	41	50	18	39,7	30x2
HVR NW 32 HL ED	L	PB 100	35	G 1 1/4"	91,5	70	65	50	60	20	49,7	39x2,5
HVR NW 40 HL ED	L	PB 100	42	G 1 1/2"	97,5	74,5	65	60	60	22	55	39x2,5
HVR NW 03 HS ED	S	PB 400	6	G 1/4"	46,5	31,5	19	17	19	12	18,7	—
HVR NW 04 HS ED	S	PB 400	8	G 1/4"	48,5	33,5	22	19	19	12	18,7	11x1,5
HVR NW 06 HS ED	S	PB 400	10	G 3/8"	54,5	38,5	22	22	19	12	22	11x1,5
HVR NW 08 HS ED	S	PB 400	12	G 3/8"	55,5	39,5	27	24	24	12	22	15x1
HVR NW 10 HS ED	S	PB 400	14	G 1/2"	70	52	32	27	32	14	26,7	19x1,5
HVR NW 13 HS ED	S	PB 400	16	G 1/2"	65,5	47	36	30	32	14	26,7	19x1,5
HVR NW 16 HS ED	S	PB 400	20	G 3/4"	77,5	56	46	36	41	16	32	29,5x1,5
HVR NW 20 HS ED	S	PS 250	25	G 1"	82,5	58,5	50	46	46	18	39,7	29,5x1,5
HVR NW 25 HS ED	S	PB 250	30	G 1 1/4"	92,5	66	60	50	55	20	49,7	39x2,5
HVR NW 32 HS ED	S	PB 250	38	G 1 1/2"	101,5	70,5	65	60	55	22	55	39x2,5

Construction Series: LL = Very Light – L = Light – S = Heavy — Ø = Tube Outside Diameter — PN = Nominal Pressure — PB = Maximal Working Pressure

HZM-ED

Non-return Valves with Captive Seal (Perbunan)

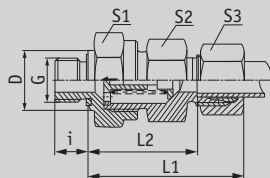
Flow direction: to the screwed
plug

Thread: metric parallel

Opening Pressure: 1 bar

Available with P= 0,5; 2;3 bar

Article category 5263, 5363



Designation	Series	Pressure	Ø	G	L1	L2	i	S1	S2	S3	D
HZM NW 04 HL ED	L	PB 250	6	M 10x1	41	26,5	8	17	17	14	13,9
HZM NW 06 HL ED	L	PB 250	8	M 12x1,5	43	28,5	12	19	17	17	16,9
HZM NW 08 HL ED	L	PB 250	10	M 14x1,5	53	38,5	12	24	22	19	18,9
HZM NW 10 HL ED	L	PB 250	12	M 16x1,5	55	40,5	12	30	27	22	21,9
HZM NW 13 HL ED	L	PB 250	15	M 18x1,5	58	42,5	12	30	27	27	23,9
HZM NW 16 HL ED	L	PB 160	18	M 22x1,5	64	48	14	36	36	32	26,9
HZM NW 20 HL ED	L	PB 160	22	M 26x1,5	72	56	16	46	41	36	31,9
HZM NW 25 HL ED	L	PB 100	28	M 33x2	81	64	18	55	50	41	39,9
HZM NW 32 HL ED	L	PB 100	35	M 42x2	92	70	20	60	60	50	49,9
HZM NW 40 HL ED	L	PB 100	42	M 48x2	104	81	22	90	80	60	54,9
HZM NW 03 HS ED	S	PB 400	6	M 12x1,5	46	31,5	12	19	19	17	16,9
HZM NW 04 HS ED	S	PB 400	8	M 14x1,5	46	31,5	12	22	19	19	18,9
HZM NW 06 HS ED	S	PB 400	10	M 16x1,5	54	38	12	27	24	22	21,9
HZM NW 08 HS ED	S	PB 400	12	M 18x1,5	57	41	12	30	27	24	23,9
HZM NW 10 HS ED	S	PB 400	14	M 20x1,5	61	43,5	14	32	27	27	25,9
HZM NW 13 HS ED	S	PB 400	16	M 22x1,5	64	46	14	36	32	30	26,9
HZM NW 16 HS ED	S	PB 400	20	M 27x2	72	50	16	46	41	36	31,9
HZM NW 20 HS ED	S	PB 250	25	M 33x2	79	54,5	18	50	46	46	39,9
HZM NW 25 HS ED	S	PB 250	30	M 42x2	91	64	20	60	55	50	49,9
HZM NW 32 HS ED	S	PB 250	38	M 48x2	102	71,5	22	70	65	60	54,9

Construction Series: LL = Very Light – L = Light – S = Heavy — Ø = Tube Outside Diameter — PN = Nominal Pressure — PB = Maximal Working Pressure

HZR-ED

Non-return Valves With Captive Seal (Perbunan)

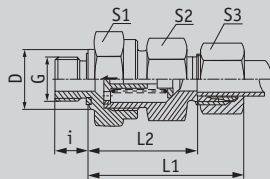
Flow direction: to the screwed plug

Thread: BSP parallel

Opening Pressure: 1 bar

Available with P= 0,5; 2;3 bar

Article category 5263, 5363



Designation	Series	Pressure	Ø	G	L1	L2	i	S1	S2	S3	D	O-Ring
HZR NW 04 HL ED	L	PB 250	6	G 1/8"	44	29,5	8	19	14	17	14	-
HZR NW 06 HL ED	L	PB 250	8	G 1/4"	46,5	31,5	12	22	17	19	18,7	11x1,5
HZR NW 08 HL ED	L	PB 250	10	G 1/4"	52,5	37,5	12	22	19	19	18,7	11x1,5
HZR NW 10 HL ED	L	PB 250	12	G 3/8"	54	39	12	27	22	24	22	15x1
HZR NW 13 HL ED	L	PB 250	15	G 1/2"	57	52	14	32	27	32	26,7	19x1,5
HZR NW 16 HL ED	L	PB 160	18	G 1/2"	69	51,5	14	36	32	36	26,7	19x1,5
HZR NW 20 HL ED	L	PB 160	22	G 3/4"	73,5	57	16	46	36	41	32	29,5x1,5
HZR NW 25 HL ED	L	PB 100	28	G 1"	78,5	62	18	55	41	50	39,7	30x2
HZR NW 32 HL ED	L	PB 100	35	G 1 1/4"	91,5	70	20	65	50	60	49,7	39x2,5
HZR NW 40 HL ED	L	PB 100	42	G 1 1/2"	97,5	74,5	22	65	60	60	55	39x2,5
HZR NW 03 HS ED	S	PB 400	6	G 1/4"	46,5	31,5	12	19	17	19	18,7	-
HZR NW 04 HS ED	S	PB 400	8	G 1/4"	48,5	33,5	12	22	19	19	18,7	11x1,5
HZR NW 06 HS ED	S	PB 400	10	G 3/8"	54,5	38,5	12	22	22	19	22	11x1,5
HZR NW 08 HS ED	S	PB 400	12	G 3/8"	55,5	39,5	12	27	24	24	22	15x1
HZR NW 10 HS ED	S	PB 400	14	G 1/2"	70	52	14	32	27	32	26,7	19x1,5
HZR NW 13 HS ED	S	PB 400	16	G 1/2"	65,5	47	14	36	30	32	26,7	19x1,5
HZR NW 16 HS ED	S	PB 400	20	G 3/4"	77,5	56	16	46	36	41	32	29,5x1,5
HZR NW 20 HS ED	S	PB 250	25	G 1"	82,5	58,5	18	50	46	46	39,7	29,5x1,5
HZR NW 25 HS ED	S	PB 250	30	G 1 1/4"	92,5	66	20	60	50	55	49,7	39x2,5
HZR NW 32 HS ED	S	PB 250	38	G 1 1/2"	101,5	70,5	22	65	60	55	55	39x2,5

Construction Series: LL = Very Light - L = Light - S = Heavy — Ø = Tube Outside Diameter — PN = Nominal Pressure — PB = Maximal Working Pressure

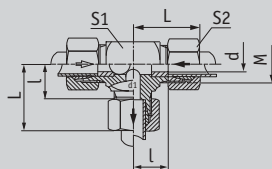
WV

Alternating Valves

2 inlets, 1 outlet

Material: zinc plated steel and
yellow chromated (A3C)

Article category 5263, 5363



Designation	Series	Pressure	Ø	d	d1	L	l	S1	S2	M
WV NW 06 HL	L	PN 160	8	4,5	4,5	29	14	14	17	M 14x1,5
WV NW 08 HL	L	PN 160	10	6,0	6,0	30	15	17	19	M 16x1,5
WV NW 10 HL	L	PN 160	12	7,5	7,5	32	17	19	22	M 18x1,5
WV NW 13 HL	L	PN 160	15	10,0	10,0	36	21	19	27	M 22x1,5
WV NW 03 HS	S	PN 630	6	3	3	31	16	14	17	M 14x1,5
WV NW 04 HS	S	PN 630	8	4,5	4,5	32	17	17	19	M 16x1,5
WV NW 06 HS	S	PN 630	10	6	6	34	17,5	19	22	M 18x1,5
WV NW 08 HS	S	PN 630	12	7,5	7,5	38	21,5	22	24	M 20x1,5
WV NW 13 HS	S	PN 400	16	10	10	43	24,5	24	30	M 24x1,5

Construction Series: LL = Very Light – L = Light – S = Heavy — Ø = Tube Outside Diameter — PN = Nominal Pressure —
PB = Maximal Working Pressure

Flanges



GSF

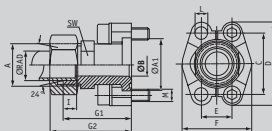
Straight Flange Couplings

DIN 3901/3902

Material: 9SMnPb28K / C15 or
stainless steel 1.4571 - 316 Ti

Surface Treatment: zinc plated,
yellow chromated

Article category 5264



Bezeichnung	reihe	PB	psi	größe	Ø	A	A1	B	C	D	E	F	G1	G2	I	L	SW	M (metr.)	M (unc)
G SF 13 HL	L	315	3000	1/2"	15	M 22x1,5	30,2	16/20	38,1	54	17,48	45,6	48,2	56	7	8,5	24	M 8x30	5/16x1 1/4
G SF 20 HL	L	160	3000	3/4"	22	M 30x2	38,1	19	47,63	65	22,23	51,8	53,2	62	7,5	10,5	30	M 10x35	3/8x1 1/2
G SF 20 HL 16	L	315	3000	3/4"	18	M 26x1,5	38,1	15/20	47,63	65	22,23	51,8	53,2	62	7,5	10,5	30	M 10x35	3/8x1 1/2
G SF 25 HL	L	160	3000	1"	28	M 36x2	44,4	24	52,37	70	26,19	58,4	54,2	65	7,5	10,5	36	M 10x35	3/8x1 1/2
G SF 32 HL	L	160	3000	1 1/4"	35	M 45x2	50,8	30/32	58,72	79	30,18	72,6	58,2	69	10,5	*1	41	*2	7/16x1 1/2
G SF 40 HL	L	160	3000	1 1/2"	42	M 52x2	60,3	36	69,85	94	35,71	82,2	64,2	76	11	13,5	46	M 12x40	1/2x1 1/2
G SF 13 HS	S	350	3000	1/2"	16	M 24x1,5	30,2	13	38,1	54	17,48	45,6	50,2	60	8,5	8,5	24	M 8x30	5/16x1 1/4
G SF 20 HS	S	350	3000	3/4"	25	M 36x2	38,1	17	47,63	65	22,23	51,8	57,2	69	12	10,5	30	M 10x35	3/8x1 1/2
G SF 20 HS 16	S	350	3000	3/4"	20	M 30x2	38,1	16/20	47,63	65	22,23	51,8	57,2	68	10,5	10,5	30	M 10x35	3/8x1 1/2
G SF 25 HS	S	350	3000	1"	30	M 42x2	44,4	24	52,37	70	26,19	58,4	63,2	76	13,5	10,5	36	M 10x35	3/8x1 1/2
G SF 25 HS 20	S	350	3000	1"	25	M 36x2	44,4	20	52,37	70	26,19	58,4	58,2	70	12	10,5	36	M 10x35	3/8x1 1/2
G SF 32 HS	S	280	3000	1 1/4"	38	M 52x2	50,8	28	58,72	79	30,18	72,6	66,6	81	16	*1	46	*2	7/16x1 1/2
G SF 32 HS 20	S	280	3000	1 1/4"	25	M 36x2	50,8	20/27	58,72	79	30,18	72,6	60,2	72	12	*1	41	*2	7/16x1 1/2
G SF 32 HS 25	S	280	3000	1 1/4"	30	M 42x2	50,8	25/28	58,72	79	30,18	72,6	62,2	75	13,5	*1	41	*2	7/16x1 1/2
G SF 40 HS 32	S	210	3000	1 1/2"	38	M 52x2	60,3	32	69,85	94	35,71	82,2	70,2	85	16	13,5	46	M 12x40	1/2x1 1/2

*1) = optional 10,5, 12,5 or 12,0 — *2) = optional M 10x30 or M 12x40

Construction Series: LL = Very Light – L = Light – S = Heavy — Ø = Tube Outside Diameter — PN = Nominal Pressure — PB = Maximal Working Pressure

