

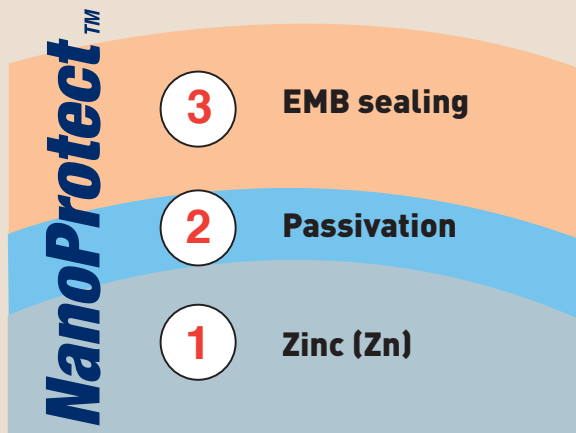


INTEGRATED FLUID POWER SOLUTIONS

THE WORLD OF TUBE FITTINGS



SAFETY OF ENVIRONMENT COMBINED WITH OPTIMAL CORROSION PROTECTION



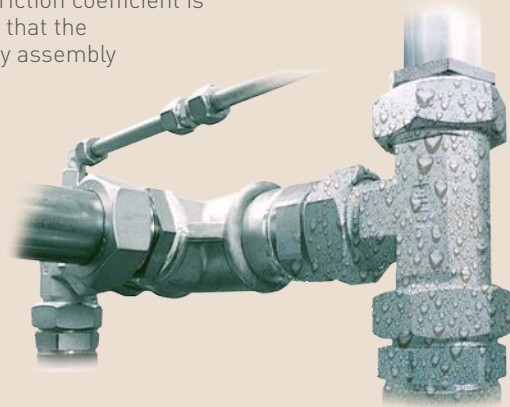
NanoProtect™ is the innovative chrome(VI)-free surface protection for hydraulic fittings that provides a much better corrosion protection than the previous Cr(VI)-containing passivation.

The highest form of safeguard

The NanoProtect™ innovative surface protection is the result of intensive research & development in electroplating technology and extensive tests in laboratories as well as in the field. The optimised passivation method results in a new, superior type of corrosion resistance against white and red rust that protects against damage during handling and assembly as well.

Triple safety with the NanoProtect™-hydraulic fittings

NanoProtect™ is an extremely economical and future-orientated solution for the rough every-day application in stationary and mobile hydraulics as well as in compressed air technology thanks to the triple layer design: the first layer consists of zinc, the second layer is a Cr(VI)-free passivation and the third layer is the sealing. This surface layer is 9 to 14 µm thick and offers a high degree of resilience with resistance against hydraulic media. Its friction coefficient is lower than that of the usual A3L surfaces which means that the assembly forces are reduced and that the risk of a faulty assembly is minimised. No use of oil is necessary.



High-grade hydraulic fittings with an optimised cost-benefit ratio and enhanced durability

The ultimate chrome(VI)-free surface protection



Spare the environment and reduce recycling costs at the same time

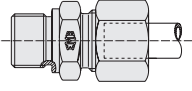
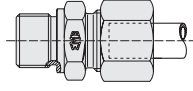
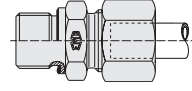
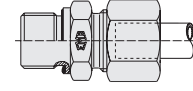
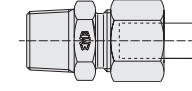
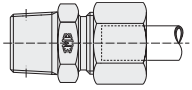
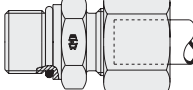

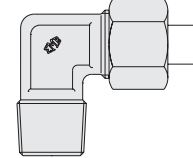
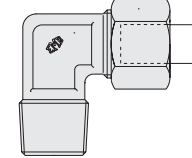
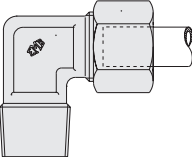
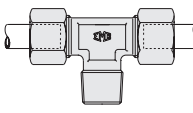
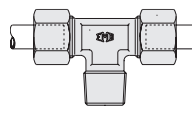
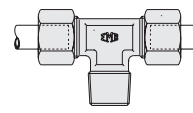
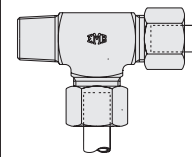
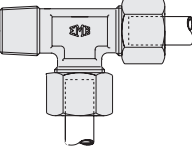
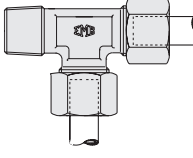
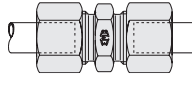
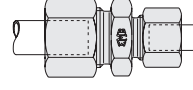
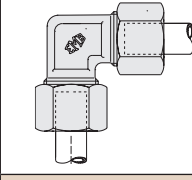
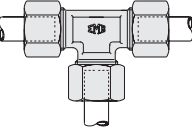
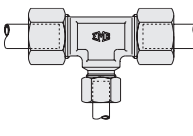
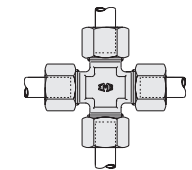
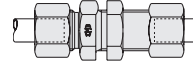
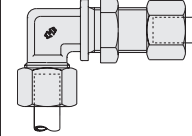
With our quality-assured and resources-saving production process, we strive to care for the environment. The new Cr(VI) and nickel free NanoProtect™ surface helps you to protect the resources during all levels of the production process – and it is compliant with the EU old vehicles directive 2000/53/EG and the EU Directive 2002/95/EG (RoHS) on restriction of the use of certain hazardous substances in electrical and electronic equipment. With this technology, users in mechanical engineering and in mobile hydraulics are able to use a surface technology which is environmentally friendly and helps you to cut recycling costs.


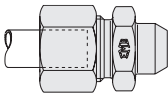
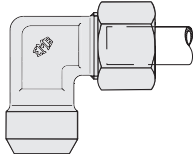
ATTENTION

TUBE FITTINGS SELECTION TABLE

THE WORLD OF TUBE FITTINGS

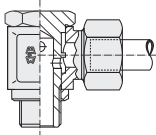
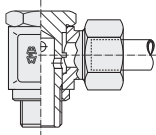
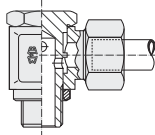
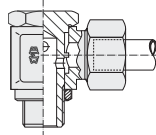
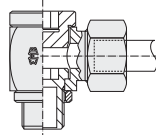
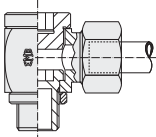
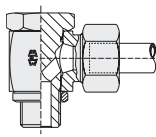
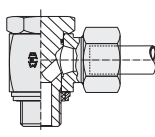
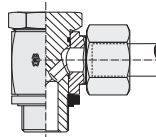
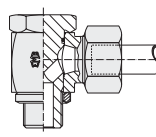
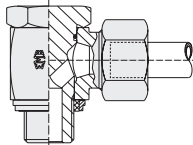
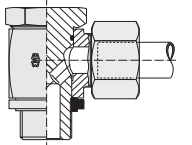
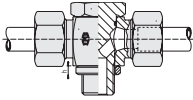
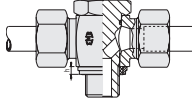
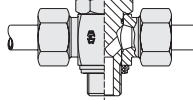
PIPE SCREW JOINTS/SCREW IN SCREW JOINTS/ SCREW JOINT PIPE CONNECTIONS

A				
				
A Male stud coupling BSP p. 366	A Male stud coupling Metric p. 368	A Male stud coupling BSP WD p. 369	A Male stud coupling Metric WD p. 370	A Male stud coupling NPT p. 371
A			B	
				
A Male stud coupling BSP Taper p. 372	A Male stud coupling Metric O-ring p. 373	A Male stud coupling UNF/UN p. 374	B Male stud elbow BSP taper p. 375	B Male stud elbow Metric taper p. 376
B	C			D
				
B Male stud elbow NPT p. 377	C Male stud coupling BSP Taper p. 378	C Male stud coupling Metric Taper p. 379	C Male stud coupling NPT p. 380	D Male stud run tee BSP taper p. 381
D		E	ER	F
				
D Male stud run tee Metric taper p. 382	D Male stud run tee NPT p. 383	E Straight couplings p. 384	ER Straight reducing couplings p. 385	F Equal elbows p. 386
G	GR	H	K	L
				
G Equal tees p. 387	GR Tee reducers p. 388	H Equal crosses p. 390	K Straight bulkhead connections p. 391	L Bulkhead elbow connections p. 392

N	V	BS
		
N Welding bulkhead connections p. 393	V Welding bosses p. 394	BS Welding elbows p. 395

COUPLINGS

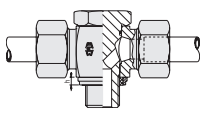
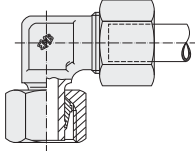
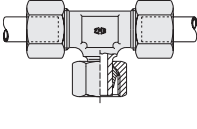
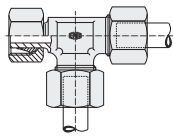
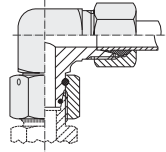
Banjo coupling

SBD				SB
				
SBD Banjo coupling BSP p. 398	SBD Banjo coupling Metric p. 399	SBD Banjo coupling components BSP p. 400	SBD Banjo coupling components Metric p. 401	SB Banjo coupling choke-free BSP p. 402
SB	SBE			
				
SB Banjo coupling choke-free Metric p. 403	SBE Banjo coupling high pressure Metric DKA p. 404	SBE Banjo coupling high pressure BSP EDE p. 405	SBE Banjo coupling high pressure BSP KDE p. 406	SBE Banjo coupling high pressure Metric DKA p. 407
SBE		SGE		
				
SBE Banjo coupling high pressure Metric EDE p. 408	SBE Banjo coupling high pressure Metric KDE p. 409	SGE T swiveling screw fitting high pressure BSP DKA p. 410	SGE T swiveling screw fitting high pressure BSP EDE p. 411	SGE T swiveling screw fitting high pressure Metric DKA p. 412

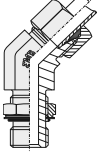
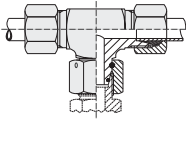
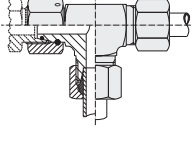
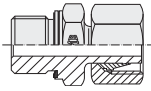
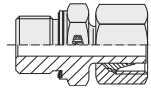
TUBE FITTINGS SELECTION TABLE

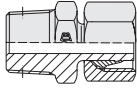
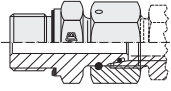
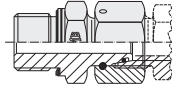
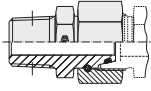
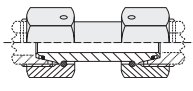
THE WORLD OF TUBE FITTINGS

Adjustable coupling

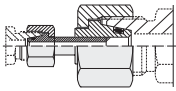
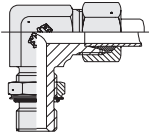
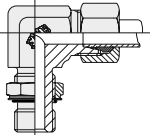
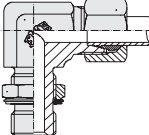
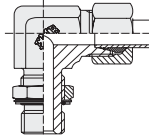
SGE	VB	VC	VD	VBDKO
				
SGE T swiveling screw fitting high pressure Metric EDE p. 413	VB Adjustable elbow p. 414	VC Adjustable branch tee p. 415	VD Adjustable barrel tee p. 416	VBDKO Adjustable male stud elbow p. 417

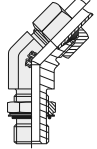
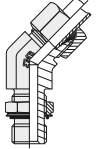
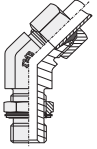
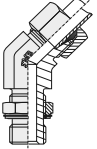
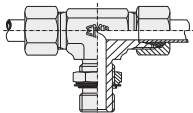
Standpipe coupling

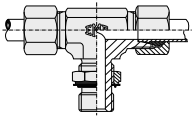
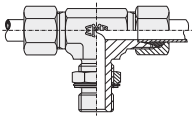
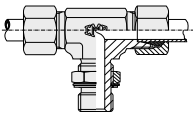
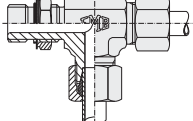
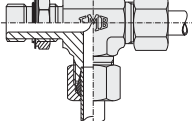
BFDKO	VCDKO	VDDKO	VA	
				
BFDKO Adjustable 45° elbow p. 418	VCDKO Adjustable equal tee p. 419	VDDKO Adjustable male stud tee-stud barrel p. 420	VA Stud standpipe coupling BSP p. 421	VA Stud standpipe coupling Metric p. 422

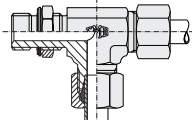
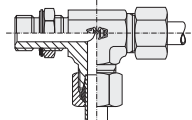
VA	VADKO			EDKO
				
VA Stud standpipe coupling NPT p. 423	VADKO Stud standpipe adaptor BSP p. 424	VADKO Stud standpipe adaptor Metric p. 425	VADKO Stud standpipe adaptor NPT p. 426	EDKO Straight coupling taper p. 427

Adjustable locknut coupling

EDKOR	BE			
				
EDKOR Straight reducer coupling taper p. 428	BE Adjustable locknut elbow Metric p. 430	BE Adjustable locknut elbow UNF/UN p. 431	BE Adjustable locknut elbow BSP RR p. 432	BE Adjustable locknut elbow Metric RR p. 433

BFE				CE
				
BFE Adjustable 45° locknut elbow Metric p. 434	BFE Adjustable 45° locknut elbow UNF/UN p. 435	BFE Adjustable 45° locknut elbow BSP RR p. 436	BFE Adjustable 45° locknut elbow Metric RR p. 437	CE Adjustable locknut branch tee Metric p. 438



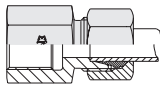
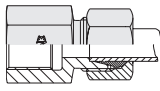
CE			DE	
				
CE Adjustable locknut branch tee UNF/UN p. 439	CE Adjustable locknut branch tee BSP RR p. 440	CE Adjustable locknut branch tee Metric RR p. 441	DE Adjustable locknut run tee Metric p. 442	DE Adjustable locknut run tee UNF/UN p. 443

DE	
	
DE Adjustable locknut run tee BSP RR p. 444	DE Adjustable locknut run tee Metric RR p. 445

PIPE CONNECTION / PRESSURE-GAUGE CONNECTION / CONNECTIONS REDUCER

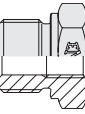

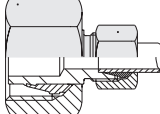
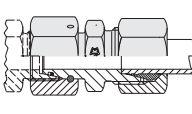
Gauge Couplings

Female stud couplings

O	VODKO	AI	
			
O Gauge coupling BSP p. 448	VODKO Gauge coupling p. 449	AI Female stud coupling BSP p. 450	AI Female stud coupling Metric p. 451

Reducing adaptors

Reducing connections

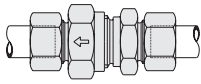
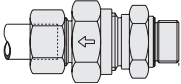
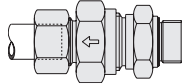
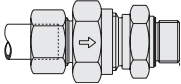
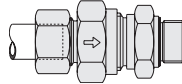
RI	RI/WD	RL/RS	RLDKO/RSDKO
			
RI Reducing adaptor BSP p. 452	RI/WD Reducing adaptor BSP p. 453	RL/RS Reducing connection p. 454-455	RLDKO/RSDKO Reducing connection p. 456-457

TUBE FITTINGS SELECTION TABLE

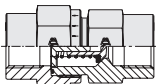
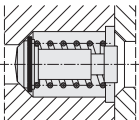
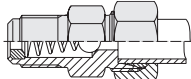
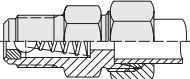
THE WORLD OF TUBE FITTINGS

VALVES / NON-RETURN VALVES / SHUT-OFF ELEMENTS

Non-return valves with cone

RD	RV		RZ	
				
RD Non-return valves p. 461	RV Non-return valves BSP p. 462	RV Non-return valves Metric p. 463	RZ Non-return valves BSP p. 464	RZ Non-return valves Metric p. 465


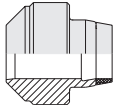
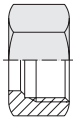
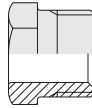

Ball check valves

RF	RVS	ARVA	ARVV
			
RF Non-return valves p. 466	RVS Inside parts p. 466	ARVA Ball check valves p. 467	ARVV Ball check valves p. 467

SINGLE PARTS

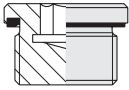
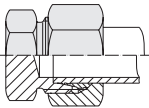
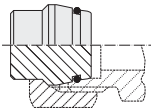
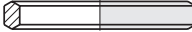

Cutting Ring

Nut






DS	DSW	M	UES	GM
				
DS Cutting Ring p. 470	DSW Cutting Ring p. 471	M Coupling nut p. 472	UES Internal coupling nut p. 473	GM Counter nut p. 473

Plug

Sealing Ring

VSCH	VSCHK	STO	DKA/DKAD	DKI
				
VSCH Blanking plug p. 474	VSCHK Standpipe end plug p. 475	STO Blanking plug p. 476	DKA/DKAD Sealing Ring p. 477-478	DKI Packing ring p. 479

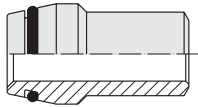
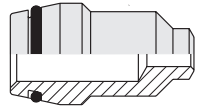
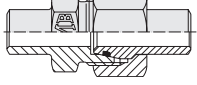

Support Sleeve

WD	TR	KDE	EDE	VSH
				
WD Captive seal p. 479	TR Sealing Ring p. 480	KDE Retaining ring p. 481	EDE Retaining ring with captive seal p. 482	VSH Support Sleeve p. 483

WELDING NIPPLE-PIPE SCREW JOINTS


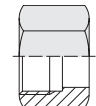
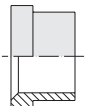

Welding nipples

Welding type screw joints

SNO	SNR	SNO-V	SNO-A
			
SNO Welding nipple p. 486	SNR Welding nipple reducer p. 487	SNO-V Welding type screw joint p. 488	SNO-A Welding type order example p. 489

FLARE COUPLINGS

Flare connection parts

BAO	BMO	SRO	ABO-A
			
BAO Flare adaptor p. 493	BMO Nut p. 493	SRO Support ring p. 493	Flaring type order example p. 494

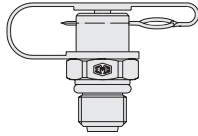
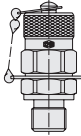
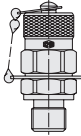
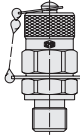





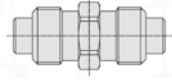
TUBE FITTINGS SELECTION TABLE

THE WORLD OF TUBE FITTINGS

CONTROL SYSTEM

Test Couplings

Accessories

CST	CSH	CSS	CSHK	CST
				
CST Test coupling 400 bar p. 498-501	CSH Test coupling 630 bar p. 502-508	CSS Test coupling 630 bar p. 509-515	CSHK Test coupling 630 bar p. 516-519	CST Pressure test kit p. 520
CSH	CSS	CMM	VO	CS
				
CSH Pressure test kit p. 520	CSS Pressure test kit p. 520	CMM Pressure gauge p. 521	VO Adjustable gauge fitting p. 521	CS Hose connector p. 522

HOSE FITTING



Hose fitting
p. 523-531

THE WORLD OF TUBE FITTINGS
INTEGRATED FLUID POWER SOLUTIONS



PIPE SCREW JOINTS



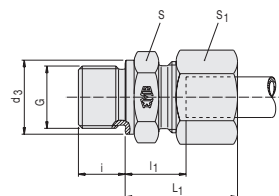
PIPE SCREW JOINTS A MALE STUD COUPLINGS

THE WORLD OF TUBE FITTINGS

A MALE STUD COUPLING BSP

Series LL, BSP taper.

Series L+S, BSP parallel, form B.



description	pipe OD	PN series	S	S ₁	L ₁	l ₁	d ₃	i	G	kg / 100 pcs
A 4-RLL	4	LL 100 (400)	11	10	26.0	16.0	-	8	R 1/8" K taper	1.4
A 6-RLL	6	LL PN 100 (400)	11	12	26.0	14.5	-	8	R 1/8" K taper	1.6
A 8-RLL	8	LL PN 100 (400)	12	14	28.0	16.5	-	8	R 1/8" K taper	1.8
DS-A 6-RL	6	L PN 400 (1600)	14	14	23.0	8.5	14	8	G 1/8" A	2.5
DS-A 6-L/R 1/4"	6	L PN 400 (1600)	19	14	25.0	10.0	18	12	G 1/4" A	3.5
DS-A 6-L/R 3/8"	6	L PN 400 (1600)	22	14	26.0	11.5	22	12	G 3/8" A	5.6
DS-A 6-L/R 1/2"	6	L PN 400 (1600)	27	14	27.0	12.0	26	14	G 1/2" A	7.3
DS-A 8-RL	8	L PN 400 (1600)	19	17	25.0	10.0	18	12	G 1/4" A	4.5
DS-A 8-L/R 1/8"	8	L PN 400 (1600)	14	17	24.0	9.5	14	8	G 1/8" A	3.1
DS-A 8-L/R 3/8"	8	L PN 400 (1600)	22	17	26.0	11.5	22	12	G 3/8" A	6.0
DS-A 8-L/R 1/2"	8	L PN 400 (1600)	27	17	27.0	12.0	26	14	G 1/2" A	9.0
DS-A 10-RL	10	L PN 400 (1600)	19	19	26.0	11.0	18	12	G 1/4" A	4.7
DS-A 10-L/R 3/8"	10	L PN 400 (1600)	22	19	27.0	12.5	22	12	G 3/8" A	6.2
DS-A 10-L/R 1/2"	10	L PN 400 (1600)	27	19	28.0	13.0	26	14	G 1/2" A	9.2
DS-A 12-RL	12	L PN 400 (1600)	22	22	27.0	12.5	22	12	G 3/8" A	7.0
DS-A 12-L/R 1/4"	12	L PN 400 (1600)	19	22	27.0	12.0	18	12	G 1/4" A	5.8
DS-A 12-L/R 1/2"	12	L PN 400 (1600)	27	22	28.0	13.0	26	14	G 1/2" A	9.4
DS-A 12-L/R 3/4"	12	L PN 400 (1600)	32	22	29.0	14.0	32	16	G 3/4" A	14.7
DS-A 15-RL	15	L PN 400 (1600)	27	27	29.0	14.0	26	14	G 1/2" A	11.5
DS-A 15-L/R 3/8"	15	L PN 400 (1600)	24	27	29.0	13.5	22	12	G 3/8" A	9.7
DS-A 15-L/R 3/4"	15	L PN 400 (1600)	32	27	30.0	15.0	32	16	G 3/4" A	16.1
DS-A 18-RL	18	L PN 400 (1600)	27	32	31.0	14.5	26	14	G 1/2" A	13.2
DS-A 18-L/R 3/8"	18	L PN 400 (1600)	27	32	29.5	14.0	22	12	G 3/8" A	13.3
DS-A 18-L/R 3/4"	18	L PN 400 (1600)	32	32	30.0	14.5	32	16	G 3/4" A	17.3

L₁ = approximate length with nut tightened

Please see "Engineering and technical data - Selecting the correct tube fitting" for more information on pressure.

PIPE SCREW JOINTS A MALE STUD COUPLINGS

description	pipe OD	PN/PB series	S	S ₁	L ₁	l ₁	d ₃	i	G	kg / 100 pcs
DS-A 22-RL	22	L PN 250 (1000)	32	36	33	16.5	32	16	G 3/4" A	18.5
DS-A 22-L/R 1/2"	22	L PN 250 (1000)	32	36	47	26.5	26	14	G 1/2" A	17.7
DS-A 28-RL	28	L PN 250 (1000)	41	41	34	17.5	39	18	G 1" A	25.9
DS-A 28-L/R 3/4"	28	L PB 250 (625)	41	41	34	17.5	32	16	G 3/4" A	25.6
DS-A 35-RL	35	L PB 250 (625)	50	50	39	17.5	49	20	G 1 1/4" A	42.2
DS-A 35-L/R 1"	35	L PB 250 (625)	46	50	39	17.5	39	18	G 1" A	37.8
DS-A 42-RL	42	L PB 250 (625)	55	60	42	19.0	55	22	G 1 1/2" A	56.9
DS-A 6-RS	6	S PB 630 (1575)	19	17	28	13.0	18	12	G 1/4" A	5.0
DS-A 6-S/R 1/2"	6	S PB 630 (1575)	27	17	33	18.0	26	14	G 1/2" A	10.8
DS-A 8-RS	8	S PB 630 (1575)	19	19	30	15.0	18	12	G 1/4" A	5.5
DS-A 8-S/R 3/8"	8	S PB 630 (1575)	22	19	30	15.5	22	12	G 3/8" A	8.0
DS-A 10-RS	10	S PB 630 (1575)	22	22	31	15.0	22	12	G 3/8" A	8.8
DS-A 10-S/R 1/4"	10	S PB 630 (1575)	19	22	31	14.5	18	12	G 1/4" A	7.5
DS-A 10-S/R 1/2"	10	S PB 630 (1575)	27	22	34	17.5	26	14	G 1/2" A	12.9
DS-A 12-RS	12	S PB 630 (1575)	22	24	33	17.0	22	12	G 3/8" A	10.0
DS-A 12-S/R 1/4"	12	S PB 630 (1575)	22	24	33	16.5	18	12	G 1/4" A	9.3
DS-A 12-S/R 1/2"	12	S PB 630 (1575)	27	24	34	17.5	26	14	G 1/2" A	13.3
DS-A 14-RS	14	S PB 630 (1575)	27	27	37	19.0	26	14	G 1/2" A	14.8
DS-A 14-S/R 3/8"	14	S PB 630 (1575)	24	27	36	18.5	22	12	G 3/8" A	12.8
DS-A 16-RS	16	S PB 630 (1575)	27	30	37	18.5	26	14	G 1/2" A	16.1
DS-A 16-S/R 3/8"	16	S PB 630 (1575)	27	30	36	18.0	22	12	G 3/8" A	15.3
DS-A 16-S/R 3/4"	16	S PB 400 (1000)	32	30	39	20.5	32	16	G 3/4" A	22.6
DS-A 20-RS	20	S PB 400 (1000)	32	36	42	20.5	32	16	G 3/4" A	25.3
DS-A 20-S/R 1/2"	20	S PB 400 (1000)	32	36	42	20.5	26	14	G 1/2" A	24.3
DS-A 25-RS	25	S PB 400 (1000)	41	46	47	23.0	39	18	G 1" A	48.7
DS-A 25-S/R 3/4"	25	S PB 400 (1000)	41	46	47	23.0	32	16	G 3/4" A	46.5
DS-A 30-RS	30	S PB 250 (625)	50	50	50	23.5	49	20	G 1 1/4" A	66.3
DS-A 30-S/R 1"	30	S PB 250 (625)	46	50	50	23.5	39	18	G 1" A	57.8
DS-A 38-RS	38	S PB 250 (625)	55	60	57	26.0	55	22	G 1 1/2" A	90.1
DS-A 38-S/R 1 1/4"	38	S PB 250 (625)	55	60	57	26.0	49	20	G 1 1/4" A	91.9

L₁ = approximate length with nut tightened

Please see "Engineering and technical data - Selecting the correct tube fitting" for more information on pressure.

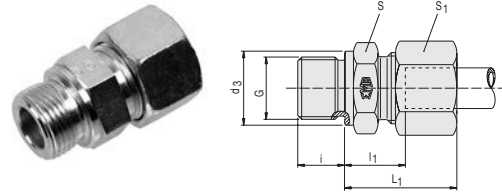
PIPE SCREW JOINTS A MALE STUD COUPLINGS

THE WORLD OF TUBE FITTINGS

A MALE STUD COUPLING METRIC

Series LL, metric taper.

Series L+S, metric parallel, form B.



description	pipe OD	PN/PB series	S	S ₁	L ₁	l ₁	d ₃	i	G	kg / 100 pcs
A 4-MLL	4	LL PN 100 (400)	10	10	25	16.0	-	8	M 8 x 1 K	1.4
A 4-LL/M 6 x 1	4	LL PN 100 (400)	9	10	26	16.0	-	8	M 6 x 1 K	0.9
A 6-MLL	6	LL PN 100 (400)	11	12	25	14.5	-	8	M 10 x 1 K	1.6
A 8-MLL	8	LL PN 100 (400)	12	14	27	16.5	-	8	M 10 x 1 K	1.8
DS-A 6-ML	6	L PN 400 (1600)	14	14	23	8.5	14	8	M 10 x 1	2.5
DS-A 8-ML	8	L PN 400 (1600)	17	17	25	10.0	17	12	M 12 x 1.5	4.0
DS-A 8-L/M 18 x 1.5	8	L PN 400 (1600)	24	17	26	11.5	23	12	M 18 x 1.5	6.7
DS-A 10-ML	10	L PN 400 (1600)	19	19	26	11.0	19	12	M 14 x 1.5	4.9
DS-A 10-L/M 16 x 1.5	10	L PN 400 (1600)	22	19	27	12.0	21	12	M 16 x 1.5	6.0
DS-A 10-L/M 18 x 1.5	10	L PN 400 (1600)	24	19	27	12.5	23	12	M 18 x 1.5	7.0
DS-A 10-L/M 22 x 1.5	10	L PN 400 (1600)	27	19	29	14.0	27	14	M 22 x 1.5	9.2
DS-A 12-ML	12	L PN 400 (1600)	22	22	27	12.5	21	12	M 16 x 1.5	6.8
DS-A 12-L/M 14 x 1.5	12	L PN 400 (1600)	19	22	26	11.0	19	12	M 14 x 1.5	5.7
DS-A 12-L/M 18 x 1.5	12	L PN 400 (1600)	24	22	27	12.5	23	12	M 18 x 1.5	7.4
DS-A 12-L/M 22 x 1.5	12	L PN 400 (1600)	27	22	29	14.0	27	14	M 22 x 1.5	10.3
DS-A 15-ML	15	L PN 400 (1600)	24	27	29	13.5	23	12	M 18 x 1.5	9.5
DS-A 15-L/M 16 x 1.5	15	L PN 400 (1600)	24	27	28	13.0	21	12	M 16 x 1.5	9.4
DS-A 15-L/M 22 x 1.5	15	L PN 400 (1600)	27	27	30	15.0	27	14	M 22 x 1.5	12.1
DS-A 18-ML	18	L PN 400 (1600)	27	32	31	14.5	27	14	M 22 x 1.5	13.7
DS-A 18-L/M 18 x 1.5	18	L PN 400 (1600)	27	32	30	14.0	23	12	M 18 x 1.5	13.2
DS-A 22-ML	22	L PN 250 (1000)	32	36	33	16.5	31	16	M 26 x 1.5	18.8
DS-A 22-L/M 22 x 1.5	22	L PN 250 (1000)	32	36	33	16.5	27	14	M 22 x 1.5	17.8
DS-A 28-ML	28	L PN 250 (1000)	41	41	34	17.5	39	18	M 33 x 2	25.8
DS-A 35-ML	35	L PB 250 (625)	50	50	39	17.5	49	20	M 42 x 2	42.0
DS-A 42-ML	42	L PB 250 (625)	55	60	42	19.0	55	22	M 48 x 2	57.5
DS-A 6-MS	6	S PB 630*	17	17	28	13.0	17	12	M 12 x 1.5	4.7
DS-A 8-MS	8	S PB 630*	19	19	30	15.0	19	12	M 14 x 1.5	6.5
DS-A 10-MS	10	S PB 630*	22	22	31	15.0	21	12	M 16 x 1.5	8.6
DS-A 12-MS	12	S PB 630*	24	24	33	17.0	23	12	M 18 x 1.5	10.9
DS-A 12-S/M 22 x 1.5	12	S PB 630*	27	24	34	17.5	27	14	M 22 x 1.5	13.0
DS-A 14-MS	14	S PB 630*	27	27	37	19.0	25	14	M 20 x 1.5	14.8
DS-A 16-MS	16	S PB 630*	27	30	37	18.5	27	14	M 22 x 1.5	16.6
DS-A 16-S/M 18 x 1.5	16	S PB 630*	27	30	36	18.0	23	12	M 18 x 1.5	15.7
DS-A 20-MS	20	S PB 400 (1000)	32	36	42	20.5	32	16	M 27 x 2	25.3
DS-A 25-MS	25	S PB 400 (1000)	41	46	47	23.0	39	18	M 33 x 2	46.5
DS-A 30-MS	30	S PB 250 (625)	50	50	50	23.5	49	20	M 42 x 2	64.4
DS-A 38-MS	38	S PB 250 (625)	55	60	57	26.0	55	22	M 48 x 2	87.3

L_1 = approximate length with nut tightened

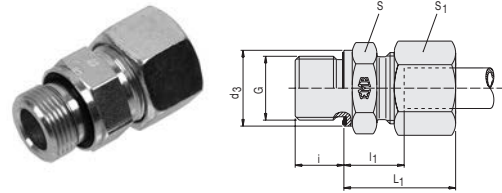
Please see "Engineering and technical data - Selecting the correct tube fitting" for more information on pressure.