HANSA FLEX
Hydraulikschläuche

GSF6

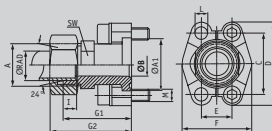
Straight Flange Couplings

DIN 3901/3902

Material: 9SMnPb28K / C15 or
stainless steel 1.4571 - 316 Ti

Surface Treatment: zinc plated,
yellow chromated

Article category 5364



Bezeich- nung

reihe PB psi gröÙe Ø A A1 B C D E F G1 G2 I L SW (metr.) (unc)

G SF 6 13 HS	S	400	6000	1/2"	15	M 24x1,5	31,7	12	40,49	56	18,24	47,2	53,2	63	8,5	8,5	24	M 8x30	5/16x1 1/4
G SF 6 20 HS	S	400	6000	3/4"	25	M 36x2	41,3	17	50,8	71	23,8	60	63,2	75	12	10,5	30	M 10x35	3/8x1 1/2
G SF 6 20 HS 13	S	400	6000	3/4"	16	M 24x1,5	41,3	12	50,8	71	23,8	60	59,2	69	8,5	10,5	30	M 10x35	3/8x1 1/2
G SF 6 20 HS 16	S	400	6000	3/4"	20	M 30x2	41,3	16	50,8	71	23,8	60	61,2	72	10,5	10,5	30	M 10x35	3/8x1 1/2
G SF 6 25 HS	S	400	6000	1"	30	M 42x2	47,6	24	57,15	81	27,76	69,6	74	87	13,5	*1	41	M 12x45	7/16x1 3/4
G SF 6 25 HS 20	S	400	6000	1"	25	M 36x2	47,6	20	57,15	81	27,76	69,6	72,2	84	12	*1	41	M 12x45	7/16x1 3/4
G SF 6 32 HS	S	350	6000	1 1/4"	38	M 52x2	54	30	66,68	95	31,75	77,2	83,2	98	16	*2	46	M 14x50	1/2x1 3/4
G SF 6 32 HS 25	S	400	6000	1 1/4"	30	M 42x2	54	25/30	66,68	95	31,75	77,2	79,2	92	13,5	*2	41	M 14x50	1/2x1 3/4
G SF 6 40 HS 32	S	350	6000	1 1/2"	38	M 52x2	63,5	30	79,38	113	36,5	95	89,2	104	16	16,75	46	M 16x55	1/2x1 3/4

*1) = optional 10,5, 12,5 or 12,0 — *2) = optional M 10x30 or M 12x40

Construction Series: LL = Very Light – L = Light – S = Heavy — Ø = Tube Outside Diameter — PN = Nominal Pressure —
PB = Maximal Working Pressure

HANSA FLEX
Hydraulikschläuche

WSF

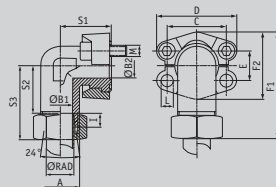
Elbow Flange Couplings

DIN 3901/3902, forged

Material: ST 52.3 (FE 510) or
1.4571 - 316T

Surface Treatment: zinc plated,
yellow chromated

Article category 5265



Designation	Series	PB	psi	Flange size	Ø	A	B1	B2	C	D	E	F1	F2	I	L	S1	S2	S3	M
W SF 13 HL	L	315	3000	1/2"	15	M 22x1,5	12	11	38,10	54	17,48	66,8	45,6	7	8,5	39	29	44	M 8x25
W SF 20 HL	L	160	3000	3/4"	22	M 30x2	19	19	47,63	64,9	22,23	75,9	51,8	7,5	10,5	42	33,5	50	M 10x30
W SF 20 HL 16	L	315	3000	3/4"	18	M 26x1,5	15	19	47,63	64,9	22,23	73,9	51,8	7,5	10,5	42	31,5	48	M 10x30
W SF 25 HL	L	160	3000	1"	28	M 36x2	24	25	52,37	69,9	26,19	82,2	58,4	7,5	10,5	45	36,5	53	M 10x30
W SF 32 HL	L	160	3000	1 1/4"	35	M 45x2	30	27	58,72	79,4	30,18	104,3	72,6	10,5	-	50	46,5	68	*2
W SF 40 HL	L	160	3000	1 1/2"	42	M 52x2	36	36	69,85	93,8	35,71	118,2	82,4	11	13,5	76	56	77	M 12x35
W SF 13 HS	S	350	3000	1/2"	16	M 24x1,5	12	11	38,10	54	17,48	70,8	45,6	8,5	8,5	39	29,5	48	M 8x25
W SF 20 HS	S	350	3000	3/4"	25	M 36x2	17	19	47,63	64,9	22,23	82,9	51,8	12	10,5	42	33	57	M 10x30
W SF 20 HS 16	S	350	3000	3/4"	20	M 30x2	16	19	47,63	64,9	22,23	79,9	51,8	10,5	10,5	42	32,5	54	M 10x30
W SF 25 HS	S	350	3000	1"	30	M 42x2	24	25	52,37	69,9	26,19	92,2	58,4	13,5	10,5	45	36,5	63	M 10x30
W SF 32 HS	S	280	3000	1 1/4"	28	M 52x2	28	27	58,72	79,4	30,18	110,3	72,6	16	-	50	43	74	*2
W SF 32 HS 20	S	280	3000	1 1/4"	25	M 36x2	20	27	58,72	79,4	30,18	103,3	72,6	12	*1	50	43	67	*2
W SF 32 HS 25	S	280	3000	1 1/4"	30	M 42x2	25	27	58,72	79,4	30,18	106,3	72,6	13,5	*1	50	43,5	70	*2
W SF 40 HS 32	S	210	3000	1 1/2"	38	M 52x2	32	36	69,85	93,8	35,71	128,2	82,4	16	13,5	76	56	87	M 12x35

*1) = optional 10,5 or 12,5 — *2) = optional M 10x30 or M 12x40

Please note: The maximum working pressure is fixed by SAE J 518 C on flange side or by the used tube.

Construction Series: LL = Very Light – L = Light – S = Heavy — Ø = Tube Outside Diameter — PN = Nominal Pressure — PB = Maximal Working Pressure

GSFA

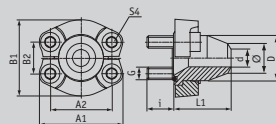
Butt Weld Straight Flange Couplings

with O-ring in Perbunan®

SAE series 3000 psi

tube side to weld

Article category 5266



Designation	Series Pressure		Flange size	Ø	A1	A2	B1	B2	L1	i	G	D	d	S4
G SFA 13 L	L	PB 315	1/2"	15	54	38,1	46	17,5	38	16,5	M 8	23,9	11	6
G SFA 20 L	L	PB 220	3/4"	22	65	47,6	52	22,3	50	20,5	M 10	31,8	18	8
G SFA 20 L 16	L	PB 200	3/4"	18	65	47,6	52	22,3	50	20,5	M 10	31,8	15	8
G SFA 25 L	L	PB 180	1"	28	70	52,4	59	26,2	50	18,5	M 10	38	24	8
G SFA 32 L	L	PB 140	1 1/4"	35	79	58,7	73	30,2	55	25,5	M 12	43	31	10
G SFA 40 L	L	PB 180	1 1/2"	42	94	69,9	82	35,7	57	23,5	M 12	50	36	10
G SFA 13 S	S	PB 350	1/2"	16	54	38,1	46	17,5	38	16,5	M 8	23,9	10	6
G SFA 20 S	S	PB 350	3/4"	25	65	47,6	52	22,3	50	20,5	M 10	31,8	17	8
G SFA 20 S 16	S	PB 350	3/4"	20	65	47,6	52	22,3	50	20,5	M 10	31,8	14	8
G SFA 25 S	S	PB 350	1"	30	70	52,4	59	26,2	50	18,5	M 10	38	21	8
G SFA 32 S	S	PB 280	1 1/4"	38	79	58,7	73	30,2	55	25,5	M 12	43	28	10
G SFA 32 S 20	S	PB 280	1 1/4"	25	79	58,7	73	30,2	55	25,5	M 12	43	19	10
G SFA 32 S 25	S	PB 280	1 1/4"	30	79	58,7	73	30,2	55	25,5	M 12	43	22	10
G SFA 40 S 32	S	PB 210	1 1/2"	38	94	69,9	82	35,7	57	23,5	M 12	50	30	10

Construction Series: LL = Very Light – L = Light – S = Heavy — Ø = Tube Outside Diameter — PN = Nominal Pressure — PB = Maximal Working Pressure

GSFA6

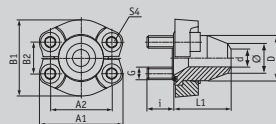
Butt Weld Straight Flange Couplings

with O-ring in Perbunan®

SAE serie 6000 psi

tube side to weld

Article category 5366



Designation	Series	Pressure	Flange size	Ø	A1	A2	B1	B2	L1	i	G	D	d	S4
G SFA 6 13 S	S	PB 400	1/2"	16	56	40,5	47	18,2	41	18,5	M 8	23,9	10	6
G SFA 6 20 S	S	PB 400	3/4"	25	71	50,8	60	23,8	55	15,5	M 10	31,8	15	8
G SFA 6 20 S 13	S	PB 400	1/2"	16	71	50,8	60	23,8	55	15,5	M 10	31,8	10	8
G SFA 6 20 S 16	S	PB 400	3/4"	20	71	50,8	60	23,8	55	15,5	M 10	31,8	12	8
G SFA 6 25 S	S	PB 315	1"	30	81	57,2	70	27,8	67	20,5	M 12	38	22	10
G SFA 6 25 S 20	S	PB 400	1"	25	81	57,2	70	27,8	67	20,5	M 12	38	15	10
G SFA 6 32 S	S	PB 315	1 1/4"	38	95	66,7	77	31,8	78	22,5	M 14	43,7	28	12
G SFA 6 32 S 25	S	PB 315	1 1/4"	30	95	66,7	77	31,8	78	22,5	M 14	43,7	22	12
G SFA 6 40 S 32	S	PB 315	1 1/2"	38	113	79,4	95	36,5	85	24,5	M 16	50,8	28	14

Construction Series: LL = Very Light – L = Light – S = Heavy — Ø = Tube Outside Diameter — PN = Nominal Pressure —
PB = Maximal Working Pressure

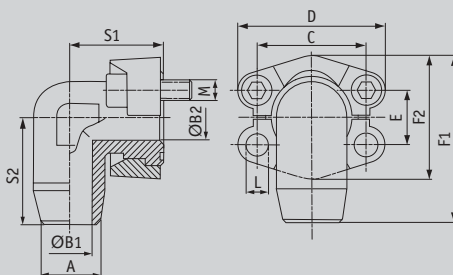
WSFA

Weld on Flange Adapters 90°

SAE series 3000 psi

Material: ST 52.3 (FE 510) or
1.4571 – 316T

Article category 5267



Designation	Series	PB	psi	Flange size	A	B1	B2	C	D	E	F1	F2	S1	S2	L	M (metr.)	M (unc)
W SFA 13 L	L	250	3000	1/2"	15	11	11	38,10	54	17,48	60,8	45,6	39	38	8,5	M 8x30	5/16x1 1/4
W SFA 20 L	L	160	3000	3/4"	22	18	19	47,63	64,9	22,23	70,9	51,8	42	45	10,5	M 10x35	3/8x1 1/2
W SFA 20 L 16	L	160	3000	3/4"	18	15	19	47,63	64,9	22,23	70,9	51,8	42	45	10,5	M 10x35	3/8x1 1/2
W SFA 25 L	L	100	3000	1"	28	24	25	52,37	69,9	26,19	79,2	58,4	45	50	10,5	M 10x35	3/8x1 1/2
W SFA 32 L	L	100	3000	1 1/4	35	31	32	58,72	79,4	30,18	85,3	72,6	50	59	*1	*2	7/16x1 1/2
W SFA 40 L	L	160	3000	1 1/2	42	36	36	69,85	93,8	35,71	117,1	82,2	76	76	13,5	M 12x40	1/2x1 1/2
W SFA 13 S	L	345	3000	1/2"	16	10	10	38,10	54	17,48	60,8	45,6	39	38	8,5	M 8x30	5/16x1 1/4
W SFA 20 S	L	250	3000	3/4"	25	17	17	47,63	64,9	22,23	70,9	51,8	42	45	10,5	M 10x35	3/8x1 1/2
W SFA 20 S 16	L	345	3000	3/4"	20	14	17	47,63	64,9	22,23	70,9	51,8	42	45	10,5	M 10x35	3/8x1 1/2
W SFA 25 S	L	210	3000	1"	30	21	21	52,37	69,9	26,19	79,2	58,4	45	50	10,5	M 10x35	3/8x1 1/2
W SFA 32 S	L	210	3000	1 1/4	38	28	27	58,72	79,4	30,18	85,3	72,6	50	59	*1	*2	7/16x1 1/2
W SFA 32 S 20	L	210	3000	1 1/4	25	19	27	58,72	79,4	30,18	85,3	72,6	50	59	*1	*2	7/16x1 1/2
W SFA 32 S 25	L	210	3000	1 1/4	30	22	27	58,72	79,4	30,18	85,3	72,6	50	59	*1	*2	7/16x1 1/2
W SFA 40 S 32	L	210	3000	1 1/2	38	30	32	69,85	93,8	35,71	117,1	82,2	76	76	13,5	M 12x40	1/2x1 1/2

*1) = optional 10,5, 12,0 or 12,5 — *2) = optional M 10x30 or M 12x40

Please note: The maximum working pressure is fixed by SAE J 518 C on flange side or by the used tube.