PIPE SCREW JOINTS A MALE STUD COUPLINGS

A MALE STUD COUPLING BSP WD

BSP parallel.

Captive seal NBR (e.g. Perbunan),
FPM (e.g. Viton) upon request.



description	pipe OD	PN series	S	S ₁	L ₁	l ₁	d ₃	i	G	kg / 100 pcs
DS-A 6-RL/WD	6	L 500 (2200)	14	14	23	8.5	14	8	G 1/8" A	2.5
DS-A 6-L/R 1/4"/WD	6	L 500 (2200)	19	14	25	10.0	19	12	G 1/4" A	3.9
DS-A 8-RL/WD	8	L 500 (2200)	19	17	25	10.0	19	12	G 1/4" A	4.5
DS-A 8-L/R 1/8"/WD	8	L 500 (2200)	14	17	23	8.5	14	8	G 1/8" A	2.9
DS-A 8-L/R 3/8"/WD	8	L 500 (2200)	22	17	26	11.5	22	12	G 3/8" A	5.9
DS-A 10-RL/WD	10	L 500 (2200)	19	19	26	11.0	19	12	G 1/4" A	4.7
DS-A 10-L/R 3/8"/WD	10	L 500 (2200)	22	19	27	12.5	22	12	G 3/8" A	6.2
DS-A 10-L/R 1/2"/WD	10	L 500 (2200)	27	19	28	13.0	27	14	G 1/2" A	9.2
DS-A 12-RL/WD	12	L 400 (1700)	22	22	27	12.5	22	12	G 3/8" A	6.9
DS-A 12-L/R 1/4"/WD	12	L 400 (1700)	19	22	27	12.0	19	12	G 1/4" A	5.8
DS-A 12-L/R 1/2"/WD	12	L 400 (1700)	27	22	28	13.0	27	14	G 1/2" A	9.4
DS-A 15-RL/WD	15	L 400 (1700)	27	27	29	14.0	27	14	G 1/2" A	11.5
DS-A 15-L/R 3/8"/WD	15	L 400 (1700)	24	27	29	13.5	22	12	G 3/8" A	9.7
DS-A 18-RL/WD	18	L 400 (1700)	27	32	31	14.5	27	14	G 1/2" A	13.2
DS-A 18-L/R 3/4"/WD	18	L 400 (1700)	32	32	31	14.5	32	16	G 3/4" A	17.4
DS-A 22-RL/WD	22	L 250 (1100)	32	36	33	16.5	32	16	G 3/4" A	18.5
DS-A 28-RL/WD	28	L 250 (1100)	41	41	34	17.5	40	18	G 1" A	25.9
DS-A 35-RL/WD	35	L 250 (1100)	50	50	39	17.5	50	20	G 1 1/4" A	42.2
DS-A 42-RL/WD	42	L 250 (1100)	55	60	42	19.0	55	22	G 1 1/2" A	56.9
DS-A 6-RS/WD	6	S 800 (3400)	19	17	28	13.0	19	12	G 1/4" A	5.0
DS-A 8-RS/WD	8	S 800 (3400)	19	19	30	15.0	19	12	G 1/4" A	5.5
DS-A 8-S/R 3/8"/WD	8	S 800 (3400)	22	19	30	15.5	22	12	G 3/8" A	7.8
DS-A 10-RS/WD	10	S 800 (3400)	22	22	31	15.0	22	12	G 3/8" A	8.8
DS-A 10-S/R 1/4"/WD	10	S 800 (3400)	19	22	31	14.5	19	12	G 1/4" A	7.3
DS-A 10-S/R 1/2"/WD	10	S 800 (3400)	27	22	34	17.5	27	14	G 1/2" A	12.9
DS-A 12-RS/WD	12	S 630 (2700)	22	24	33	17.0	22	12	G 3/8" A	10.0
DS-A 12-S/R 1/4"/WD	12	S 630 (2700)	22	24	33	16.5	19	12	G 1/4" A	9.3
DS-A 12-S/R 1/2"/WD	12	S 630 (2700)	27	24	34	17.5	27	14	G 1/2" A	13.6
DS-A 14-RS/WD	14	S 630 (2700)	27	27	37	19.0	27	14	G 1/2" A	14.8
DS-A 16-RS/WD	16	S 630 (2700)	27	30	37	18.5	27	14	G 1/2" A	16.1
DS-A 16-S/R 3/8"/WD	16	S 630 (2700)	27	30	36	18.0	22	12	G 3/8" A	15.2
DS-A 16-S/R 3/4"/WD	16	S 630 (2700)	32	30	39	20.5	27	16	G 3/4" A	22.2
DS-A 20-RS/WD	20	S 400 (1700)	32	36	42	20.5	32	16	G 3/4" A	25.3
DS-A 25-RS/WD	25	S 400 (1700)	41	46	47	23.0	40	18	G 1" A	46.5
DS-A 25-S/R 1/2"/WD	25	S 400 (1700)	41	46	47	23.0	27	14	G 1/2" A	45.0
DS-A 30-RS/WD	30	S 400 (1700)	50	50	50	23.5	50	20	G 1 1/4" A	63.5
DS-A 38-RS/WD	38	S 400 (1700)	55	60	57	26.0	55	22	G 1 1/2" A	87.0

L₁ = approximate length with nut tightened

Please see "Engineering and technical data - Selecting the correct tube fitting" for more information on pressure.

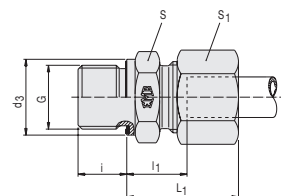
PIPE SCREW JOINTS A MALE STUD COUPLINGS

THE WORLD OF TUBE FITTINGS

A MALE STUD COUPLING METRIC WD

Metric parallel.

Captive seal NBR (e.g. Perbunan),
FPM (e.g. Viton) upon request.



description	pipe OD	PN series	S	S ₁	L ₁	l ₁	d ₃	i	G	kg / 100 pcs
DS-A 6-ML/WD	6	L 500 (2200)	14	14	23	8.5	14	8	M 10 x 1	2.5
DS-A 8-ML/WD	8	L 500 (2200)	17	17	25	10.0	17	12	M 12 x 1.5	4.0
DS-A 10-ML/WD	10	L 500 (2200)	19	19	26	11.0	19	12	M 14 x 1.5	4.9
DS-A 12-ML/WD	12	L 400 (1700)	22	22	27	12.5	22	12	M 16 x 1.5	6.8
DS-A 12-L/M 18x1.5/WD	12	L 400 (1700)	24	22	27	12.5	24	12	M 18 x 1.5	7.4
DS-A 12-L/M 22x1.5/WD	12	L 400 (1700)	27	22	29	14.0	27	14	M 22 x 1.5	10.3
DS-A 15-ML/WD	15	L 400 (1700)	24	27	29	13.5	24	12	M 18 x 1.5	9.5
DS-A 15-L/M 22x1.5/WD	15	L 400 (1700)	27	27	30	15.0	27	14	M 22 x 1.5	12.0
DS-A 18-ML/WD	18	L 400 (1700)	27	32	31	14.5	27	14	M 22 x 1.5	13.7
DS-A 22-ML/WD	22	L 250 (1100)	32	36	33	16.5	32	16	M 26 x 1.5	18.8
DS-A 28-ML/WD	28	L 250 (1100)	41	41	34	17.5	40	18	M 33 x 2	25.8
DS-A 35-ML/WD	35	L 250 (1100)	50	50	39	17.5	50	20	M 42 x 2	42.0
DS-A 42-ML/WD	42	L 250 (1100)	55	60	42	19.0	55	22	M 48 x 2	57.5
DS-A 6-MS/WD	6	S 800 (3400)	17	17	28	13.0	17	12	M 12 x 1.5	4.7
DS-A 8-MS/WD	8	S 800 (3400)	19	19	30	15.0	19	12	M 14 x 1.5	6.5
DS-A 10-MS/WD	10	S 800 (3400)	22	22	31	15.0	22	12	M 16 x 1.5	8.6
DS-A 12-MS/WD	12	S 630 (2700)	24	24	33	17.0	24	12	M 18 x 1.5	10.9
DS-A 14-MS/WD	14	S 630 (2700)	27	27	37	19.0	26	14	M 20 x 1.5	14.8
DS-A 16-MS/WD	16	S 630 (2700)	27	30	37	18.5	27	14	M 22 x 1.5	16.6
DS-A 20-MS/WD	20	S 400 (1700)	32	36	42	20.5	32	16	M 27 x 2	25.3
DS-A 25-MS/WD	25	S 401 (1700)	41	46	47	23.0	40	18	M 33 x 2	46.5
DS-A 30-MS/WD	30	S 402 (1700)	50	50	50	23.5	50	20	M 42 x 2	64.4
DS-A 38-MS/WD	38	S 403 (1700)	55	60	57	26.0	55	22	M 48 x 2	87.3

L₁ = approximate length with nut tightened

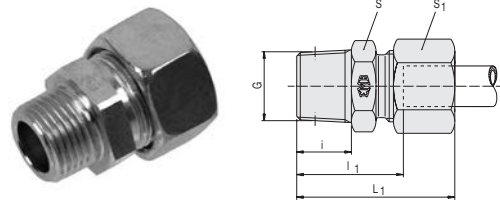
Please see "Engineering and technical data - Selecting the correct tube fitting" for more information on pressure.

PIPE SCREW JOINTS A MALE STUD COUPLINGS

A MALE STUD COUPLING NPT

NPT (ANSI/ASME B1-20.1.1983).

Special dimensions.



description	pipe OD	PN series	S	S ₁	L _z	l _z	i	G	kg / 100 pcs
A 4-LL/NPT	4	LL 100 (400)	11	10	28	18.0	10.0	1/8" NPT	1.5
A 6-LL/NPT	6	LL 100 (400)	11	12	28	16.5	10.0	1/8" NPT	1.5
A 8-LL/NPT	8	LL 100 (400)	12	14	30	18.5	10.0	1/8" NPT	2.0
DS-A 6-L / NPT	6	L 315 (1260)	12	14	32	18.0	10.0	1/8" NPT	2.6
DS-A 6-L 1/4" / NPT	6	L 315 (1260)	17	14	38	23.0	15.1	1/4" NPT	3.8
DS-A 8-L / NPT	8	L 315 (1260)	17	17	38	23.0	15.0	1/4" NPT	4.0
DS-A 10-L / NPT	10	L 315 (1260)	17	19	39	24.0	15.0	1/4" NPT	4.8
DS-A 10-L 3/8" / NPT	10	L 315 (1260)	19	19	40	25.0	15.2	3/8" NPT	6.0
DS-A 12-L / NPT	12	L 315 (1260)	19	22	40	25.0	15.0	3/8" NPT	6.5
DS-A 12-L 1/4" / NPT	12	L 315 (1260)	19	22	40	25.0	15.1	1/4" NPT	5.8
DS-A 12-L 1/2" / NPT	12	L 315 (1260)	24	22	45	30.0	19.8	1/2" NPT	8.9
DS-A 15-L / NPT	15	L 315 (1260)	24	27	46	31.0	20.0	1/2" NPT	11.0
DS-A 18-L / NPT	18	L 315 (1260)	27	32	48	31.5	20.0	1/2" NPT	13.5
DS-A 22-L / NPT	22	L 160 (640)	32	36	50	33.5	20.0	3/4" NPT	19.0
DS-A 28-L / NPT	28	L 160 (640)	41	41	56	39.5	25.0	1" NPT	27.5
DS-A 35-L / NPT	35	L 160 (640)	46	50	62	40.0	25.6	1 1/4" NPT	40.5
DS-A 42-L / NPT	42	L 160 (640)	55	60	65	42.0	26.0	1 1/2" NPT	57.0
DS-A 6-S / NPT	6	S 630 (2520)	17	17	43	26.0	15.0	1/4" NPT	5.0
DS-A 8-S / NPT	8	S 630 (2520)	17	19	43	28.0	15.0	1/4" NPT	5.5
DS-A 10-S / NPT	10	S 630 (2520)	19	22	44	27.5	15.0	3/8" NPT	8.0
DS-A 10-S 1/4" / NPT	10	S 630 (2520)	19	22	44	27.5	15.1	1/4" NPT	7.6
DS-A 12-S / NPT	12	S 630 (2520)	22	24	46	29.5	15.0	3/8" NPT	10.0
DS-A 12-S 1/4" / NPT	12	S 630 (2520)	22	24	46	29.5	15.1	1/4" NPT	9.4
DS-A 12-S 1/2" / NPT	12	S 630 (2520)	24	24	51	34.5	19.8	1/2" NPT	11.9
DS-A 14-S / NPT	14	S 630 (2520)	24	27	54	36.0	20.0	1/2" NPT	15.5
DS-A 16-S / NPT	16	S 630 (2520)	27	30	54	35.5	20.0	1/2" NPT	16.0
DS-A 20-S / NPT	20	S 400 (1600)	32	36	59	37.5	20.0	3/4" NPT	25.0
DS-A 25-S / NPT	25	S 400 (1600)	41	46	69	45.0	25.0	1" NPT	47.5
DS-A 30-S/NPT	30	S 400 (1600)	46	50	73	46.0	25.6	1 1/4" NPT	62.0
DS-A 38-S/NPT	38	S 400 (1600)	55	60	80	49.0	26.0	1 1/2" NPT	89.0

L_z = approximate length with nut tightened

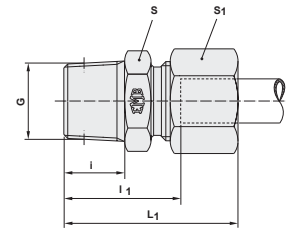
Please see "Engineering and technical data - Selecting the correct tube fitting" for more information on pressure.

PIPE SCREW JOINTS A MALE STUD COUPLINGS

THE WORLD OF TUBE FITTINGS

AP MALE STUD COUPLINGS BSP TAPER

BSP taper.



description	pipe OD	PN series	S	S ₁	L ₁	l ₁	i	G	kg / 100 pcs
DS-AP 6-L/R 1/8"	6	L 315 (1260)	12	14	30.0	15.0	8	R 1/8" K	2.2
DS-AP 8-L/R 1/4"	8	L 315 (1260)	17	17	35.0	20.0	12	R 1/4" K	3.8
DS-AP 10-L/R 1/4"	10	L 315 (1260)	17	19	37.0	22.0	12	R 1/4" K	4.3
DS-AP 12-L/R 3/8"	12	L 315 (1260)	19	22	37.0	22.0	12	R 3/8" K	6.0
DS-AP 15-L/R 1/2"	15	L 315 (1260)	24	27	40.0	25.0	14	R 1/2" K	10.3
DS-AP 18-L/R 1/2"	18	L 315 (1260)	27	32	42.0	25.5	14	R 1/2" K	12.7
DS-AP 22-L/R 3/4"	22	L 160 (640)	32	36	46.0	29.5	16	R 3/4" K	18.5
DS-AP 28-L/R 1"	28	L 161 (640)	41	41	51.5	34.5	18	R 1" K	25.8
DS-AP 35-L/R 1 1/4"	35	L 162 (640)	50	50	56.0	34.5	20	R 1 1/4" K	41.5
DS-AP 42-L/R 1 1/2"	42	L 163 (640)	55	60	61.0	38.0	22	R 1 1/2" K	56.7

L₁ = approximate length with nut tightened

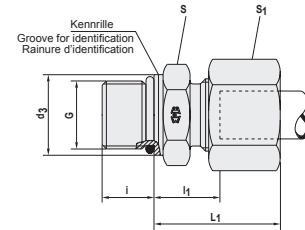
Please see "Engineering and technical data - Selecting the correct tube fitting" for more information on pressure.

PIPE SCREW JOINTS A MALE STUD COUPLINGS

A MALE STUD COUPLING METRIC O-RING

Metric parallel (DIN ISO 6149-2 a. -3).

O-ring seal.



description	pipe OD	PN series	S	S ₁	L ₁	l ₁	d ₃	i	G	kg / 100 pcs	o-ring shore A-90
DS-A 6-ML/O	6	L 400 (1700)	14	14	24	9.5	14	9.5	M 10 x 1	2.4	8.1 x 1.6
DS-A 8-ML/O	8	L 400 (1700)	17	17	24	10.0	17	11.0	M 12 x 1.5	3.8	9.3 x 2.2
DS-A 10-ML/O	10	L 400 (1700)	19	19	25	11.0	19	11.0	M 14 x 1.5	5.1	11.3 x 2.2
DS-A 12-ML/O	12	L 400 (1700)	22	22	27	12.5	22	11.5	M 16 x 1.5	6.8	13.3 x 2.2
DS-A 15-ML/O	15	L 400 (1700)	24	27	28	13.5	24	14.0	M 18 x 1.5	9.5	15.3 x 2.2
DS-A 18-ML/O	18	L 400 (1700)	27	32	30	14.5	27	15.0	M 22 x 1.5	14.0	19.3 x 2.2
DS-A 22-ML/O	22	L 250 (1100)	32	36	32	16.5	32	18.5	M 27 x 2	18.8	23.6 x 2.9
DS-A 28-ML/O	28	L 250 (1100)	41	41	34	17.5	41	18.5	M 33 x 2	26.8	29.6 x 2.9
DS-A 35-ML/O	35	L 250 (1100)	50	50	39	17.5	50	19.0	M 42 x 2	43.4	38.6 x 2.9
DS-A 6-MS/O	6	S 630 (2700)	17	17	27	13.0	17	11.0	M 12 x 1.5	4.8	9.3 x 2.2
DS-A 8-MS/O	8	S 630 (2700)	19	19	29	15.0	19	11.0	M 14 x 1.5	6.4	11.3 x 2.2
DS-A 10-MS/O	10	S 630 (2700)	22	22	31	15.0	22	12.5	M 16 x 1.5	8.6	13.3 x 2.2
DS-A 12-MS/O	12	S 630 (2700)	24	24	33	17.0	24	14.0	M 18 x 1.5	10.9	15.3 x 2.2
DS-A 16-MS/O	16	S 630 (2700)	27	30	36	18.5	27	15.0	M 22 x 1.5	16.6	19.3 x 2.2
DS-A 20-MS/O	20	S 400 (1700)	32	36	42	20.5	32	18.5	M 27 x 2	26.2	23.6 x 2.9
DS-A 25-MS/O	25	S 400 (1700)	41	46	47	23.0	41	18.5	M 33 x 2	48.8	29.6 x 2.9
DS-A 30-MS/O	30	S 400 (1700)	50	50	50	23.5	50	19.0	M 42 x 2	66.2	38.6 x 2.9

L₁ = approximate length with nut tightened

O-rings NBR (e.g. Perbunan), FPM (e.g. Viton) upon request

Please see "Engineering and technical data - Selecting the correct tube fitting" for more information on pressure.

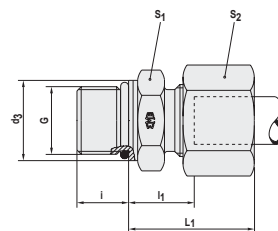
PIPE SCREW JOINTS A MALE STUD COUPLINGS

THE WORLD OF TUBE FITTINGS

A MALE STUD COUPLING UNF/UN O-RING

UNF/UN (ISO 11926-2 and 3).

O-ring-seal.



description	pipe OD	PN series	S	S ₁	L ₁	l ₁	d ₃	i	G	kg / 100 pcs	o-ring shore A-90
DS-A 8-L/7/16"-20 UNF	8	L 400 (1700)	17	17	25	10.0	14	9.0	7/16-20 UNF-2A	3.6	8.92 x 1.83
DS-A 10-S/9/16"-18 UNF	10	L 400 (1700)	17	19	26	11.0	14	9.0	7/16-20 UNF-2A	4.2	8.92 x 1.83
DS-A 12-L/7/16"-20 UNF	12	L 400 (1700)	19	22	26	11.0	17	10.0	9/16-18 UNF-2A	5.6	12.00 x 2.00
DS-A 12-L/3/4"-16 UNF	12	L 400 (1700)	24	22	28	13.0	22	11.0	3/4-16 UNF-2A	7.6	16.36 x 2.21
DS-A 12-L/7/8"-14 UNF	12	L 400 (1700)	27	22	29	14.3	27	12.7	7/8-14 UNF-2A	10.1	19.18 x 2.46
DS-A 15-L/3/4"-16 UNF	15	L 400 (1700)	24	27	29	14.0	22	11.0	3/4-16 UNF-2A	9.7	16.36 x 2.21
DS-A 15-L/7/8"-14 UNF	15	L 400 (1700)	27	27	30	15.3	27	12.7	7/8-14 UNF-2A	12.0	19.18 x 2.46
DS-A 18-L/3/4"-16 UNF	18	L 400 (1700)	27	32	31	14.5	22	11.0	3/4-16 UNF-2A	13.1	16.36 x 2.21
DS-A 18-L/7/8"-14 UNF	18	L 400 (1700)	27	32	31	14.8	27	12.7	7/8-14 UNF-2A	13.7	19.18 x 2.46
DS-A 22-L/7/8"-14 UNF	22	L 250 (1100)	32	36	33	16.8	27	12.7	7/8-14 UNF-2A	18.0	19.18 x 2.46
DS-A 22-L/1 1/16"-12 UN	22	L 250 (1100)	32	36	33	16.5	32	15.0	11/16-12 UN-2A	18.8	23.47 x 2.95
DS-A 22-L 1 5/16"-12 UN	22	L 250 (1100)	41	36	34	17.5	41	15.0	15/16-12 UN-2A	24.8	29.74 x 2.95
DS-A 28-L/1 1/16"-12 UN	28	L 250 (1100)	41	41	34	17.5	32	15.0	11/16-12 UN-2A	25.2	23.47 x 2.95
DS-A 28-L/1 5/16"-12 UN	28	L 250 (1100)	41	41	34	17.5	41	15.0	15/16-12 UN-2A	26.2	29.74 x 2.95
DS-A 35-L/1 5/16"-12 UN	35	L 250 (1100)	46	50	39	17.5	41	15.0	15/16-12 UN-2A	37.6	37.46 x 2.95
DS-A 35-L/1 5/8"-12 UN	35	L 250 (1100)	50	50	39	17.5	50	15.0	15/8-12 UN-2A	41.0	37.46 x 3
DS-A 42-L/1 5/8"-12 UN	42	L 250 (1100)	55	60	42	19.0	50	15.0	15/8-12 UN-2A	57.6	37.46 x 3
DS-A 8-S/7/16"-20 UNF	8	S 630 (2700)	17	19	30	15.0	14	9.0	7/16-20 UNF-2A	5.4	8.92 x 1.83
DS-A 10-S/9/16"-18 UNF	10	S 630 (2700)	19	22	31	14.5	17	10.0	9/16-18 UNF-2A	7.4	12.00 x 2.00
DS-A 12-S 9/16"-18 UNF	12	S 630 (2700)	22	24	31	14.5	17	10.0	9/16-18 UNF-2A	8.6	12.00 x 2.00
DS-A 12-S 3/4"-16 UNF	12	S 630 (2700)	24	24	34	17.5	22	11.0	3/4-16 UNF-2A	10.9	16.36 x 2.21
DS-A 16-S/3/4"-16 UNF	16	S 630 (2700)	24	30	34	15.5	22	11.0	3/4-16 UNF-2A	13.5	16.36 x 2.21
DS-A 16-S/7/8"-14 UNF	16	S 630 (2700)	27	30	37	18.8	27	12.7	7/8-14 UNF-2A	16.4	19.18 x 2.46
DS-A 20-S 3/4"-16 UNF	20	S 400 (1700)	32	36	42	20.5	22	11.0	3/4-16 UNF-2A	24.0	16.36 x 2.21
DS-A 20-S/7/8"-14 UNF	20	S 400 (1700)	32	36	42	20.8	27	12.7	7/8-14 UNF-2A	25.2	19.18 x 2.46
DS-A 20-S/1 1/16"-12 UN	20	S 400 (1700)	32	36	42	20.5	32	15.0	11/16-12 UN-2A	26.0	23.47 x 2.95
DS-A 25-S/1 1/16"-12 UN	25	S 400 (1700)	36	46	47	23.0	32	15.0	11/16-12 UN-2A	42.5	23.47 x 2.95
DS-A 25-S/1 5/16"-12 UN	25	S 400 (1700)	41	46	47	23.0	41	15.0	15/16-12 UN-2A	47.7	29.74 x 2.95
DS-A 30-S/1 5/16"-12 UN	30	S 400 (1700)	46	50	50	23.5	41	15.0	15/16-12 UN-2A	56.3	29.74 x 2.95
DS-A 30-S/1 5/8"-12 UN	30	S 400 (1700)	50	50	50	23.5	50	15.0	15/8-12 UN-2A	63.4	37.46 x 3
DS-A 38-S 1 5/8"-12 UN	38	S 400 (1700)	55	60	57	26.0	50	15.0	15/8-12 UN-2A	89.4	37.46 x 3

L₁ = approximate length with nut tightened

O-rings NBR (e.g. Perbunan). FPM (e.g. Viton) upon request

Please see "Engineering and technical data - Selecting the correct tube fitting" for more information on pressure.

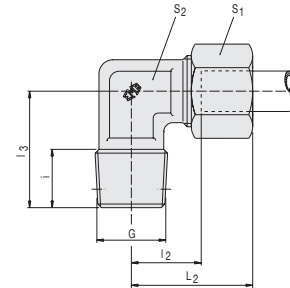
PIPE SCREW JOINTS

B MALE STUD ELBOWS

B MALE STUD ELBOW

BSP TAPER

BSP taper.



description	pipe OD	PN series	S ₁	S ₂	L ₂	l ₂	l ₃	i	G	kg / 100 pcs
B 4-RLL	4	LL 100 (400)	10	11	21	11.0	17	8	R 1/8" K	2.2
B 6-RLL	6	LL 100 (400)	12	11	21	9.5	17	8	R 1/8" K	2.5
B 8-RLL	8	LL 100 (400)	14	12	23	11.5	20	8	R 1/8" K	3.4
DS-B 6-RL	6	L 315 (1260)	14	12	27	12.0	20	8	R 1/8" K	4.0
DS-B 8-RL	8	L 315 (1260)	17	14	29	14.0	26	12	R 1/4" K	6.6
DS-B 10-RL	10	L 315 (1260)	19	17	30	15.0	27	12	R 1/4" K	8.3
DS-B 12-RL	12	L 315 (1260)	22	19	32	17.0	28	12	R 3/8" K	11.8
DS-B 15-RL	15	L 315 (1260)	27	19	36	21.0	34	14	R 1/2" K	13.0
DS-B 18-RL	18	L 315 (1260)	32	24	40	23.5	36	14	R 1/2" K	16.6
DS-B 6-RS	6	S 630* (2520)	17	14	31	16.0	26	12	R 1/4" K	7.2
DS-B 8-RS	8	S 630* (2520)	19	17	32	17.0	27	12	R 1/4" K	8.8
DS-B 10-RS	10	S 630* (2520)	22	19	34	17.5	28	12	R 3/8" K	13.4
DS-B 12-RS	12	S 630* (2520)	24	22	38	21.5	28	12	R 3/8" K	16.5
DS-B 14-RS	14	S 630* (2520)	27	19	40	22.0	32	14	R 1/2" K	15.3
DS-B 16-RS	16	S 630* (2520)	30	24	43	24.5	32	14	R 1/2" K	17.9

L₂ = approximate length with nut tightened

OD 4 to 12 mm manufactured from profile material

* PN 630 applies only to taper port forms; PN 400 is applicable to parallel port forms

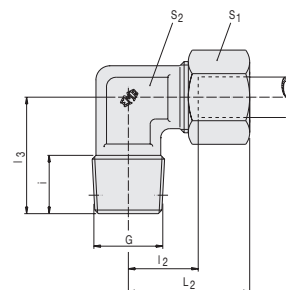
Please see "Engineering and technical data - Selecting the correct tube fitting" for more information on pressure.

PIPE SCREW JOINTS B MALE STUD ELBOWS

THE WORLD OF TUBE FITTINGS

B MALE STUD ELBOW METRIC TAPER

Metric taper.



description	pipe OD	PN series	S ₁	S ₂	L ₂	L ₂	L ₃	i	G	kg / 100 pcs
B 4-MLL	4	LL 100 (400)	10	9	21	11.0	17	8	M 8x1 K	2.1
B 6-MLL	6	LL 100 (400)	12	11	21	9.5	17	8	M 10x1 K	2.5
B 8-MLL	8	LL 100 (400)	14	12	23	11.5	20	8	M 10x1 K	3.4
DS-B 6-ML	6	L 315 (1260)	14	12	27	12.0	20	8	M 10x1 K	4.0
DS-B 8-ML	8	L 315 (1260)	17	14	29	14.0	26	12	M 12x1.5 K	6.6
DS-B 10-ML	10	L 315 (1260)	19	17	30	15.0	27	12	M 14x1.5 K	8.3
DS-B 12-ML	12	L 315 (1260)	22	19	32	17.0	28	12	M 16x1.5 K	11.8
DS-B 15-ML	15	L 315 (1260)	27	19	36	21.0	32	12	M 18x1.5 K	12.0
DS-B 18-ML	18	L 315 (1260)	32	24	40	23.5	36	14	M 22x1.5 K	19.1
DS-B 6-MS	6	S 630* (2520)	17	14	31	16.0	26	12	M 12x1.5 K	7.5
DS-B 8-MS	8	S 630* (2520)	19	17	32	17.0	27	12	M 14x1.5 K	10.0
DS-B 10-MS	10	S 630* (2520)	22	19	34	17.5	28	12	M 16x1.5 K	13.8
DS-B 12-MS	12	S 630* (2520)	24	22	38	21.5	28	12	M 18x1.5 K	16.5
DS-B 14-MS	14	S 630* (2520)	27	19	40	22.0	32	14	M 20x1.5 K	15.3
DS-B 16-MS	16	S 630* (2520)	30	24	43	24.5	32	14	M 22x1.5 K	19.0

L₂ = approximate length with nut tightened

OD 4 to 12 mm manufactured from profile material

* PN 630 applies only to taper port forms; PN 400 is applicable to parallel port forms

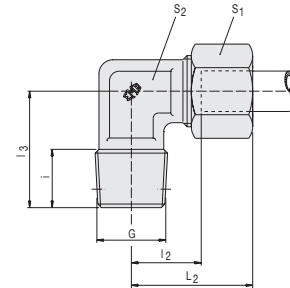
Please see "Engineering and technical data - Selecting the correct tube fitting" for more information on pressure.

PIPE SCREW JOINTS

B MALE STUD ELBOWS

B MALE STUD ELBOW NPT

NPT (ANSI/ASME B1-20.1.1983).



description	pipe OD	PN series	S ₁	S ₂	L ₂	l ₂	l ₃	i	G	kg / 100 pcs
B 4-LL/NPT	4	LL 100 (400)	10	11	21	11.0	17	10.0	1/8" NPT	2.1
B 6-LL/NPT	6	LL 100 (400)	12	11	21	9.5	17	10.0	1/8" NPT	2.4
B 8-LL/NPT	8	LL 100 (400)	14	12	23	11.5	20	10.0	1/8" NPT	3.3
DS-B 6-L/NPT	6	L 315 (1260)	14	12	27	12.0	20	10.0	1/8" NPT	4.0
DS-B 8-L/NPT	8	L 315 (1260)	17	14	29	14.0	26	15.0	1/4" NPT	6.3
DS-B 10-L/NPT	10	L 315 (1260)	19	17	30	15.0	27	15.0	1/4" NPT	8.2
DS-B 12-L/NPT	12	L 315 (1260)	22	19	32	17.0	28	15.0	3/8" NPT	11.6
DS-B 15-L/NPT	15	L 315 (1260)	27	19	36	21.0	34	20.0	1/2" NPT	14.0
DS-B 18-L/NPT	18	L 160 (640)	32	24	40	23.5	36	20.0	1/2" NPT	16.5
DS-B 22-L/NPT	22	L 160 (640)	36	27	44	27.5	42	20.0	3/4" NPT	23.5
DS-B 28-L/NPT	28	L 160 (640)	41	36	47	30.5	48	25.0	1" NPT	37.5
DS-B 35-L/NPT	35	L 160 (640)	50	41	56	34.5	54	25.5	1 1/4" NPT	57.5
DS-B 42-L/NPT	42	L 160 (640)	60	50	63	40.0	61	26.0	1 1/2" NPT	83.0
DS-B 6-S/NPT	6	S 630 (2520)	17	14	31	16.0	26	15.0	1/4" NPT	6.9
DS-B 8-S/NPT	8	S 630 (2520)	19	17	32	17.0	27	15.0	1/4" NPT	8.5
DS-B 10-S/NPT	10	S 630 (2520)	22	19	34	17.5	28	15.0	3/8" NPT	13.3
DS-B 12-S/NPT	12	S 630 (2520)	24	22	38	21.5	28	15.0	3/8" NPT	16.8
DS-B 14-S/NPT	14	S 630 (2520)	27	19	40	22.0	34	20.0	1/2" NPT	16.6
DS-B 16-S/NPT	16	S 630 (2520)	30	24	43	24.5	36	20.0	1/2" NPT	18.6
DS-B 20-S/NPT	20	S 400 (1600)	36	27	48	26.5	42	20.0	3/4" NPT	30.0
DS-B 25-S/NPT	25	S 400 (1600)	46	36	54	30.0	48	25.0	1" NPT	56.5
DS-B 30-S/NPT	30	S 400 (1600)	50	41	62	35.5	54	25.5	1 1/4" NPT	82.0
DS-B 38-S/NPT	38	S 400 (1600)	60	50	72	41.0	61	26.0	1 1/2" NPT	116.0

L₂ = approximate length with nut tightened

OD 4 to 12 mm manufactured from profile material

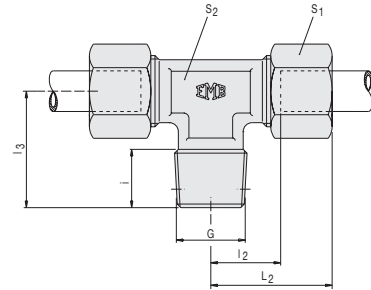
Please see "Engineering and technical data - Selecting the correct tube fitting" for more information on pressure.

PIPE SCREW JOINTS C MALE STUD BRANCH TEES

THE WORLD OF TUBE FITTINGS

C MALE STUD BRANCH TEE BSP TAPER

BSP taper.



description	pipe OD	PN series	S ₁	S ₂ *	L ₂	l ₂	l ₃	i	G	kg / 100 pcs
C 4-RLL	4	LL 100 (400)		10/9	21	11.0	17	8	R 1/8" K	2.9
C 6-RLL	6	LL 100 (400)	12	11	21	9.5	17	8	R 1/8" K	3.4
C 8-RLL	8	LL 100 (400)	14	12/14	23	11.5	20	8	R 1/8" K	4.7
DS-C 6-RL	6	L 315 (1260)	14	12/14	27	12.0	20	8	R 1/8" K	6.0
DS-C 8-RL	8	L 315 (1260)	17	14	29	14.0	26	12	R 1/4" K	9.2
DS-C 10-RL	10	L 315 (1260)	19	17	30	15.0	27	12	R 1/4" K	11.7
DS-C 12-RL	12	L 315 (1260)	22	19	32	17.0	28	12	R 3/8" K	16.0
DS-C 15-RL	15	L 315 (1260)	27	19	36	21.0	34	14	R 1/2" K	20.3
DS-C 18-RL	18	L 315 (1260)	32	24	40	23.5	36	14	R 1/2" K	29.2
DS-C 6-RS	6	S 400 (1600)	17	14	31	16.0	26	12	R 1/4" K	10.9
DS-C 8-RS	8	S 400 (1600)	19	17	32	17.0	27	12	R 1/4" K	14.0
DS-C 10-RS	10	S 400 (1600)	22	19	34	17.5	28	12	R 3/8" K	19.0
DS-C 12-RS	12	S 400 (1600)	24	22	38	21.5	28	12	R 3/8" K	24.5
DS-C 14-RS	14	S 400 (1600)	27	19	40	22.0	32	14	R 1/2" K	24.4
DS-C 16-RS	16	S 400 (1600)	30	24	43	24.5	32	14	R 1/2" K	28.4

L₂ = approximate length with nut tightened

OD 4 to 12 mm manufactured from profile material

Please see "Engineering and technical data - Selecting the correct tube fitting" for more information on pressure.

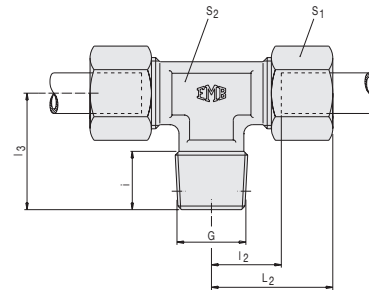
* Depending on type of production, the wrench size may vary in some cases.

PIPE SCREW JOINTS

C MALE STUD BRANCH TEES

C MALE STUD BRANCH TEE METRIC TAPER

Metric taper.



description	pipe OD	PN series	S ₁	S ₂ *	L ₂	l ₂	l ₃	i	G	kg / 100 pcs
C 4-MLL	4	LL 100 (400)		10/9	21	11.0	17	8	M 8x1 K	2.8
C 6-MLL	6	LL 100 (400)	12	11	21	9.5	17	8	M 10x1 K	3.4
C 8-MLL	8	LL 100 (400)	14	12/14	23	11.5	20	8	M 10x1 K	4.7
DS-C 6-ML	6	L 315 (1260)	14	12/14	27	12.0	20	8	M 10x1 K	6.0
DS-C 8-ML	8	L 315 (1260)	17	14	29	14.0	26	12	M 12x1.5 K	9.2
DS-C 10-ML	10	L 315 (1260)	19	17	30	15.0	27	12	M 14x1.5 K	11.7
DS-C 12-ML	12	L 315 (1260)	22	19	32	17.0	28	12	M 16x1.5 K	16.0
DS-C 15-ML	15	L 315 (1260)	27	19	36	21.0	32	12	M 18x1.5 K	19.3
DS-C 18-ML	18	L 315 (1260)	32	24	40	23.5	36	14	M 22x1.5 K	29.2
DS-C 6-MS	6	S 400 (1600)	17	14	31	16.0	26	12	M 12x1.5 K	10.9
DS-C 8-MS	8	S 400 (1600)	19	17	32	17.0	27	12	M 14x1.5 K	14.0
DS-C 10-MS	10	S 400 (1600)	22	19	34	17.5	28	12	M 16x1.5 K	19.0
DS-C 12-MS	12	S 400 (1600)	24	22	38	21.5	28	12	M 18x1.5 K	24.5
DS-C 14-MS	14	S 400 (1600)	27	19	40	22.0	32	14	M 20x1.5 K	24.4
DS-C 16-MS	16	S 400 (1600)	30	24	43	24.5	32	14	M 22x1.5 K	28.4

L₂ = approximate length with nut tightened

OD 4 to 12 mm manufactured from profile material

Please see "Engineering and technical data - Selecting the correct tube fitting" for more information on pressure.

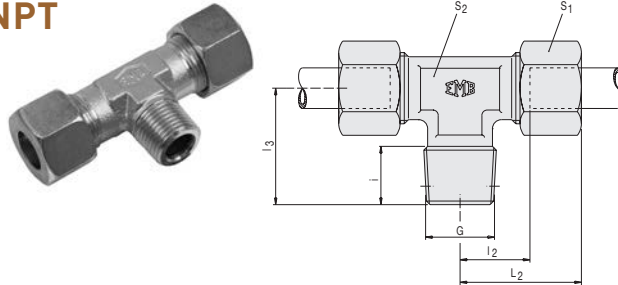
* Depending on type of production, the wrench size may vary in some cases.

PIPE SCREW JOINTS C MALE STUD BRANCH TEES

THE WORLD OF TUBE FITTINGS

C MALE STUD BRANCH TEE NPT

NPT (ANSI/ASME B1-20.1.1983).



description	pipe OD	PN series	S ₁	S ₂	L ₂	l ₂	l ₃	i	G	kg / 100 pcs
C 4-LL/NPT	4	LL 100 (400)	10	11	21	11.0	17	10.0	1/8" NPT	2.2
C 6-LL/NPT	6	LL 100 (400)	12	11	21	9.5	17	10.0	1/8" NPT	2.8
C 8-LL/NPT	8	LL 100 (400)	14	12	23	11.5	20	10.0	1/8" NPT	3.7
DS-C 6-L/NPT	6	L 315 (1260)	14	12	27	12.0	20	10.0	1/8" NPT	4.5
DS-C 8-L/NPT	8	L 315 (1260)	17	14	29	14.0	26	15.0	1/4" NPT	6.5
DS-C 10-L/NPT	10	L 315 (1260)	19	17	30	15.0	27	15.0	1/4" NPT	8.5
DS-C 12-L/NPT	12	L 315 (1260)	22	19	32	17.0	28	15.0	3/8" NPT	12.0
DS-C 15-L/NPT	15	L 315 (1260)	27	19	36	21.0	34	20.0	1/2" NPT	21.0
DS-C 18-L/NPT	18	L 315 (1260)	32	24	40	23.5	36	20.0	1/2" NPT	28.0
DS-C 22-L/NPT	22	L 160 (640)	36	27	44	27.5	42	20.0	3/4" NPT	38.0
DS-C 28-L/NPT	28	L 161 (640)	41	36	47	30.5	48	25.0	1" NPT	56.0
DS-C 35-L/NPT	35	L 162 (640)	50	41	56	34.5	54	25.5	1 1/4" NPT	91.0
DS-C 42-L/NPT	42	L 163 (640)	60	50	63	40.0	61	26.0	1 1/2" NPT	137.0
DS-C 6-S/NPT	6	S 630 (2520)	17	14	31	16.0	26	15.0	1/4" NPT	8.5
DS-C 8-S/NPT	8	S 630 (2520)	19	17	32	17.0	27	15.0	1/4" NPT	10.5
DS-C 10-S/NPT	10	S 630 (2520)	22	19	34	17.5	28	15.0	3/8" NPT	15.0
DS-C 12-S/NPT	12	S 630 (2520)	24	22	38	21.5	28	15.0	3/8" NPT	18.0
DS-C 14-S/NPT	14	S 630 (2520)	27	19	40	22.0	34	20.0	1/2" NPT	25.0
DS-C 16-S/NPT	16	S 630 (2520)	30	24	43	24.5	36	20.0	1/2" NPT	34.5
DS-C 20-S/NPT	20	S 400 (1600)	36	27	48	26.5	42	20.0	3/4" NPT	49.5
DS-C 25-S/NPT	25	S 400 (1600)	46	36	54	30.0	48	25.0	1" NPT	92.5
DS-C 30-S/NPT	30	S 400 (1600)	50	41	62	35.5	54	25.5	1 1/4" NPT	128.0
DS-C 38-S/NPT	38	S 400 (1600)	60	50	72	41.0	61	26.0	1 1/2" NPT	189.0

L₂ = approximate length with nut tightened

OD 4 to 12 mm manufactured from profile material

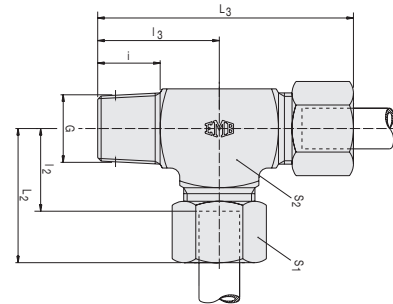
Please see "Engineering and technical data - Selecting the correct tube fitting" for more information on pressure.

PIPE SCREW JOINTS

D MALE STUD RUN TEES

D MALE STUD RUN TEE BSP TAPER

BSP taper.



description	pipe OD	PN series	S ₁	S ₂ *	L ₂	l ₂	L ₃	l ₃	i	G	kg / 100 pcs
D 4-RLL	4	LL 100 (400)	10	11	21	11.0	38	17	8	R 1/8" K	2.9
D 6-RLL	6	LL 100 (400)	12	11	21	9.5	38	17	8	R 1/8" K	3.5
D 8-RLL	8	LL 100 (400)	14	12	23	11.5	43	20	8	R 1/8" K	4.7
DS-D 6-RL	6	L 315 (1260)	14	12/14	27	12.0	47	20	8	R 1/8" K	6.0
DS-D 8-RL	8	L 315 (1260)	17	14	29	14.0	55	26	12	R 1/4" K	9.1
DS-D 10-RL	10	L 315 (1260)	19	17	30	15.0	57	27	12	R 1/4" K	11.4
DS-D 12-RL	12	L 315 (1260)	22	19	32	17.0	60	28	12	R 3/8" K	16.2
DS-D 15-RL	15	L 315 (1260)	27	19	36	21.0	70	34	14	R 1/2" K	20.0
DS-D 18-RL	18	L 315 (1260)	32	24	40	23.5	76	36	14	R 1/2" K	26.7
DS-D 6-RS	6	S 400 (1600)	17	14	31	16.0	57	26	12	R 1/4" K	10.8
DS-D 8-RS	8	S 400 (1600)	19	17	32	17.0	59	27	12	R 1/4" K	13.8
DS-D 10-RS	10	S 400 (1600)	22	19	34	17.5	62	28	12	R 3/8" K	19.0
DS-D 12-RS	12	S 400 (1600)	24	22	38	21.5	66	28	12	R 3/8" K	24.3
DS-D 14-RS	14	S 400 (1600)	27	19	40	22.0	72	32	14	R 1/2" K	23.4
DS-D 16-RS	16	S 400 (1600)	30	24	43	24.5	75	32	14	R 1/2" K	30.7

L_2+L_3 = approximate length with nut tightened

OD 4 to 12 mm manufactured from profile material

Please see "Engineering and technical data - Selecting the correct tube fitting" for more information on pressure.

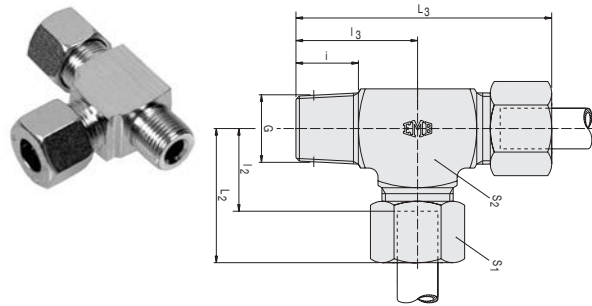
* Depending on type of production, the wrench size may vary in some cases

PIPE SCREW JOINTS D MALE STUD RUN TEES

THE WORLD OF TUBE FITTINGS

D MALE STUD RUN TEE METRIC TAPER

Metric taper.



description	pipe OD	PN series	S ₁	S ₂ *	L ₂	l ₂	L ₃	l ₃	i	G	kg / 100 pcs
D 4-MLL	4	LL 100 (400)	10	9	21	11.0	38	17	8	M 8x1 K	2.8
D 6-MLL	6	LL 100 (400)	12	11	21	9.5	38	17	8	M 10x1 K	3.5
D 8-MLL	8	LL 100 (400)	14	12	23	11.5	43	20	8	M 10x1 K	4.7
DS-D 6-ML	6	L 315 (1260)	14	12/14	27	12.0	47	20	8	M 10x1 K	6.0
DS-D 8-ML	8	L 315 (1260)	17	14	29	14.0	55	26	12	M 12x1.5 K	9.1
DS-D 10-ML	10	L 315 (1260)	19	17	30	15.0	57	27	12	M 14x1.5 K	11.4
DS-D 12-ML	12	L 315 (1260)	22	19	32	17.0	60	28	12	M 16x1.5 K	16.2
DS-D 15-ML	15	L 315 (1260)	27	19	36	21.0	68	32	12	M 18x1.5 K	18.6
DS-D 18-ML	18	L 315 (1260)	32	24	40	23.5	76	36	14	M 22x1.5 K	26.6
DS-D 6-MS	6	S 400 (1600)	17	14	31	16.0	57	26	12	M 12x1.5 K	10.8
DS-D 8-MS	8	S 400 (1600)	19	17	32	17.0	59	27	12	M 14x1.5 K	13.8
DS-D 10-MS	10	S 400 (1600)	22	19	34	17.5	62	28	12	M 16x1.5 K	19.0
DS-D 12-MS	12	S 400 (1600)	24	22	38	21.5	66	28	12	M 18x1.5 K	24.3
DS-D 14-MS	14	S 400 (1600)	27	19	40	22.0	72	32	14	M 20x1.5 K	23.8
DS-D 16-MS	16	S 400 (1600)	30	24	43	24.5	75	32	14	M 22x1.5 K	31.9

L_2+L_3 = approximate length with nut tightened

OD 4 to 12 mm manufactured from profile material

Please see "Engineering and technical data - Selecting the correct tube fitting" for more information on pressure.

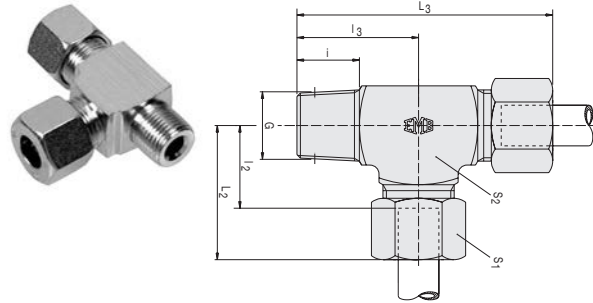
* Depending on type of production, the wrench size may vary in some cases

PIPE SCREW JOINTS

D MALE STUD RUN TEES

D MALE STUD RUN TEE NPT

NPT (ANSI/ASME B1-20.1.1983).



description	pipe OD	PN series	S ₁	S ₂	L ₂	l ₂	L ₃	l ₃	i	G	kg / 100 pcs
D 4-LL/NPT	4	LL 100 (400)	10	11	21	11.0	36	15	10.0	1/8" NPT	2.3
D 6-LL/NPT	6	LL 100 (400)	12	9	21	9.5	36	15	10.0	1/8" NPT	2.9
D 8-LL/NPT	8	LL 100 (400)	14	12	23	11.5	42	19	10.0	1/8" NPT	3.7
DS-D 6-L/NPT	6	L 315 (1260)	14	12	27	12.0	46	19	10.0	1/8" NPT	5.0
DS-D 8-L/NPT	8	L 315 (1260)	17	14	29	14.0	52	23	15.0	1/4" NPT	6.5
DS-D 10-L/NPT	10	L 315 (1260)	19	17	30	15.0	54	24	15.0	1/4" NPT	8.5
DS-D 12-L/NPT	12	L 315 (1260)	22	19	32	17.0	57	25	15.0	3/8" NPT	12.5
DS-D 15-L/NPT	15	L 315 (1260)	27	19	36	21.0	66	30	20.0	1/2" NPT	20.5
DS-D 18-L/NPT	18	L 315 (1260)	32	24	40	23.5	73	33	20.0	1/2" NPT	26.5
DS-D 22-L/NPT	22	L 160 (640)	36	27	44	27.5	86	42	20.0	3/4" NPT	36.5
DS-D 28-L/NPT	28	L 160 (640)	41	36	47	30.5	95	48	25.0	1" NPT	56.0
DS-D 35-L/NPT	35	L 160 (640)	50	41	56	34.5	110	54	25.5	1 1/4" NPT	81.0
DS-D 42-L/NPT	42	L 160 (640)	60	50	63	40.0	124	61	26.0	1 1/2" NPT	115.0
DS-D 6-S/NPT	6	S 630 (2520)	17	14	31	16.0	54	23	15.0	1/4" NPT	9.0
DS-D 8-S/NPT	8	S 630 (2520)	19	17	32	17.0	56	24	15.0	1/4" NPT	10.5
DS-D 10-S/NPT	10	S 630 (2520)	22	19	34	17.5	59	25	15.0	3/8" NPT	15.6
DS-D 12-S/NPT	12	S 630 (2520)	24	22	38	21.5	66	28	15.0	3/8" NPT	18.0
DS-D 14-S/NPT	14	S 630 (2520)	27	19	40	22.0	70	30	20.0	1/2" NPT	24.5
DS-D 16-S/NPT	16	S 630 (2520)	30	24	43	24.5	76	33	20.0	1/2" NPT	32.0
DS-D 20-S/NPT	20	S 400 (1600)	36	27	48	26.5	90	42	20.0	3/4" NPT	49.0
DS-D 25-S/NPT	25	S 400 (1600)	46	36	54	30.0	102	48	25.0	1" NPT	82.2
DS-D 30-S/NPT	30	S 400 (1600)	50	41	62	35.5	116	54	25.5	1 1/4" NPT	109.5
DS-D 38-S/NPT	38	S 400 (1600)	60	50	72	41.0	133	61	26.0	1 1/2" NPT	155.0

L_2+L_3 = approximate length with nut tightened

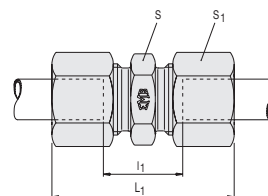
OD 4 to 12 mm manufactured from profile material

Please see "Engineering and technical data - Selecting the correct tube fitting" for more information on pressure.

PIPE SCREW JOINTS E STRAIGHT COUPLINGS

THE WORLD OF TUBE FITTINGS

E STRAIGHT COUPLINGS



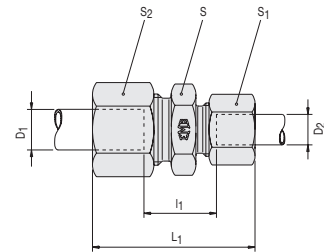
description	pipe OD	PN series	S	S ₁	L ₁	L ₁	kg / 100 pcs
E 4-LL	4	LL 100 (400)	9	10	31	12	1.4
E 6-LL	6	LL 100 (400)	11	12	32	9	2.1
E 8-LL	8	LL 100 (400)	12	14	35	12	2.6
DS-E 6-L	6	L 500 (2200)	12	14	39	10	3.5
DS-E 8-L	8	L 500 (2200)	14	17	40	11	4.9
DS-E 10-L	10	L 500 (2200)	17	19	42	13	6.9
DS-E 12-L	12	400 (1700)	19	22	43	14	8.5
DS-E 15-L	15	400 (1700)	24	27	46	16	13.8
DS-E 18-L	18	400 (1700)	27	32	48	16	19.5
DS-E 22-L	22	250 (1100)	32	36	52	20	26.2
DS-E 28-L	28	250 (1100)	41	41	54	21	31.5
DS-E 35-L	35	250 (1100)	46	50	63	20	49.4
DS-E 42-L	42	250 (1100)	55	60	66	21	72.8
DS-E 6-S	6	S 800 (3400)	14	17	45	16	5.9
DS-E 8-S	8	S 800 (3400)	17	19	47	18	7.8
DS-E 10-S	10	S 800 (3400)	19	22	49	17	11.0
DS-E 12-S	12	630 (2700)	22	24	51	19	13.6
DS-E 14-S	14	630 (2700)	24	27	57	22	18.2
DS-E 16-S	16	630 (2700)	27	30	57	21	22.3
DS-E 20-S	20	400 (1700)	32	36	66	23	34.7
DS-E 25-S	25	400 (1700)	41	46	74	26	66.9
DS-E 30-S	30	400 (1700)	46	50	80	27	80.9
DS-E 38-S	38	400 (1700)	55	60	90	29	119.4

L₁ = approximate length with nut tightened

Please see "Engineering and technical data - Selecting the correct tube fitting" for more information on pressure.

PIPE SCREW JOINTS ER STRAIGHT REDUCING COUPLINGS

ER STRAIGHT REDUCING COUPLINGS



description	pipe OD ₁	Pipe OD ₂	PN series	S	S ₁	S ₂	L ₁	l ₁	kg / 100 pcs
ER 6/4-LL	6	4	LL 100 (400)	11	10	12	32	10.5	1.8
ER 8/4-LL	8	4	LL 100 (400)	12	10	14	34	12.5	2.1
ER 8/6-LL	8	6	LL 100 (400)	12	12	14	34	11.0	2.3
DS-ER 8/6-L	8	6	L 500 (2200)	14	14	17	40	11.0	4.3
DS-ER 10/6-L	10	6	L 500 (2200)	17	14	19	41	12.0	5.2
DS-ER 10/8-L	10	8	L 500 (2200)	17	17	19	41	12.0	5.7
DS-ER 12/6-L	12	6	L 400 (1700)	19	14	22	42	13.0	6.5
DS-ER 12/8-L	12	8	L 400 (1700)	19	17	22	42	13.0	7.0
DS-ER 12/10-L	12	10	L 400 (1700)	19	19	22	43	14.0	7.5
DS-ER 15/10-L	15	10	L 400 (1700)	24	19	27	45	15.0	10.7
DS-ER 15/12-L	15	12	L 400 (1700)	24	22	27	45	15.0	11.4
DS-ER 18/10-L	18	10	L 400 (1700)	27	19	32	46	15.5	14.3
DS-ER 18/12-L	18	12	L 400 (1700)	27	22	32	46	15.5	15.0
DS-ER 18/15-L	18	15	L 400 (1700)	27	27	32	48	16.5	17.2
DS-ER 22/12-L	22	12	L 250 (1100)	32	22	36	48	17.5	19.3
DS-ER 22/15-L	22	15	L 250 (1100)	32	27	36	50	18.5	21.8
DS-ER 22/18-L	22	18	L 250 (1100)	32	32	36	50	18.0	23.8
DS-ER 28/18-L	28	18	L 250 (1100)	41	32	41	52	19.0	30.6
DS-ER 28/22-L	28	22	L 250 (1100)	41	36	41	54	21.0	32.6
DS-ER 35/22-L	35	22	L 250 (1100)	46	36	50	59	21.0	44.3
DS-ER 35/28-L	35	28	L 250 (1100)	46	41	50	59	21.0	46.1
DS-ER 8/6-S	8	6	S 800 (3400)	17	17	19	47	18.0	7.4
DS-ER 10/6-S	10	6	S 800 (3400)	19	17	22	48	17.5	9.1
DS-ER 10/8-S	10	8	S 800 (3400)	19	19	22	48	17.5	9.5
DS-ER 12/6-S	12	6	S 630 (2700)	22	17	24	50	19.5	11.1
DS-ER 12/8-S	12	8	S 630 (2700)	22	19	24	50	19.5	11.5
DS-ER 12/10-S	12	10	S 630 (2700)	22	22	24	51	19.0	12.7
DS-ER 14/10-S	14	10	S 630 (2700)	24	22	27	54	20.5	15.6
DS-ER 14/12-S	14	12	S 630 (2700)	24	24	27	54	20.5	16.2
DS-ER 16/12-S	16	12	S 630 (2700)	27	24	30	54	20.0	18.8
DS-ER 16/14-S	16	14	S 630 (2700)	27	27	30	57	21.5	21.2
DS-ER 20/10-S	20	10	S 400 (1700)	32	22	36	60	22.0	27.1
DS-ER 20/12-S	20	12	S 400 (1700)	32	24	36	60	22.0	27.7
DS-ER 20/16-S	20	16	S 400 (1700)	32	30	36	63	23.0	31.3
DS-ER 25/16-S	25	16	S 400 (1700)	41	30	46	68	25.5	51.2
DS-ER 25/20-S	25	20	S 400 (1700)	41	36	46	71	25.5	56.4
DS-ER 30/20-S	30	20	S 400 (1700)	46	36	50	74	26.0	65.1
DS-ER 30/25-S	30	25	S 400 (1700)	46	46	50	77	26.5	77.8
DS-ER 38/30-S	38	30	S 400 (1700)	55	50	60	87	29.5	110.3

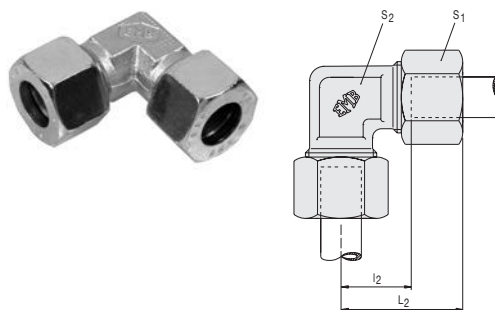
L₁ = approximate length with nut tightened

Please see "Engineering and technical data - Selecting the correct tube fitting" for more information on pressure.

PIPE SCREW JOINTS F EQUAL ELBOWS

THE WORLD OF TUBE FITTINGS

F EQUAL ELBOWS



description	pipe OD	PN series	S ₁	S ₂ *	L ₂	l ₂	kg / 100 pcs
F 4-LL	4	LL 100 (400)	10	9	21	11.0	2.5
F 6-LL	6	LL 100 (400)	12	11	21	9.5	2.8
F 8-LL	8	LL 100 (400)	14	12	23	11.5	3.8
DS-F 6-L	6	L 500 (2200)	14	12	27	12.0	4.9
DS-F 8-L	8	L 500 (2200)	17	14	29	14.0	7.6
DS-F 10 L	10	L 500 (2200)	19	14/ 17	30	15.0	9.6
DS-F 12-L	12	L 400 (1700)	22	17	32	17.0	13.5
DS-F 15-L	15	L 400 (1700)	27	19	36	21.0	15.8
DS-F 18-L	18	L 400 (1700)	32	24	40	23.5	23.9
DS-F 22-L	22	L 250 (1100)	36	27	44	27.5	31.7
DS-F 28-L	28	L 250 (1100)	41	36	47	30.5	42.0
DS-F 35-L	35	L 250 (1100)	50	41	56	34.5	75.9
DS-F 42-L	42	L 250 (1100)	60	50	63	40.0	107.8
DS-F 6-S	6	S 800 (3400)	17	14	31	16.0	8.5
DS-F 8-S	8	S 800 (3400)	19	14/ 17	32	17.0	11.7
DS-F 10-S	10	S 800 (3400)	22	17	34	17.5	16.1
DS-F 12-S	12	S 630 (2700)	24	22	38	21.5	20.5
DS-F 14-S	14	S 630 (2700)	27	19	40	22.0	20.7
DS-F 16-S	16	S 630 (2700)	30	24	43	24.5	25.0
DS-F 20-S	20	S 400 (1700)	36	27	48	26.5	40.7
DS-F 25-S	25	S 400 (1700)	46	36	54	30.0	77.6
DS-F 30-S	30	S 400 (1700)	50	41	62	35.5	97.4
DS-F 38-S	38	S 400 (1700)	60	50	72	41.0	131.8

L₂ = approximate length with nut tightened

OD 4 to 12 mm manufactured from profile material

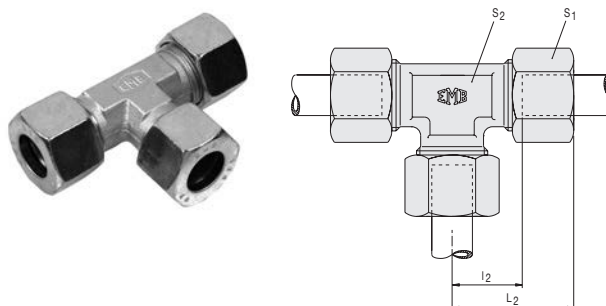
Please see "Engineering and technical data - Selecting the correct tube fitting" for more information on pressure.

** Depending on type of production, the wrench size may vary in some cases*

PIPE SCREW JOINTS

G EQUAL TEES

G EQUAL TEES



description	pipe OD	PN series	S ₁	S ₂ *	L ₂	l ₂	kg / 100 pcs
G 4-LL	4	LL 100 (400)	10	9	21	11.0	2.9
G 6-LL	6	LL 100 (400)	12	12	21	9.5	3.8
G 8-LL	8	LL 100 (400)	14	12/14	23	11.5	5.1
DS-G 6-L	6	L 500 (2200)	14	12	27	12.0	7.1
DS-G 8-L	8	L 500 (2200)	17	14	29	14.0	10.1
DS-G 10-L	10	L 500 (2200)	19	17	30	15.0	13.0
DS-G 12-L	12	L 400 (1700)	22	19	32	17.0	17.7
DS-G 15-L	15	L 400 (1700)	27	19	36	21.0	23.2
DS-G 18-L	18	L 400 (1700)	32	24	40	23.5	35.4
DS-G 22-L	22	L 250 (1100)	36	27	44	27.5	44.3
DS-G 28-L	28	L 250 (1100)	41	36	47	30.5	61.1
DS-G 35-L	35	L 250 (1100)	50	41	56	34.5	90.1
DS-G 42-L	42	L 250 (1100)	60	50	63	40.0	136.8
DS-G 6-S	6	S 800 (3400)	17	14	31	16.0	12.0
DS-G 8-S	8	S 800 (3400)	19	17	32	17.0	15.7
DS-G 10-S	10	S 800 (3400)	22	19	34	17.5	21.2
DS-G 12-S	12	S 630 (2700)	24	22/17	38	21.5	28.5
DS-G 14-S	14	S 630 (2700)	27	19	40	22.0	28.5
DS-G 16-S	16	S 630 (2700)	30	24	43	24.5	35.9
DS-G 20-S	20	S 400 (1700)	36	27	48	26.5	55.8
DS-G 25-S	25	S 400 (1700)	46	36	54	30.0	106.7
DS-G 30-S	30	S 400 (1700)	50	41	62	35.5	134.9
DS-G 38-S	38	S 400 (1700)	60	50	72	41.0	202.2

L₂ = approximate length with nut tightened

OD 4 to 12 mm manufactured from profile material

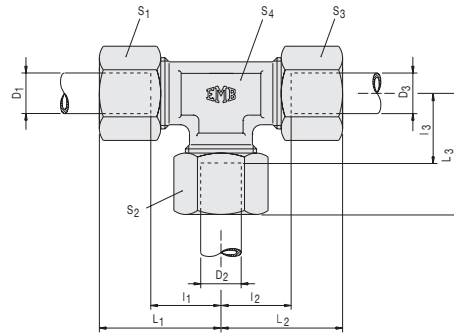
Please see "Engineering and technical data - Selecting the correct tube fitting" for more information on pressure.