Construction Series: LL = Very Light – L = Light – S = Heavy — Ø = Tube Outside Diameter — PN = Nominal Pressure — PB = Maximal Working Pressure

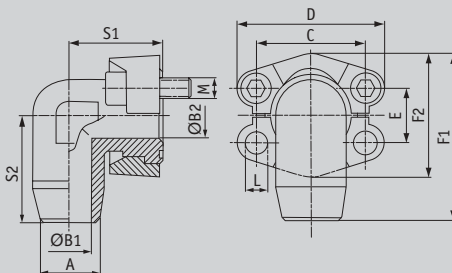
WSFA6

Weld on Flange Adapters 90°

SAE series 6000 psi

Material: ST 52.3 (FE 510) or
1.4571 – 316T

Article category 5367



Designation	Series	PB	psi	Flange size	A	B1	B2	C	D	E	F1	F2	S1	S2	L	M (metr.)	M (unc)
W SFA 6 13 S	S	400	6000	1/2"	16	10	10	40,49	56	18,24	61,6	47,2	39	38	8,5	M 8x35	5/16x1 1/4
W SFA 6 20 S	S	400	6000	3/4"	25	15	17	50,80	71	23,80	78	60	48	48	10,5	M 10x35	3/8x1 1/2
W SFA 6 20 S 13	S	400	6000	3/4"	16	10	17	50,80	71	23,80	78	60	48	48	10,5	M 10x35	3/8x1 1/2
W SFA 6 20 S 16	S	400	6000	3/4"	20	12	17	50,80	71	23,80	78	60	48	48	10,5	M 10x35	3/8x1 1/2
W SFA 6 25 S	S	315	6000	1"	30	22	25	57,15	81	27,76	94	69,6	60	60	*1	M 12x45	7/16x1 3/4
W SFA 6 25 S 20	S	400	6000	1"	25	15	20	57,15	81	27,76	94	69,6	60	60	*1	M 12x45	7/16x1 3/4
W SFA 6 25 S 400	S	400	6000	1"	30	18	20	57,15	81	27,76	94	69,6	60	60	*1	M 12x45	7/16x1 3/4
W SFA 6 32 S	S	315	6000	1 1/4"	38	28	30	66,68	95	31,75	106,6	77,2	68	68	*2	M 14x50	1/2x1 3/4
W SFA 6 32 S 25	S	315	6000	1 1/4"	30	22	27	66,68	95	31,75	106,6	77,2	68	68	*2	M 14x50	1/2x1 3/4
W SFA 6 32 S 25 400	S	400	6000	1 1/4"	30	18	24	66,68	95	31,75	106,6	77,2	68	68	*2	M 14x50	1/2x1 3/4
W SFA 6 32 S 400	S	400	6000	1 1/4"	38	22	24	66,68	95	31,75	106,6	77,2	68	68	*2	M 14x50	1/2x1 3/4
W SFA 6 40 S 32	S	315	6000	1 1/2"	38	28	32	79,38	113	36,50	123,5	95	76	76	16,5	M 16x55	5/8x2
W SFA 6 40 S 32 400	S	400	6000	1 1/2"	38	22	26	79,38	113	36,50	123,5	95	76	76	16,5	M 16x55	5/8x2

*1) = optional 12,0 or 12,5 — *2) = optional 13,5 or 14,5

Please note: The maximum working pressure is fixed by SAE J 518 C on flange side or by the used tube.

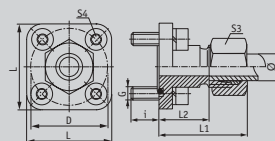
Construction Series: LL = Very Light – L = Light – S = Heavy — Ø = Tube Outside Diameter — PN = Nominal Pressure — PB = Maximal Working Pressure

HANSA FLEX
Hydraulikschläuche

GP

Straight Flange Couplings

Article category 5268



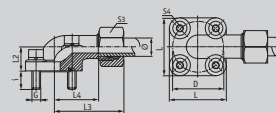
Designation	Series	Pressure	Ø	D	L	L1	L2	i	G	S3	S4
GP 08 HL	L	PB 315	10	35	39	38	23	12,5	M 6	19	5
GP 10 HL	L	PB 315	12	35	39	38	23	12,5	M 6	22	5
GP 13 HL	L	PB 250	15	35	39	38	23	12,5	M 6	27	5
GP 13 HL 40	L	PB 100	15	40	42	43	28	12,5	M 6	27	5
GP 16 HL	L	PB 100	18	40	42	44	27,5	12,5	M 6	32	5
GP 20 HL	L	PB 100	22	40	42	44	27,5	12,5	M 6	36	5
GP 25 HL	L	PB 100	28	40	42	51	34,5	12,5	M 6	41	5

Construction Series: LL = Very Light – L = Light – S = Heavy — Ø = Tube Outside Diameter — PN = Nominal Pressure — PB = Maximal Working Pressure

WP

Elbow Flange Couplings

Article category 5269



Designation	Series	Pressure	Ø	D	L	L2	L3	L4	i	G	S3	S4
WP 08 HL	L	PB 315	10	35	39	16,5	46	31	12,5	M 6	19	5
WP 10 HL	L	PB 315	12	35	39	16,5	46	31	12,5	M 6	22	5
WP 13 HL	L	PB 250	15	35	39	16,5	46	31	12,5	M 6	27	5
WP 13 HL 40	L	PB 100	15	40	42	22,5	46	31	12,5	M 6	27	5
WP 16 HL	L	PB 100	18	40	42	22,5	47	30,5	12,5	M 6	32	5
WP 20 HL	L	PB 100	22	40	42	22,5	47	30,5	12,5	M 6	36	5
WP 25 HL	L	PB 100	28	40	42	28	49	32,5	12,5	M 6	41	5
WP 32 HL	L	PB 100	35	40	42	32	52	30,5	12,5	M 6	50	5
WP 32 HL 55	L	PB 100	35	55	58	32	60	38,5	12,5	M 8	50	6
WP 40 HL	L	PB 100	42	55	58	40	61	38	12,5	M 8	60	6
WP 13 HS	S	PB 315	16	35	39	20	48	29,5	12,5	M 6	30	5
WP 16 HS	S	PB 315	20	35	39	25	56	34,5	12,5	M 6	36	5
WP 16 HS 40	S	PB 250	20	40	42	22,5	51	29,5	12,5	M 6	36	5
WP 16 HS 250	S	PB 250	20	55	58	24	56	34,5	12,5	M 8	36	6
WP 20 HS	S	PB 250	25	55	58	30	61	37	12,5	M 8	46	6
WP 25 HS	S	PB 250	30	55	58	32	62	35,5	12,5	M 8	50	6

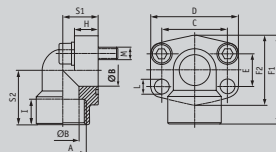
Construction Series: LL = Very Light – L = Light – S = Heavy — Ø = Tube Outside Diameter — PN = Nominal Pressure — PB = Maximal Working Pressure

GSF-IR

Pipe threaded flanges with BSP-thread

Material: ST 52.3 (FE 510) or
stainless steel 1.4404 - 316L

Article category 5271



Designation	Series	PB	psi	Flange size	A	B	C	D	E	F	G	H	I	L	M(metr.)	M(unc)
G SF 13 IR	L	345	3000	1/2"	R 1/2	13	38,1	54	17,48	46	36	16	19	9	M 8x30	5/16x1 1/4
G SF 13 IR 10	L	345	3000	1/2"	R 3/8"	13	38,1	54	17,48	46	36	16	19	9	M 8x30	5/16x1 1/4
G SF 20 IR	L	345	3000	3/4"	R 3/4"	19	47,63	65	22,23	50	36	18	19	11	M 10x35	3/8x1 1/2
G SF 20 IR 13	L	345	3000	3/4"	R 1/2"	13	47,63	65	22,23	50	36	18	19	11	M 10x35	3/8x1 1/2
G SF 25 IR	L	345	3000	1"	R 1"	25	52,37	70	26,19	55	38	18	22	11	M 10x35	3/8x1 1/2
G SF 25 IR 13	L	345	3000	1"	R 1/2"	13	52,37	70	26,16	55	38	18	22	11	M 10x35	3/8x1 1/2
G SF 25 IR 20	L	345	3000	1"	R 3/4"	19	52,37	70	26,19	55	35	21	19	11	M 10x35	3/8x1 1/2
G SF 32 IR	L	276	3000	1 1/4"	R 1 1/4"	32	58,72	79	30,18	68	41	21	22	13	M 12x40	-
G SF 32 IR 20	L	276	3000	1 1/4"	R 3/4"	19	58,72	79	30,18	68	41	21	22	11,5	M 10x40	7/16x1 1/2
G SF 32 IR 25	L	276	3000	1 1/4"	R 1"	25	58,72	81	30,18	65	42	25	22	13	M 12x40	-
G SF 40 IR	L	207	3000	1 1/2"	R 1 1/2"	38	69,85	93	35,71	78	45	25	24	13,5	M 12x45	1/2x1 3/4
G SF 40 IR 20	L	207	3000	1 1/2"	R 3/4"	19	69,85	93	35,71	78	45	25	24	13,5	M 12x45	1/2x1 3/4
G SF 40 IR 25	L	207	3000	1 1/2"	R 1"	25	69,85	93	35,71	78	45	25	24	13,5	M 12x45	1/2x1 3/4
G SF 40 IR 32	L	207	3000	1 1/2"	R 1 1/4"	32	69,85	95	35,71	78	45	27	24	13,5	M 12x45	1/2x1 3/4
G SF 50 IR	L	207	3000	2"	R 2"	51	77,77	102	42,88	90	45	25	30	13,5	M 12x45	1/2x1 3/4
G SF 50 IR 25	L	207	3000	2"	R 1"	25	77,77	102	42,88	90	45	25	26	13,5	M 12x45	1/2x1 3/4
G SF 50 IR 32	L	207	3000	2"	R 1 1/4"	32	77,77	102	42,88	90	45	25	24	13,5	M 12x45	1/2x1 3/4
G SF 50 IR 40	L	207	3000	2"	R 1 1/2"	38	77,77	102	42,88	90	45	25	26	13,5	M 12x45	1/2x1 3/4
G SF 60 IR	L	172	3000	2 1/2"	R 2 1/2"	63	88,9	114	50,8	105	50	25	30	13,5	M 12x45	1/2x1 3/4
G SF 60 IR 50	L	172	3000	2 1/2"	R 2"	51	88,9	114	50,8	105	50	25	30	13,5	M 12x45	1/2x1 3/4

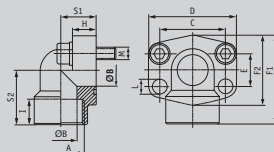
Construction Series: LL = Very Light - L = Light - S = Heavy — Ø = Tube Outside Diameter — PN = Nominal Pressure — PB = Maximal Working Pressure

GSF6-IR

Pipe threaded flanges with BSP-thread

Material: ST 52.3 (FE 510) or
stainless steel 1.4404 - 316L

Article category 5371



Designation	Series	PB	psi	Flange size	A	B	C	D	E	F	G	H	I	L	M(metr.)	M(unc)
G SF 6 13 IR	S	414	6000	1/2"	R 1/2"	13	40,49	54	18,24	46	36	16	19	9	M 8x30	5/16x1 1/4
G SF 6 13 IR 10	S	414	6000	1/2"	R 3/8"	13	40,49	54	18,24	46	36	16	19	9	M 8x30	5/16x1 1/4
G SF 6 20 IR	S	414	6000	3/4"	R 3/4"	19	50,80	71	23,80	55	35	21	22	11	M 10x35	3/8x1 1/2
G SF 6 25 IR	S	414	6000	1"	R 1"	25	57,15	81	27,76	65	42	25	24	13	M 12x45	7/16x1 3/4
G SF 6 25 IR 20	S	414	6000	1"	R 3/4"	19	57,15	81	27,76	65	42	25	24	13	M 12x45	7/16x1 3/4
G SF 6 32 IR	S	414	6000	1 1/4	R 1 1/4	32	66,68	95	31,75	78	45	27	25	15*	M 14x45	1/2x1 3/4
G SF 6 32 IR 25	S	414	6000	1 1/4	R 1"	25	66,68	95	31,75	78	45	27	25	15*	M 14x45	1/2x1 3/4
G SF 6 40 IR	S	414	6000	1 1/2	R 1 1/2	38	79,38	112	36,50	94	50	30	28	17	M 16x50	5/8x2
G SF 6 50 IR	S	414	6000	2"	R 2"	51	96,82	134	44,45	114	65	37	30	21	M 20x65	3/4x 2 1/2
G SF 6 50 IR 40	S	414	6000	2"	R 1 1/2	38	96,82	134	44,45	114	65	37	30	21	M 20x65	3/4x 2 1/2

*) L = 13,5 bei UNC-Schrauben

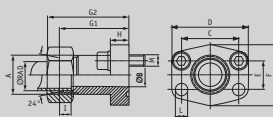
Construction Series: LL = Very Light – L = Light – S = Heavy — Ø = Tube Outside Diameter — PN = Nominal Pressure — PB = Maximal Working Pressure