* Depending on type of production, the wrench size may vary in some cases

PIPE SCREW JOINTS GR TEE REDUCERS

THE WORLD OF TUBE FITTINGS

GR TEE REDUCERS



description	pipe OD ₁	Pipe OD ₂	Pipe OD ₃	PN series	S ₁	S ₂	S ₃	S ₄	L ₁	L ₂	L ₃	l ₁	l ₂	l ₃	kg / 100 pcs
GR 4/8/4-LL	4	8	4	LL 100 (400)	10	14	10	12	23	23	23	13.0	13.0	11.5	4.3
GR 6/4/6-LL	6	4	6	LL 100 (400)	12	10	12	11	21	21	21	9.5	9.5	11.0	3.5
DS-GR 6/8/6-L	6	8	6	L 500 (2200)	14	17	14	14	29	29	29	14.0	14.0	14.0	9.2
DS-GR 8/6/8-L	8	6	8	L 500 (2200)	17	14	17	14	29	29	29	14.0	14.0	14.0	9.5
DS-GR 6/10/6-L	6	10	6	L 500 (2200)	14	19	14	14	30	30	30	15.0	15.0	15.0	11.4
DS-GR 8/10/8-L	8	10	8	L 500 (2200)	17	19	17	14	30	30	30	15.0	15.0	15.0	12.2
DS-GR 10/6/10-L	10	6	10	L 500 (2200)	19	14	19	14	30	30	30	15.0	15.0	15.0	12.1
DS-GR 10/8/10-L	10	8	10	L 500 (2200)	19	17	19	14	30	30	30	15.0	15.0	15.0	12.2
DS-GR 10/10/6-L	10	10	6	L 500 (2200)	19	19	14	14	30	30	30	15.0	15.0	15.0	12.1
DS-GR 8/12/8-L	8	12	8	L 400 (1700)	17	22	17	17	32	32	32	17.0	17.0	17.0	16.0
DS-GR 12/6/12-L	12	6	12	L 400 (1700)	22	14	22	17	32	32	32	17.0	17.0	17.0	15.9
DS-GR 12/8/8-L	12	8	8	L 400 (1700)	22	17	17	17	32	32	32	17.0	17.0	17.0	16.0
DS-GR 12/8/12-L	12	8	12	L 400 (1700)	22	17	22	17	32	32	32	17.0	17.0	17.0	16.4
DS-GR 12/10/10-L	12	10	10	L 400 (1700)	22	19	19	17	32	32	32	17.0	17.0	17.0	16.2
DS-GR 12/10/12-L	12	10	12	L 400 (1700)	22	19	22	17	32	32	32	17.0	17.0	17.0	16.7
DS-GR 12/12/10-L	12	12	10	L 400 (1700)	22	22	19	17	32	32	32	17.0	17.0	17.0	16.7
DS-GR 10/15/10-L	10	15	10	L 400 (1700)	19	27	19	19	36	36	36	21.0	21.0	21.0	18.8
DS-GR 12/15/12-L	12	15	12	L 400 (1700)	22	27	22	19	36	36	36	21.0	21.0	21.0	19.2
DS-GR 15/6/15-L	15	6	15	L 400 (1700)	27	14	27	19	36	36	36	21.0	21.0	21.0	19.4
DS-GR 15/10/15-L	15	10	15	L 400 (1700)	27	19	27	19	36	36	36	21.0	21.0	21.0	20.7
DS-GR 15/12/12-L	15	12	12	L 400 (1700)	27	22	22	19	36	36	36	21.0	21.0	21.0	18.8
DS-GR 15/12/15-L	15	12	15	L 400 (1700)	27	22	27	19	36	36	36	21.0	21.0	21.0	21.1
DS-GR 15/15/12-L	15	15	12	L 400 (1700)	27	27	22	19	36	36	36	21.0	21.0	21.0	20.8
DS-GR 12/18/12-L	12	18	12	L 400 (1700)	22	32	22	24	39	39	40	24.0	24.0	23.5	26.3
DS-GR 18/10/10-L	18	10	10	L 400 (1700)	32	19	19	24	40	39	39	23.5	24.0	24.0	25.9
DS-GR 18/10/18-L	18	10	18	L 400 (1700)	32	19	32	24	40	40	39	23.5	23.5	24.0	29.7
DS-GR 18/12/18-L	18	12	18	L 400 (1700)	32	22	32	24	40	40	39	23.5	23.5	24.0	29.7
DS-GR 18/15/18-L	18	15	18	L 400 (1700)	32	27	32	24	40	40	39	23.5	23.5	24.0	31.6
DS-GR 18/18/10-L	18	18	10	L 400 (1700)	32	32	19	24	40	39	40	23.5	24.0	23.5	29.6
DS-GR 22/10/22-L	22	10	22	L 250 (1100)	36	19	36	27	44	44	43	27.5	27.5	28.0	39.1
DS-GR 22/12/22-L	22	12	22	L 250 (1100)	36	22	36	27	44	44	43	27.5	27.5	28.0	39.7
DS-GR 22/15/15-L	22	15	15	L 250 (1100)	36	27	27	27	44	43	43	27.5	28.0	28.0	37.7
DS-GR 22/15/22-L	22	15	22	L 250 (1100)	36	27	36	27	44	44	43	27.5	27.5	28.0	41.0
DS-GR 22/18/18-L	22	18	18	L 250 (1100)	36	32	32	27	44	44	44	27.5	27.5	27.5	42.2
DS-GR 22/18/22-L	22	18	22	L 250 (1100)	36	32	36	27	44	44	44	27.5	27.5	27.5	43.5
DS-GR 22/22/18-L	22	22	18	L 250 (1100)	36	36	32	27	44	44	44	27.5	27.5	27.5	43.1
DS-GR 28/10/28-L	28	10	28	L 250 (1100)	41	19	41	36	47	47	46	30.5	30.5	31.0	55.7
DS-GR 28/12/28-L	28	12	28	L 250 (1100)	41	22	41	36	47	47	46	30.5	30.5	31.0	56.3
DS-GR 28/15/28-L	28	15	28	L 250 (1100)	41	27	41	36	47	47	46	30.5	30.5	31.0	59.7

PIPE SCREW JOINTS GR TEE REDUCERS

description	pipe OD ₁	Pipe OD ₂	Pipe OD ₃	PN series	S ₁	S ₂	S ₃	S ₄	L ₁	L ₂	L ₃	l ₁	l ₂	l ₃	kg / 100 pcs
DS-GR 28/18/28-L	28	18	28	L 250 (1100)	41	32	41	36	47	47	47	30.5	30.5	30.5	59.7
DS-GR 28/22/22-L	28	22	22	L 250 (1100)	41	36	36	36	47	47	47	30.5	30.5	30.5	60.2
DS-GR 28/22/28-L	28	22	28	L 250 (1100)	41	36	41	36	47	47	47	30.5	30.5	30.5	60.3
DS-GR 10/6/10-S	10	6	10	S 800 (3400)	22	17	22	17	34	34	33	17.5	17.5	18.0	19.9
DS-GR 12/8/8-S	12	8	8	S 630 (2700)	24	19	19	17	38	37	37	21.5	22.0	22.0	25.1
DS-GR 12/8/12-S	12	8	12	S 630 (2700)	24	19	24	17	38	38	37	21.5	21.5	22.0	26.6
DS-GR 12/10/12-S	12	10	12	S 630 (2700)	24	22	24	17	38	38	38	21.5	21.5	21.5	27.5
DS-GR 12/16/12-S	12	16	12	S 630 (2700)	24	30	24	24	42	42	43	25.5	25.5	24.5	32.9
DS-GR 16/6/16-S	16	6	16	S 630 (2700)	30	17	30	24	43	43	41	24.5	24.5	26.0	33.3
DS-GR 16/8/16-S	16	8	16	S 630 (2700)	30	19	30	24	43	43	41	24.5	24.5	26.0	33.2
DS-GR 16/10/16-S	16	10	16	S 630 (2700)	30	22	30	24	43	43	42	24.5	24.5	25.5	34.8
DS-GR 16/12/16-S	16	12	16	S 630 (2700)	30	24	30	24	43	43	42	24.5	24.5	25.5	35.6
DS-GR 16/20/16-S	16	20	16	S 400 (1700)	30	36	30	27	47	47	48	28.5	28.5	26.5	50.5
DS-GR 20/10/20-S	20	10	20	S 400 (1700)	36	22	36	27	48	48	46	26.5	26.5	29.5	51.7
DS-GR 20/12/20-S	20	12	20	S 400 (1700)	36	24	36	27	48	48	46	26.5	26.5	29.5	52.4
DS-GR 20/16/20-S	20	16	20	S 400 (1700)	36	30	36	27	48	48	47	26.5	26.5	28.5	54.2
DS-GR 20/25/20-S	20	25	20	S 400 (1700)	36	46	36	36	53	53	54	31.5	31.5	30.0	89.1
DS-GR 25/16/25-S	25	16	25	S 400 (1700)	46	30	46	36	54	54	52	30.0	30.0	33.5	96.6
DS-GR 25/20/25-S	25	20	25	S 400 (1700)	46	36	46	36	54	54	53	30.0	30.0	31.5	99.8
DS-GR 25/30/25-S	25	30	25	S 400 (1700)	46	50	46	41	61	61	62	37.0	37.0	35.5	139.4

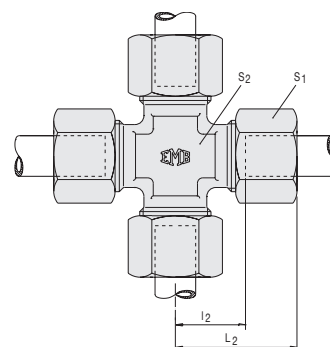
$L_1+L_2+L_3$ = approximate length with nut tightened

Please see "Engineering and technical data - Selecting the correct tube fitting" for more information on pressure.

PIPE SCREW JOINTS H EQUAL CROSSES

THE WORLD OF TUBE FITTINGS

H EQUAL CROSSES



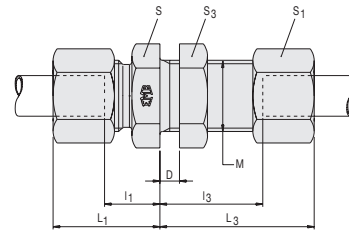
description	pipe OD	PN series	S ₁	S ₂	L ₂	l ₂	kg / 100 pcs
DS-H 6-L	6	L 500 (2200)	14	12	27	12.0	7.7
DS-H 8-L	8	L 500 (2200)	17	12	29	14.0	10.9
DS-H 10-L	10	L 500 (2200)	19	14	30	15.0	15.5
DS-H 12-L	12	L 400 (1700)	22	17	32	17.0	19.2
DS-H 15-L	15	L 400 (1700)	27	19	36	21.0	31.1
DS-H 18-L	18	L 400 (1700)	32	24	40	23.5	48.3
DS-H 22-L	22	L 250 (1100)	36	27	44	27.5	72.4
DS-H 28-L	28	L 250 (1100)	41	36	47	30.5	101.2
DS-H 35-L	35	L 250 (1100)	50	41	56	34.5	122.8
DS-H 42-L	42	L 250 (1100)	60	50	63	40.0	175.6
DS-H 6-S	6	S 800 (3400)	17	12	31	16.0	12.3
DS-H 8-S	8	S 800 (3400)	19	14	32	17.0	14.8
DS-H 10-S	10	S 800 (3400)	22	17	34	17.5	23.0
DS-H 12-S	12	S 630 (2700)	24	17	38	21.5	28.2
DS-H 14-S	14	S 630 (2700)	27	19	40	22.0	35.4
DS-H 16-S	16	S 630 (2700)	30	24	43	24.5	45.1
DS-H 20-S	20	S 400 (1700)	36	27	48	26.5	70.4
DS-H 25-S	25	S 400 (1700)	46	36	54	30.0	125.7
DS-H 30-S	30	S 400 (1700)	50	41	62	35.5	150.3
DS-H 38-S	38	S 400 (1700)	60	50	72	41.0	205.1

L₂ = approximate length with nut tightened

Please see "Engineering and technical data - Selecting the correct tube fitting" for more information on pressure.

PIPE SCREW JOINTS K STRAIGHT BULKHEAD CONNECTIONS

K STRAIGHT BULKHEAD CONNECTIONS



description	pipe OD	PN series	S	S ₁	S ₃	L ₁	l ₁	Dmax	L ₃	l ₃	M	kg / 100 pcs
DS-K 6-L	6	L 500 (2200)	17	14	17	22	7.0	16	42	27.0	M 12x1.5	6.7
DS-K 8-L	8	L 500 (2200)	19	17	19	23	8.0	16	42	27.0	M 14x1.5	8.4
DS-K 10-L	10	L 500 (2200)	22	19	22	25	10.0	16	43	28.0	M 16x1.5	11.0
DS-K 12-L	12	L 400 (1700)	24	22	24	25	10.0	16	44	29.0	M 18x1.5	13.3
DS-K 15-L	15	L 400 (1700)	27	27	30	27	12.0	16	46	31.0	M 22x1.5	22.8
DS-K 18-L	18	L 400 (1700)	32	32	36	30	13.5	16	49	32.5	M 26x1.5	33.2
DS-K 22-L	22	L 250 (1100)	36	36	41	33	16.5	16	51	34.5	M 30x2	41.5
DS-K 28-L	28	L 250 (1100)	41	41	46	35	18.5	16	52	35.5	M 36x2	52.5
DS-K 35-L	35	L 250 (1100)	50	50	55	40	18.5	16	58	36.5	M 45x2	80.0
DS-K 42-L	42	L 250 (1100)	60	60	65	42	19.0	16	59	36.0	M 52x2	119.3
DS-K 6-S	6	S 800 (3400)	19	17	19	27	12.0	16	44	29.0	M 14x1.5	9.6
DS-K 8-S	8	S 800 (3400)	22	19	22	28	13.0	16	44	29.0	M 16x1.5	12.4
DS-K 10-S	10	S 800 (3400)	24	22	24	31	14.5	16	46	29.5	M 18x1.5	18.1
DS-K 12-S	12	S 630 (2700)	27	24	27	31	14.5	16	47	30.5	M 20x1.5	21.0
DS-K 14-S	14	S 630 (2700)	30	27	30	35	17.0	16	50	32.0	M 22x1.5	29.0
DS-K 16-S	16	S 630 (2700)	32	30	32	35	16.5	16	50	31.5	M 24x1.5	31.0
DS-K 20-S	20	S 400 (1700)	41	36	41	39	17.5	16	55	33.5	M 30x2	54.5
DS-K 25-S	25	S 400 (1700)	46	46	46	44	20.0	16	59	35.0	M 36x2	89.0
DS-K 30-S	30	S 400 (1700)	50	50	50	48	21.5	16	64	37.5	M 42x2	107.7
DS-K 38-S	38	S 400 (1700)	65	60	65	53	22.0	16	68	37.0	M 52x2	173.0

L_1+L_3 = approximate length with nut tightened

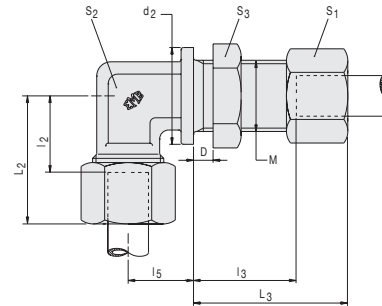
Please see "Engineering and technical data - Selecting the correct tube fitting" for more information on pressure.

PIPE SCREW JOINTS

L BULKHEAD ELBOW CONNECTIONS

THE WORLD OF TUBE FITTINGS

L BULKHEAD ELBOW CONNECTIONS



description	pipe OD	PN series	S ₁	S ₂	S ₃	L ₂	l ₂	l ₅	Dmax	L ₃	l ₃	d ₂	M	kg / 100 pcs
DS-L 6-L	6	L 500 (2200)	14	12	17	27	12.0	14	16	42	27.0	17	M 12x1.5	7.5
DS-L 8-L	8	L 500 (2200)	17	12	19	29	14.0	17	16	42	27.0	19	M 14x1.5	9.9
DS-L 10-L	10	L 500 (2200)	19	14	22	30	15.0	18	16	43	28.0	22	M 16x1.5	12.0
DS-L 12-L	12	L 400 (1700)	22	17	24	32	17.0	20	16	44	29.0	24	M 18x1.5	15.0
DS-L 15-L	15	L 400 (1700)	27	19	30	36	21.0	23	16	46	31.0	27	M 22x1.5	25.0
DS-L 18-L	18	L 400 (1700)	32	24	36	40	23.5	24	16	49	32.5	32	M 26x1.5	35.5
DS-L 22-L	22	L 250 (1100)	36	27	41	44	27.5	30	16	51	34.5	36	M 30x2	46.5
DS-L 28-L	28	L 250 (1100)	41	36	46	47	30.5	34	16	52	35.5	42	M 36x2	64.0
DS-L 35-L	35	L 250 (1100)	50	41	55	56	34.5	39	16	58	36.5	50	M 45x2	99.4
DS-L 42-L	42	L 250 (1100)	60	50	65	63	40.0	43	16	59	36.0	60	M 52x2	149.0
DS-L 6-S	6	S 800 (3400)	17	12	19	31	16.0	17	16	44	29.0	19	M 14x1.5	10.5
DS-L 8-S	8	S 800 (3400)	19	14	22	32	17.0	18	16	44	29.0	22	M 16x1.5	14.0
DS-L 10-S	10	S 800 (3400)	22	17	24	34	17.5	20	16	46	29.5	24	M 18x1.5	19.0
DS-L 12-S	12	S 630 (2700)	24	17	27	38	21.5	21	16	47	30.5	27	M 20x1.5	22.5
DS-L 14-S	14	S 630 (2700)	27	19	30	40	22.0	23	16	50	32.0	27	M 22x1.5	30.0
DS-L 16-S	16	S 630 (2700)	30	24	32	43	24.5	24	16	50	31.5	30	M 24x1.5	36.5
DS-L 20-S	20	S 400 (1700)	36	27	41	48	26.5	30	16	55	33.5	36	M 30x2	58.0
DS-L 25-S	25	S 400 (1700)	46	36	46	54	30.0	34	16	59	35.0	42	M 36x2	100.0
DS-L 30-S	30	S 400 (1700)	50	41	50	62	35.5	39	16	64	37.5	50	M 42x2	130.0
DS-L 38-S	38	S 400 (1700)	60	50	65	72	41.0	43	16	68	37.0	60	M 52x2	197.0

L_2+L_3 = approximate length with nut tightened

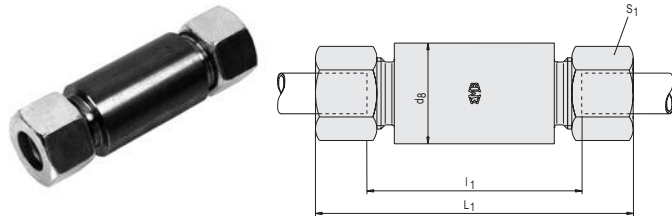
Please see "Engineering and technical data - Selecting the correct tube fitting" for more information on pressure.

PIPE SCREW JOINTS N WELDING BULKHEAD CONNECTIONS

N WELDING BULKHEAD CONNECTIONS

Socket material: steel, fusion weldable.

Socket surface: bright, oiled.



description	pipe OD	PN series	S ₁	L ₁	l ₁	d ₈	kg / 100 pcs
DS-N 6-L	6	L 500 (2200)	14	85	56	18	13.1
DS-N 8-L	8	L 500 (2200)	17	85	56	20	16.2
DS-N 10-L	10	L 500 (2200)	19	87	58	22	19.5
DS-N 12-L	12	L 400 (1700)	22	87	58	25	24.1
DS-N 15-L	15	L 400 (1700)	27	100	70	28	35.3
DS-N 18-L	18	L 400 (1700)	32	101	69	32	46.9
DS-N 22-L	22	L 250 (1100)	36	105	73	36	58.2
DS-N 28-L	28	L 250 (1100)	41	106	73	40	66.0
DS-N 35-L	35	L 250 (1100)	50	114	71	50	102.9
DS-N 42-L	42	L 250 (1100)	60	115	70	60	148.8
DS-N 6-S	6	S 800 (3400)	17	89	60	20	16.9
DS-N 8-S	8	S 800 (3400)	19	89	60	22	20.4
DS-N 10-S	10	S 800 (3400)	22	91	59	25	27.0
DS-N 12-S	12	S 630 (2700)	24	91	59	28	33.1
DS-N 14-S	14	S 630 (2700)	27	107	72	30	44.7
DS-N 16-S	16	S 630 (2700)	30	107	71	35	57.8
DS-N 20-S	20	S 400 (1700)	36	114	71	38	73.2
DS-N 25-S	25	S 400 (1700)	46	120	72	45	114.6
DS-N 30-S	30	S 400 (1700)	50	126	73	50	134.4
DS-N 38-S	38	S 400 (1700)	60	133	72	60	191.3

L₁ = approximate length with nut tightened

Please see "Engineering and technical data - Selecting the correct tube fitting" for more information on pressure.

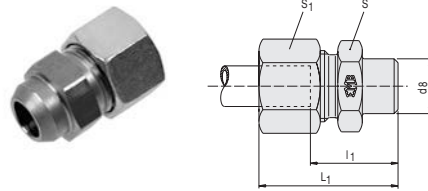
PIPE SCREW JOINTS V WELDING BOSSES

THE WORLD OF TUBE FITTINGS

V WELDING BOSSES

Socket material: steel, fusion weldable.

Socket surface: bright, oiled.



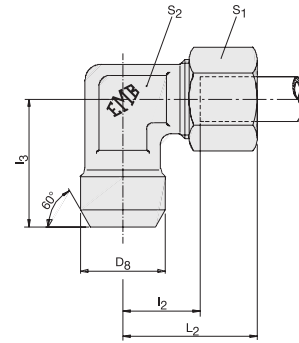
description	pipe OD	PN series	S	S ₁	L ₁	l ₁	d ₈	kg / 100 pcs
DS-V 6-L	6	L 500 (2200)	12	14	29	14.0	10	2.5
DS-V 8-L	8	L 500 (2200)	14	17	31	16.0	12	3.6
DS-V 10-L	10	L 500 (2200)	17	19	33	18.0	14	4.7
DS-V 12-L	12	L 400 (1700)	19	22	33	18.0	16	6.3
DS-V 15-L	15	L 400 (1700)	22	27	37	22.0	19	8.4
DS-V 18-L	18	L 400 (1700)	27	32	40	23.5	22	13.9
DS-V 22-L	22	L 250 (1100)	32	36	45	28.5	27	18.1
DS-V 28-L	28	L 250 (1100)	41	41	47	30.5	32	30.2
DS-V 35-L	35	L 250 (1100)	46	50	54	32.5	40	37.7
DS-V 42-L	42	L 250 (1100)	55	60	58	35.0	46	64.1
DS-V 6-S	6	S 800 (3400)	14	17	34	19.0	11	3.2
DS-V 8-S	8	S 800 (3400)	17	19	36	21.0	13	4.9
DS-V 10-S	10	S 800 (3400)	19	22	39	22.5	15	7.2
DS-V 12-S	12	S 630 (2700)	22	24	41	24.5	17	8.3
DS-V 14-S	14	S 630 (2700)	24	27	45	27.0	19	10.8
DS-V 16-S	16	S 630 (2700)	27	30	45	26.5	21	14.4
DS-V 20-S	20	S 400 (1700)	32	36	51	29.5	26	21.8
DS-V 25-S	25	S 400 (1700)	41	46	56	32.0	31	37.7
DS-V 30-S	30	S 400 (1700)	46	50	62	35.5	36	44.9
DS-V 38-S	38	S 400 (1700)	55	60	69	38.0	44	68.4

L₁ = approximate length with nut tightened

Please see "Engineering and technical data - Selecting the correct tube fitting" for more information on pressure.

PIPE SCREW JOINTS BS WELDING ELBOWS

BS WELDING ELBOWS



description	pipe OD	PN series	S ₁	S ₂	L ₂	l ₂	l ₃	d ₈	kg / 100 pcs
DS-BS 6-L	6	L 500	14	12	27	12.0	19	10	3.0
DS-BS 8-L	8	L 500	17	12	29	14.0	23	12	3.6
DS-BS 10-L	10	L 500	19	14	30	15.0	24	14	5.2
DS-BS 12-L	12	L 500	22	17	32	17.0	25	16	7.3
DS-BS 15-L	15	L 400	27	19	36	21.0	30	19	12.0
DS-BS 18-L	18	L 400	32	24	40	23.5	33	22	16.6
DS-BS 22-L	22	L 250	36	27	44	27.5	37	27	24.6
DS-BS 28-L	28	L 250	41	36	47	30.5	42	32	34.7
DS-BS 35-L	35	L 250	50	41	56	34.5	49	40	61.2
DS-BS 42-L	42	L 250	60	50	63	40.0	57	46	84.6
DS-BS 6-S	6	S 800	17	12	31	16.0	23	11	5.2
DS-BS 8-S	8	S 800	19	14	32	17.0	24	13	6.4
DS-BS 10-S	10	S 800	22	17	34	17.5	25	15	9.7
DS-BS 12-S	12	S 630	24	17	38	21.5	29	17	10.8
DS-BS 14-S	14	S 630	27	19	40	22.0	30	19	15.3
DS-BS 16-S	16	S 630	30	24	43	24.5	33	21	18.9
DS-BS 20-S	20	S 400	36	27	48	26.5	37	26	30.3
DS-BS 25-S	25	S 400	46	36	54	30.0	42	31	58.0
DS-BS 30-S	30	S 400	50	41	62	35.5	49	36	74.4
DS-BS 38-S	38	S 400	60	50	72	41.0	57	44	98.9

Please see "Engineering and technical data - Selecting the correct tube fitting" for more information on pressure.

THE WORLD OF TUBE FITTINGS
INTEGRATED FLUID POWER SOLUTIONS



COUPLINGS



COUPLINGS

BANJO COUPLING

SBD BANJO COUPLING

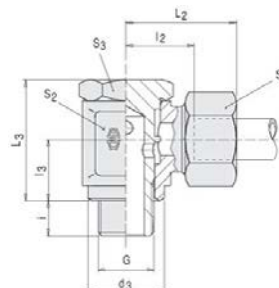
THE WORLD OF TUBE FITTINGS

SBD BANJO COUPLING BSP

BSP parallel.

Bodies from forgings with turned sealing shoulder.

Tubes O.D. L 18, L 22, S 16 and S 20 with sealing washer.



description	pipe OD	PB series	S ₁	S ₂	S ₃	L ₂	l ₂	l ₃	L ₃	d ₃	i	G	MA* Nm	kg / 100 pcs
SBD 4-RLL	4	LL 100	10	14	14	21	11.5	10.0	21.0	14.5	6	G 1/8" A	20	3.0
SBD 6-RLL	6	LL 100	12	14	14	22	10.0	10.0	21.0	14.5	6	G 1/8" A	20	3.3
SBD 8-RLL	8	LL 100	14	14	14	23	12.0	10.0	21.0	14.5	6	G 1/8" A	20	3.5
DS-SBD 6-RL	6	L 250	14	14	14	25	10.5	10.0	21.0	14.5	6	G 1/8" A	20	4.0
DS-SBD 8-RL	8	L 250	17	19	19	28	13.0	13.0	27.0	18.5	9	G 1/4" A	45	7.7
DS-SBD 10-RL	10	L 250	19	19	19	29	14.0	13.0	27.0	18.5	9	G 1/4" A	45	8.5
DS-SBD 12-RL	12	L 250	22	22	22	30	15.5	15.0	32.0	22.5	9	G 3/8" A	70	14.2
DS-SBD 15-RL	15	L 250	27	27	27	34	19.0	18.0	37.5	26.5	11	G 1/2" A	100	19.5
DS-SBD 18-RL	18	L 160	32	30	27	37	20.5	21.5	44.0	26.0	11	G 1/2" A	100	20.5
DS-SBD 22-RL	22	L 160	36	36	32	42	25.5	24.0	49.0	32.0	13	G 3/4" A	140	38.3
DS-SBD 6-RS	6	S 250	17	19	19	30	15.0	13.0	27.0	18.5	9	G 1/4" A	45	8.0
DS-SBD 8-RS	8	S 250	19	19	19	30	15.0	13.0	27.0	18.5	9	G 1/4" A	45	9.5
DS-SBD 10-RS	10	S 250	22	22	22	32	16.0	15.0	32.0	22.5	9	G 3/8" A	70	12.0
DS-SBD 12-RS	12	S 250	24	24	24	33	17.0	18.0	37.0	22.5	9	G 3/8" A	70	14.5
DS-SBD 14-RS	14	S 250	27	27	27	38	20.0	18.0	37.0	26.5	11	G 1/2" A	100	21.5
DS-SBD 16-RS	16	S 160	30	30	27	40	21.5	21.5	44.0	26.0	11	G 1/2" A	100	27.7
DS-SBD 20-RS	20	S 160	36	36	32	46	24.5	24.0	49.0	32.0	13	G 3/4" A	140	42.5

L₂ = approximate length with nut tightened

* Recommended tightening torques for stud threads G, with mating material steel

Please see "Engineering and technical data - Selecting the correct tube fitting" for more information on pressure.

COUPLINGS

BANJO COUPLING

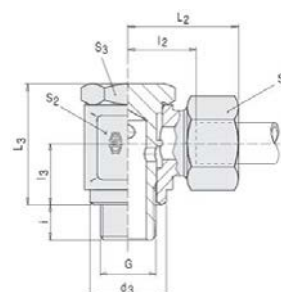
SBD BANJO COUPLING

SBD BANJO COUPLING METRIC

Metric parallel.

Bodies from forgings with turned sealing shoulder.

Tubes O.D. L 18, L 22, S 16 and S 20 with sealing washer.



description	pipe OD	PB series	S ₁	S ₂	S ₃	L ₂	l ₂	l ₃	L ₃	d ₃	i	G	MA* Nm	kg / 100 pcs
SBD 4-MLL	4	LL 100	10	12	12	20	10.5	8.0	17.0	12.5	6	M 8x1	10	2.8
SBD 6-MLL	6	LL 100	12	14	14	22	10.0	10.0	21.0	14.5	6	M 10x1	25	3.3
SBD 8-MLL	8	LL 100	14	14	14	23	12.0	10.0	21.0	14.5	6	M 10x1	25	3.5
DS-SBD 6-ML	6	L 250	14	14	14	25	10.5	10.0	21.0	14.5	6	M 10x1	25	3.8
DS-SBD 8-ML	8	L 250	17	17	17	27	12.0	12.0	25.0	17.5	9	M 12x1.5	40	7.0
DS-SBD 10-ML	10	L 250	19	19	19	29	14.0	13.0	27.0	19.5	9	M 14x1.5	55	8.0
DS-SBD 12-ML	12	L 250	22	22	22	30	15.5	15.0	32.0	21.5	9	M 16x1.5	65	11.2
DS-SBD 15-ML	15	L 250	27	24	24	33	17.5	18.0	37.5	23.5	9	M 18x1.5	90	16.5
DS-SBD 18-ML	18	L 160	32	30	27	37	20.5	21.5	44.0	27.0	11	M 22x1.5	130	26.5
DS-SBD 22-ML	22	L 160	36	36	32	42	25.5	24.0	49.0	31.0	13	M 26x1.5	140	35.0
DS-SBD 6-MS	6	S 250	17	17	17	29	14.0	12.0	25.0	17.5	9	M 12x1.5	40	6.7
DS-SBD 8-MS	8	S 250	19	19	19	30	15.0	13.0	27.0	19.5	9	M 14x1.5	55	9.3
DS-SBD 10-MS	10	S 250	22	22	22	32	16.0	15.0	32.0	21.5	9	M 16x1.5	65	13.0
DS-SBD 12-MS	12	S 250	24	24	24	33	17.0	18.0	37.0	23.5	9	M 18x1.5	90	16.8
DS-SBD 14-MS	14	S 250	27	27	27	38	20.0	18.0	37.0	25.5	11	M 20x1.5	120	21.5
DS-SBD 16-MS	16	S 160	30	30	27	40	21.5	21.5	44.0	27.0	11	M 22x1.5	130	27.5
DS-SBD 20-MS	20	S 160	36	36	32	46	24.5	24.0	49.0	32.0	13	M 27x2	150	42.5

L₂ = approximate length with nut tightened

* Recommended tightening torques for stud threads G, with mating material steel

Please see "Engineering and technical data - Selecting the correct tube fitting" for more information on pressure.

COUPLINGS

BANJO COUPLING

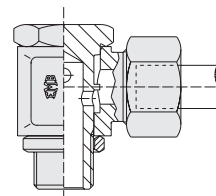
SBD BANJO COUPLING

THE WORLD OF TUBE FITTINGS

SBD BANJO COUPLING COMPONENTS BSP

BSP parallel.

Order codes single parts.



description	pipe OD	series	Housing	Hollow screw	Seal-edge ring
SBD 4-RLL	4	LL	XSBD 4-RLL/K	SHD R 1/8"	turned sealing shoulder
SBD 6-RLL	6	LL	XSBD 6-RLL/K	SHD R 1/8"	turned sealing shoulder
SBD 8-RLL	8	LL	XSBD 8-RLL/K	SHD R 1/8"	turned sealing shoulder
DS-SBD 6-RL	6	L	XSBD 6-RL/K	SHD R 1/8"	turned sealing shoulder
DS-SBD 8-RL	8	L	XSBD 8-RL/K	SHD R 1/4"	turned sealing shoulder
DS-SBD 10-RL	10	L	XSBD 10-RL/K	SHD R 1/4"	turned sealing shoulder
DS-SBD 12-RL	12	L	XSBD 12-RL/K	SHD R 3/8"	turned sealing shoulder
DS-SBD 15-RL	15	L	XSBD 15-RL/K	SHD R 1/2"	turned sealing shoulder
DS-SBD 18-RL	18	L	XSBD 18-RL/K	SHD R 1/2" / 55	DKAD R 1/2"
DS-SBD 22-RL	22	L	XSBD 22-RL/K	SHD R 3/4"	DKAD R 3/4"
DS-SBD 6-RS	6	S	XSBD 6-RS/K	SHD R 1/4"	turned sealing shoulder
DS-SBD 8-RS	8	S	XSBD 8-RS/K	SHD R 1/4"	turned sealing shoulder
DS-SBD 10-RS	10	S	XSBD 10-RS/K	SHD R 3/8"	turned sealing shoulder
DS-SBD 12-RS	12	S	XSBD 12-RS/K	SHD R 3/8" 24	turned sealing shoulder
DS-SBD 14-RS	14	S	XSBD 14-RS/K	SHD R 1/2"	turned sealing shoulder
DS-SBD 16-RS	16	S	XSBD 16-RS/K	SHD R 1/2" 55	DKAD R 1/2"
DS-SBD 20-RS	20	S	XSBD 20-RS/K	SHD R 3/4"	DKAD R 3/4"

Please see "Engineering and technical data - Selecting the correct tube fitting" for more information on pressure.

COUPLINGS

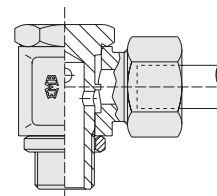
BANJO COUPLING

SBD BANJO COUPLING

SBD BANJO COUPLING COMPONENTS METRIC

Metric parallel.

Order codes single parts.



description	pipe OD	series	Housing	Hollow screw	Seal-edge ring
SBD 4-MLL	4	LL	XSBD 4-MLL/K	SHD M 8x1	turned sealing shoulder
SBD 6-MLL	6	LL	XSBD 6-MLL/K	SHD M 10x1	turned sealing shoulder
SBD 8-MLL	8	LL	XSBD 8-MLL/K	SHD M 10x1	turned sealing shoulder
DS-SBD 6-ML	6	L	XSBD 6-ML/K	SHD M 10x1	turned sealing shoulder
DS-SBD 8-ML	8	L	XSBD 8-ML/K	SHD M 12x1.5	turned sealing shoulder
DS-SBD 10-ML	10	L	XSBD 10-ML/K	SHD M 14x1.5	turned sealing shoulder
DS-SBD 12-ML	12	L	XSBD 12-ML/K	SHD M 16x1.5	turned sealing shoulder
DS-SBD 15-ML	15	L	XSBD 15-ML/K	SHD M 18x1.5	turned sealing shoulder
DS-SBD 18-ML	18	L	XSBD 18-ML/K	SHD M 22x1.5	DKAD M 22
DS-SBD 22-ML	22	L	XSBD 22-ML/K	SHD M 26x1.5	DKAD M 26
DS-SBD 6-MS	6	S	XSBD 6-MS/K	SHD M 12x1.5	turned sealing shoulder
DS-SBD 8-MS	8	S	XSBD 8-MS/K	SHD M 14x1.5	turned sealing shoulder
DS-SBD 10-MS	10	S	XSBD 10-MS/K	SHD M 16x1.5	turned sealing shoulder
DS-SBD 12-MS	12	S	XSBD 12-MS/K	SHD M 18x1.5	turned sealing shoulder
DS-SBD 14-MS	14	S	XSBD 14-MS/K	SHD M 20x1.5	turned sealing shoulder
DS-SBD 16-MS	16	S	XSBD 16-MS/K	SHD M 22x1.5	DKAD M 22
DS-SBD 20-MS	20	S	XSBD 20-MS/K	SHD M 27x2	DKAD M 27

Please see "Engineering and technical data - Selecting the correct tube fitting" for more information on pressure.

COUPLINGS

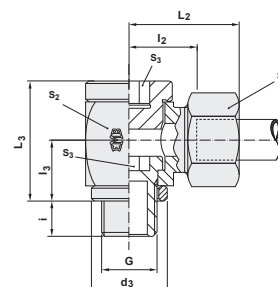
BANJO COUPLING

SB BANJO COUPLING CHOKE-FREE

THE WORLD OF TUBE FITTINGS

SB BANJO COUPLING CHOKE-FREE BSP

BSP parallel.



description	pipe OD	PB series	S ₁	S ₂	S ₃	L ₂	l ₂	l ₃	L ₃	d ₃	i	G	kg / 100 pcs
DS-SB 6-RL	6	L 250	14	18	6	27	12.5	12.0	24	14	8	G 1/8" A	5.9
DS-SB 8-RL	8	L 250	17	22	8	29	14.5	16.0	30	18	12	G 1/4" A	10.5
DS-SB 10-RL	10	L 250	19	22	8	30	15.5	16.0	30	18	12	G 1/4" A	11.3
DS-SB 12-RL	12	L 250	22	27	10	33	18.0	18.0	37	22	12	G 3/8" A	18.0
DS-SB 15-RL	15	L 250	27	32	12	37	22.0	21.0	42	26	14	G 1/2" A	24.7
DS-SB 18-RL	18	L 100	32	36	12	38	21.5	23.0	46	26	14	G 1/2" A	26.9
DS-SB 22-RL	22	L 100	36	46	17	45	28.5	28.0	58	32	16	G 3/4" A	54.6
DS-SB 28-RL	28	L 100	41	50	22	48	31.5	30.5	64	39	18	G 1" A	83.0
DS-SB 35-RL	35	L 100	50	60	27	57	35.5	36.0	76	49	20	G 1 1/4" A	117.3
DS-SB 42-RL	42	L 100	60	70	32	63	40.0	41.0	85	55	22	G 1 1/2" A	224.4
DS-SB 6-RS	6	S 400*	17	22	8	31	16.5	16.0	30	18	12	G 1/4" A	10.9
DS-SB 8-RS	8	S 400*	19	22	8	31	16.5	16.0	30	18	12	G 1/4" A	11.4
DS-SB 10-RS	10	S 400*	22	27	10	35	18.5	18.0	37	22	12	G 3/8" A	19.0
DS-SB 12-RS	12	S 400*	24	27	10	35	18.5	18.0	37	22	12	G 3/8" A	19.6
DS-SB 14-RS	14	S 400*	27	32	12	41	23.0	21.0	42	26	14	G 1/2" A	29.7
DS-SB 16-RS	16	S 400*	30	36	12	41	22.5	23.0	46	26	14	G 1/2" A	30.7
DS-SB 20-RS	20	S 400*	36	46	17	49	27.5	28.0	58	32	16	G 3/4" A	75.3
DS-SB 25-RS	25	S 250*	46	50	22	55	31.0	30.5	64	39	18	G 1" A	101.9
DS-SB 30-RS	30	S 250*	50	60	27	63	36.5	36.0	76	49	20	G 1 1/4" A	158.0
DS-SB 38-RS	38	S 250*	60	70	32	72	41.0	41.0	85	55	22	G 1 1/2" A	243.2

L₂ = approximate length with nut tightened

* Security factor minimum 1.6

Please see "Engineering and technical data - Selecting the correct tube fitting" for more information on pressure.

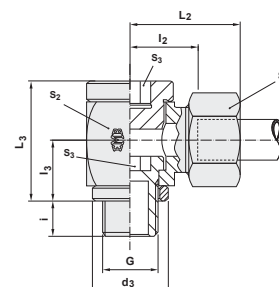
COUPLINGS

BANJO COUPLING

SB BANJO COUPLING CHOKE-FREE

SB BANJO COUPLING CHOKE-FREE METRIC

Metric parallel.



description	pipe OD	PB series	S ₁	S ₂	S ₃	L ₂	l ₂	l ₃	L ₃	d ₃	i	G	kg / 100 pcs
DS-SB 6-ML	6	L 250	14	18	6	27	12.5	12.0	24	14	8	M 10x1	6.2
DS-SB 8-ML	8	L 250	17	22	6	29	14.5	15.0	30	17	12	M 12x1.5	10.0
DS-SB 10-ML	10	L 250	19	22	8	30	15.5	16.0	30	19	12	M 14x1.5	11.4
DS-SB 12-ML	12	L 250	22	27	10	33	18.0	18.0	37	21	12	M 16x1.5	17.9
DS-SB 15-ML	15	L 250	27	30	12	36	21.0	20.0	40	23	12	M 18x1.5	24.1
DS-SB 18-ML	18	L 100	32	36	14	38	21.5	23.0	46	27	14	M 22x1.5	30.1
DS-SB 22-ML	22	L 100	36	41	17	42	26.0	25.0	51	31	16	M 26x1.5	39.9
DS-SB 28-ML	28	L 100	41	50	22	48	31.5	30.5	64	39	18	M 33x2	82.5
DS-SB 35-ML	35	L 100	50	60	27	57	35.5	36.0	76	49	20	M 42x2	116.1
DS-SB 42-ML	42	L 100	60	70	32	63	40.0	41.0	85	55	22	M 48x2	224.0
DS-SB 6-MS	6	S 400*	17	22	6	31	16.5	15.0	30	17	12	M 12x1.5	9.2
DS-SB 8-MS	8	S 400*	19	22	8	31	16.5	16.0	30	19	12	M 14x1.5	11.6
DS-SB 10-MS	10	S 400*	22	27	10	35	18.5	18.0	37	21	12	M 16x1.5	18.9
DS-SB 12-MS	12	S 400*	24	30	12	37	20.5	20.0	41	23	12	M 18x1.5	24.0
DS-SB 14-MS	14	S 400*	27	32	12	41	23.0	21.0	42	25	14	M 20x1.5	30.2
DS-SB 16-MS	16	S 400*	30	36	14	41	22.5	23.0	46	27	14	M 22x1.5	38.9
DS-SB 20-MS	20	S 400*	36	46	17	49	27.5	28.0	58	32	16	M 27x2	75.8
DS-SB 25-MS	25	S 250*	46	50	22	55	31.0	30.5	64	39	18	M 33x2	101.4
DS-SB 30-MS	30	S 250*	50	60	27	63	36.5	36.0	76	49	20	M 42x2	156.8
DS-SB 38-MS	38	S 250*	60	70	32	72	41.0	41.0	85	55	22	M 48x2	242.8

L₂ = approximate length with nut tightened

* Security factor minimum 1.6

Please see "Engineering and technical data - Selecting the correct tube fitting" for more information on pressure.

COUPLINGS

BANJO COUPLING

SBE BANJO COUPLING HIGH PRESSURE

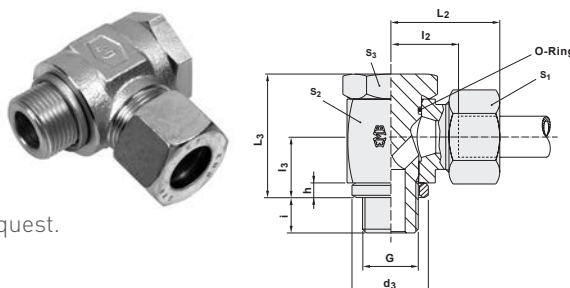
THE WORLD OF TUBE FITTINGS

SBE BANJO COUPLING HIGH PRESSURE BSP DKA

BSP parallel.

Edge sealing ring DKA match "narrow" counter bore according to DIN 3852/d4.

O-ring NBR (e.g. Perbunan), FPM (e.g. Viton) upon request.



description	pipe OD	PB series	S ₁	S ₂	S ₃	L ₂	L ₂	L ₃	L ₃	d ₃	i	h	G	MA* Nm	kg / 100 pcs
DS-SBE 6-RL	6	L 500	14	17	17	27	24	12.0	10.5	14	8	2.5	G 1/8" A	20	6.4
DS-SBE 8-RL	8	L 500	17	22	19	29	30	14.5	14.0	18	12	3.0	G 1/4" A	50	11.7
DS-SBE 10-RL	10	L 500	19	22	19	30	30	15.5	14.0	18	12	3.0	G 1/4" A	50	12.3
DS-SBE 12-RL	12	L 400	22	27	24	33	36	18.0	16.5	22	12	3.0	G 3/8" A	75	20.7
DS-SBE 15-RL	15	L 400	27	32	30	37	45	21.5	21.5	26	14	4.5	G 1/2" A	130	35.9
DS-SBE 18-RL	18	L 400	32	32	30	37	45	21.0	21.5	26	14	4.5	G 1/2" A	130	38.4
DS-SBE 22-RL	22	L 250	36	41	36	44	53	27.5	24.0	32	16	3.5	G 3/4" A	250	66.6
DS-SBE 28-RL	28	L 250	41	50	46	49	66	32.0	30.5	39	18	3.5	G 1" A	350	112.7
DS-SBE 35-RL	35	L 250	50	60	55	58	76	36.0	35.5	49	20	3.5	G 1 1/4" A	600	166.3
DS-SBE 42-RL	42	L 250	60	70	60	63	87	40.5	40.5	55	22	3.5	G 1 1/2" A	800	245.9
DS-SBE 6-RS	6	S 500	17	22	19	31	30	16.5	14.0	18	12	3.0	G 1/4" A	50	12.6
DS-SBE 8-RS	8	S 500	19	22	19	31	30	16.5	14.0	18	12	3.0	G 1/4" A	50	12.9
DS-SBE 10-RS	10	S 500	22	27	24	35	36	18.5	16.5	22	12	3.0	G 3/8" A	75	22.0
DS-SBE 12-RS	12	S 500	24	27	24	35	36	18.5	16.5	22	12	3.0	G 3/8" A	75	22.5
DS-SBE 14-RS	14	S 500	27	32	30	40	45	22.5	21.5	26	14	4.5	G 1/2" A	130	37.5
DS-SBE 16-RS	16	S 500	30	32	30	40	45	22.0	21.5	26	14	4.5	G 1/2" A	130	39.3
DS-SBE 20-RS	20	S 400	36	41	36	48	53	26.5	24.0	32	16	3.5	G 3/4" A	250	69.2
DS-SBE 25-RS	25	S 400	46	50	46	56	66	31.5	30.5	39	18	3.5	G 1" A	350	128.4
DS-SBE 30-RS	30	S 400	50	60	55	64	76	37.0	35.5	49	20	3.5	G 1 1/4" A	600	176.3
DS-SBE 38-RS	38	S 400	60	70	60	72	87	41.5	40.5	55	22	3.5	G 1 1/2" A	800	293.0

L₂ = approximate length with nut tightened

* Recommended tightening torques for stud threads G, with mating material steel

Please see "Engineering and technical data - Selecting the correct tube fitting" for more information on pressure.

COUPLINGS

BANJO COUPLING

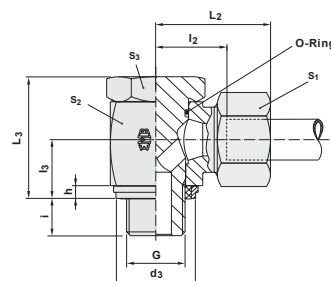
SBE BANJO COUPLING HIGH PRESSURE

SBE BANJO COUPLING HIGH PRESSURE BSP EDE

BSP parallel.

Sealing ring EDE (vulcanised NBR) for "narrow"
DIN 3852/d4 bore.

O-ring NBR (e.g. Perbunan), FPM (e.g. Viton) upon request.



description	pipe OD	PB series	S ₁	S ₂	S ₃	L ₂	L ₂	L ₃	L ₃	D ₉	i	h	G	MA* Nm	kg / 100 pcs
DS-SBE 6-RL/EDE	6	L 500	14	17	17	27	12.0	24	10.5	14.9	8	2.5	G 1/8" A	20	6.4
DS-SBE 8-RL/EDE	8	L 500	17	22	19	29	14.5	30	14.0	18.9	12	3.0	G 1/4" A	50	11.7
DS-SBE 10-RL/EDE	10	L 500	19	22	19	30	15.5	30	14.0	18.9	12	3.0	G 1/4" A	50	12.3
DS-SBE 12-RL/EDE	12	L 400	22	27	24	33	18.0	36	16.5	21.9	12	3.0	G 3/8" A	75	20.7
DS-SBE 15-RL/EDE	15	L 400	27	32	30	37	21.5	45	21.5	26.9	14	4.5	G 1/2" A	130	35.9
DS-SBE 18-RL/EDE	18	L 400	32	32	30	37	21.0	45	21.5	26.9	14	4.5	G 1/2" A	130	38.4
DS-SBE 22-RL/EDE	22	L 250	36	41	36	44	27.5	53	24.0	32.9	16	3.5	G 3/4" A	250	66.6
DS-SBE 28-RL/EDE	28	L 250	41	50	46	49	32.0	66	30.5	39.9	18	3.5	G 1" A	350	112.7
DS-SBE 35-RL/EDE	35	L 250	50	60	55	58	36.0	76	35.5	49.9	20	3.5	G 1 1/4" A	600	166.3
DS-SBE 42-RL/EDE	42	L 250	60	70	60	63	40.5	87	40.5	55.9	22	3.5	G 1 1/2" A	800	245.9
DS-SBE 6-RS/EDE	6	S 500	17	22	19	31	16.5	30	14.0	18.9	12	3.0	G 1/4" A	50	12.6
DS-SBE 8-RS/EDE	8	S 500	19	22	19	31	16.5	30	14.0	18.9	12	3.0	G 1/4" A	50	12.9
DS-SBE 10-RS/EDE	10	S 500	22	27	24	35	18.5	36	16.5	21.9	12	3.0	G 3/8" A	75	22.0
DS-SBE 12-RS/EDE	12	S 500	24	27	24	35	18.5	36	16.5	21.9	12	3.0	G 3/8" A	75	22.5
DS-SBE 14-RS/EDE	14	S 500	27	32	30	40	22.5	45	21.5	26.9	14	4.5	G 1/2" A	130	37.5
DS-SBE 16-RS/EDE	16	S 500	30	32	30	40	22.0	45	21.5	26.9	14	4.5	G 1/2" A	130	39.3
DS-SBE 20-RS/EDE	20	S 400	36	41	36	48	26.5	53	24.0	32.9	16	3.5	G 3/4" A	250	69.2
DS-SBE 25-RS/EDE	25	S 400	46	50	46	56	31.5	66	30.5	39.9	18	3.5	G 1" A	350	128.4
DS-SBE 30-RS/EDE	30	S 400	50	60	55	64	37.0	76	35.5	49.9	20	3.5	G 1 1/4" A	600	176.3
DS-SBE 38-RS/EDE	38	S 400	60	70	60	72	41.5	87	40.5	55.9	22	3.5	G 1 1/2" A	800	293.0

L₂ = approximate length with nut tightened

* Recommended tightening torques for stud threads G, with mating material steel

Please see "Engineering and technical data - Selecting the correct tube fitting" for more information on pressure.

COUPLINGS

BANJO COUPLING

SBE BANJO COUPLING HIGH PRESSURE

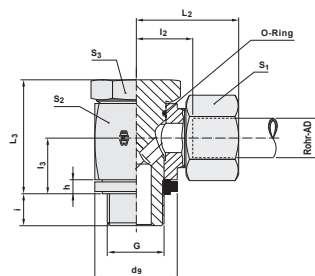
THE WORLD OF TUBE FITTINGS

SBE BANJO COUPLING HIGH PRESSURE BSP KDE

BSP parallel.

Metal joint ring KDE.

O-ring NBR (e.g. Perbunan), FPM (e.g. Viton) upon request.



description	pipe OD	PB series	S ₁	S ₂	S ₃	L ₂	l ₂	l ₃	L ₃	D ₉	i	h	G	MA* Nm	kg / 100 pcs
DS-SBE 6-RL/KDE	6	L 500	14	17	17	27	12.0	10.5	24	17	8	2.5	G 1/8" A	20	6.4
DS-SBE 8-RL/KDE	8	L 500	17	22	19	29	14.5	14.0	30	22	12	3.0	G 1/4" A	50	11.9
DS-SBE 10-RL/KDE	10	L 500	19	22	19	30	15.5	14.0	30	22	12	3.0	G 1/4" A	50	12.5
DS-SBE 12-RL/KDE	12	L 400	22	27	24	33	18.0	16.5	36	27	12	3.0	G 3/8" A	75	21.0
DS-SBE 15-RL/KDE	15	L 400	27	32	30	37	21.5	21.5	45	32	14	4.5	G 1/2" A	130	36.5
DS-SBE 18-RL/KDE	18	L 400	32	32	30	37	21.0	21.5	45	32	14	4.5	G 1/2" A	130	39.0
DS-SBE 22-RL/KDE	22	L 250	36	41	36	44	27.5	24.0	53	41	16	3.5	G 3/4" A	250	67.7
DS-SBE 28-RL/KDE	28	L 250	41	50	46	49	32.0	30.5	66	46	18	3.5	G 1" A	350	113.5
DS-SBE 35-RL/KDE	35	L 250	50	60	55	58	36.0	35.5	76	57	20	3.5	G 1 1/4" A	600	167.7
DS-SBE 42-RL/KDE	42	L 250	60	70	60	63	40.5	40.5	87	64	22	3.5	G 1 1/2" A	800	247.7
DS-SBE 6-RS/KDE	6	S 500	17	22	19	31	16.5	14.0	30	22	12	3.0	G 1/4" A	50	12.7
DS-SBE 8-RS/KDE	8	S 500	19	22	19	31	16.5	14.0	30	22	12	3.0	G 1/4" A	50	13.1
DS-SBE 10-RS/KDE	10	S 500	22	27	24	35	18.5	16.5	36	27	12	3.0	G 3/8" A	75	22.2
DS-SBE 12-RS/KDE	12	S 500	24	27	24	35	18.5	16.5	36	27	12	3.0	G 3/8" A	75	22.8
DS-SBE 14-RS/KDE	14	S 500	27	32	30	40	22.5	21.5	45	32	14	4.5	G 1/2" A	130	38.0
DS-SBE 16-RS/KDE	16	S 500	30	32	30	40	22.0	21.5	45	32	14	4.5	G 1/2" A	130	39.9
DS-SBE 20-RS/KDE	20	S 400	36	41	36	48	26.5	24.0	53	41	16	3.5	G 3/4" A	250	70.3
DS-SBE 25-RS/KDE	25	S 400	46	50	46	56	31.5	30.5	66	46	18	3.5	G 1" A	350	129.2
DS-SBE 30-RS/KDE	30	S 400	50	60	55	64	37.0	35.5	76	57	20	3.5	G 1 1/4" A	600	177.7
DS-SBE 38-RS/KDE	38	S 400	60	70	60	72	41.5	40.5	87	64	22	3.5	G 1 1/2" A	800	294.8

L₂ = approximate length with nut tightened

* Recommended tightening torques for stud threads G, with mating material steel

Please see "Engineering and technical data - Selecting the correct tube fitting" for more information on pressure.

COUPLINGS

BANJO COUPLING

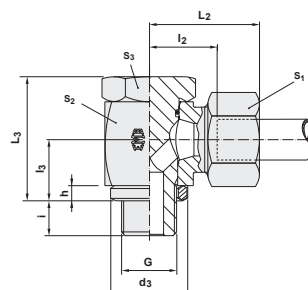
SBE BANJO COUPLING HIGH PRESSURE

SBE BANJO COUPLING HIGH PRESSURE METRIC DKA

Metric parallel.

Edge sealing ring DKA match "narrow" counter bore according to DIN 3852/d4.

O-ring NBR (e.g. Perbunan), FPM (e.g. Viton) upon request.



description	pipe OD	PB series	S ₁	S ₂	S ₃	L ₂	l ₂	l ₃	L ₃	d ₃	i	h	G	MA* Nm	kg / 100 pcs
DS-SBE 6-ML	6	L 500	14	17	17	27	12.0	10.5	24.0	14	8	2.5	M 10x1	25	6.5
DS-SBE 8-ML	8	L 500	17	22	19	29	14.5	14.0	30.0	17	12	3.0	M 12x1.5	50	11.4
DS-SBE 10-ML	10	L 500	19	22	19	30	15.5	14.0	30.0	19	12	3.0	M 14x1.5	60	12.5
DS-SBE 12-ML	12	L 400	22	27	24	33	18.0	16.5	36.0	21	12	3.0	M 16x1.5	90	20.3
DS-SBE 15-ML	15	L 400	27	30	27	36	20.5	18.5	39.5	23	12	3.0	M 18x1.5	110	28.8
DS-SBE 18-ML	18	L 400	32	32	30	37	21.0	21.5	45.0	27	14	4.5	M 22x1.5	150	38.8
DS-SBE 22-ML	22	L 250	36	41	36	44	27.5	24.0	53.0	31	16	3.5	M 26x1.5	350	65.8
DS-SBE 28-ML	28	L 250	41	50	46	49	32.0	30.5	66.0	39	18	3.5	M 33x2	400	110.3
DS-SBE 35-ML	35	L 250	50	60	55	58	36.0	35.5	76.0	49	20	3.5	M 42x2	600	166.3
DS-SBE 42-ML	42	L 250	60	70	60	63	40.5	40.5	87.0	55	22	3.5	M 48x2	800	249.9
DS-SBE 6-MS	6	S 500	17	22	19	31	16.5	14.0	30.0	17	12	3.0	M 12x1.5	50	12.2
DS-SBE 8-MS	8	S 500	19	22	19	31	16.5	14.0	30.0	19	12	3.0	M 14x1.5	60	13.2
DS-SBE 10-MS	10	S 500	22	27	24	35	18.5	16.5	36.0	21	12	3.0	M 16x1.5	90	21.7
DS-SBE 12-MS	12	S 500	24	30	27	36	20.0	18.5	39.5	23	12	3.0	M 18x1.5	110	28.0
DS-SBE 14-MS	14	S 500	27	32	30	40	22.5	20.0	48.5	25	14	3.0	M 20x1.5	130	37.4
DS-SBE 16-MS	16	S 500	30	32	30	40	22.0	21.5	45.0	27	14	4.5	M 22x1.5	150	39.4
DS-SBE 20-MS	20	S 400	36	41	36	48	26.5	24.0	53.0	32	16	3.5	M 27x2	350	68.8
DS-SBE 25-MS	25	S 400	46	50	46	56	31.5	30.5	66.0	39	18	3.5	M 33x2	400	126.0
DS-SBE 30-MS	30	S 400	50	60	55	64	37.0	35.5	76.0	49	20	3.5	M 42x2	600	176.3
DS-SBE 38-MS	38	S 400	60	70	60	72	41.5	40.5	87.0	55	22	3.5	M 48x2	800	296.9

L₂ = approximate length with nut tightened

* Recommended tightening torques for stud threads G, with mating material steel

Please see "Engineering and technical data - Selecting the correct tube fitting" for more information on pressure.

COUPLINGS

BANJO COUPLING

SBE BANJO COUPLING HIGH PRESSURE

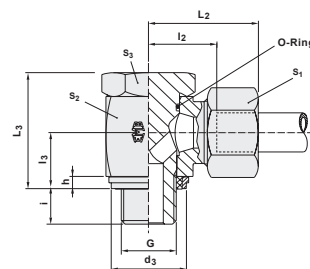
THE WORLD OF TUBE FITTINGS

SBE BANJO COUPLING HIGH PRESSURE METRIC EDE

Metric parallel.

Sealing ring EDE (vulcanised NBR) for "narrow"
DIN 3852/d4 bore.

O-ring NBR (e.g. Perbunan), FPM (e.g. Viton) upon request.



description	pipe OD	PB series	S ₁	S ₂	S ₃	L ₂	l ₂	l ₃	L ₃	d ₃	i	h	d ₉	G	MA* Nm	kg / 100 pcs
DS-SBE 6-ML/EDE	6	L 500	14	17	17	27	12.0	10.5	24.0	14.9	8	2.5	8	M 10x1	25	6.6
DS-SBE 8-ML/EDE	8	L 500	17	22	19	29	14.5	14.0	30.0	16.9	12	3.0	12	M 12x1.5	50	11.6
DS-SBE 10-ML/EDE	10	L 500	19	22	19	30	15.5	14.0	30.0	18.9	12	3.0	12	M 14x1.5	60	12.7
DS-SBE 12-ML/EDE	12	L 400	22	27	24	33	18.0	16.5	36.0	21.9	12	3.0	12	M 16x1.5	90	20.7
DS-SBE 15-ML/EDE	15	L 400	27	30	27	36	20.5	18.5	39.5	23.9	12	3.0	12	M 18x1.5	110	28.8
DS-SBE 18-ML/EDE	18	L 400	32	32	30	37	21.0	21.5	45.0	26.9	14	4.5	14	M 22x1.5	150	39.3
DS-SBE 22-ML/EDE	22	L 250	36	41	36	44	27.5	24.0	53.0	31.9	16	3.5	16	M 26x1.5	350	67.0
DS-SBE 28-ML/EDE	28	L 250	41	50	46	49	32.0	30.5	66.0	39.9	18	3.5	18	M 33x2	400	111.1
DS-SBE 35-ML/EDE	35	L 250	50	60	55	58	36.0	35.5	76.0	49.9	20	3.5	20	M 42x2	600	167.7
DS-SBE 42-ML/EDE	42	L 250	60	70	60	63	40.5	40.5	87.0	55.9	22	3.5	22	M 48x2	800	251.7
DS-SBE 6-MS/EDE	6	S 500	17	22	19	31	16.5	14.0	30.0	16.9	12	3.0	12	M 12x1.5	50	12.5
DS-SBE 8-MS/EDE	8	S 500	19	22	19	31	16.5	14.0	30.0	18.9	12	3.0	12	M 14x1.5	60	13.3
DS-SBE 10-MS/EDE	10	S 500	22	27	24	35	18.5	16.5	36.0	21.9	12	3.0	12	M 16x1.5	90	22.0
DS-SBE 12-MS/EDE	12	S 500	24	30	27	36	20.0	18.5	39.5	23.9	12	3.0	12	M 18x1.5	110	28.3
DS-SBE 16-MS/EDE	16	S 500	30	32	30	40	22.0	21.5	45.0	26.9	14	4.5	14	M 22x1.5	150	39.8
DS-SBE 20-MS/EDE	20	S 400	36	41	36	48	26.5	24.0	53.0	32.9	16	3.5	16	M 27x2	350	69.9
DS-SBE 25-MS/EDE	25	S 400	46	50	46	56	31.5	39.0	66.0	39.9	18	3.5	18	M 33x2	400	126.8
DS-SBE 30-MS/EDE	30	S 400	50	60	55	64	37.0	49.0	76.0	49.9	20	3.5	20	M 42x2	600	177.6
DS-SBE 38-MS/EDE	38	S 400	60	70	60	72	41.5	55.0	87.0	55.9	22	3.5	22	M 48x2	800	298.7

L₂ = approximate length with nut tightened

* Recommended tightening torques for stud threads G, with mating material steel

Please see "Engineering and technical data - Selecting the correct tube fitting" for more information on pressure.

COUPLINGS

BANJO COUPLING

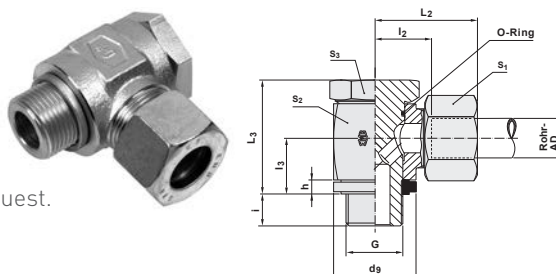
SBE BANJO COUPLING HIGH PRESSURE

SBE BANJO COUPLING HIGH PRESSURE METRIC KDE

Metric parallel.

Metal joint ring KDE.