GSFH

Metric threaded Flanges

DIN 3901/3902

Article category 5272



Designation	Series	PB	psi	Flange size	A	B	C	D	E	F	G1	G2	H	I	L	M(metr.)	M(unc)
G SFH 13 HL	L	315	3000	1/2"	M 22x1,5	12	38,1	54	17,48	46	52	60	13	7	9	M 8x30	5/16x1 1/4
G SFH 20 HL	L	160	3000	3/4"	M 30x2	19	47,63	65	22,23	50	60	69	14	7,5	11,5	M 10x30	3/8x1 1/4
G SFH 25 HL	L	160	3000	1"	M 36x2	24	52,37	70	26,19	55	63	72	16	7,5	11,5	M 10x30	3/8x1 1/4
G SFH 32 HL	L	160	3000	1 1/4"	M 45x2	29	58,72	79	30,18	68	65	76	14	10,5	11,5	M 10x35	7/16x1 1/2
G SFH 32 HL 25	L	160	3000	1 1/4"	M 36x2	24	58,72	79	30,18	68	65	74	14	7,5	11,5	M 10x35	7/16x1 1/2
G SFH 40 HL	L	160	3000	1 1/2"	M 52x2	36	69,85	94	35,71	78	70	82	16	11	13,5	M 12x35	1/2x1 1/2
G SFH 6 13 HS	S	414	6000	1/2"	M 24x1,5	12	40,49	56	18,24	48	60	70	16	8,5	9	M 8x30	5/16x1 1/4
G SFH 6 20 HS	S	414	6000	3/4"	M 36x2	19	50,8	71	23,8	60	73	85	19	12	11,5	M 10x35	7/16x1 1/2
G SFH 6 25 HS	S	414	6000	1"	M 42x2	25	57,15	81	27,76	70	82	95	24	13,5	13	M 12x45	7/16x1 3/4
G SFH 6 32 HS	S	414	6000	1 1/4"	M 52x2	29	66,68	95	31,75	78	92	107	27	16	15*	M 14x50	1/2x1 3/4
G SFH 6 40 HS 32	S	414	6000	1 1/2"	M 52x2	32	79,38	113	36,5	95	96	111	30	16	17,5	M 16x50	5/8x2
*) L = 13,5 bei UNC-Schrauben																	

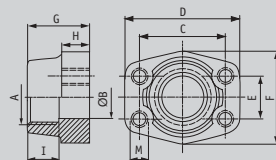
Construction Series: LL = Very Light – L = Light – S = Heavy — Ø = Tube Outside Diameter — PN = Nominal Pressure — PB = Maximal Working Pressure

GGF-IN

NPT threaded Flange Companion

Material: ST 52.3 or 1.4404 - 316L

Article category 5273, 5373



Designation	Series	PB	psi	Flange size	A	B	C	D	E	F	G	H	I	M (metr.)	M (unc)
GGF 13 IN	L	345	3000	1/2"	1/2" NPT	13	38,1	54	17,48	46	36	16	19	M 8	5/16
GGF 20 IN	L	345	3000	3/4"	3/4" NPT	19	47,63	65	22,23	50	36	18	19	M 10	3/8
GGF 25 IN	L	345	3000	1"	1" NPT	25	52,37	70	26,19	55	38	18	22	M 10	3/8
GGF 32 IN	L	276	3000	1 1/4	1 1/4 NPT	32	58,72	79	30,18	68	41	21	22	M 10	7/16
GGF 40 IN	L	207	3000	1 1/2	1 1/2 NPT	38	69,85	93	35,71	78	45	25	24	M 12	1/2
GGF 50 IN	L	207	3000	2"	2" NPT	51	77,77	102	42,88	90	45	25	30	M 12	1/2
GGF 6 13 IN 10	S	414	6000	1/2"	3/8" NPT	13	40,49	54	18,24	46	36	16	19	M 8	5/16
GGF 6 20 IN	S	414	6000	3/4"	3/4" NPT	19	50,8	71	23,8	55	35	21	22	M 10	3/8
GGF 6 25 IN	S	414	6000	1"	1" NPT	25	57,15	81	27,76	65	42	25	24	M 12	7/16
GGF 6 32 IN	S	414	6000	1 1/4	1 1/4 NPT	32	66,68	95	31,75	78	45	27	25	M 14	1/2
GGF 6 40 IN	S	414	6000	1 1/2	1 1/2 NPT	38	79,38	112	36,5	94	50	30	28	M 16	5/8
GGF 6 50 IN	S	414	6000	2"	2" NPT	51	96,82	134	44,45	114	65	37	30	M 20	3/4

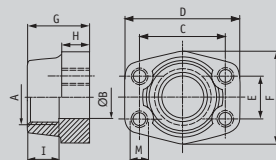
Construction Series: LL = Very Light – L = Light – S = Heavy — Ø = Tube Outside Diameter — PN = Nominal Pressure — PB = Maximal Working Pressure

GGF-IR

NPT threaded Flange Companion

Material: ST 52.3 or 1.4404 - 316L

Article category 5274, 5374



Designation	Series	PB	psi	Flange size	A	B	C	D	E	F	G	H	I	M (metr.)	M (unc)
GGF 13 IR	L	345	3000	1/2"	R 1/2"	13	38,1	54	17,48	46	36	16	19	M 8	5/16
GGF 20 IR	L	345	3000	3/4"	R 3/4"	19	47,63	65	22,23	50	36	18	19	M 10	3/8
GGF 25 IR	L	345	3000	1"	R 1"	25	52,37	70	26,19	55	38	18	22	M 10	3/8
GGF 32 IR	L	276	3000	1 1/4	R 1 1/4	32	58,72	79	30,18	68	41	21	22	M 10	7/16
GGF 40 IR	L	207	3000	1 1/2	R 1 1/2	38	69,85	93	35,71	78	45	25	24	M 12	1/2
GGF 50 IR	L	207	3000	2"	R 2"	51	77,77	102	42,88	90	45	25	30	M 12	1/2
GGF 6 13 IR 10	S	414	6000	1/2"	R 3/8"	13	40,49	54	18,24	46	36	16	19	M 8	5/16
GGF 6 20 IR	S	414	6000	3/4"	R 3/4"	19	50,8	71	23,8	55	35	21	22	M 10	3/8
GGF 6 25 IR	S	414	6000	1"	R 1"	25	57,16	81	27,76	65	42	25	24	M 12	7/16
GGF 6 32 IR	S	414	6000	1 1/4	R 1 1/4	32	66,68	95	31,75	78	45	27	25	M 14	1/2
GGF 6 40 IR	S	414	6000	1 1/2	R 1 1/2	38	79,38	112	36,5	94	50	30	28	M 16	5/8
GGF 6 50 IR	S	414	6000	2"	R 2"	51	96,82	134	44,45	114	65	37	30	M 20	3/4

Construction Series: LL = Very Light – L = Light – S = Heavy — Ø = Tube Outside Diameter — PN = Nominal Pressure — PB = Maximal Working Pressure

WBSF

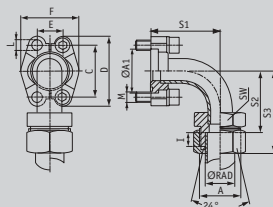
Flange Adapters 90°

DIN 3901/3902 – brazed

Material: 9SMnPb28K / ST 37

Surface Treatment: zinc plated,
yellow chromated

Article category 5279



Designation	Series	PB	psi	Flange size	Ø	A	A1	C	D	E	F	I	S1	S2	S3	SW	L	M(metr.)	M(unc)
W B SF 13 HL	L	315	3000	1/2"	15	M 22x1,5	30,2	38,10	54	17,48	45,6	7	40	43	58	22	8,5	M 8x30	5/16x1 1/4
W B SF 20 HL	L	160	3000	3/4"	22	M 30x2	38,1	47,63	65	22,23	51,8	7,5	59	63,5	80	30	10,5	M 10x35	3/8x1 1/2
W B SF 25 HL	L	160	3000	1"	28	M 36x2	44,4	52,37	70	26,19	58,4	7,5	68	75,5	80	36	10,5	M 10x35	3/8x1 1/2
W B SF 32 HL	L	160	3000	1 1/4	35	M 45x2	50,8	58,72	79	30,18	72,6	10,5	86	94,5	116	46	*1	*2	7/16x1 1/2
W B SF 40 HL	L	160	3000	1 1/2	42	M 52x2	60,3	69,85	94	35,71	82,6	11	98	104	127	55	13,5	M 12x35	1/2x1 1/2
W B SF 13 HS	S	350	3000	1/2"	16	M 24x1,5	30,2	38,10	54	17,48	45,6	7,5	40	42,5	60	24	8,5	M 8x30	5/16x1 1/4
W B SF 25 HS	S	350	3000	1"	30	M 42x2	44,4	52,37	70	26,19	58,4	13,5	68	69,5	96	46	10,5	M 10x35	3/8x1 1/2
W B SF 25 HS 20	S	350	3000	1"	25	M 36x2	44,4	52,37	70	26,19	58,4	12	68	71	95	36	10,5	M 10x35	3/8x1 1/2
W B SF 40 HS 32	S	210	3000	1 1/2	38	M 52x2	60,3	69,85	94	35,71	82,6	16	98	99	130	55	13,5	M 12x35	1/2x1 1/2

*1) = optional 10,5, 12,0 or 12,5 — *2) = optional M 10x30 or M 12x40

Construction Series: LL = Very Light – L = Light – S = Heavy — Ø = Tube Outside Diameter — PN = Nominal Pressure — PB = Maximal Working Pressure

WBSF6

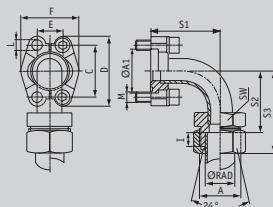
Flange Adapters 90°

DIN 3901/3902 – brazed

Material: 9SMnPb28K / ST37

Surface Treatment: zinc plated,
yellow chromated

Article category 5379



Designation	Series	PB	psi	Flange size	Ø	A	A1	C	D	E	F	I	S1	S2	S3	SW	L	M(metr.)	M(unc)
W B SF 6 13 HS	S	400	6000	1/2"	16	M 24x1,5	31,8	40,49	56	18,24	47,2	8,5	40	41,5	60	24	8,5	M 8x30	5/16x1 1/4
W B SF 6 20 HS	S	400	6000	3/4"	25	M 36x2	41,3	50,80	71	23,80	60	12	62	59	83	36	10,5	M 10x35	3/8x1 1/2
W B SF 6 20 HS 25	S	400	6000	3/4"	30	M 42x2	41,3	50,80	71	23,80	60	13,5	62	57,5	84	46	10,5	M 10x35	3/8x1 1/2
W B SF 6 25 HS	S	400	6000	1"	30	M 42x2	47,6	57,15	81	27,76	69,6	13,5	74	71,5	98	46	*1	M 12x45	7/16x1 3/4
W B SF 6 25 HS 20	S	400	6000	1"	25	M 36x2	47,6	57,15	81	27,76	69,6	12	74	73	97	36	*1	M 12x45	7/16x1 3/4
W B SF 6 32 HS	S	315	6000	1 1/4"	38	M 52x2	54	66,68	95	31,75	77,2	16	96	91	122	55	*2	M 14x50	1/2x1 3/4
W B SF 6 40 HS 32	S	315	6000	1 1/2"	38	M 52x2	63,5	79,38	113	36,50	95	16	111	91	122	55	16,75	M 16x55	5/8x2

*1) = optional 12,0 or 12,5 — *2) = optional 13,5 or 14,5

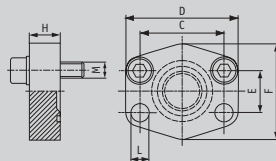
Construction Series: LL = Very Light – L = Light – S = Heavy — Ø = Tube Outside Diameter — PN = Nominal Pressure — PB = Maximal Working Pressure

Verschluss-SF

Closed Flanges

Material: ST 52.3 (FE 510) or
stainless steel 1.4404 - 316L

Article category 5280



Designation	Series	PB	psi	Flange size	C	D	E	F	H	L	M (metr.)	M (unc)
VERSCHLUSS SF 13	L	345	3000	1/2"	38,10	56	17,48	48	16	9	M 8x30	5/16 x 1 1/4
VERSCHLUSS SF 20	L	345	3000	3/4"	47,63	65	22,23	50	16	11	M 10x35	3/8 x 1 1/2
VERSCHLUSS SF 25	L	345	3000	1"	52,37	70	26,19	60	19	11	M 10x35	3/8 x 1 1/2
VERSCHLUSS SF 32	L	276	3000	1 1/4"	58,72	79	30,18	68	18	11,5	M 10x40	7/16 x 1 1/2
VERSCHLUSS SF 40	L	207	3000	1 1/2"	69,85	93	35,71	78	20	13,5	M 12x45	7/16 x 1 1/2
VERSCHLUSS SF 50	L	207	3000	2"	77,77	102	42,88	90	20	13,5	M 12x45	7/16 x 1 1/2
VERSCHLUSS SF 6 13	S	414	6000	1/2"	40,49	56	18,24	48	16	9	M 8x30	5/16 x 1 1/4
VERSCHLUSS SF 6 20	S	414	6000	3/4"	50,80	71	23,80	60	19	11	M 10x35	3/8 x 1 1/2
VERSCHLUSS SF 6 25	S	414	6000	1"	57,15	81	27,76	70	24	13	M 12x45	7/16 x 1 1/2
VERSCHLUSS SF 6 32	S	414	6000	1 1/4"	66,68	95	31,75	78	27	15*	M 14x45	1/2 x 1 3/4
VERSCHLUSS SF 6 40	S	414	6000	1 1/2"	79,38	112	36,50	94	30	17	M 16x50	5/8 x 2
VERSCHLUSS SF 6 50	S	414	6000	2"	96,82	134	44,45	114	28	21	M 20x65	3/4 x 2 1/2
*) L = 13,5 für UNC-Schrauben												