O-ring NBR (e.g. Perbunan), FPM (e.g. Viton) upon request.



description	pipe OD	PB series	S ₁	S ₂	S ₃	L ₂	l ₂	l ₃	L ₃	d ₃	h	d ₉	G	MA* Nm	kg / 100 pcs
DS-SBE 6-ML/KDE	6	L 500	14	17	17	27	12.0	10.5	24.0	17	2.5	8	M 10x1	25	6.6
DS-SBE 8-ML/KDE	8	L 500	17	22	19	29	14.5	14.0	30.0	22	3.0	12	M 12x1.5	50	11.6
DS-SBE 10-ML/KDE	10	L 500	19	22	19	30	15.5	14.0	30.0	23	3.0	12	M 14x1.5	60	12.7
DS-SBE 12-ML/KDE	12	L 400	22	27	24	33	18.0	16.5	36.0	27	3.0	12	M 16x1.5	90	20.7
DS-SBE 15-ML/KDE	15	L 400	27	30	27	36	20.5	18.5	39.5	29	3.0	12	M 18x1.5	110	28.8
DS-SBE 18-ML/KDE	18	L 400	32	32	30	37	21.0	21.5	45.0	32	4.5	14	M 22x1.5	150	39.3
DS-SBE 22-ML/KDE	22	L 250	36	41	36	44	27.5	24.0	53.0	41	3.5	16	M 26x1.5	350	67.0
DS-SBE 28-ML/KDE	28	L 250	41	50	46	49	32.0	30.5	66.0	46	3.5	18	M 33x2	400	111.1
DS-SBE 35-ML/KDE	35	L 250	50	60	55	58	36.0	35.5	76.0	57	3.5	20	M 42x2	600	167.7
DS-SBE 42-ML/KDE	42	L 250	60	70	60	63	40.5	40.5	87.0	64	3.5	22	M 48x2	800	251.7
DS-SBE 6-MS/KDE	6	S 500	17	22	19	31	16.5	14.0	30.0	22	3.0	12	M 12x1.5	50	12.5
DS-SBE 8-MS/KDE	8	S 500	19	22	19	31	16.5	14.0	30.0	23	3.0	12	M 14x1.5	60	13.3
DS-SBE 10-MS/KDE	10	S 500	22	27	24	35	18.5	16.5	36.0	27	3.0	12	M 16x1.5	90	22.0
DS-SBE 12-MS/KDE	12	S 500	24	30	27	36	20.0	18.5	39.5	29	3.0	12	M 18x1.5	110	28.3
DS-SBE 16-MS/KDE	16	S 500	30	32	30	40	22.0	21.5	45.0	32	4.5	14	M 22x1.5	150	39.8
DS-SBE 20-MS/KDE	20	S 400	36	41	36	48	26.5	24.0	53.0	41	3.5	16	M 27x2	350	69.9
DS-SBE 25-MS/KDE	25	S 400	46	50	46	56	31.5	30.5	66.0	46	3.5	18	M 33x2	400	126.8
DS-SBE 30-MS/KDE	30	S 400	50	60	55	64	37.0	35.5	76.0	57	3.5	20	M 42x2	600	177.6
DS-SBE 38-MS/KDE	38	S 400	60	70	60	72	41.5	40.5	87.0	64	3.5	22	M 48x2	800	298.7

L₂ = approximate length with nut tightened

* Recommended tightening torques for stud threads G, with mating material steel

Please see "Engineering and technical data - Selecting the correct tube fitting" for more information on pressure.

COUPLINGS

BANJO COUPLING

SGE T SWIVELING SCREW FITTING HIGH PRESSURE

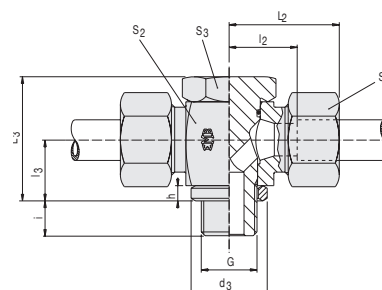
THE WORLD OF TUBE FITTINGS

SGE T SWIVELING SCREW FITTING HIGH PRESSURE BSP DKA

BSP parallel.

Edge sealing ring DKA.

O-ring NBR (e.g. Perbunan), FPM (e.g. Viton) upon request.



description	pipe OD	PB series	S ₁	S ₂	S ₃	L ₂	l ₂	l ₃	L ₃	d ₃	i	h	d ₉	G	MA* Nm	kg / 100 pcs
DS-SGE 6-RL	6	L 500	14	17	17	27	12.0	10.5	24	14	8	2.5	14.9	G 1/8"A	20	8.0
DS-SGE 8-RL	8	L 500	17	22	19	29	14.5	14.0	30	18	12	3.0	18.9	G 1/4"A	50	14.1
DS-SGE 10-RL	10	L 500	19	22	19	30	15.5	14.0	30	18	12	3.0	18.9	G 1/4"A	50	15.0
DS-SGE 12-RL	12	L 400	22	27	24	33	18.0	16.5	36	22	12	3.0	21.9	G 3/8"A	75	24.1
DS-SGE 15-RL	15	L 400	27	32	30	37	21.5	21.5	45	26	14	4.5	26.9	G 1/2"A	130	40.9
DS-SGE 18-RL	18	L 400	32	32	30	37	21.0	21.5	45	26	14	4.5	26.9	G 1/2"A	130	45.8
DS-SGE 22-RL	22	L 250	36	41	36	44	27.5	24.0	53	32	16	3.5	32.9	G 3/4"A	250	75.9
DS-SGE 28-RL	28	L 250	41	50	46	49	32.0	30.5	66	39	18	3.5	39.9	G 1" A	350	125.4
DS-SGE 35-RL	35	L 250	50	60	55	58	36.0	35.5	76	49	20	3.5	49.9	G 1 1/4"A	600	206.1
DS-SGE 42-RL	42	L 250	60	70	60	63	40.5	40.5	87	55	22	3.5	55.9	G 1 1/2"A	800	299.0
DS-SGE 6-RS	6	S 500	17	22	19	31	16.5	14.0	30	18	12	3.0	18.9	G 1/4"A	50	15.2
DS-SGE 8-RS	8	S 500	19	22	19	31	16.5	14.0	30	18	12	3.0	18.9	G 1/4"A	50	16.4
DS-SGE 10-RS	10	S 500	22	27	24	35	18.5	16.5	36	22	12	3.0	21.9	G 3/8"A	75	26.4
DS-SGE 12-RS	12	S 500	24	27	24	35	18.5	16.5	36	22	12	3.0	21.9	G 3/8"A	75	27.8
DS-SGE 14-RS	14	S 500	27	32	30	40	22.5	21.5	45	26	14	4.5	26.9	G 1/2"A	130	[37.5]
DS-SGE 16-RS	16	S 500	30	32	30	40	22.0	21.5	45	26	14	4.5	26.9	G 1/2"A	130	49.0
DS-SGE 20-RS	20	S 400	36	41	36	48	26.5	24.0	53	32	16	3.5	32.9	G 3/4"A	250	84.2
DS-SGE 25-RS	25	S 400	46	50	46	56	31.5	30.5	66	39	18	3.5	39.9	G 1" A	350	155.0
DS-SGE 30-RS	30	S 400	50	60	55	64	37.0	35.5	76	49	20	3.5	49.9	G 1 1/4"A	600	230.0
DS-SGE 38-RS	38	S 400	60	70	60	72	41.5	40.5	87	55	22	3.5	55.9	G 1 1/2"A	800	337.2

L₂ = approximate length with nut tightened

* Recommended tightening torques for stud threads G, with mating material steel

Please see "Engineering and technical data - Selecting the correct tube fitting" for more information on pressure.

COUPLINGS

BANJO COUPLING

SGE T SWIVELING SCREW FITTING HIGH PRESSURE

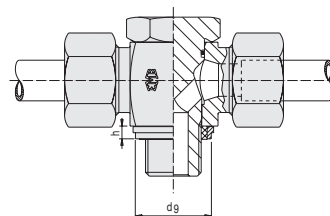
SGE T SWIVELING SCREW FITTING HIGH PRESSURE

BSP EDE

BSP parallel.

Sealing ring EDE.

O-ring NBR (e.g. Perbunan), FPM (e.g. Viton) upon request.



description	pipe OD	PB series	S ₁	S ₂	S ₃	L ₂	l ₂	l ₃	L ₃	d ₃	i	h	d ₉	G	MA* Nm	kg / 100 pcs
DS-SGE 6-RL/EDE	6	L 500	14	17	17	27	12.0	10.5	24	14	8	2.5	14.9	G 1/8"A	20	8.1
DS-SGE 8-RL/EDE	8	L 500	17	22	19	29	14.5	14.0	30	18	12	3.0	18.9	G 1/4"A	50	14.2
DS-SGE 10-RL/EDE	10	L 500	19	22	19	30	15.5	14.0	30	18	12	3.0	18.9	G 1/4"A	50	15.2
DS-SGE 12-RL/EDE	12	L 400	22	27	24	33	18.0	16.5	36	22	12	3.0	21.9	G 3/8"A	75	24.3
DS-SGE 15-RL/EDE	15	L 400	27	32	30	37	21.5	21.5	45	26	14	4.5	26.9	G 1/2"A	130	41.5
DS-SGE 18-RL/EDE	18	L 400	32	32	30	37	21.0	21.5	45	26	14	4.5	26.9	G 1/2"A	130	46.4
DS-SGE 22-RL/EDE	22	L 250	36	41	36	44	27.5	24.0	53	32	16	3.5	32.9	G 3/4"A	250	77.0
DS-SGE 28-RL/EDE	28	L 250	41	50	46	49	32.0	30.5	66	39	18	3.5	39.9	G 1" A	350	126.2
DS-SGE 35-RL/EDE	35	L 250	50	60	55	58	36.0	35.5	76	49	20	3.5	49.9	G 1 1/4"A	600	207.4
DS-SGE 42-RL/EDE	42	L 250	60	70	60	63	40.5	40.5	87	55	22	3.5	55.9	G 1 1/2"A	800	300.8
DS-SGE 6-RS/EDE	6	S 500	17	22	19	31	16.5	14.0	30	18	12	3.0	18.9	G 1/4"A	50	15.3
DS-SGE 8-RS/EDE	8	S 500	19	22	19	31	16.5	14.0	30	18	12	3.0	18.9	G 1/4"A	50	16.6
DS-SGE 10-RS/EDE	10	S 500	22	27	24	35	18.5	16.5	36	22	12	3.0	21.9	G 3/8"A	75	26.7
DS-SGE 12-RS/EDE	12	S 500	24	27	24	35	18.5	16.5	36	22	12	3.0	21.9	G 3/8"A	75	28.1
DS-SGE 14-RS/EDE	14	S 500	27	32	30	40	22.5	21.5	45	26	14	4.5	26.9	G 1/2"A	130	[38.0]
DS-SGE 16-RS/EDE	16	S 500	30	32	30	40	22.0	21.5	45	26	14	4.5	26.9	G 1/2"A	130	49.6
DS-SGE 20-RS/EDE	20	S 400	36	41	36	48	26.5	24.0	53	32	16	3.5	32.9	G 3/4"A	250	85.2
DS-SGE 25-RS/EDE	25	S 400	46	50	46	56	31.5	30.5	66	39	18	3.5	39.9	G 1" A	350	155.9
DS-SGE 30-RS/EDE	30	S 400	50	60	55	64	37.0	35.5	76	49	20	3.5	49.9	G 1 1/4"A	600	231.4
DS-SGE 38-RS/EDE	38	S 400	60	70	60	72	41.5	40.5	87	55	22	3.5	55.9	G 1 1/2"A	800	339.0

L₂ = approximate length with nut tightened

* Recommended tightening torques for stud threads G, with mating material steel

Please see "Engineering and technical data - Selecting the correct tube fitting" for more information on pressure.

COUPLINGS

BANJO COUPLING

SGE T SWIVELING SCREW FITTING HIGH PRESSURE

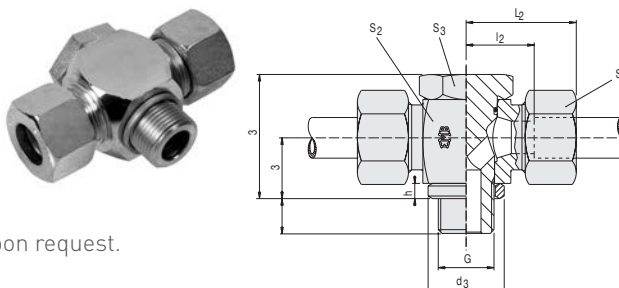
THE WORLD OF TUBE FITTINGS

SGE T SWIVELING SCREW FITTING HIGH PRESSURE METRIC DKA

Metric parallel.

Edge sealing ring DKA.

O-ring NBR (e.g. Perbunan), FPM (e.g. Viton) upon request.



description	pipe OD	PB series	S ₁	S ₂	S ₃	L ₂	l ₂	L ₃	l ₃	d ₃	i	h	d ₉	G	MA*	kg / 100 pcs
DS-SGE 6-ML	6	L 500	14	17	17	27	12.0	10.5	24.0	14	8	2.5	14.9	M 10x1	25	8.1
DS-SGE 8-ML	8	L 500	17	22	19	29	14.5	14.0	30.0	17	12	3.0	16.9	M 12x1.5	50	13.8
DS-SGE 10-ML	10	L 500	19	22	19	30	15.5	14.0	30.0	19	12	3.0	18.9	M 14x1.5	60	15.3
DS-SGE 12-ML	12	L 400	22	27	24	33	18.0	16.5	36.0	21	12	3.0	21.9	M 16x1.5	90	23.7
DS-SGE 15-ML	15	L 400	27	30	27	36	20.5	18.5	39.5	23	12	3.0	23.9	M 18x1.5	110	34.3
DS-SGE 18-ML	18	L 400	32	32	30	37	21.0	21.5	45.0	27	14	4.5	26.9	M 22x1.5	150	46.3
DS-SGE 22-ML	22	L 250	36	41	36	44	27.5	24.0	53.0	31	16	3.5	31.9	M 26x1.5	350	76.0
DS-SGE 28-ML	28	L 250	41	50	46	49	32.0	30.5	66.0	39	18	3.5	39.9	M 33x2	400	122.9
DS-SGE 35-ML	35	L 250	50	60	55	58	36.0	35.5	76.0	49	20	3.5	49.9	M 42x2	600	206.0
DS-SGE 42-ML	42	L 250	60	70	60	63	40.5	40.5	87.0	55	22	3.5	55.9	M 48x2	800	303.0
DS-SGE 6-MS	6	S 500	17	22	19	31	16.5	14.0	30.0	17	12	3.0	16.9	M 12x1.5	50	14.8
DS-SGE 8-MS	8	S 500	19	22	19	31	16.5	14.0	30.0	19	12	3.0	18.9	M 14x1.5	60	16.6
DS-SGE 10-MS	10	S 500	22	27	24	35	18.5	16.5	36.0	21	12	3.0	21.9	M 16x1.5	90	26.2
DS-SGE 12-MS	12	S 500	24	30	27	36	20.0	18.5	39.5	23	12	3.0	23.9	M 18x1.5	110	33.1
DS-SGE 14-MS	14	S 500	27	32	30	40	22.5	20.0	43.5	25	14	3.0	-	M 20x1.5	130	(37.4)
DS-SGE 16-MS	16	S 500	30	32	30	40	22.0	21.5	45.0	27	14	4.5	26.9	M 22x1.5	150	48.7
DS-SGE 20-MS	20	S 400	36	41	36	48	26.5	24.0	53.0	32	16	3.5	32.9	M 27x2	350	83.7
DS-SGE 25-MS	25	S 400	46	50	46	56	31.5	30.5	66.0	39	18	3.5	39.9	M 33x2	400	152.6
DS-SGE 30-MS	30	S 400	50	60	55	64	37.0	35.5	76.0	49	20	3.5	49.9	M 42x2	600	229.9
DS-SGE 38-MS	38	S 400	60	70	60	72	41.5	40.5	87.0	55	22	3.5	55.9	M 48x2	800	341.2

L₂ = approximate length with nut tightened

* Recommended tightening torques for stud threads G, with mating material steel

Please see "Engineering and technical data - Selecting the correct tube fitting" for more information on pressure.

COUPLINGS

BANJO COUPLING

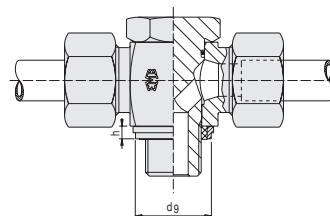
SGE T SWIVELING SCREW FITTING HIGH PRESSURE

SGE T SWIVELING SCREW FITTING HIGH PRESSURE METRIC EDE

Metric parallel.

Sealing ring EDE.

O-ring NBR (e.g. Perbunan), FPM (e.g. Viton) upon request.



description	pipe OD	PB series	S ₁	S ₂	S ₃	L ₂	l ₂	l ₃	L ₃	d ₃	i	h	d ₉	G	MA* Nm	kg / 100 pcs
DS-SGE 6-ML/EDE	6	L 500	14	17	17	27	12.0	10.5	24.0	14	8	2.5	14.9	M 10x1	25	8.1
DS-SGE 8-ML/EDE	8	L 500	17	22	19	29	14.5	14.0	30.0	17	12	3.0	16.9	M 12x1.5	50	14.0
DS-SGE 10-ML/EDE	10	L 500	19	22	19	30	15.5	14.0	30.0	19	12	3.0	18.9	M 14x1.5	60	15.4
DS-SGE 12-ML/EDE	12	L 400	22	27	24	33	18.0	16.5	36.0	21	12	3.0	21.9	M 16x1.5	90	24.0
DS-SGE 15-ML/EDE	15	L 400	27	30	27	36	20.5	18.5	39.5	23	12	3.0	23.9	M 18x1.5	110	34.7
DS-SGE 18-ML/EDE	18	L 400	32	32	30	37	21.0	21.5	45.0	27	14	4.5	26.9	M 22x1.5	150	46.8
DS-SGE 22-ML/EDE	22	L 250	36	41	36	44	27.5	24.0	53.0	31	16	3.5	31.9	M 26x1.5	350	77.2
DS-SGE 28-ML/EDE	28	L 250	41	50	46	49	32.0	30.5	66.0	39	18	3.5	39.9	M 33x2	400	123.8
DS-SGE 35-ML/EDE	35	L 250	50	60	55	58	36.0	35.5	76.0	49	20	3.5	49.9	M 42x2	600	207.4
DS-SGE 42-ML/EDE	42	L 250	60	70	60	63	40.5	40.5	87.0	55	22	3.5	55.9	M 48x2	800	304.8
DS-SGE 6-MS/EDE	6	S 500	17	22	19	31	16.5	14.0	30.0	17	12	3.0	16.9	M 12x1.5	50	15.1
DS-SGE 8-MS/EDE	8	S 500	19	22	19	31	16.5	14.0	30.0	19	12	3.0	18.9	M 14x1.5	60	16.8
DS-SGE 10-MS/EDE	10	S 500	22	27	24	35	18.5	16.5	36.0	21	12	3.0	21.9	M 16x1.5	90	26.5
DS-SGE 12-MS/EDE	12	S 500	24	30	27	36	20.0	18.5	39.5	23	12	3.0	23.9	M 18x1.5	110	33.5
DS-SGE 16-MS/EDE	16	S 500	30	32	30	40	22.0	21.5	45.0	27	14	4.5	26.9	M 22x1.5	150	49.2
DS-SGE 20-MS/EDE	20	S 400	36	41	36	48	26.5	24.0	53.0	32	16	3.5	32.9	M 27x2	350	84.8
DS-SGE 25-MS/EDE	25	S 400	46	50	46	56	31.5	30.5	66.0	39	18	3.5	39.9	M 33x2	400	153.5
DS-SGE 30-MS/EDE	30	S 400	50	60	55	64	37.0	35.5	76.0	49	20	3.5	49.9	M 42x2	600	231.3
DS-SGE 38-MS/EDE	38	S 400	60	70	60	72	41.5	40.5	87.0	55	22	3.5	55.9	M 48x2	800	343.0

L₂ = approximate length with nut tightened

* Recommended tightening torques for stud threads G, with mating material steel

Please see "Engineering and technical data - Selecting the correct tube fitting" for more information on pressure.

COUPLINGS

ADJUSTABLE COUPLING

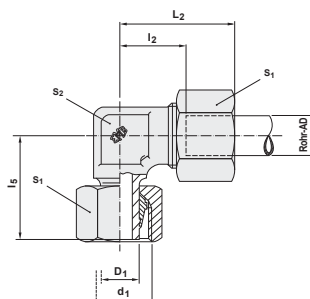
THE WORLD OF TUBE FITTINGS

VB ADJUSTABLE ELBOW

Without straight screw- in screw-joint.

These parts are ready mounted not pre-assembled.

After screwing on by hand, tighten with a spanner until tight, and then apply final 30° turn.



description	pipe OD	PN series	L ₂	l ₂	l ₅	D ₁	d ₁	S ₁	S ₂	kg / 100 pcs
DS-VB 6-L	6	L 500 (2200)	27	12.0	26.0	6	M 12x1.5	14	12	3.6
DS-VB 8-L	8	L 500 (2200)	29	14.0	27.5	8	M 14x1.5	17	12	5.0
DS-VB 10-L	10	L 500 (2200)	30	15.0	29.0	10	M 16x1.5	19	14	6.8
DS-VB 12-L	12	L 400 (1700)	32	17.0	29.5	12	M 18x1.5	22	17	9.0
DS-VB 15-L	15	L 400 (1700)	36	21.0	32.5	15	M 22x1.5	27	19	15.3
DS-VB 18-L	18	L 400 (1700)	40	23.5	35.5	18	M 26x1.5	32	24	22.6
DS-VB 22-L	22	L 250 (1100)	44	27.5	38.5	22	M 30x2	36	27	30.4
DS-VB 28-L	28	L 250 (1100)	47	30.5	41.5	28	M 36x2	41	36	42.5
DS-VB 35-L	35	L 250 (1100)	56	34.5	51.0	35	M 45x2	50	41	64.7
DS-VB 42-L	42	L 250 (1100)	63	40.0	56.0	42	M 52x2	60	50	99.7
DS-VB 6-S	6	S 800 (3400)	31	16.0	27.0	6	M 14x1.5	17	12	5.7
DS-VB 8-S	8	S 800 (3400)	32	17.0	27.5	8	M 16x1.5	19	14	7.0
DS-VB 10-S	10	S 800 (3400)	34	17.5	30.0	10	M 18x1.5	22	17	11.1
DS-VB 12-S	12	S 630 (2700)	38	21.5	31.0	12	M 20x1.5	24	17	13.8
DS-VB 14-S	14	S 630 (2700)	40	22.0	35.0	14	M 22x1.5	27	19	18.9
DS-VB 16-S	16	S 630 (2700)	43	24.5	36.5	16	M 24x1.5	30	24	23.8
DS-VB 20-S	20	S 400 (1700)	48	26.5	44.5	20	M 30x2	36	27	36.2
DS-VB 25-S	25	S 400 (1700)	54	30.0	50.0	25	M 36x2	46	36	72.1
DS-VB 30-S	30	S 400 (1700)	62	35.5	55.0	30	M 42x2	50	41	96.4
DS-VB 38-S	38	S 400 (1700)	72	41.0	63.0	38	M 52x2	60	50	138.4

L₂ = approximate length with nut tightened

Please see "Engineering and technical data - Selecting the correct tube fitting" for more information on pressure.

COUPLINGS

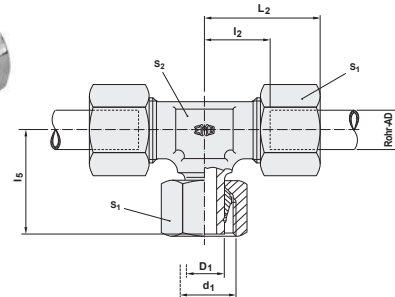
ADJUSTABLE COUPLING

VC ADJUSTABLE BRANCH TEE

Without straight screw- in screw-joint.

These parts are ready mounted
not pre-assembled.

After screwing on by hand, tighten with
a spanner until tight, and then apply
final 30° turn.



description	pipe OD	PN series	L ₂	l ₂	l ₅	D ₁	d ₁	S ₁	S ₂	kg / 100 pcs
DS-VC 6-L	6	L 500 (2200)	27	12.0	26.0	6	M 12x1.5	14	12	5.3
DS-VC 8-L	8	L 500 (2200)	29	14.0	27.5	8	M 14x1.5	17	12	7.4
DS-VC 10-L	10	L 500 (2200)	30	15.0	29.0	10	M 16x1.5	19	14	10.3
DS-VC 12-L	12	L 400 (1700)	32	17.0	29.5	12	M 18x1.5	22	17	12.9
DS-VC 15-L	15	L 400 (1700)	36	21.0	32.5	15	M 22x1.5	27	19	21.8
DS-VC 18-L	18	L 400 (1700)	40	23.5	35.5	18	M 26x1.5	32	24	32.4
DS-VC 22-L	22	L 250 (1100)	44	27.5	38.5	22	M 30x2	36	27	43.3
DS-VC 28-L	28	L 250 (1100)	47	30.5	41.5	28	M 36x2	41	36	57.9
DS-VC 35-L	35	L 250 (1100)	56	34.5	51.0	35	M 45x2	50	41	90.1
DS-VC 42-L	42	L 250 (1100)	63	40.0	56.0	42	M 52x2	60	50	135.3
DS-VC 6-S	6	S 800 (3400)	31	16.0	27.0	6	M 14x1.5	17	12	8.5
DS-VC 8-S	8	S 800 (3400)	32	17.0	27.5	8	M 16x1.5	19	14	10.7
DS-VC 10-S	10	S 800 (3400)	34	17.5	30.0	10	M 18x1.5	22	17	16.5
DS-VC 12-S	12	S 630 (2700)	38	21.5	31.0	12	M 20x1.5	24	17	20.4
DS-VC 14-S	14	S 630 (2700)	40	22.0	35.0	14	M 22x1.5	27	19	27.5
DS-VC 16-S	16	S 630 (2700)	43	24.5	36.5	16	M 24x1.5	30	24	35.6
DS-VC 20-S	20	S 400 (1700)	48	26.5	44.5	20	M 30x2	36	27	53.6
DS-VC 25-S	25	S 400 (1700)	54	30.0	50.0	25	M 36x2	46	36	104.2
DS-VC 30-S	30	S 400 (1700)	62	35.5	55.0	30	M 42x2	50	41	133.3
DS-VC 38-S	38	S 400 (1700)	72	41.0	63.0	38	M 52x2	60	50	204.7

L₂ = approximate length with nut tightened

Please see "Engineering and technical data - Selecting the correct tube fitting" for more information on pressure.

COUPLINGS

ADJUSTABLE COUPLING

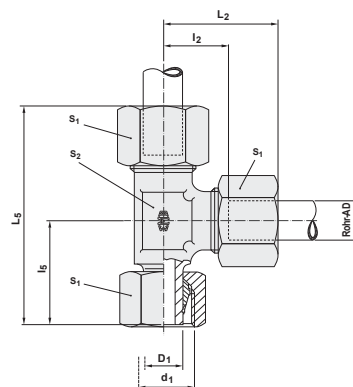
THE WORLD OF TUBE FITTINGS

VD ADJUSTABLE BARREL TEE

Without straight screw- in screw-joint.

These parts are ready mounted
not pre-assembled.

After screwing on by hand, tighten with
a spanner until tight, and then apply final 30° turn.



description	pipe OD	PN series	L ₂	l ₂	l ₅	L ₅	D ₁	d ₁	S ₁	S ₂	kg / 100 pcs
DS-VD 6-L	6	L 500 (2200)	27	12.0	26.0	53	6	M 12x1.5	14	12	5.2
DS-VD 8-L	8	L 500 (2200)	29	14.0	27.5	56	8	M 14x1.5	17	12	7.8
DS-VD 10-L	10	L 500 (2200)	30	15.0	29.0	59	10	M 16x1.5	19	14	10.5
DS-VD 12-L	12	L 400 (1700)	32	17.0	29.5	62	12	M 18x1.5	22	17	12.6
DS-VD 15-L	15	L 400 (1700)	36	21.0	32.5	70	15	M 22x1.5	27	19	21.8
DS-VD 18-L	18	L 400 (1700)	40	23.5	35.5	76	18	M 26x1.5	32	24	32.9
DS-VD 22-L	22	L 250 (1100)	44	27.5	38.5	83	22	M 30x2	36	27	43.3
DS-VD 28-L	28	L 250 (1100)	47	30.5	41.5	91	28	M 36x2	41	36	55.8
DS-VD 35-L	35	L 250 (1100)	56	34.5	51.0	111	35	M 45x2	50	41	89.1
DS-VD 42-L	42	L 250 (1100)	63	40.0	56.0	123	42	M 52x2	60	50	132.8
DS-VD 6-S	6	S 800 (3400)	31	16.0	27.0	58	6	M 14x1.5	17	12	8.7
DS-VD 8-S	8	S 800 (3400)	32	17.0	27.5	61	8	M 16x1.5	19	14	10.7
DS-VD 10-S	10	S 800 (3400)	34	17.5	30.0	66	10	M 18x1.5	22	17	16.6
DS-VD 12-S	12	S 630 (2700)	38	21.5	31.0	71	12	M 20x1.5	24	17	20.4
DS-VD 14-S	14	S 630 (2700)	40	22.0	35.0	76	14	M 22x1.5	27	19	27.1
DS-VD 16-S	16	S 630 (2700)	43	24.5	36.5	80	16	M 24x1.5	30	24	33.7
DS-VD 20-S	20	S 400 (1700)	48	26.5	44.5	93	20	M 30x2	36	27	54.2
DS-VD 25-S	25	S 400 (1700)	54	30.0	50.0	105	25	M 36x2	46	36	102.6
DS-VD 30-S	30	S 400 (1700)	62	35.5	55.0	119	30	M 42x2	50	41	132.5
DS-VD 38-S	38	S 400 (1700)	72	41.0	63.0	139	38	M 52x2	60	50	195.0

L₂ = approximate length with nut tightened

Please see "Engineering and technical data - Selecting the correct tube fitting" for more information on pressure.

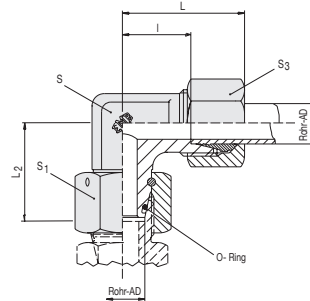
COUPLINGS

ADJUSTABLE COUPLING

VBDKO ADJUSTABLE MALE STUD ELBOW

With taper and O-ring according to DIN 3865.

O-ring NBR (e.g. Perbunan), FPM (e.g. Viton) upon request.



description	pipe OD	PN series	L ₂	L	I	S	S ₁	S ₃	kg / 100 pcs	O-Ring
DS-VBDKO 6-L	6	L 500 (2200)	26.0	27	12.0	12	17	14	4.0	4x1.5
DS-VBDKO 8-L	8	L 500 (2200)	27.5	29	14.0	12	17	17	5.5	6x1.5
DS-VBDKO 10-L	10	L 500 (2200)	29.0	30	15.0	14	19	19	7.1	7.5x1.5
DS-VBDKO 12-L	12	L 400 (1700)	29.5	32	17.0	17	22	22	9.6	9x1.5
DS-VBDKO 15-L	15	L 400 (1700)	32.5	36	21.0	19	27	27	16.6	12x2
DS-VBDKO 18-L	18	L 400 (1700)	35.5	40	23.5	24	32	32	23.6	15x2
DS-VBDKO 22-L	22	L 250 (1100)	38.5	44	27.5	27	36	36	32.7	20x2
DS-VBDKO 28-L	28	L 250 (1100)	41.5	47	30.5	36	41	41	52.4	26x2
DS-VBDKO 35-L	35	L 250 (1100)	51.0	56	34.5	41	50	50	68.8	32x2.5
DS-VBDKO 42-L	42	L 250 (1100)	56.0	63	40.0	50	60	60	108.0	38x2.5
DS-VBDKO 6-S	6	S 800 (3400)	27.0	31	16.0	14	17	17	6.2	4x1.5
DS-VBDKO 8-S	8	S 800 (3400)	27.5	32	17.0	17	19	19	7.4	6x1.5
DS-VBDKO 10-S	10	S 800 (3400)	30.0	34	17.5	19	22	22	11.3	7.5x1.5
DS-VBDKO 12-S	12	S 630 (2700)	31.0	38	21.5	22	24	24	14.0	9x1.5
DS-VBDKO 14-S	14	S 630 (2700)	35.0	40	22.0	19	27	27	19.3	10x2
DS-VBDKO 16-S	16	S 630 (2700)	36.5	43	24.5	24	30	30	25.8	12x2
DS-VBDKO 20-S	20	S 400 (1700)	44.5	48	26.5	27	36	36	40.3	16.3x2.4
DS-VBDKO 25-S	25	S 400 (1700)	50.0	54	30.0	36	46	46	75.1	20.3x2.4
DS-VBDKO 30-S	30	S 400 (1700)	55.0	62	35.5	41	50	50	96.4	25.3x2.4
DS-VBDKO 38-S	38	S 400 (1700)	63.0	72	41.0	50	60	60	142.5	33.3x2.4

L = approximate length with nut tightened

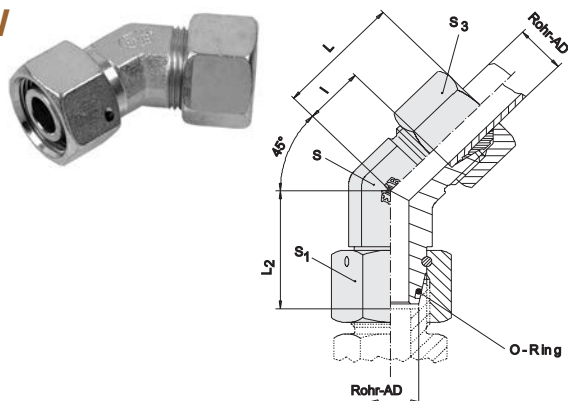
Please see "Engineering and technical data - Selecting the correct tube fitting" for more information on pressure.