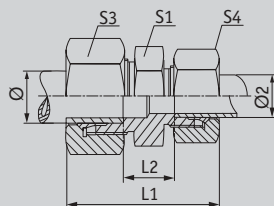
Construction Series: LL = Very Light – L = Light – S = Heavy — Ø = Tube Outside Diameter — PN = Nominal Pressure — PB = Maximal Working Pressure

Reducing and Butt Weld Couplings Swivel Reducer

V-red

Straight Reducing Couplings

Article category 5115



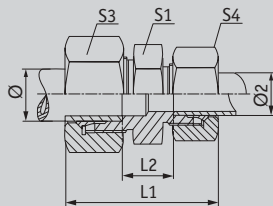
Designation	Series	Pressure	D1	D2	L1	L2	S1	S3	S4
V 06 LL 04	LL	PN 100	6	4	31,5	10,5	11	12	10
V 08 LL 04	LL	PN 100	8	4	33,5	12,5	12	14	10
V 08 LL 06	LL	PN 100	8	6	34	11	12	14	12

Construction Series: LL = Very Light – L = Light – S = Heavy — Ø = Tube Outside Diameter — PN = Nominal Pressure — PB = Maximal Working Pressure

V-red

Straight Reducing Couplings

Article category 5281



Designation	Series	Pressure	Ø	Ø2	L1	L2	S1	S3	S4
V NW 06 HL 04	L	PN 315	8	6	41	11	14	17	14
V NW 08 HL 04	L	PN 315	10	6	42	12	17	19	14
V NW 08 HL 06	L	PN 315	10	8	42	12	17	19	17
V NW 10 HL 04	L	PN 315	12	6	42	13	19	22	14
V NW 10 HL 06	L	PN 315	12	8	42	13	19	22	17
V NW 10 HL 08	L	PN 315	12	10	44	14	19	22	19
V NW 13 HL 04	L	PN 315	15	6	43,5	14	24	27	14
V NW 13 HL 06	L	PN 315	15	8	43,5	14	24	27	17
V NW 13 HL 08	L	PN 315	15	10	45	15	24	27	19
V NW 13 HL 10	L	PN 315	15	12	45	15	24	27	22
V NW 16 HL 04	L	PN 315	18	6	45	15	27	32	14
V NW 16 HL 06	L	PN 315	18	8	45	15	27	32	17
V NW 16 HL 08	L	PN 315	18	10	46	15,5	27	32	19
V NW 16 HL 10	L	PN 315	18	12	47	15,5	27	32	22
V NW 16 HL 13	L	PN 315	18	15	48	16,5	27	32	27
V NW 16 HL 13 HS	L	PN 315	18	16	48	17	27	32	30
V NW 20 HL 06	L	PN 160	22	8	48	17	32	36	17
V NW 20 HL 08	L	PN 160	22	10	48	17	32	36	19
V NW 20 HL 10	L	PN 160	22	12	48	17,5	32	36	22
V NW 20 HL 13	L	PN 160	22	15	50	18,5	32	36	27
V NW 20 HL 16	L	PN 160	22	18	51	18	32	36	32
V NW 25 HL 06	L	PN 160	28	8	49,5	18,5	41	41	17
V NW 25 HL 08	L	PN 160	28	10	49,5	18,5	41	41	19
V NW 25 HL 10	L	PN 160	28	12	51	19	41	41	22
V NW 25 HL 13	L	PN 160	28	15	51	19,5	41	41	27
V NW 25 HL 16	L	PN 160	28	18	52	19	41	41	32
V NW 25 HL 20	L	PN 160	28	22	54	21	41	41	36

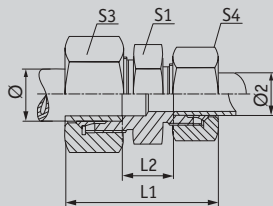
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Construction Series: LL = Very Light – L = Light – S = Heavy — Ø = Tube Outside Diameter — PN = Nominal Pressure — PB = Maximal Working Pressure

V-red

Straight Reducing Couplings

Article category 5281

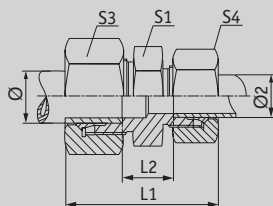


Designation	Series	Pressure	Ø	Ø2	L1	L2	S1	S3	S4
<--									
V NW 32 HL 20	L	PN 160	35	22	59	21	46	50	36
V NW 32 HL 25	L	PN 160	35	28	59	21	46	50	41
V NW 40 HL 25	L	PN 160	42	28	62	22,5	65	60	41
V NW 40 HL 32	L	PN 160	42	35	66	21,5	55	60	50
V NW 04 HS 03	S	PN 630	8	6	48	18	17	19	17
V NW 06 HS 03	S	PN 630	10	6	49	17,5	19	22	17
V NW 06 HS 04	S	PN 630	10	8	49	17,5	19	22	19
V NW 08 HS 03	S	PN 630	12	6	51	19,5	22	24	17
V NW 08 HS 04	S	PN 630	12	8	51	19,5	22	24	19
V NW 08 HS 06	S	PN 630	12	10	52	19	22	24	22
V NW 10 HS 03	S	PN 630	14	6	53	20	24	27	17
V NW 10 HS 04	S	PN 630	14	8	54	20	24	27	19
V NW 10 HS 06	S	PN 630	14	10	55	20,5	24	27	22
V NW 10 HS 08	S	PN 630	14	12	55	20,5	24	27	24
V NW 13 HS 03	S	PN 400	16	6	53	20	27	30	17
V NW 13 HS 04	S	PN 400	16	8	54	20	27	30	19
V NW 13 HS 06	S	PN 400	16	10	54	20	27	30	22
V NW 13 HS 08	S	PN 400	16	12	55	20	27	30	24
V NW 13 HS 10	S	PN 400	16	14	58	21,5	27	30	27
V NW 13 HS 13 HL	S	PN 400	16	15	60	22	27	30	27
V NW 16 HS 06	S	PN 400	20	10	59,5	22	32	36	22
V NW 16 HS 08	S	PN 400	20	12	59,5	22	32	36	24
V NW 16 HS 10	S	PN 400	20	14	63	23,5	32	36	27
V NW 16 HS 13	S	PN 400	20	16	63	23	32	36	30
V NW 16 HS 13 HL	S	PN 400	20	15	62	24	32	36	27
<--									

V-red

Straight Reducing Couplings

Article category 5281



Designation	Series	Pressure	Ø	Ø2	L1	L2	S1	S3	S4
<--									
V NW 16 HS 16 HL	S	PN 400	20	18	62	24	32	36	32
V NW 20 HS 13	S	PN 400	25	16	68	25,5	41	46	30
V NW 20 HS 16	S	PN 400	25	20	71	25,5	41	46	36
V NW 20 HS 20 HL	S	PN 400	25	22	70	25	41	46	36
V NW 25 HS 13	S	PN 400	30	16	70	25	46	50	30
V NW 25 HS 16	S	PN 400	30	20	74	26	46	50	36
V NW 25 HS 20	S	PN 400	30	25	77	26,5	46	50	46
V NW 32 HS 13	S	PN 315	38	16	81	29	55	60	30
V NW 32 HS 20	S	PN 315	38	25	84	29	55	60	46
V NW 32 HS 25	S	PN 315	38	30	87	29,5	55	60	50

Construction Series: LL = Very Light – L = Light – S = Heavy — Ø = Tube Outside Diameter — PN = Nominal Pressure — PB = Maximal Working Pressure

KM

Hexagonal Nut for bulkhead couplings

Article category 5282



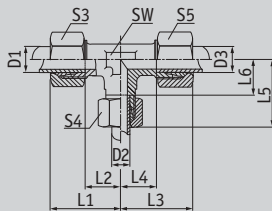
Deignation	Series	Ø	M	h	SW
KM 12	L	6	M 12x1,5	6	17
KM 14	L	8	M 14x1,5	6	19
KM 16	L	10	M 16x1,5	6	22
KM 18	L	12	M 18x1,5	6	24
KM 20	S	12	M 20x1,5	6	27
KM 22	L	15	M 22x1,5	7	30
KM 24	S	16	M 24x1,5	7	32
KM 26	L	18	M 26x1,5	8	36
KM 30	L	22	M 30x2	8	41
KM 36	L	28	M 36x2	9	46
KM 36 - 1,5	LS	28	M 36x1,5	9	46
KM 42	S	30	M 42x2	9	50
KM 45	L	35	M 45x2	9	55
KM 52	L	42	M 52x2	10	65

Construction Series: LL = Very Light – L = Light – S = Heavy — Ø = Tube Outside Diameter — PN = Nominal Pressure — PB = Maximal Working Pressure

RT

Reducing Tee Couplings

Article category 5182, 5283



Designation	Series	Pressure	Ø D1	Ø D2	Ø D3	L1	L2	L3	L4	L5	L6	SW	S3	S4	S5
RT 04 08 04 LL	LL	PN 100	4	8	4	23	13	23	13	23	11,5	12	10	14	10
RT 06 04 06 LL	LL	PN 100	6	4	6	21	9,5	21	9,5	21	11	11	12	10	12
RT NW 04 06 04 HL	L	PN 400	6	8	6	26	11	26	11	29	14	14	14	17	14
RT NW 04 08 04 HL	L	PN 400	6	10	6	30	15	30	15	30	15	17	14	19	14
RT NW 06 04 06 HL	L	PN 400	8	6	8	29	14	29	14	29	14	14	17	14	17
RT NW 06 06 04 HL	L	PN 400	8	8	6	29	14	29	14	29	14	14	17	17	14
RT NW 06 08 06 HL	L	PN 400	8	10	8	30	15	30	15	30	15	17	17	19	17
RT NW 06 10 06 HL	L	PN 400	8	12	8	32	17	32	17	32	17	19	17	22	17
RT NW 06 13 06 HL	L	PN 400	8	15	8	32	17	32	17	30	15	19	17	27	17
RT NW 08 04 08 HL	L	PN 400	10	6	10	30	15	30	15	30	15	17	19	14	19
RT NW 08 06 06 HL	L	PN 400	10	8	8	30	15	30	15	30	15	17	19	17	17
RT NW 08 06 08 HL	L	PN 400	10	8	10	30	15	30	15	30	15	17	19	17	19
RT NW 08 08 04 HL	L	PN 400	10	10	6	30	15	30	15	30	15	17	19	19	14
RT NW 08 10 08 HL	L	PN 400	10	12	10	32	19	32	19	32	15	17	19	22	19
RT NW 08 13 08 HL	L	PN 400	10	15	10	36	21	36	21	36	21	19	19	27	19
RT NW 10 04 10 HL	L	PN 400	12	6	12	32	17	32	17	32	17	19	22	14	22
RT NW 10 06 06 HL	L	PN 400	12	8	8	32	17	32	17	32	17	19	22	17	17
RT NW 10 06 10 HL	L	PN 400	12	8	12	32	17	32	17	32	17	19	22	17	22
RT NW 10 08 08 HL	L	PN 400	12	10	10	32	17	32	17	32	17	19	22	19	19
RT NW 10 08 10 HL	L	PN 400	12	10	12	32	17	32	17	32	17	19	22	19	22
RT NW 10 10 06 HL	L	PN 400	12	12	8	32	17	32	17	32	17	19	22	22	17
RT NW 10 10 08 HL	L	PN 400	12	12	10	32	17	32	17	32	17	19	22	22	19
RT NW 10 13 10 HL	L	PN 400	12	15	12	36	21	36	21	36	21	19	22	27	22
RT NW 10 16 10 HL	L	PN 315	12	18	12	39	24	39	24	40	23,5	24	22	32	22
RT NW 10 20 10 HL	L	PN 315	12	22	12	39	24	39	24	40	21	24	22	36	22
RT NW 13 04 13 HL	L	PN 400	15	6	15	36	21	36	21	36	21	19	27	14	27

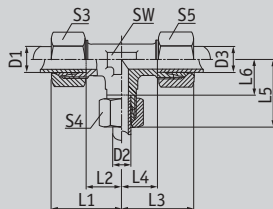
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Construction Series: LL = Very Light – L = Light – S = Heavy — Ø = Tube Outside Diameter — PN = Nominal Pressure — PB = Maximal Working Pressure

RT

Reducing Tee Couplings

Article category 5283



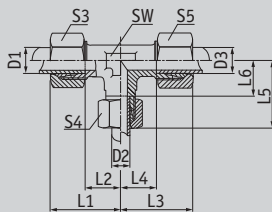
Designation	Series	Pressure	Ø D1	Ø D2	Ø D3	L1	L2	L3	L4	L5	L6	SW	S3	S4	S5
<--															
RT NW 13 06 06 HL	L	PN 300	15	8	8	36	21	36	21	36	21	19	27	17	17
RT NW 13 06 13 HL	L	PN 400	15	8	15	36	21	36	21	36	21	19	27	17	27
RT NW 13 08 06 HL	L	PN 400	15	10	8	36	21	36	21	36	21	19	27	19	17
RT NW 13 08 08 HL	L	PN 400	15	10	10	36	21	36	21	36	21	19	27	19	19
RT NW 13 08 13 HL	L	PN 400	15	10	15	36	21	36	21	36	21	19	27	19	27
RT NW 13 10 10 HL	L	PN 400	15	12	12	36	21	36	21	36	21	19	27	22	22
RT NW 13 10 13 HL	L	PN 400	15	12	15	36	21	36	21	36	21	19	27	22	27
RT NW 13 13 08 HL	L	PN 400	15	15	10	36	21	36	21	36	21	19	27	27	19
RT NW 13 13 10 HL	L	PN 400	15	15	12	36	21	36	21	36	21	19	27	27	22
RT NW 13 16 13 HL	L	PN 315	15	18	15	39	24	39	24	40	23,5	24	27	32	27
RT NW 16 06 06 HL	L	PN 315	18	8	8	39	24	39	24	40	23,5	24	32	17	17
RT NW 16 06 16 HL	L	PN 315	18	8	18	40	23,5	40	23,5	39	24	24	32	17	32
RT NW 16 08 08 HL	L	PN 315	18	10	10	39	23,5	39	24	39	24	24	32	19	19
RT NW 16 08 16 HL	L	PN 315	18	10	18	40	23,5	40	23,5	39	24	24	32	19	32
RT NW 16 10 10 HL	L	PN 315	18	12	12	39	23,5	39	24	39	24	24	32	22	22
RT NW 16 10 16 HL	L	PN 315	18	12	18	40	23,5	40	23,5	39	24	24	32	22	32
RT NW 16 13 16 HL	L	PN 315	18	15	18	40	23,5	40	23,5	39	24	24	32	27	32
RT NW 16 16 06 HL	L	PN 315	18	18	8	40	23,5	40	23,5	39	24	24	32	32	17
RT NW 16 16 08 HL	L	PN 315	18	18	10	39	23,5	39	24	40	23,5	24	32	32	19
RT NW 16 16 10 HL	L	PN 315	18	18	12	39	23,5	39	24	40	23,5	27	32	32	22
RT NW 20 08 20 HL	L	PN 315	22	10	22	44	27,5	44	27,5	43	28	27	36	19	36
RT NW 20 10 20 HL	L	PN 315	22	12	22	44	27,5	44	27,5	43	28	27	36	22	36
RT NW 20 13 13 HL	L	PN 315	22	15	15	43	27,5	43	28	43	28	27	36	27	27
RT NW 20 13 20 HL	L	PN 315	22	15	22	44	27,5	44	27,5	43	28	27	36	27	36
RT NW 20 16 16 HL	L	PN 315	22	18	18	44	27,5	44	27,5	44	27,5	27	36	32	32
RT NW 20 16 20 HL	L	PN 315	22	18	22	44	27,5	44	27,5	44	27,5	27	36	32	36
															-->

Construction Series: LL = Very Light – L = Light – S = Heavy — Ø = Tube Outside Diameter — PN = Nominal Pressure — PB = Maximal Working Pressure

RT

Reducing Tee Couplings

Article category 5283



Designation	Series	Pressure	Ø D1	Ø D2	Ø D3	L1	L2	L3	L4	L5	L6	SW	S3	S4	S5
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RT NW 20 20 16 HL	L	PN 315	22	22	18	44	27,5	44	27,5	44	27,5	27	36	36	32
RT NW 20 25 20 HL	L	PN 250	22	28	22	47	30,5	47	30,5	47	30,5	36	36	41	36
RT NW 25 08 25 HL	L	PN 250	28	10	28	47	30,5	47	30,5	46	31	36	41	19	41
RT NW 25 10 25 HL	L	PN 250	28	12	28	47	30,5	47	30,5	46	31	36	41	22	41
RT NW 25 13 25 HL	L	PN 250	28	15	28	47	30,5	47	30,5	46	31	36	41	27	41
RT NW 25 16 25 HL	L	PN 250	28	18	28	47	30,5	47	30,5	47	30,5	36	41	32	41
RT NW 25 20 20 HL	L	PN 250	28	22	22	47	30,5	47	30,5	47	30,5	36	41	36	36
RT NW 25 20 25 HL	L	PN 250	28	22	28	47	30,5	47	30,5	47	30,5	36	41	36	41
RT NW 25 25 20 HL	L	PN 250	28	28	22	47	30,5	47	30,5	47	30,5	36	41	41	36
RT NW 32 20 32 HL	L	PN 250	35	22	35	56	34,5	56	34,5	54	37,5	41	50	36	50
RT NW 32 25 25 HL	L	PN 250	35	28	28	56	34,5	54	37,5	54	37,5	41	50	41	41
RT NW 32 25 32 HL	L	PN 250	35	28	35	56	34,5	56	34,5	54	37,5	41	50	41	50

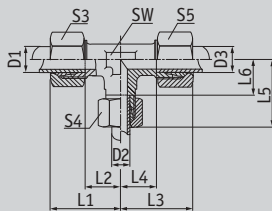
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Construction Series: LL = Very Light – L = Light – S = Heavy — Ø = Tube Outside Diameter — PN = Nominal Pressure — PB = Maximal Working Pressure

RT

Reducing Tee Couplings

Article category 5383



Designation	Series	Pressure	Ø D1	Ø D2	Ø D3	L1	L2	L3	L4	L5	L6	SW	S3	S4	S5
<--															
RT NW 04 03 04 HS	S	PN 630	8	6	8	32	16,5	32	16,5	33	18	19	19	17	19
RT NW 06 03 06 HS	S	PN 630	10	6	10	34	17,5	34	17,5	33	18	19	22	17	22
RT NW 08 03 08 HS	S	PN 630	12	6	12	38	21,5	38	21,5	37	22	22	24	17	24
RT NW 08 04 04 HS	S	PN 630	12	8	8	37	21,5	37	22	37	22	22	24	19	19
RT NW 08 04 08 HS	S	PN 630	12	8	12	38	21,5	38	21,5	37	22	22	24	19	24
RT NW 08 06 08 HS	S	PN 630	12	10	12	38	21,5	38	21,5	38	21,5	22	24	22	24
RT NW 08 13 08 HS	S	PN 400	12	16	12	42	25,5	42	25,5	43	24,5	24	24	30	24
RT NW 10 06 10 HS	S	PN 630	14	10	14	40	22	40	22	39	22,5	19	27	22	27
RT NW 13 03 13 HS	S	PN 400	16	6	16	43	24,5	43	24,5	41	26	24	30	17	30
RT NW 13 04 13 HS	S	PN 400	16	8	16	43	24,5	43	24,5	41	26	24	30	19	30
RT NW 13 06 13 HS	S	PN 400	16	10	16	43	24,5	43	24,5	42	25,5	24	30	22	30
RT NW 13 08 13 HS	S	PN 400	16	12	16	43	24,5	43	24,5	42	25,5	24	30	24	30
RT NW 13 16 13 HS	S	PN 400	16	20	16	48	28,5	48	28,5	48	26,5	27	30	36	30
RT NW 16 06 16 HS	S	PN 400	20	10	20	48	26,5	48	26,5	46	29,5	27	36	22	36
RT NW 16 08 16 HS	S	PN 400	20	12	20	48	26,5	48	26,5	46	29,5	27	36	24	36
RT NW 16 10 16 HS	S	PN 400	20	14	20	48	26,5	48	26,5	46	29,5	27	36	30	36
RT NW 16 13 16 HS	S	PN 400	20	16	20	48	26,5	48	26,5	47	28,5	27	36	30	36
RT NW 16 16 20 HS	S	PN 400	20	20	25	48	26,5	48	26,5	47	28,5	32	36	36	46
RT NW 16 20 16 HS	S	PN 400	20	25	20	53	31,5	53	31,5	54	30	36	36	46	36
RT NW 20 13 20 HS	S	PN 400	25	16	25	54	30	54	30	52	33,5	36	46	30	46
RT NW 20 16 20 HS	S	PN 400	25	20	25	54	30	54	30	53	31,5	36	46	36	46
RT NW 20 25 20 HS	S	PN 400	25	30	25	61	37	61	37	62	35,5	41	46	50	46
RT NW 25 13 25 HS	S	PN 400	30	16	30	62	35,5	62	35,5	59	40,5	41	46	30	50
RT NW 25 16 25 HS	S	PN 400	30	20	30	62	35,5	62	35,5	60	38,5	41	50	36	50
RT NW 25 20 25 HS	S	PN 400	30	25	30	62	35,5	62	35,5	61	37	41	50	46	50

Construction Series: LL = Very Light – L = Light – S = Heavy — Ø = Tube Outside Diameter — PN = Nominal Pressure — PB = Maximal Working Pressure

SA-DKOL

Welding nipples with O-ring

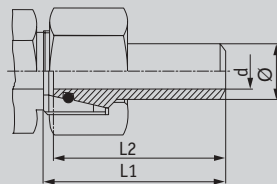
acc. to DIN 3865

Available for 24° inner cone

Welding of the extremity without
centring adjustment

Available tube acc. to DIN 2391

Article category 5288



Designation	Series	Pressure	Ø	Ø Rohr	Pressure SA/Tube	L1	L2	d	O-Ring
SA NW 25 DKOL 2,5	L	PN 160	28	28x2,5	PN 252	53	48	23	26x2
SA NW 32 DKOL 3	L	PN 160	35	35x2	PN 242	61	52	29	32x2,5

Construction Series: LL = Very Light – L = Light – S = Heavy — Ø = Tube Outside Diameter — PN = Nominal Pressure —
PB = Maximal Working Pressure

SA-DKO

Welding nipples with O-ring

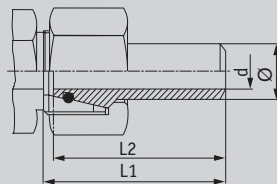
acc. to DIN 3865

Available for 24° inner cone

Welding of the extremity without
centring adjustment

Available tube acc. to DIN 2391

Article category 5390



Designation	Series	Pressure	Ø	Ø Tube	PB SA/Tube	L1	L2	d	O-Ring
SA NW 03 DKO 1,5	S	PN 630	6	6x1,5	PB 528	31	32,5	3	4x1,5
SA NW 04 DKO 1,5	S	PN 630	8	8x1,5	PB 413	32	30	5	6x1,5
SA NW 06 DKO 1	S	PN 630	10	10x1	PB 249	32,5	33,5	8	7,5x1,5
SA NW 06 DKO 1,5	S	PN 630	10	10x1,5	PB 357	33,5	31,5	7	7,5x1,5
SA NW 06 DKO 2	S	PN 630	10	10x2	PB 459	33,5	31,5	6	7,5x1,5
SA NW 08 DKO 1,5	S	PN 630	12	12x1,5	PB 304	33,5	31,5	9	9x1,5
SA NW 08 DKO 2	S	PN 630	12	12x2	PB 392	33,5	31,5	8	9x1,5
SA NW 08 DKO 2,5	S	PN 630	12	12x2,5	PB 475	33,5	31,5	7	9x1,5
SA NW 10 DKO 2	S	PN 630	14	14x2	PB 343	40	37,5	10	10x2
SA NW 13 DKO 1,5	S	PN 400	16	16x1,5	PB 234	37,5	40,5	13	12x2
SA NW 13 DKO 2	S	PN 400	16	16x2	PB 304	40,5	37,5	12	12x2
SA NW 13 DKO 2,5	S	PN 400	16	16x2,5	PB 370	40,5	37,5	11	12x2
SA NW 13 DKO 3	S	PN 400	16	16x3	PB 400	40,5	37,5	10	12x2
SA NW 16 DKO 2	S	PN 400	20	20x2	PB 249	43,5	47	16	16,3x2,4
SA NW 16 DKO 2,5	S	PN 400	20	20x2,5	PB 304	46,5	43	15	16,3x2,4
SA NW 16 DKO 3	S	PN 400	20	20x3	PB 358	46,5	43	14	16,3x2,4
SA NW 16 DKO 3,5	S	PN 400	20	20x3,5	PB 426	43,5	47	13	16,3x2,4
SA NW 16 DKO 4	S	PN 400	20	20x4	PB 400	46,5	43	12	16,3x2,4
SA NW 20 DKO 2	S	PN 400	25	25x2	PB 214	53	48	21	20,3x2,4
SA NW 20 DKO 3	S	PN 400	25	25x3	PB 293	53	48	19	20,3x2,4
SA NW 20 DKO 4	S	PN 400	25	25x4	PB 377	53	48	17	20,3x2,4
SA NW 20 DKO 5	S	PN 400	25	25x5	PB 400	53	48	15	20,3x2,4
SA NW 25 DKO 3	S	PN 400	30	30x3	PB 248	57,5	51,5	24	25,3x2,4
SA NW 25 DKO 4	S	PN 400	30	30x4	PB 322	57,5	51,5	22	25,3x2,4
SA NW 25 DKO 5	S	PN 400	30	30x5	PB 391	57,5	51,5	20	25,3x2,4
SA NW 25 DKO 6	S	PN 400	30	30x6	PB 460	52	57	18	25,3x2,4
SA NW 32 DKO 4	S	PN 315	38	38x4	PB 260	64	55	30	33,3x2,4
SA NW 32 DKO 5	S	PN 315	38	38x5	PB 315	64	55	28	33,3x2,4
SA NW 32 DKO 6	S	PN 315	38	38x6	PB 315	64	55	26	33,3x2,4

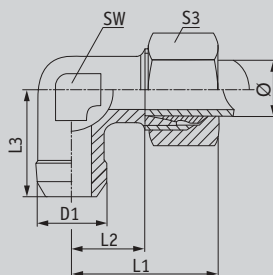
Construction Series: LL = Very Light – L = Light – S = Heavy — Ø = Tube Outside Diameter — PN = Nominal Pressure — PB = Maximal Working Pressure