COUPLINGS ADJUSTABLE COUPLING

THE WORLD OF TUBE FITTINGS

BFDKO ADJUSTABLE 45° ELBOW

O-ring NBR (e.g. Perbunan), FPM (e.g. Viton)
upon request.



description	pipe OD	PN series	L ₂	L	I	S	S ₁	S ₃	kg / 100 pcs	O-Ring
DS-BFDKO 6-L	6	L 500	26.0	24	9	14	17	14	4.3	4.5x1.5
DS-BFDKO 8-L	8	L 500	27.5	27	12	14	17	17	5.7	6.5x1.5
DS-BFDKO 10-L	10	L 500	29.0	27	12	19	19	19	7.3	8x1.5
DS-BFDKO 12-L	12	L 400	29.5	28	14	19	22	22	10.0	10x1.5
DS-BFDKO 15-L	15	L 400	32.5	32	17	22	27	27	16.8	12x2
DS-BFDKO 18-L	18	L 400	35.5	33	17	27	32	32	24.1	15x2
DS-BFDKO 22-L	22	L 250	38.5	35	19	30	36	36	33.0	20x2
DS-BFDKO 28-L	28	L 250	41.5	40	23	36	41	41	49.3	26x2
DS-BFDKO 35-L	35	L 250	51.0	48	27	50	50	50	69.0	32x2.5
DS-BFDKO 42-L	42	L 250	56.0	49	26	50	60	60	108.1	38x2.5
DS-BFDKO 6-S	6	S 800	27.0	24	9	14	17	17	6.4	4.5x1.5
DS-BFDKO 8-S	8	S 800	27.5	27	12	19	19	19	8.4	6.5x1.5
DS-BFDKO 10-S	10	S 800	30.0	29	13	19	22	22	11.5	8x1.5
DS-BFDKO 12-S	12	S 630	31.0	33	17	19	24	24	14.2	10x1.5
DS-BFDKO 16-S	16	S 630	36.5	34	16	19	30	30	26.0	13x2
DS-BFDKO 20-S	20	S 400	44.5	38	16	27	36	36	40.6	16.3x2.4
DS-BFDKO 25-S	25	S 400	50.0	43	19	36	46	46	74.7	20.3x2.4
DS-BFDKO 30-S	30	S 400	55.0	50	24	50	50	50	95.7	25.3x2.4
DS-BFDKO 38-S	38	S 400	63.0	52	21	50	60	60	142.9	33.3x2.4

Please see "Engineering and technical data - Selecting the correct tube fitting" for more information on pressure.

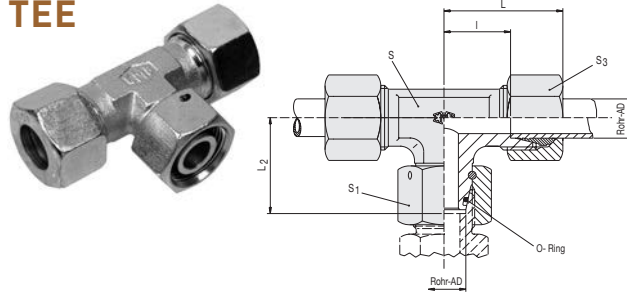
COUPLINGS

ADJUSTABLE COUPLING

VCDKO ADJUSTABLE EQUAL TEE

With taper and O-ring according to DIN 3865.

O-ring NBR (e.g. Perbunan), FPM (e.g. Viton) upon request.



description	pipe OD	PN series	L ₂	L	I	S (A)	S (B)	S ₁	S ₃	kg / 100 pcs	O-Ring
DS-VCDKO 6-L	6	L 500 (2200)	26.0	27	12.0	12	12	17	14	5.8	4x1.5
DS-VCDKO 8-L	8	L 500 (2200)	27.5	29	14.0	14	12	17	17	7.9	6x1.5
DS-VCDKO 10-L	10	L 500 (2200)	29.0	30	15.0	17	14	19	19	10.1	7.5x1.5
DS-VCDKO 12-L	12	L 400 (1700)	29.5	32	17.0	19	17	22	22	13.5	9x1.5
DS-VCDKO 15-L	15	L 400 (1700)	32.5	36	21.0		19	27	27	23.3	12x2
DS-VCDKO 18-L	18	L 400 (1700)	35.5	40	23.5		24	32	32	33.2	15x2
DS-VCDKO 22-L	22	L 250 (1100)	38.5	44	27.5		27	36	36	44.6	20x2
DS-VCDKO 28-L	28	L 250 (1100)	41.5	47	30.5		36	41	41	70.2	26x2
DS-VCDKO 35-L	35	L 250 (1100)	51.0	56	34.5		41	50	50	96.1	32x2.5
DS-VCDKO 42-L	42	L 250 (1100)	56.0	63	40.0		50	60	60	146.1	38x2.5
DS-VCDKO 6-S	6	S 800 (3400)	27.0	31	16.0		14	17	17	8.7	4x1.5
DS-VCDKO 8-S	8	S 800 (3400)	27.5	32	17.0		17	19	19	11.8	6x1.5
DS-VCDKO 10-S	10	S 800 (3400)	30.0	34	17.5		19	22	22	16.3	7.5x1.5
DS-VCDKO 12-S	12	S 630 (2700)	31.0	38	21.5		22	24	24	20.6	9x1.5
DS-VCDKO 14-S	14	S 630 (2700)	35.0	40	22.0		19	27	27	28.1	10x2
DS-VCDKO 16-S	16	S 630 (2700)	36.5	43	24.5		24	30	30	37.3	12x2
DS-VCDKO 20-S	20	S 400 (1700)	44.5	48	26.5		27	36	36	56.8	16.3x2.4
DS-VCDKO 25-S	25	S 400 (1700)	50.0	54	30.0		36	46	46	107.9	20.3x2.4
DS-VCDKO 30-S	30	S 400 (1700)	55.0	62	35.5		41	50	50	136.3	25.3x2.4
DS-VCDKO 38-S	38	S 400 (1700)	63.0	72	41.0		50	60	60	203.6	33.3x2.4

L = approximate length with nut tightened

Pipe OD 6-42 = forging

Please see "Engineering and technical data - Selecting the correct tube fitting" for more information on pressure.

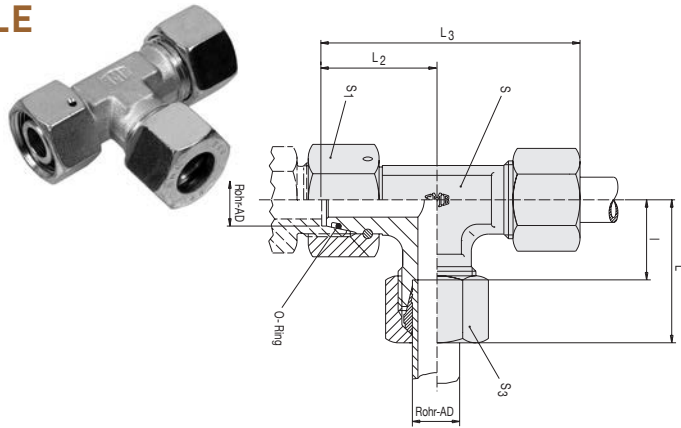
COUPLINGS ADJUSTABLE COUPLING

THE WORLD OF TUBE FITTINGS

VDDKO ADJUSTABLE MALE STUD TEE-STUD BARREL

With taper and O-ring according to DIN 3865.

O-ring NBR (e.g. Perbunan),
FPM (e.g. Viton) upon request.



description	pipe OD	PN series	L ₂	L	I	S (A)	S (B)	S ₁	S ₃	L ₃	kg / 100 pcs	O-Ring
DS-VDDKO 6-L	6	L 500 (2200)	26.0	27	12.0	12	12	17	14	53	5.8	4x1.5
DS-VDDKO 8-L	8	L 500 (2200)	27.5	29	14.0	14	12	17	17	56	7.9	6x1.5
DS-VDDKO 10-L	10	L 500 (2200)	29.0	30	15.0	17	14	19	19	59	10.0	7.5x1.5
DS-VDDKO 12-L	12	L 400 (1700)	29.5	32	17.0	19	17	22	22	62	13.4	9x1.5
DS-VDDKO 15-L	15	L 400 (1700)	32.5	36	21.0		19	27	27	70	23.3	12x2
DS-VDDKO 18-L	18	L 400 (1700)	35.5	40	23.5		24	32	32	76	33.2	15x2
DS-VDDKO 22-L	22	L 250 (1100)	38.5	44	27.5		27	36	36	83	44.3	20x2
DS-VDDKO 28-L	28	L 250 (1100)	41.5	47	30.5		36	41	41	91	70.2	26x2
DS-VDDKO 35-L	35	L 250 (1100)	51.0	56	34.5		41	50	50	111	94.5	32x2.5
DS-VDDKO 42-L	42	L 250 (1100)	56.0	63	40.0		50	60	60	123	146.3	38x2.5
DS-VDDKO 6-S	6	S 800 (3400)	27.0	31	16.0		14	17	17	58	9.1	4x1.5
DS-VDDKO 8-S	8	S 800 (3400)	27.5	32	17.0		17	19	19	61	11.8	6x1.5
DS-VDDKO 10-S	10	S 800 (3400)	30.0	34	17.5		19	22	22	66	16.4	7.5x1.5
DS-VDDKO 12-S	12	S 630 (2700)	31.0	38	21.5		22	24	24	71	20.7	9x1.5
DS-VDDKO 14-S	14	S 630 (2700)	35.0	40	22.0		19	27	27	76	28.1	10x2
DS-VDDKO 16-S	16	S 630 (2700)	36.5	43	24.5		24	30	30	80	38.2	12x2
DS-VDDKO 20-S	20	S 400 (1700)	44.5	48	26.5		27	36	36	93	58.3	16.3x2.4
DS-VDDKO 25-S	25	S 400 (1700)	50.0	54	30.0		36	46	46	105	107.8	20.3x2.4
DS-VDDKO 30-S	30	S 400 (1700)	55.0	62	35.5		41	50	50	119	138.0	25.3x2.4
DS-VDDKO 38-S	38	S 400 (1700)	63.0	72	41.0		50	60	60	139	205.1	33.3x2.4

L+L₃ = approximate length with nut tightened

Pipe OD 6-42 = forging

Please see "Engineering and technical data - Selecting the correct tube fitting" for more information on pressure.

COUPLINGS

STANDPIPE COUPLING

VA STUD STANDPIPE COUPLING

VA STUD STANDPIPE COUPLING BSP

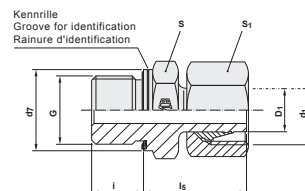
These parts are ready mounted not pre-assembled.

After screwing on by hand, tighten with a spanner until tight, and then apply final 30° turn.

BSP parallel with stud.

Final assembled according to DIN 3955.

Captive seal NBR (e.g. Perbunan), FPM (e.g. Viton) upon request.



description	pipe OD	PN series	l ₅	d ₇	D ₁	i	S ₁	S	d ₁	G	kg / 100 pcs
DS-VA 6-RL/WD	6	L 500 (2200)	24.5	14	6	8	14	14	M 12x1.5	G 1/8" A	2.5
DS-VA 8-RL/WD	8	L 500 (2200)	29.5	19	8	12	17	19	M 14x1.5	G 1/4" A	4.5
DS-VA 10-RL/WD	10	L 500 (2200)	27.5	19	10	12	19	19	M 16x1.5	G 1/4" A	4.7
DS-VA 12-RL/WD	12	L 400 (1700)	34.0	22	12	12	22	22	M 18x1.5	G 3/8" A	6.3
DS-VA 15-RL/WD	15	L 400 (1700)	32.0	27	15	14	27	27	M 22x1.5	G 1/2" A	11.5
DS-VA 18-RL/WD	18	L 400 (1700)	31.5	27	18	14	32	27	M 26x1.5	G 1/2" A	12.9
DS-VA 22-RL/WD	22	L 250 (1100)	32.5	32	22	16	36	32	M 30x2	G 3/4" A	17.6
DS-VA 28-RL/WD	28	L 250 (1100)	35.0	40	28	18	41	41	M 36x2	G 1" A	24.7
DS-VA 35-RL/WD	35	L 250 (1100)	42.5	50	35	20	50	50	M 45x2	G 1 1/4" A	40.7
DS-VA 42-RL/WD	42	L 250 (1100)	46.5	55	42	22	60	55	M 52x2	G 1 1/2" A	45.6
DS-VA 6-RS/WD	6	S 800 (3400)	27.0	19	6	12	17	19	M 14x1.5	G 1/4" A	5.0
DS-VA 8-RS/WD	8	S 800 (3400)	29.5	19	8	12	19	19	M 16x1.5	G 1/4" A	5.5
DS-VA 10-RS/WD	10	S 800 (3400)	32.0	22	10	12	22	22	M 18x1.5	G 3/8" A	8.2
DS-VA 12-RS/WD	12	S 630 (2700)	34.0	22	12	12	24	22	M 20x1.5	G 3/8" A	9.5
DS-VA 12-S/R 1/2"/WD	12	S 630 (2700)	33.5	27	12	14	24	27	M 20x1.5	G 1/2" A	11.8
DS-VA 14-RS/WD	14	S 630 (2700)	36.5	27	14	14	27	27	M 22x1.5	G 1/2" A	14.8
DS-VA 16-RS/WD	16	S 630 (2700)	37.0	27	16	14	30	27	M 24x1.5	G 1/2" A	15.4
DS-VA 16-S/R 3/4"/WD	16	S 400 (1700)	39.0	32	16	16	30	32	M 24x1.5	G 3/4" A	20.0
DS-VA 20-RS/WD	20	S 400 (1700)	43.0	32	20	16	36	32	M 30x2	G 3/4" A	25.3
DS-VA 25-RS/WD	25	S 400 (1700)	48.0	40	25	18	46	41	M 36x2	G 1" A	46.5
DS-VA 30-RS/WD	30	S 400 (1700)	51.0	50	30	20	50	50	M 42x2	G 1 1/4" A	64.4
DS-VA 38-RS/WD	38	S 400 (1700)	60.0	55	38	22	60	55	M 52x2	G 1 1/2" A	88.9

Please see "Engineering and technical data - Selecting the correct tube fitting" for more information on pressure.

COUPLINGS

STANDPIPE COUPLING

VA STUD STANDPIPE COUPLING

THE WORLD OF TUBE FITTINGS

VA STUD STANDPIPE COUPLING METRIC

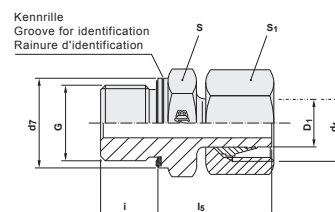
These parts are ready mounted not pre-assembled.

After screwing on by hand, tighten with a spanner until tight, and then apply final 30° turn.

Metric parallel with stud.

Final assembled according to DIN 3955.

Captive seal NBR (e.g. Perbunan), FPM (e.g. Viton) upon request.



description	pipe OD	PN series	l_5	d_7	D_1	i	S_1	S	d_1	G	kg / 100 pcs
DS-VA 6-ML/WD	6	L 500 (2200)	24.5	14	6	8	14	14	M 12x1.5	M 10x1	2.5
DS-VA 8-ML/WD	8	L 500 (2200)	26.5	17	8	12	17	17	M 14x1.5	M 12x1.5	4.0
DS-VA 10-ML/WD	10	L 500 (2200)	27.5	19	10	12	19	19	M 16x1.5	M 14x1.5	4.7
DS-VA 12-ML/WD	12	L 400 (1700)	30.5	22	12	12	22	22	M 18x1.5	M 16x1.5	6.3
DS-VA 15-ML/WD	15	L 400 (1700)	31.5	24	15	12	27	24	M 22x1.5	M 18x1.5	9.5
DS-VA 18-ML/WD	18	L 400 (1700)	31.5	27	18	14	32	27	M 26x1.5	M 22x1.5	12.9
DS-VA 22-ML/WD	22	L 250 (1100)	32.5	32	22	16	36	32	M 30x2	M 26x1.5	17.6
DS-VA 28-ML/WD	28	L 250 (1100)	35.0	40	28	18	41	41	M 36x2	M 33x2	24.7
DS-VA 35-ML/WD	35	L 250 (1100)	42.5	50	35	20	50	50	M 45x2	M 42x2	40.7
DS-VA 42-ML/WD	42	L 250 (1100)	46.5	55	42	22	60	55	M 52x2	M 48x2	45.6
DS-VA 6-MS/WD	6	S 800 (3400)	27.0	17	6	12	17	17	M 14x1.5	M 12x1.5	4.5
DS-VA 8-MS/WD	8	S 800 (3400)	29.5	19	8	12	19	19	M 16x1.5	M 14x1.5	5.5
DS-VA 10-MS/WD	10	S 800 (3400)	32.0	22	10	12	22	22	M 18x1.5	M 16x1.5	8.2
DS-VA 12-MS/WD	12	S 630 (2700)	34.0	24	12	12	24	24	M 20x1.5	M 18x1.5	10.5
DS-VA 14-MS/WD	14	S 630 (2700)	36.5	26	14	14	27	27	M 22x1.5	M 20x1.5	14.8
DS-VA 16-MS/WD	16	S 630 (2700)	37.0	27	16	14	30	27	M 24x1.5	M 22x1.5	15.4
DS-VA 20-MS/WD	20	S 400 (1700)	43.0	32	20	16	36	32	M 30x2	M 27x2	25.3
DS-VA 25-MS/WD	25	S 400 (1700)	48.0	40	25	18	46	41	M 36x2	M 33x2	46.5
DS-VA 30-MS/WD	30	S 400 (1700)	51.0	50	30	20	50	50	M 42x2	M 42x2	64.4
DS-VA 38-MS/WD	38	S 400 (1700)	60.0	55	38	22	60	55	M 52x2	M 48x2	88.9

Please see "Engineering and technical data - Selecting the correct tube fitting" for more information on pressure.

COUPLINGS

STANDPIPE COUPLING

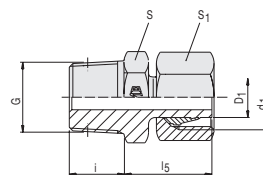
VA STUD STANDPIPE COUPLING

VA STUD STANDPIPE COUPLING NPT

These parts are ready mounted not pre-assembled.

After screwing on by hand, tighten with a spanner until tight, and then apply final 30° turn.

NPT (ANSI, ASME B1-20.1.1983).



description	pipe OD	PN series	l_5	D_1	i	S_1	S	d_1	G	kg / 100 pcs
DS-VA 6-L/NPT	6	L 315 (1260)	24.0	6	10.0	14	11	M 12x1.5	1/8" NPT	2.6
DS-VA 8-L/NPT	8	L 315 (1260)	27.5	8	15.0	17	14	M 14x1.5	1/4" NPT	4.1
DS-VA 10-L/NPT	10	L 315 (1260)	25.5	10	15.0	19	14	M 16x1.5	1/4" NPT	4.8
DS-VA 12-L/NPT	12	L 315 (1260)	31.5	12	15.0	22	19	M 18x1.5	3/8" NPT	6.5
DS-VA 15-L/NPT	15	L 315 (1260)	29.0	15	20.0	27	22	M 22x1.5	1/2" NPT	11.0
DS-VA 18-L/NPT	18	L 315 (1260)	28.5	18	20.0	32	22	M 26x1.5	1/2" NPT	13.5
DS-VA 22-L/NPT	22	L 160 (640)	29.5	22	20.0	36	27	M 30x2	3/4" NPT	19.0
DS-VA 28-L/NPT	28	L 160 (640)	32.0	28	25.0	41	36	M 36x2	1" NPT	27.4
DS-VA 35-L/NPT	35	L 160 (640)	39.5	35	25.5	50	46	M 45x2	1 1/4" NPT	40.5
DS-VA 42-L/NPT	42	L 160 (640)	43.5	42	26.0	60	50	M 52x2	1 1/2" NPT	57.5
DS-VA 6-S/NPT	6	S 630 (2520)	25.0	6	15.0	17	14	M 14x1.5	1/4" NPT	5.0
DS-VA 8-S/NPT	8	S 630 (2520)	27.5	8	15.0	19	14	M 16x1.5	1/4" NPT	5.5
DS-VA 10-S/NPT	10	S 630 (2520)	29.5	10	15.0	22	19	M 18x1.5	3/8" NPT	8.0
DS-VA 12-S/NPT	12	S 630 (2520)	31.5	12	15.0	24	19	M 20x1.5	3/8" NPT	10.0
DS-VA 14-S/NPT	14	S 630 (2520)	33.5	14	20.0	27	22	M 22x1.5	1/2" NPT	14.9
DS-VA 16-S/NPT	16	S 630 (2520)	34.0	16	20.0	30	22	M 24x1.5	1/2" NPT	16.4
DS-VA 20-S/NPT	20	S 400 (1600)	40.0	20	20.0	36	27	M 30x2	3/4" NPT	25.0
DS-VA 25-S/NPT	25	S 400 (1600)	45.0	25	25.0	46	36	M 36x2	1" NPT	47.0
DS-VA 30-S/NPT	30	S 400 (1600)	48.0	30	25.5	50	46	M 42x2	1 1/4" NPT	61.9
DS-VA 38-S/NPT	38	S 400 (1600)	56.5	38	26.0	60	50	M 52x2	1 1/2" NPT	88.9

Please see "Engineering and technical data - Selecting the correct tube fitting" for more information on pressure.

COUPLINGS

STANDPIPE COUPLING

VADKO STUD STANDPIPE ADAPTOR

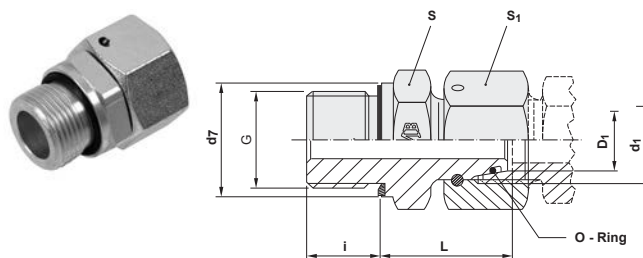
THE WORLD OF TUBE FITTINGS

VADKO STUD STANDPIPE ADAPTOR BSP

BSP parallel.

With taper and O-ring according to DIN 3865.

Captive seal NBR (e.g. Perbunan),
FPM (e.g. Viton) upon request.



description	pipe OD	PN series	L	i	d ₇	G	D ₁	d ₁	S	S ₁	kg / 100 pcs	O-Ring
VADKO 6-RL/WD	6	L 500 [2200]	24.5	8	14	G 1/8" A	6	M 12x1.5	14	17	2.4	4x1.5
VADKO 8-RL/WD	8	L 500 [2200]	29.5	12	19	G 1/4" A	8	M 14x1.5	19	17	4.4	6x1.5
VADKO 10-RL/WD	10	L 500 [2200]	27.5	12	19	G 1/4" A	10	M 16x1.5	19	19	4.7	7.5x1.5
VADKO 12-RL/R1/4"/WD	12	L 400 [1700]	27.5	12	19	G 1/4" A	12	M 18x1.5	19	22	6.8	9x1.5
VADKO 12-RL/WD	12	L 400 [1700]	34.0	12	22	G 3/8" A	12	M 18x1.5	22	22	6.9	9x1.5
VADKO 15-RL/WD	15	L 400 [1700]	32.0	14	27	G 1/2" A	15	M 22x1.5	27	27	12.1	12x2
VADKO 18-RL/WD	18	L 400 [1700]	31.5	14	27	G 1/2" A	18	M 26x1.5	27	32	13.4	15x2
VADKO 22-RL/WD	22	L 250 [1100]	32.5	16	32	G 3/4" A	22	M 30x2	32	36	19.6	20x2
VADKO 28-RL/WD	28	L 250 [1100]	35.0	18	40	G 1" A	28	M 36x2	41	41	36.0	26x2
VADKO 35-RL/WD	35	L 250 [1100]	42.5	20	50	G 1 1/4" A	35	M 45x2	50	50	45.5	32x2.5
VADKO 42-RL/WD	42	L 250 [1100]	46.5	22	55	G 1 1/2" A	42	M 52x2	55	60	66.2	38x2.5
VADKO 6-RS/WD	6	S 800 [3400]	27.0	12	19	G 1/4" A	6	M 14x1.5	19	17	4.5	4x1.5
VADKO 8-RS/WD	8	S 800 [3400]	29.5	12	19	G 1/4" A	8	M 16x1.5	19	19	5.0	6x1.5
VADKO 10-RS/WD	10	S 800 [3400]	32.0	12	22	G 3/8" A	10	M 18x1.5	22	22	7.4	7.5x1.5
VADKO 12-RS/WD	12	S 630 [2700]	34.0	12	22	G 3/8" A	12	M 20x1.5	22	24	8.2	9x1.5
VADKO 12-S/R1/2"/WD	12	S 630 [2700]	34.5	14	27	G 1/2" A	12	M 20x1.5	27	24	15.3	9x1.5
VADKO 14-RS/WD	14	S 630 [2700]	36.5	14	27	G 1/2" A	14	M 22x1.5	27	27	12.6	10x2
VADKO 16-RS/WD	16	S 630 [2700]	37.0	14	27	G 1/2" A	16	M 24x1.5	27	30	14.6	12x2
VADKO 20-RS/WD	20	S 400 [1700]	43.0	16	32	G 3/4" A	20	M 30x2	32	36	22.1	16.3x2.4
VADKO 25-RS/WD	25	S 400 [1700]	48.0	18	40	G 1" A	25	M 36x2	41	46	40.2	20.3x2.4
VADKO 30-RS/WD	30	S 400 [1700]	51.0	20	50	G 1 1/4" A	30	M 42x2	50	50	58.2	25.3x2.4
VADKO 38-RS/WD	38	S 400 [1700]	60.0	22	55	G 1 1/2" A	38	M 52x2	55	60	78.6	33.3x2.4

Please see "Engineering and technical data - Selecting the correct tube fitting" for more information on pressure.

COUPLINGS

STANDPIPE COUPLING

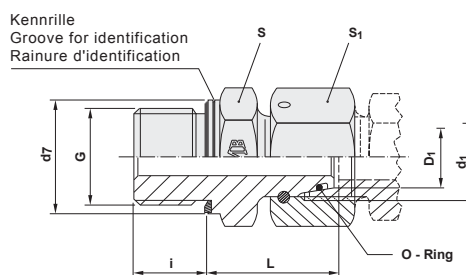
VADKO STUD STANDPIPE ADAPTOR

VADKO STUD STANDPIPE ADAPTOR METRIC

Metric parallel.

With taper and O-ring according to DIN 3865.

Captive seal NBR (e.g. Perbunan), FPM (e.g. Viton) upon request.



description	pipe OD	PN series	L	i	d ₇	G	D ₁	d ₁	S	S ₁	kg / 100 pcs	O-Ring
VADKO 6-ML/WD	6	L 500 (2200)	24.5	8	14	M 10x1	6	M 12x1.5	14	17	2.3	4 x1.5
VADKO 8-ML/WD	8	L 500 (2200)	26.5	12	17	M 12x1.5	8	M 14x1.5	17	17	3.8	6 x1.5
VADKO 10-ML/WD	10	L 500 (2200)	27.5	12	19	M 14x1.5	10	M 16x1.5	19	19	4.8	7.5x1.5
VADKO 12-ML/WD	12	L 400 (1700)	30.5	12	22	M 16x1.5	12	M 18x1.5	22	22	6.7	9 x1.5
VADKO 15-ML/WD	15	L 400 (1700)	31.5	12	24	M 18x1.5	15	M 22x1.5	24	27	10.1	12x2
VADKO 18-ML/WD	18	L 400 (1700)	31.5	14	27	M 22x1.5	18	M 26x1.5	27	32	13.8	15x2
VADKO 22-ML/WD	22	L 250 (1100)	32.5	16	32	M 26x1.5	22	M 30x2	32	36	19.9	20x2
VADKO 28-ML/WD	28	L 250 (1100)	35.0	18	40	M 33x2	28	M 36x2	41	41	35.8	26x2
VADKO 35-ML/WD	35	L 250 (1100)	42.5	20	50	M 42x2	35	M 45x2	50	50	45.0	32x2.5
VADKO 42-ML/WD	42	L 250 (1100)	46.5	22	55	M 48x2	42	M 52x2	55	60	70.8	38x2.5
VADKO 6-MS/WD	6	S 800 (3400)	27.0	12	17	M 12x1.5	6	M 14x1.5	17	17	4.0	4x1.5
VADKO 8-MS/WD	8	S 800 (3400)	29.5	12	19	M 14x1.5	8	M 16x1.5	19	19	5.1	6x1.5
VADKO 10-MS/WD	10	S 800 (3400)	32.0	12	22	M 16x1.5	10	M 18x1.5	22	22	7.1	7.5x1.5
VADKO 12-MS/WD	12	S 630 (2700)	34.0	12	24	M 18x1.5	12	M 20x1.5	24	24	8.9	9x1.5
VADKO 14-MS/WD	14	S 630 (2700)	36.5	14	26	M 20x1.5	14	M 22x1.5	27	27	12.1	10x2
VADKO 16-MS/WD	16	S 630 (2700)	37.0	14	27	M 22x1.5	16	M 24x1.5	27	30	14.8	12x2
VADKO 20-MS/WD	20	S 400 (1700)	43.0	16	32	M 27x2	20	M 30x2	32	36	22.3	16.3x2.4
VADKO 25-MS/WD	25	S 400 (1700)	48.0	18	40	M 33x2	25	M 36x2	41	46	40.0	20.3x2.4
VADKO 30-MS/WD	30	S 400 (1700)	51.0	20	50	M 42x2	30	M 42x2	50	50	58.3	25.3x2.4
VADKO 38-MS/WD	38	S 400 (1700)	60.0	22	55	M 48x2	38	M 52x2	55	60	78.2	33.3x2.4

Please see "Engineering and technical data - Selecting the correct tube fitting" for more information on pressure.

COUPLINGS

STANDPIPE COUPLING

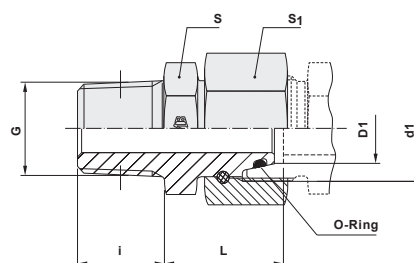
VADKO STUD STANDPIPE ADAPTOR

THE WORLD OF TUBE FITTINGS

VADKO STUD STANDPIPE ADAPTOR NPT

NPT (ANSI, ASME B1-20.1.1983).

With taper and O-ring according to DIN 3865.



description	pipe OD	PN series	L	i	G	D ₁	d ₁	S	S ₁	kg / 100 pcs	O-Ring
VADKO 6-L/NPT	6	L 315 (1260)	20.5	10.0	1/8"NPT	6	M 12x1.5	11	17	2.3	4x1.5
VADKO 8-L/NPT	8	L 315 (1260)	22.5	15.0	1/4"NPT	8	M 14x1.5	14	17	4.1	6x1.5
VADKO 10-L/NPT	10	L 315 (1260)	23.0	15.0	1/4"NPT	10	M 16x1.5	14	19	4.4	7.5x1.5
VADKO 12-L/NPT	12	L 315 (1260)	24.7	15.3	3/8"NPT	12	M 18x1.5	19	22	6.9	9x1.5
VADKO 15-L/NPT	15	L 315 (1260)	29.5	20.0	1/2"NPT	15	M 22x1.5	22	27	12.7	2x2
VADKO 18-L/NPT	18	L 315 (1260)	29.0	20.0	1/2"NPT	18	M 26x1.5	24	32	14.2	15x2
VADKO 22-L/NPT	22	L 160 (640)	32.0	20.0	3/4"NPT	22	M 30x2	27	36	20.0	20x2
VADKO 28-L/NPT	28	L 160 (640)	36.0	25.0	1" NPT	28	M 36x2	36	41	30.6	26x2
VADKO 35-L/NPT	35	L 160 (640)	40.0	25.5	1/4"NPT	35	M 45x2	46	50	48.6	32x2.5
VADKO 42-L/NPT	42	L 160 (640)	42.5	26.0	1 1/2"NPT	42	M 52x2	50	60	66.2	38x2.5
VADKO 6-S/NPT	6	S 630 (2520)	22.5	15.0	1/4"NPT	6	M 14x1.5	14	17	4.2	4x1.5
VADKO 8-S/NPT	8	S 630 (2520)	23.0	15.0	1/4"NPT	8	M 16x1.5	14	19	4.7	6x1.5
VADKO 10-S/NPT	10	S 630 (2520)	25.2	15.3	3/8"NPT	10	M 18x1.5	19	22	7.5	7.5x1.5
VADKO 12-S/NPT	12	S 630 (2520)	26.7	15.3	3/8"NPT	12	M 20x1.5	19	24	8.1	9x1.5
VADKO 14-S/NPT	14	S 630 (2520)	30.5	20.0	1/2"NPT	14	M 22x1.5	22	27	13.1	10x2
VADKO 16-S/NPT	16	S 630 (2520)	31.0	20.0	1/2"NPT	16	M 24x1.5	22	30	14.5	12x2
VADKO 20-S/NPT	20	S 400 (1600)	34.0	20.0	3/4"NPT	20	M 30x2	27	36	22.1	16.3x2.4
VADKO 25-S/NPT	25	S 400 (1600)	38.5	25.0	1" NPT	25	M 36x2	36	46	42.2	20.3x2.4
VADKO 30-S/NPT	30	S 400 (1600)	45.0	25.5	1 1/4"NPT	30	M 42x2	46	50	62.8	25.3x2.4
VADKO 38-S/NPT	38	S 400 (1600)	47.5	26.0	1 1/2"NPT	38	M 52x2	50	60	77.0	33.3x2.4

Please see "Engineering and technical data - Selecting the correct tube fitting" for more information on pressure.