WSA

Butt Weld Elbow Couplings

Stud material: C15

Article category 5286



Designation	Series	Pressure	Ø	L1	L2	L3	D2	SW	S3
WSA NW 04 HL	L	PN 400	6	27	12	18,5	10	12	14
WSA NW 06 HL	L	PN 400	8	29	14	21	12	12	17
WSA NW 08 HL	L	PN 400	10	30	15	22	14	14	19
WSA NW 10 HL	L	PN 400	12	32	17	24	16	17	22
WSA NW 13 HL	L	PN 400	15	36	21	28	19	19	27
WSA NW 16 HL	L	PN 315	18	40	23,5	30	22	24	32
WSA NW 20 HL	L	PN 315	22	44	27,5	42	27	27	36
WSA NW 25 HL	L	PN 250	28	47	30,5	48	32	36	41
WSA NW 32 HL	L	PN 250	35	56	34,5	54	40	41	50
WSA NW 40 HL	L	PN 250	42	63	40	61	46	50	60
WSA NW 03 HS	S	PN 630	6	31	16	23	11	12	17
WSA NW 04 HS	S	PN 630	8	32	17	22,5	13	14	19
WSA NW 06 HS	S	PN 630	10	34	17,5	23,5	15	17	22
WSA NW 08 HS	S	PN 630	12	38	21,5	23,5	17	17	24
WSA NW 10 HS	S	PN 630	14	40	22	25,5	19	19	27
WSA NW 13 HS	S	PN 400	16	43	24,5	33	21	24	30
WSA NW 16 HS	S	PN 400	20	48	26,5	42	26	27	36
WSA NW 20 HS	S	PN 400	25	54	30	48	31	36	46
WSA NW 25 HS	S	PN 400	30	62	35,5	54	36	41	50
WSA NW 32 HS	S	PN 315	38	72	41	57	44	50	60

Construction Series: LL = Very Light – L = Light – S = Heavy — Ø = Tube Outside Diameter — PN = Nominal Pressure — PB = Maximal Working Pressure

DMO

Swivel Reducer

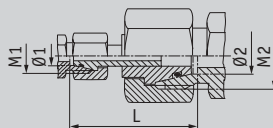
for 24° inner cone (DIN 3861)

Material: steel

Surface treatment: DIN 50961

Fe/Zn8C

Article category 5291

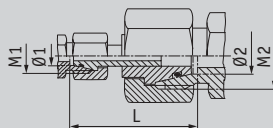


Designation	Series	Pressure	Ø1	Ø2	M1	M2	L
DMO NW 04 L	L	PN 315	6-L	6-L	M 12x1,5	M 12x1,5	31,5
DMO NW 04 L 03 S	L/S	PN 315	6-L	6-S	M 12x1,5	M 14x1,5	33
DMO NW 04 L 04 S	L/S	PN 315	6-L	8-S	M 12x1,5	M 16x1,5	34,5
DMO NW 04 L 06	L	PN 315	6-L	8-L	M 12x1,5	M 14x1,5	34,2
DMO NW 04 L 06 S	L/S	PN 315	6-L	10-S	M 12x1,5	M 18x1,5	36
DMO NW 04 L 08	L	PN 315	6-L	10-L	M 12x1,5	M 16x1,5	35,6
DMO NW 04 L 10	L	PN 315	6-L	12-L	M 12x1,5	M 18x1,5	35
DMO NW 06 L	L	PN 315	8-L	8-L	M 14x1,5	M 14x1,5	35,4
DMO NW 06 L 03 S	L/S	PN 315	8-L	6-S	M 14x1,5	M 14x1,5	35
DMO NW 06 L 04 S	L/S	PN 315	8-L	8-S	M 14x1,5	M 16x1,5	35,7
DMO NW 06 L 06 S	L/S	PN 315	8-L	10-S	M 14x1,5	M 18x1,5	37,2
DMO NW 06 L 08	L	PN 315	8-L	10-L	M 14x1,5	M 20x1,5	36,8
DMO NW 06 L 08 S	L/S	PN 315	8-L	12-S	M 14x1,5	M 12x1,5	35,9
DMO NW 06 L 10	L	PN 315	8-L	12-L	M 14x1,5	M 18x1,5	36,5
DMO NW 06 L 13	L	PN 315	8-L	15-L	M 14x1,5	M 22x1,5	36
DMO NW 06 L 13 S	L/S	PN 315	8-L	16-S	M 14x1,5	M 24x1,5	36
DMO NW 06 L 16	L	PN 315	8-L	18-L	M 14x1,5	M 26x1,5	36
DMO NW 08 L	L	PN 315	10-L	10-L	M 16x1,5	M 16x1,5	36,3
DMO NW 08 L 03 S	L/S	PN 315	10-L	6-S	M 16x1,5	M 14x1,5	38
DMO NW 08 L 04 S	L/S	PN 315	10-L	8-S	M 16x1,5	M 16x1,5	38
DMO NW 08 L 06 S	L/S	PN 315	10-L	10-S	M 16x1,5	M 18x1,5	38
DMO NW 08 L 08 S	L/S	PN 315	10-L	12-S	M 16x1,5	M 20x1,5	40,5
DMO NW 08 L 10	L	PN 315	10-L	12-L	M 16x1,5	M 18x1,5	35,9
DMO NW 08 L 10 S	L/S	PN 315	10-L	14-S	M 16x1,5	M 22x1,5	37,9
DMO NW 08 L 13	L	PN 315	10-L	15-L	M 16x1,5	M 22x1,5	35,8
DMO NW 08 L 13 S	L/S	PN 315	10-L	16-S	M 16x1,5	M 24x1,5	38,8
DMO NW 08 L 16	L	PN 315	10-L	18-L	M 16x1,5	M 26x1,5	39

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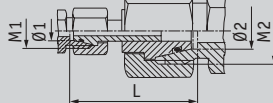
Construction Series: LL = Very Light – L = Light – S = Heavy — Ø = Tube Outside Diameter — PN = Nominal Pressure — PB = Maximal Working Pressure

Article category 5291



Construction Series: LL = Very Light – L = Light – S = Heavy — Ø = Tube Outside Diameter — PN = Nominal Pressure — PB = Maximal Working Pressure

Article category 5291



Construction Series: LL = Very Light - L = Light - S = Heavy — Ø = Tube Outside Diameter — PN = Nominal Pressure — PB = Maximal Working Pressure

DMO

Swivel Reducer

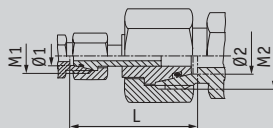
for 24° inner cone (DIN 3861)

Material: steel

Surface treatment: DIN 50961

Fe/Zn8C

Article category 5291



Designation	Series	Pressure	Ø1	Ø2	M1	M2	L
<--							
DMO NW 03 S	S	PN 600	6-S	6-S	M 14x1,5	M 14x1,5	31
DMO NW 03 S 04	S	PN 600	6-S	8-S	M 14x1,5	M 16x1,5	33,4
DMO NW 04 S	S	PN 600	8-S	8-S	M 16x1,5	M 16x1,5	36,4
DMO NW 04 S 06	S	PN 400	8-S	10-S	M 16x1,5	M 18x1,5	38,3
DMO NW 04 S 08	S	PN 400	8-S	12-S	M 16x1,5	M 20x1,5	40,1
DMO NW 06 S	S	PN 600	10-S	10-S	M 18x1,5	M 18x1,5	36,3
DMO NW 06 S 08	S	PN 400	10-S	12-S	M 18x1,5	M 20x1,5	41,2
DMO NW 06 S 10	S	PN 400	10-S	14-S	M 18x1,5	M 22x1,5	40,5
DMO NW 06 S 13	S	PN 400	10-S	16-S	M 18x1,5	M 24x1,5	44,2
DMO NW 08 S	S	PN 400	12-S	12-S	M 20x1,5	M 20x1,5	40
DMO NW 08 S 10	S	PN 400	12-S	14-S	M 20x1,5	M 22x1,5	42,5
DMO NW 08 S 13	S	PN 400	12-S	16-S	M 20x1,5	M 24x1,5	43,3
DMO NW 10 S	S	PN 600	14-S	14-S	M 22x1,5	M 22x1,5	43,9
DMO NW 10 S 13	S	PN 400	14-S	16-S	M 22x1,5	M 24x1,5	44,8
DMO NW 13 S	S	PN 400	16-S	16-S	M 24x1,5	M 24x1,5	46
DMO NW 13 S 16	S	PN 400	16-S	20-S	M 24x1,5	M 30x2	49,8
DMO NW 13 S 20	S	PN 400	16-S	25-S	M 24x1,5	M 36x2	52,6
DMO NW 16 S	S	PN 400	20-S	20-S	M 30x2	M 30x2	57,5
DMO NW 16 S 20	S	PN 400	20-S	25-S	M 30x2	M 36x2	58,9
DMO NW 16 S 25	S	PN 400	20-S	30-S	M 30x2	M 30x2	59,7
DMO NW 20 S	S	PN 400	25-S	25-S	M 36x2	M 36x2	58,2
DMO NW 20 S 25	S	PN 400	25-S	30-S	M 36x2	M 42x2	58,9
DMO NW 20 S 32	S	PN 330	25-S	38-S	M 36x2	M 52x2	62,9
DMO NW 25 S	S	PN 400	30-S	30-S	M 42x2	M 42x2	66,2
DMO NW 25 S 32	S	PN 360	30-S	38-S	M 42x2	M 52x2	70,4
DMO NW 32 S	S	PN 360	38-S	38-S	M 52x2	M 52x2	74,7

Construction Series: LL = Very Light – L = Light – S = Heavy — Ø = Tube Outside Diameter — PN = Nominal Pressure — PB = Maximal Working Pressure

HANSA-FLEX

Tube Fittings

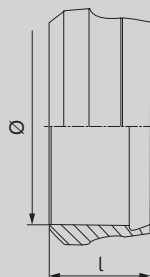
French Series



SRD-F

Cutting Rings, french series

Article category 5500



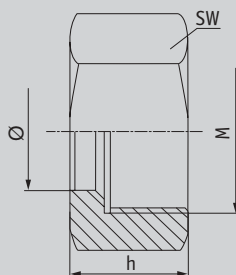
Designation	Pressure	Ø	l
SR D 13	PN 400	13,25	10
SR D 17	PN 400	16,75	10
SR D 21	PN 250	21,25	10
SR D 27	PN 250	26,75	10,5
SR D 33	PN 160	33,5	10,5

Construction Series: LL = Very Light – L = Light – S = Heavy — Ø = Tube Outside Diameter — PN = Nominal Pressure — PB = Maximal Working Pressure

UEM-F

Nut,
french Series

Article category 5501



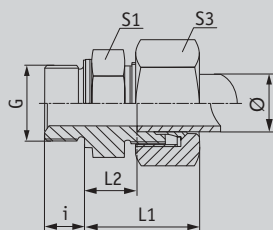
Designation	Pressure	Ø	M	h	SW
UEM NW 10 F	PN 400	13,25	M 20x1,5	17	24
UEM NW 13 F	PN 400	16,75	M 24x1,5	18	30
UEM NW 16 F	PN 250	21,25	M 30x1,5	20,5	36
UEM NW 20 F	PN 250	26,75	M 36x1,5	21,5	42
UEM NW 25 F	PN 160	33,5	M 45x1,5	23,5	55

Construction Series: LL = Very Light – L = Light – S = Heavy — Ø = Tube Outside Diameter — PN = Nominal Pressure — PB = Maximal Working Pressure

VR-HF

Straight Male Stud Couplings, french Series

Article category 5504



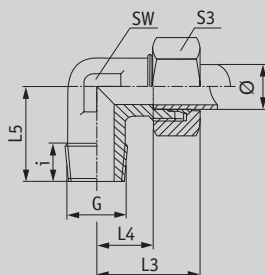
Designation	Pressure	Ø	G	L1	L2	i	S1	S3
VR NW 10 HF	PN 300	13,25	3/8"	34,5	12	10	22	27
VR NW 10 HF 1/4	PN 300	13,25	1/4"	33	10,5	10	22	27
VR NW 10 HF 1/2	PN 300	13,25	1/2"	34,5	12	10	22	27
VR NW 13 HF	PN 300	16,75	1/2"	36,5	13	12	27	30
VR NW 13 HF 1/4	PN 300	16,75	1/4"	34,5	12	10	27	30
VR NW 13 HF 3/8	PN 300	16,75	3/8"	35,5	12	10	27	30
VR NW 16 HF	PN 200	21,25	1/2"	39	15	12	32	36
VR NW 16 HF 3/4	PN 200	21,25	3/4"	40,5	16,5	16	32	36
VR NW 20 HF	PN 200	26,75	3/4"	41,5	16,5	16	41	46
VR NW 20 HF 1	PN 200	26,75	1"	43,5	18,5	16	46	46
VR NW 25 HF	PN 160	33,5	1"	45,5	20,5	16	46	55

Construction Series: LL = Very Light – L = Light – S = Heavy — Ø = Tube Outside Diameter — PN = Nominal Pressure — PB = Maximal Working Pressure

WN-HF

Male Stud Elbows,
french Series

Article category 5505



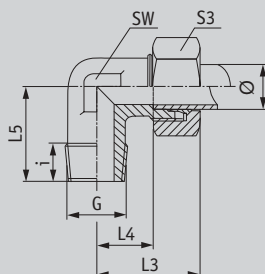
Designation	Pressure	Ø	G	L3	L4	L5	i	SW	S3
WN NW 10 HF	PN 300	13,25	3/8"	19	27	12	16	25	27,5
WN NW 10 HF 1/4	PN 300	13,25	1/4"	19	27	12	16	25	27,5
WN NW 13 HF	PN 300	16,75	1/2"	24	30	16	18	27	33,5
WN NW 13 HF 3/8	PN 300	16,75	3/8"	24	30	12	18	27	29,5
WN NW 16 HF	PN 200	21,25	1/2"	30	36	16	23	32	37

Construction Series: LL = Very Light – L = Light – S = Heavy — Ø = Tube Outside Diameter — PN = Nominal Pressure — PB = Maximal Working Pressure

WR-HF

Male Stud Elbows, French Series

Article category 5508



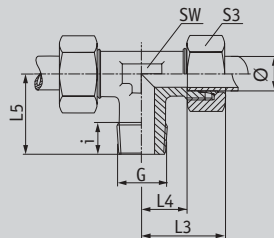
Designation	Pressure	Ø	G	L3	L4	L5	i	SW	S3
WR NW 10 HF	PN 300	13,25	3/8"	38,5	16	23,7	12,7	19	27
WR NW 10 HF 1/4	PN 300	13,25	1/4"	38,5	16	23,5	12,3	19	27
WR NW 10 HF 1/2	PN 300	13,25	1/2"	38,5	16	24,8	16,8	19	27
WR NW 13 HF	PN 300	16,75	1/2"	41,5	16	26,3	16,8	24	30
WR NW 13 HF 1/4	PN 300	16,75	1/4"	41,5	18	30	12,3	24	30
WR NW 13 HF 3/8	PN 300	16,75	3/8"	41,5	18	25,2	12,7	24	30
WR NW 16 HF	PN 200	21,25	1/2"	47	23	30,3	16,8	30	36
WR NW 16 HF 3/8	PN 200	21,25	3/8"	47	23	34	12,7	30	36
WR NW 16 HF 3/4	PN 200	21,25	3/4"	47	23	30	18,1	30	36
WR NW 20 HF	PN 200	26,75	3/4"	52	27	36,5	18,1	36	46
WR NW 20 HF 1	PN 200	26,75	1"	52	27	36,5	21,3	36	46
WR NW 25 HF	PN 160	33,5	1"	60	35	44,1	21,3	46	55
WR NW 25 HF 1 1/4	PN 160	33,5	1 1/4"	60	35	43,3	23,6	46	55

Construction Series: LL = Very Light – L = Light – S = Heavy — Ø = Tube Outside Diameter — PN = Nominal Pressure — PB = Maximal Working Pressure

TR-HF

Male Stud Branch Tees, french Series

Article category 5512



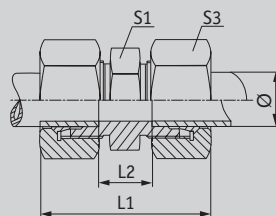
Designation	Pressure	Ø	G	L3	L4	L5	i	SW	S3
TR NW 10 HF	PN 300	13,25	3/8"	38,5	16	23,7	12,3	19	27
TR NW 10 HF 1/4	PN 300	13,25	1/4"	38,5	16	23,5	12,3	19	27
TR NW 13 HF 3/8	PN 300	16,75	3/8"	41,5	18	25,2	12,7	24	30

Construction Series: LL = Very Light – L = Light – S = Heavy — Ø = Tube Outside Diameter — PN = Nominal Pressure —
PB = Maximal Working Pressure

V-HF

Straight Couplings, french Series

Article category 5517



Designation	Pressure	Ø	L1	L2	S1	S3
V NW 10 HF	PN 300	13,25	58	13	22	27
V NW 13 HF	PN 300	16,75	61	14	27	30
V NW 16 HF	PN 200	21,25	67	19	32	36
V NW 20 HF	PN 200	26,75	70	20	41	46
V NW 25 HF	PN 160	33,5	76	26	46	55

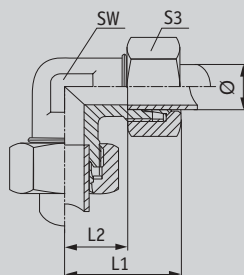
Construction Series: LL = Very Light – L = Light – S = Heavy — Ø = Tube Outside Diameter — PN = Nominal Pressure —
PB = Maximal Working Pressure

W-HF

Equal Elbows, french Series

Body acc. to DIN 3905

Article category 5518



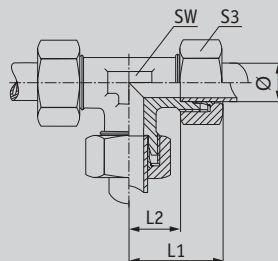
Designation	Pressure	Ø	L1	L2	SW	S3
W NW 10 HF	PN 300	13,25	38,5	16	19	27
W NW 13 HF	PN 300	16,75	41,5	18	24	30
W NW 16 HF	PN 200	21,25	47	23	30	36
W NW 20 HF	PN 200	26,75	52	27	36	46
W NW 25 HF	PN 160	33,5	60	35	46	55

Construction Series: LL = Very Light – L = Light – S = Heavy — Ø = Tube Outside Diameter — PN = Nominal Pressure — PB = Maximal Working Pressure

T-HF

Equal Tees, french Series

Article category 5519



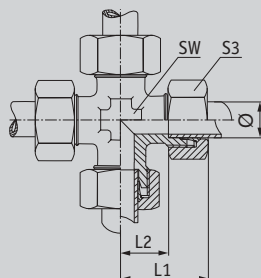
Designation	Pressure	Ø	L1	L2	SW	S3
T NW 10 HF	PN 300	13,25	38,5	16	19	27
T NW 13 HF	PN 300	16,75	41,5	18	24	30
T NW 16 HF	PN 200	21,25	47	23	30	36
T NW 20 HF	PN 200	26,75	52	27	36	46
T NW 25 HF	PN 160	33,5	60	35	46	55

Construction Series: LL = Very Light – L = Light – S = Heavy — Ø = Tube Outside Diameter — PN = Nominal Pressure —
PB = Maximal Working Pressure

K-HF

Equal Crosses,
french Series

Article category 5520



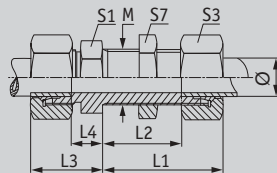
Designation	Pressure	Ø	L1	L2	SW	S3
K NW 10 HF	PN 300	13,25	38,5	16	19	27
K NW 13 HF	PN 300	16,75	41,5	18	24	30
K NW 16 HF	PN 200	21,25	47	23	30	36

Construction Series: LL = Very Light – L = Light – S = Heavy — Ø = Tube Outside Diameter — PN = Nominal Pressure —
PB = Maximal Working Pressure

SV-HF

Straight Bulkhead Couplings, french Series

Article category 5521



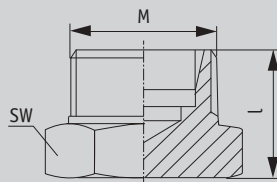
Designation	Pressure	Ø	M	L1	L2	L3	L4	S1	S3	S7
SV NW 10 HF	PN 300	13,25	21	47,5	25	32,5	10	27	27	27
SV NW 13 HF	PN 300	16,75	25	49,5	26	34,5	11	32	30	32
SV NW 16 HF	PN 200	21,25	31	52	28	37	13	41	36	41
SV NW 20 HF	PN 200	26,75	37	54	29	40	15	46	46	46

Construction Series: LL = Very Light – L = Light – S = Heavy — Ø = Tube Outside Diameter — PN = Nominal Pressure —
PB = Maximal Working Pressure

FHF

Female Shutter, french Series

Article category 5537



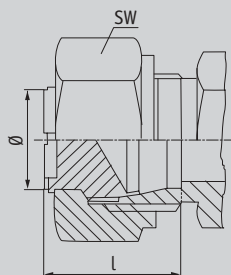
Designation	Pressure	Ø	M	SW	l
FHF NW 13	PN 300	16,75	M 24x1,5	27	20
FHF NW 16	PN 200	21,25	M 30x1,5	32	23
FHF NW 20	PN 200	26,75	M 36x1,5	41	24

Construction Series: LL = Very Light – L = Light – S = Heavy — Ø = Tube Outside Diameter — PN = Nominal Pressure —
PB = Maximal Working Pressure

FFM

Male Shutter, french Series

Article category 5538



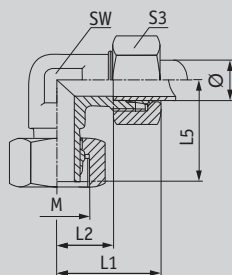
Designation	Pressure	Ø	l	SW
FFM NW 13	PN 300	16,75	20	30
FFM NW 16	PN 200	21,25	21	36
FFM NW 20	PN 200	26,75	22	46

Construction Series: LL = Very Light – L = Light – S = Heavy — Ø = Tube Outside Diameter — PN = Nominal Pressure — PB = Maximal Working Pressure

VEW-HF

Adjustable Stud Elbows,
french Series

Article category 5546



Designation	Pressure	Ø	M	L1	L2	L5	SW	S3
VEW NW 10 HF	PN 300	13,25	M 20x1,5	25	16	30,5	19	27
VEW NW 13 HF	PN 300	16,75	M 24x1,5	27	18	32,5	24	30
VEW NW 16 HF	PN 200	21,25	M 30x1,5	32	23	36,5	30	36
VEW NW 20 HF	PN 200	26,75	M 36x1,5	36	27	41	36	46
VEW NW 25 HF	PN 160	33,5	M 45x1,5	44	35	47,5	46	55

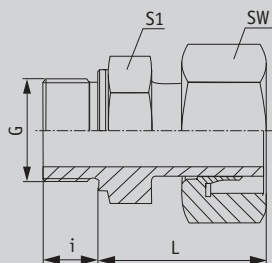
Construction Series: LL = Very Light – L = Light – S = Heavy — Ø = Tube Outside Diameter — PN = Nominal Pressure —
PB = Maximal Working Pressure

AVR-F

Straight Stud Standpipe Adapters, french Series

Thread G: Whitworth parallel

Article category 5561



Designation	Pressure	Ø	G	L	i	SW	S1
AVR NW 10 F	PN 300	13,25	3/8"	41	10	27	22
AVR NW 10 F 1/4	PN 300	13,25	1/4"	39,5	10	27	17
AVR NW 13 F	PN 300	16,75	1/2"	46	12	30	27
AVR NW 13 F 3/8	PN 300	16,75	3/8"	43	10	30	22
AVR NW 16 F	PN 200	21,25	1/2"	50	12	36	27
AVR NW 16 F 3/4	PN 200	21,25	3/4"	55,5	16	36	32
AVR NW 20 F	PN 200	26,75	3/4"	55,5	16	46	32
AVR NW 20 F 1	PN 200	26,75	1"	57,5	16	46	41

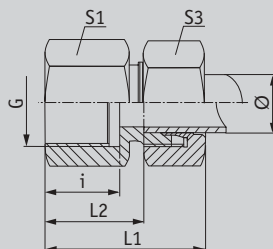
Construction Series: LL = Very Light – L = Light – S = Heavy — Ø = Tube Outside Diameter — PN = Nominal Pressure — PB = Maximal Working Pressure

GAR-HF

Female Stud Couplings, french Series

Thread G: Whitworth parallel

Article category 5568



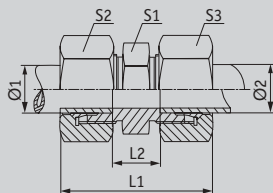
Designation	Pressure	Ø	G	L1	L2	i	S1	S3
GAR NW 10 HF	PN 300	13,25	3/8"	41,5	19	12	22	27
GAR NW 10 HF 1/4	PN 300	13,25	1/4"	41,5	19	12	22	27
GAR NW 10 HF 1/2	PN 300	13,25	1/2"	45	22	15	27	30
GAR NW 13 HF	PN 300	16,75	1/2"	44,5	21	14	27	30
GAR NW 13 HF 3/8	PN 300	16,75	3/8"	42,5	19	12	27	30
GAR NW 16 HF	PN 200	21,25	1/2"	47	23	14	32	36

Construction Series: LL = Very Light – L = Light – S = Heavy — Ø = Tube Outside Diameter — PN = Nominal Pressure — PB = Maximal Working Pressure

V-HF-red

Straight Reducing Couplings, french Series

Article category 5580



Designation	Pressure	Ø1	Ø2	L1	L2	S1	S2	S3
V NW 13 HF 10	PN 300	16,75	13,25	60	14	27	30	27
V NW 16 HF 10	PN 200	21,25	13,25	62	19	32	36	27
V NW 16 HF 13	PN 200	21,25	16,75	64	19	32	36	30
V NW 20 HF 13	PN 200	26,75	16,75	66	20	41	46	30
V NW 20 HF 16	PN 200	26,75	21,25	68	20	41	46	36
V NW 25 HF 16	PN 160	33,50	21,25	72	26	46	55	36
V NW 25 HF 20	PN 160	33,50	26,75	74	26	46	55	46

Construction Series: LL = Very Light – L = Light – S = Heavy — Ø = Tube Outside Diameter — PN = Nominal Pressure —
PB = Maximal Working Pressure

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