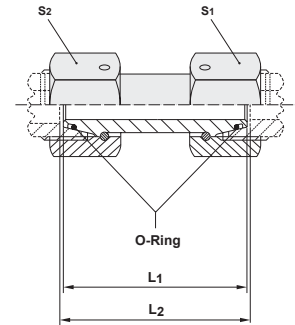
COUPLINGS

STRAIGHT COUPLING AND REDUCER

EDKO STRAIGHT COUPLING TAPER

Taper on both ends and O-ring to DIN 3865.

O-ring NBR (e.g. Perbunan), according to FPM (e.g. Viton) upon request.



description	pipe OD	PN series	L ₁	L ₂	S ₁	O-Ring
EDKO 6-L	6	L 500 (2200)	33.0	36.0	17	4x1.5
EDKO 8-L	8	L 500 (2200)	33.0	36.0	17	6x1.5
EDKO 10-L	10	L 500 (2200)	35.0	37.0	19	7.5x1.5
EDKO 12-L	12	L 400 (1700)	35.0	37.0	22	9x1.5
EDKO 15-L	15	L 400 (1700)	38.0	40.0	27	12x2
EDKO 18-L	18	L 400 (1700)	39.5	42.5	32	15x2
EDKO 22-L	22	L 250 (1100)	44.0	47.0	36	20x2
EDKO 28-L	28	L 250 (1100)	46.0	49.0	41	26x2
EDKO 35-L	35	L 250 (1100)	52.0	58.0	50	32x2.5
EDKO 42-L	42	L 250 (1100)	52.0	59.0	60	38x2.5
EDKO 6-S	6	S 800 (3400)	36.0	39.0	17	4x1.5
EDKO 8-S	8	S 800 (3400)	36.0	39.0	19	6x1.5
EDKO 10-S	10	S 800 (3400)	40.0	43.0	22	7.5x1.5
EDKO 12-S	12	S 630 (2700)	41.0	44.0	24	9x1.5
EDKO 14-S	14	S 630 (2700)	44.0	48.0	27	10x2
EDKO 16-S	16	S 630 (2700)	45.0	50.0	30	12x2
EDKO 20-S	20	S 400 (1700)	54.0	60.0	36	16.3x2.4
EDKO 25-S	25	S 400 (1700)	59.0	66.0	46	20.3x2.4
EDKO 30-S	30	S 400 (1700)	63.0	73.0	50	25.3x2.4
EDKO 38-S	38	S 400 (1700)	68.0	83.0	60	33.3x2.4

Please see "Engineering and technical data - Selecting the correct tube fitting" for more information on pressure.

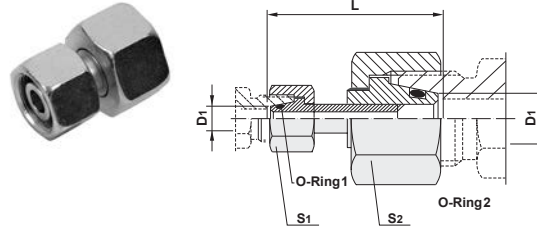
COUPLINGS STRAIGHT COUPLING AND REDUCER

THE WORLD OF TUBE FITTINGS

EDKOR STRAIGHT REDUCER COUPLING TAPER

Taper on both ends and O-ring to DIN 3865.

O-ring NBR (e.g. Perbunan), FPM (e.g. Viton) upon request.



description	PB	pipe D ₁	pipe D ₂	L (± 2 mm)	S ₁	S ₂	O-Ring 1	O-Ring 2
EDKOR 6L/6S	500	6L	6S	35.0	14	17	4x1.5	4x1.5
EDKOR 6L/8L	500	6L	8L	34.0	14	17	4x1.5	6x1.5
EDKOR 6L/8S	500	6L	8S	37.0	14	19	4x1.5	6x1.5
EDKOR 6L/10L	500	6L	10L	34.0	14	19	4x1.5	7.5x1.5
EDKOR 6L/10S	500	6L	10S	35.0	14	22	4x1.5	7.5x1.5
EDKOR 8L/8S	500	8L	8S	37.0	17	19	6x1.5	6x1.5
EDKOR 8L/10L	500	8L	10L	34.0	17	19	6x1.5	7.5x1.5
EDKOR 8L/10S	500	8L	10S	35.0	17	22	6x1.5	7.5x1.5
EDKOR 8L/12L	500	8L	12L	34.0	17	22	6x1.5	9x1.5
EDKOR 8L/12S	500	8L	12S	35.0	17	24	6x1.5	9x1.5
EDKOR 10S/10L	500	10S	10L	37.0	22	19	7.5x1.5	7.5x1.5
EDKOR 10L/12L	500	10L	12L	36.0	19	22	7.5x1.5	9x1.5
EDKOR 10L/12S	500	10L	12S	37.0	19	24	7.5x1.5	9x1.5
EDKOR 10S/12L	400	10S	12L	36.0	22	22	7.5x1.5	9x1.5
EDKOR 10S/12S	630	10S	12S	37.0	22	24	7.5x1.5	9x1.5
EDKOR 10L/14S	500	10L	14S	39.0	19	27	7.5x1.5	10x2
EDKOR 10L/15L	400	10L	15L	34.0	19	27	7.5x1.5	12x2
EDKOR 10L/16S	500	10L	16S	39.0	19	30	7.5x1.5	12x2
EDKOR 12S/12L	400	12S	12L	40.0	24	22	9x1.5	9x1.5
EDKOR 12L/14S	400	12L	14S	38.0	22	27	9x1.5	10x2
EDKOR 12S/14S	630	12S	14S	38.0	24	27	9x1.5	10x2
EDKOR 12L/15L	400	12L	15L	36.0	22	27	9x1.5	12x2
EDKOR 12S/15L	400	12S	15L	35.0	24	27	9x1.5	12x2
EDKOR 12L/16S	400	12L	16S	38.0	22	30	9x1.5	12x2
EDKOR 12S/16S	630	12S	16S	38.0	24	30	9x1.5	12x2
EDKOR 12L/18L	400	12L	18L	36.0	22	32	9x1.5	15x2
EDKOR 12L/20S	400	12L	20S	44.0	22	36	9x1.5	16.3x2.4
EDKOR 14S/16S	630	14S	16S	42.0	27	30	10x2	12x2

Please see "Engineering and technical data - Selecting the correct tube fitting" for more information on pressure.

COUPLINGS

STRAIGHT COUPLING AND REDUCER

description	PB	pipe D ₁	pipe D ₂	L (± 2 mm)	S ₁	S ₂	O-Ring 1	O-Ring 2
EDKOR 15L/16S	400	15L	16S	39.0	27	30	12x2	12x2
EDKOR 15L/18L	400	15L	18L	38.0	27	32	12x2	15x2
EDKOR 15L/20S	400	15L	20S	44.0	27	36	12x2	16.3x2.4
EDKOR 15L/22L	250	15L	22L	42.0	27	36	12x2	20x2
EDKOR 15L/25S	400	15L	25S	50.0	27	46	12x2	20.3x2.4
EDKOR 16S/18L	400	16S	18L	41.0	30	32	12x2	15x2
EDKOR 16S/20S	400	16S	20S	47.0	30	36	12x2	16.3x2.4
EDKOR 16S/22L	250	16S	22L	44.0	30	36	12x2	20x2
EDKOR 16S/25S	400	16S	25S	48.0	30	46	12x2	20.3x2.4
EDKOR 18L/20S	400	18L	20S	46.0	32	36	15x2	16.3x2.4
EDKOR 18L/22L	250	18L	22L	41.0	32	36	15x2	20x2
EDKOR 18L/25S	400	18L	25S	47.0	32	46	15x2	20.3x2.4
EDKOR 18L/28L	250	18L	28L	47.0	32	41	15x2	26x2
EDKOR 18L/30S	400	18L	30S	52.0	32	50	15x2	25.3x2.4
EDKOR 20S/22L	250	20S	22L	46.0	36	36	16.3x2.4	20x2
EDKOR 20S/25S	400	20S	25S	55.0	36	46	16.3x2.4	20.3x2.4
EDKOR 20S/28L	250	20S	28L	50.0	36	41	16.3x2.4	26x2
EDKOR 20S/30S	400	20S	30S	60.0	36	50	16.3x2.4	25.3x2.4
EDKOR 22L/25S	250	22L	25S	47.0	36	46	20x2	20.3x2.4
EDKOR 22L/28L	250	22L	28L	41.0	36	41	20x2	26x2
EDKOR 22L/30S	250	22L	30S	49.0	36	50	20x2	25.3x2.4
EDKOR 22L/35L	250	22L	35L	48.0	36	50	20x2	32x2.5
EDKOR 22L/38S	250	22L	38S	51.0	36	60	20x2	33.3x2.4
EDKOR 25S/28L	250	25S	28L	48.0	46	41	20.3x2.4	26x2
EDKOR 25S/30S	400	25S	30S	57.0	46	50	20.3x2.4	25.3x2.4
EDKOR 25S/35L	250	25S	35L	62.0	46	50	20.3x2.4	32x2.5
EDKOR 25S/38S	400	25S	38S	95.0	46	60	20.3x2.4	33.3x2.4
EDKOR 28L/30S	250	28L	30S	50.0	41	50	26x2	25.3x2.4
EDKOR 28L/35L	250	28L	35L	51.0	41	50	26x2	32x2.5
EDKOR 28L/38S	250	28L	38S	50.0	41	60	26x2	33.3x2.4
EDKOR 28L/42L	250	28L	42L	50.0	41	60	26x2	38x2.5
EDKOR 30S/35L	250	30S	35L	58.0	50	50	25.3x2.4	32x2.5
EDKOR 30S/38S	400	30S	38S	57.0	50	60	25.3x2.4	33.3x2.4
EDKOR 30S/42L	250	30S	42L	58.0	50	60	25.3x2.4	38x2.5
EDKOR 35L/38S	250	35L	38S	57.0	50	60	32x2.5	33.3x2.4
EDKOR 35L/42L	250	35L	42L	59.0	50	60	32x2.5	38x2.5
EDKOR 38S/42L	250	38S	42L	62.0	60	60	33.3x2.4	38x2.5

Please see "Engineering and technical data - Selecting the correct tube fitting" for more information on pressure.

COUPLINGS

ADJUSTABLE LOCKNUT COUPLING

BE ADJUSTABLE LOCKNUT ELBOW

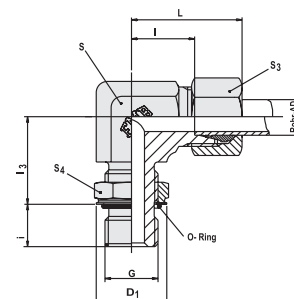
THE WORLD OF TUBE FITTINGS

BE ADJUSTABLE LOCKNUT ELBOW METRIC

Metric parallel.

ISO 6149 with O-ring seal.

O-ring NBR (e.g. Perbunan), FPM (e.g. Viton) upon request.



description	pipe OD	PN series	S ₄	S	S ₃	L	l	l ₃	D ₁	i	G	MA* Nm	O-Ring	kg / 100 pcs
BE 4-MLL/O	4	LL 250	12	11	10	21	11.5	19.8	13.3	7.1	M 8x1		6.1x1.6	2.5
BE 4-MLL/M10x1/O	4	LL 251	14	11	10	21	11.5	19.8	15.3	7.1	M 10x1		8.1x1.6	2.9
BE 6-MLL/O	6	LL 252	14	11	12	22	9.5	19.8	15.3	7.1	M 10x1		8.1x1.6	2.8
BE 6-MLL/M12x1.5/O	6	LL 253	17	14	12	25	12.5	23.2	18.6	9.6	M 12x1.5		9.3x2.2	4.9
DS-BE 6-ML/O	6	L 315	14	14	14	29	14.0	20.0	15.0	7.0	M 10x1	15	8.1x1.6	6.6
DS-BE 8-ML/O	8	L 315	17	14	17	31	16.0	22.0	18.0	10.0	M 12x1.5	25	9.3x2.2	6.6
DS-BE 10-ML/O	10	L 315	19	19	19	32	17.0	25.0	20.0	10.0	M 14x1.5	35	11.3x2.2	8.7
DS-BE 12-ML/O	12	L 315	22	19	22	34	19.0	26.0	23.0	10.0	M 16x1.5	40	13.3x2.2	9.5
DS-BE 15-ML/O	15	L 315	24	22	27	36	21.0	30.0	25.0	11.0	M 18x1.5	45	15.3x2.2	22.4
DS-BE 18-ML/O	18	L 315	27	27	32	40	24.0	33.0	28.0	12.0	M 22x1.5	60	19.3x2.2	28.4
DS-BE 22-ML/O	22	L 160	32	30	36	44	28.0	35.0	33.0	14.0	M 27x2	100	23.6x2.9	53.4
DS-BE 28-ML/O	28	L 160	41	36	41	47	31.0	38.0	41.0	14.0	M 33x2	160	29.6x2.9	60.7
DS-BE 35-ML/O	35	L 160	50	50	50	59	38.0	48.0	51.0	14.0	M 42x2	210	38.6x2.9	84.4
DS-BE 42-ML/O	42	L 160	55	50	60	61	38.0	49.0	56.0	16.0	M 48x2	260	44.6x2.9	92.8
DS-BE 6-MS/O	6	S 400	17	14	17	30	15.0	22.0	18.0	10.0	M 12x1.5	35	9.3x2.2	7.2
DS-BE 8-MS/O	8	S 400	19	19	19	32	17.0	26.0	20.0	10.0	M 14x1.5	45	11.3x2.2	8.8
DS-BE 10-MS/O	10	S 400	22	19	22	34	18.0	27.0	23.0	11.0	M 16x1.5	55	13.3x2.2	9.7
DS-BE 12-MS/O	12	S 400	24	22	24	38	22.0	31.0	25.0	12.0	M 18x1.5	70	15.3x2.2	22.7
DS-BE 16-MS/O	16	S 400	27	27	30	43	25.0	35.0	28.0	14.0	M 22x1.5	100	19.3x2.2	28.6
DS-BE 20-MS/O	20	S 400	32	30	36	49	28.0	39.0	33.0	16.0	M 27x2	170	23.6x2.9	55.3
DS-BE 25-MS/O	25	S 315	41	36	46	54	30.0	44.0	41.0	16.0	M 33x2	310	29.6x2.9	72.2
DS-BE 30-MS/O	30	S 250	50	50	50	62	36.0	51.0	51.0	17.0	M 42x2	330	38.6x2.9	93.2
DS-BE 38-MS/O	38	S 200	55	50	60	65	34.0	54.0	56.0	19.0	M 48x2	420	44.6x2.9	104.2

* Recommended tightening torques for stud threads G, with mating material steel

Please see "Engineering and technical data - Selecting the correct tube fitting" for more information on pressure.

COUPLINGS

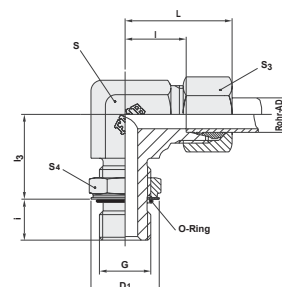
ADJUSTABLE LOCKNUT COUPLING

BE ADJUSTABLE LOCKNUT ELBOW

BE ADJUSTABLE LOCKNUT ELBOW UNF/UN

UNF / UN parallel with O-ring seal.

O-ring NBR (e.g. Perbunan), FPM (e.g. Viton) upon request.



description	pipe OD	PN series	S4	S	S3	L	l	l3	D1	i	G	MA* Nm	O-Ring	kg / 100 pcs
DS-BE 6-L/7/16-20UNF	6	L 315	14	14	14	29	14	19	16.5	10	7/16-20UNF-2A	19	8.92x1.83	6.5
DS-BE 8-L/7/16-20UNF	8	L 315	14	14	17	31	16	19	16.5	10	7/16-20UNF-2A	19	8.92x1.83	7.0
DS-BE 10-L/9/16-18UNF	10	L 315	17	19	19	32	17	24	20.2	11	9/16-18UNF-2A	40	11.89x1.98	9.0
DS-BE 12-L/9/16-18UNF	12	L 315	17	19	22	34	19	25	20.2	11	9/16-18UNF-2A	40	11.89x1.98	11.0
DS-BE 12-L/3/4-16UNF	12	L 315	22	19	22	34	19	25	25.7	13	3/4-16UNF-2A	60	16.36x2.21	19.4
DS-BE 15-L/3/4-16UNF	15	L 315	22	22	27	36	21	28	25.7	13	3/4-16UNF-2A	60	16.36x2.21	18.5
DS-BE 15-L/7/8-14UNF	15	L 315	27	22	27	36	21	28	29.3	15	7/8-14UNF-2A	80	19.18x2.46	18.8
DS-BE 18-L/7/8-14UNF	18	L 315	27	27	32	40	24	32	29.3	15	7/8-14UNF-2A	80	19.18x2.46	28.4
DS-BE 18-L/1 1/16-12UN	18	L 315	32	30	32	40	24	32	36.7	17	1 1/16-12UN-2A	110	23.47x2.95	31.8
DS-BE 22-L/1 1/16-12UN	22	L 160	32	30	36	44	28	35	36.7	17	1 1/16-12UN-2A	110	23.47x2.95	53.5
DS-BE 28-L/1 5/16-12UN	28	L 160	41	36	41	47	31	42	44.0	17	1 5/16-12UN-2A	160	29.74x2.95	45.2
DS-BE 35-L/1 5/8-12UN	35	L 160	50	50	50	59	38	46	55.0	17	1 5/8-12UN-2A	300	37.46x3	84.4
DS-BE 42-L/1 7/8-12UN	42	L 160	55	50	60	61	38	47	62.3	17	1 7/8-12UN-2A	340	43.69x3	92.8
DS-BE 6-S/7/16-20UNF	6	S 400	14	14	17	30	15	20	16.5	11	7/16-20UNF-2A	21	8.92x1.83	6.5
DS-BE 8-S/9/16-18UNF	8	S 400	17	19	19	32	17	25	20.2	12	9/16-18UNF-2A	50	11.89x1.98	8.5
DS-BE 10-S/9/16-18UNF	10	S 400	17	19	22	34	18	26	20.2	12	9/16-18UNF-2A	50	11.89x1.98	9.0
DS-BE 12-S/3/4-16UNF	12	S 400	22	22	24	38	22	30	25.7	14	3/4-16UNF-2A	80	16.36x2.21	21.3
DS-BE 16-S/7/8-14UNF	16	S 400	27	27	30	43	25	34	29.3	16	7/8-14UNF-2A	140	19.18x2.46	28.6
DS-BE 20-S/1 1/16-12UN	20	S 400	32	30	36	49	28	37	36.7	19	1 1/16-12UN-2A	190	23.47x2.95	55.5
DS-BE 25-S/1 1/16-12UN	25	S 400	32	36	46	54	30	50	36.7	19	1 1/16-12UN-2A	190	23.47x2.95	69.4
DS-BE 30-S/1 5/8-12UN	30	S 250	50	50	50	62	36	50	55.0	19	1 5/8-12UN-2A	350	37.46x3	93.2
DS-BE 38-S/1 7/8-12UN	38	S 250	55	50	60	65	34	51	62.3	19	1 7/8-12UN-2A	430	43.69x3	104.2

* Recommended tightening torques for stud threads G, with mating material steel

Please see "Engineering and technical data - Selecting the correct tube fitting" for more information on pressure.

COUPLINGS

ADJUSTABLE LOCKNUT COUPLING

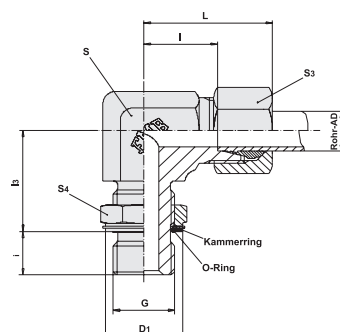
BE ADJUSTABLE LOCKNUT ELBOW

THE WORLD OF TUBE FITTINGS

BE ADJUSTABLE LOCKNUT ELBOW BSP RR

BSP parallel for small or wide spot face.

Retaining ring and O-ring NBR (e.g. Perbunan), FPM (e.g. Viton) upon request.



description	pipe OD	PN series	S ₄	S	S ₃	L	l	l ₃	D ₁	i	G	MA* Nm	O-Ring	Support ring small	kg / 100 pcs
BE 4-RL/0A	4	LL 250	14	11	10	21	11.3	20.5	15	5.5	G 1/8"A	10	8x1.88	KAM R1/3	3.0
BE 6-RL/0A	6	LL 250	14	11	12	21	11.3	20.5	15	5.5	G 1/8"A	10	8x1.88	KAM R1/8	3.2
DS-BE 6-RL/0A	6	L 315	14	14	14	29	14.0	20.5	15	5.5	G 1/8 A	25	8x1.88	KAM R1/8	6.6
DS-BE 8-RL/0A	8	L 315	19	14	17	31	16.0	25.5	20	7.0	G 1/4"A	50	10.77x2.62	KAM R1/4	6.6
DS-BE 10-RL/0A	10	L 315	19	19	19	32	17.0	27.0	20	7.0	G 1/4" A	50	10.77x2.62	KAM R1/4	11.9
DS-BE 12-RL/0A	12	L 250	22	19	22	34	19.0	30.0	23	7.0	G 3/8" A	80	13.94x2.62	KAM R3/8	13.8
DS-BE 15-RL/0A	15	L 250	27	22	27	36	21.0	32.5	28	10.5	G 1/2" A	105	17x3	KAM R1/2	28.3
DS-BE 18-RL/0A	18	L 250	27	27	32	40	24.0	38.5	28	10.5	G 1/2" A	105	17x3	KAM R1/2	34.4
DS-BE 22-RL/0A	22	L 160	36	30	36	44	28.0	38.5	33	10.5	G 3/4"A	220	23.6x2.9	KAM R3/4	44.9
DS-BE 28-RL/0A	28	L 160	41	36	41	47	31.0	46.5	41	12.5	G 1"A	370	29.74x3.53	KAM R1	65.7
DS-BE 35-RL/0A	35	L 160	50	50	50	59	38.0	52.5	51	12.5	G 1 1/4"A	500	37.69x3.53	KAM R1 1/4	111.3
DS-BE 42-RL/0A	42	L 160	55	50	60	61	38.0	54.5	56	12.5	G 1 1/2"A	600	44.04x3.53	KAM R1 1/2	119.7
DS-BE 6-RS/0A	6	S 315	19	14	17	30	15.0	25.0	20	7.0	G 1/4"A	50	10.77x2.62	KAM R1/4	6.9
DS-BE 8-RS/0A	8	S 315	19	19	19	32	17.0	27.0	20	7.0	G 1/4"A	50	10.77x2.62	KAM R1/4	12.0
DS-BE 10-RS/0A	10	S 250	22	19	22	34	18.0	30.0	23	7.0	G 3/8"A	80	13.94x2.62	KAM R3/8	13.8
DS-BE 12-RS/0A	12	S 250	22	22	24	38	22.0	30.0	23	7.0	G 3/8"A	80	13.94x2.62	KAM R3/8	20.6
DS-BE 16-RS/0A	16	S 250	27	27	30	43	25.0	38.5	28	10.5	G 1/2"A	105	17x3	KAM R1/2	34.6
DS-BE 20-RS/0A	20	S 250	36	30	36	49	28.0	38.5	33	10.5	G 3/4"A	220	23.6x2.9	KAM R3/4	46.8
DS-BE 25-RS/0A	25	S 250	41	36	46	54	30.0	46.5	41	12.5	G 1"A	370	29.74x3.53	KAM R1	77.2
DS-BE 30-RS/0A	30	S 160	50	50	50	62	36.0	51.5	51	12.5	G 1 1/4"A	500	37.69x3.53	KAM R1 1/4	106.9
DS-BE 38-RS/0A	38	S 160	55	50	60	65	34.0	57.5	56	12.5	G 1 1/2"A	600	44.04x3.53	KAM R1 1/2	131.1

* Recommended tightening torques for stud threads G, with mating material steel

Please see "Engineering and technical data - Selecting the correct tube fitting" for more information on pressure.

COUPLINGS

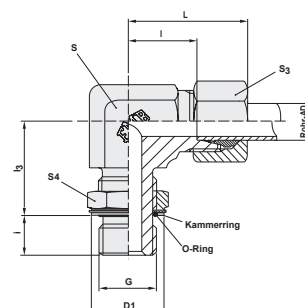
ADJUSTABLE LOCKNUT COUPLING

BE ADJUSTABLE LOCKNUT ELBOW

BE ADJUSTABLE LOCKNUT ELBOW METRIC RR

Metric parallel for small or wide spot face.

Retaining ring and O-ring NBR (e.g. Perbunan), FPM (e.g. Viton) upon request.



description	pipe OD	PN series	S ₄	S	S ₃	L	l	l ₃	D ₁	i	G	MA* Nm	O-Ring	Support ring small	kg / 100 pcs
DS-BE 6-ML/OA	6	L 315	14	14	14	29	14	21.5	15	5.5	M10x1	18	8x1.88	KAM M10x1	6.6
DS-BE 8-ML/OA	8	L 315	17	14	17	31	16	23.5	18	8.5	M12x1.5	35	9.3x2.2	KAM M12x1.5	6.6
DS-BE 10-ML/OA	10	L 315	19	19	19	32	17	26.5	20	8.5	M14x1.5	55	11.3x2.2	KAM M14x1.5	8.7
DS-BE 12-ML/OA	12	L 315	22	19	22	34	19	27.5	23	8.5	M16x1.5	80	13.3x2.2	KAM M16x1.5	9.5
DS-BE 15-ML/OA	15	L 315	24	22	27	36	21	32.0	25	9.0	M18x1.5	105	15.54x2.62	KAM M18x1.5	22.4
DS-BE 18-ML/OA	18	L 250	27	27	32	40	24	35.5	28	9.5	M22x1.5	125	19.2x3	KAM M22x1.5	28.4
DS-BE 22-ML/OA	22	L 160	32	30	36	44	28	37.5	33	11.5	M27x2	220	23.47x2.95	KAM M27x2	53.4
DS-BE 28-ML/OA	28	L 160	41	36	41	47	31	40.5	41	11.5	M33x2	370	29.2x3	KAM M33x2	60.9
DS-BE 35-ML/OA	35	L 160	50	50	50	59	38	50.5	51	11.5	M42x2	500	37.69x3.53	KAM M42x2	84.4
DS-BE 42-ML/OA	42	L 160	55	50	60	61	38	51.5	56	13.5	M48x2	600	43.69x3	KAM M48x2	92.4
DS-BE 6-MS/OA	6	S 315	17	14	17	30	15	23.5	18	8.5	M12x1.5	35	9.3x2.2	KAM M12x1.5	7.2
DS-BE 8-MS/OA	8	S 315	19	19	19	32	17	27.5	20	8.5	M14x1.5	55	11.3x2.2	KAM M14x1.5	8.8
DS-BE 10-MS/OA	10	S 315	22	19	22	34	18	28.5	23	9.5	M16x1.5	80	13.3x2.2	KAM M16x1.5	9.7
DS-BE 12-MS/OA	12	S 315	24	22	24	38	22	33.0	25	10.0	M18x1.5	105	15.54x2.62	KAM M18x1.5	22.7
DS-BE 16-MS/OA	16	S 250	27	27	30	43	25	37.5	28	11.5	M22x1.5	125	19.2x3	KAM M22x1.5	28.6
DS-BE 20-MS/OA	20	S 250	32	30	36	49	28	41.5	33	13.5	M27x2	220	23.47x2.95	KAM M27x2	55.3
DS-BE 25-MS/OA	25	S 160	41	36	46	54	30	46.5	41	13.5	M33x2	370	29.2x3	KAM M33x2	72.2
DS-BE 30-MS/OA	30	S 160	50	50	50	62	36	53.5	51	14.5	M42x2	500	37.69x3.53	KAM M42x2	93.2
DS-BE 38-MS/OA	38	S 160	55	50	60	65	34	56.5	56	16.5	M48x2	600	43.69x3	KAM M48x2	104.2

* Recommended tightening torques for stud threads G, with mating material steel

Please see "Engineering and technical data - Selecting the correct tube fitting" for more information on pressure.

COUPLINGS

ADJUSTABLE LOCKNUT COUPLING

BFE ADJUSTABLE 45° LOCKNUT ELBOW

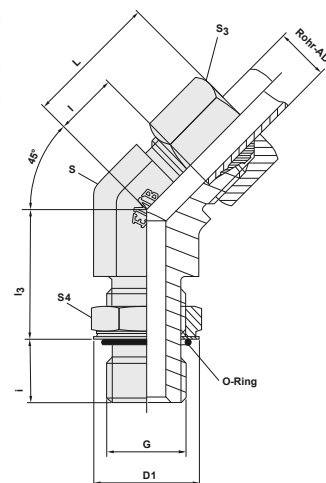
THE WORLD OF TUBE FITTINGS

BFE ADJUSTABLE 45° LOCKNUT ELBOW METRIC

Metric parallel.

ISO 6149 with O-ring seal.

O-ring NBR (e.g. Perbunan), FPM (e.g. Viton) upon request.



description	pipe OD	PN series	S ₄	S	S ₃	L	l	l ₃	D ₁	i	G	MA* Nm	O-Ring	kg / 100 pcs
DS-BFE 6-ML/O	6	L 315	14	14	14	24	9	19	15	7	M10x1	15	8.1x1.6	9.3
DS-BFE 8-ML/O	8	L 315	17	14	17	27	12	19	18	10	M12x1.5	25	9.3x2.2	10.3
DS-BFE 10-ML/O	10	L 315	19	19	19	27	12	24	20	10	M14x1.5	35	11.3x2.2	17.5
DS-BFE 12-ML/O	12	L 315	22	19	22	28	14	24	23	10	M16x1.5	40	13.3x2.2	19.1
DS-BFE 15-ML/O	15	L 315	24	22	27	32	17	24	25	11	M18x1.5	45	15.3x2.2	33.1
DS-BFE 18-ML/O	18	L 315	27	27	32	33	17	30	28	12	M22x1.5	60	19.3x2.2	42.3
DS-BFE 22-ML/O	22	L 160	32	30	36	35	19	33	33	14	M27x2	100	23.6x2.9	73.7
DS-BFE 28-ML/O	28	L 160	41	36	41	40	23	35	41	14	M33x2	160	29.6x2.9	77.7
DS-BFE 35-ML/O	35	L 160	50	50	50	48	27	37	51	14	M42x2	210	38.6x2.9	126.0
DS-BFE 42-ML/O	42	L 160	55	50	60	49	26	37	56	16	M48x2	260	44.6x2.9	142.8
DS-BFE 6-MS/O	6	S 400	17	14	17	24	9	18	18	10	M12x1.5	35	9.3x2.2	10.6
DS-BFE 8-MS/O	8	S 400	19	19	19	27	12	21	20	10	M14x1.5	45	11.3x2.2	17.7
DS-BFE 10-MS/O	10	S 400	22	19	22	29	13	21	23	11	M16x1.5	55	13.3x2.2	19.5
DS-BFE 12-MS/O	12	S 400	24	22	24	33	17	22	25	12	M18x1.5	70	15.3x2.2	31.3
DS-BFE 16-MS/O	16	S 400	27	27	30	34	16	29	28	14	M22x1.5	100	19.3x2.2	42.7
DS-BFE 20-MS/O	20	S 400	32	30	36	38	16	31	33	16	M27x2	170	23.6x2.9	77.5
DS-BFE 25-MS/O	25	S 250	41	36	46	43	19	33	41	16	M33x2	310	29.6x2.9	100.7
DS-BFE 30-MS/O	30	S 200	50	50	50	50	24	35	51	17	M42x2	330	38.6x2.9	143.6
DS-BFE 38-MS/O	38	S 200	55	50	60	52	21	35	56	19	M48x2	420	44.6x2.9	165.6

* Recommended tightening torques for stud threads G, with mating material steel

Please see "Engineering and technical data - Selecting the correct tube fitting" for more information on pressure.

COUPLINGS

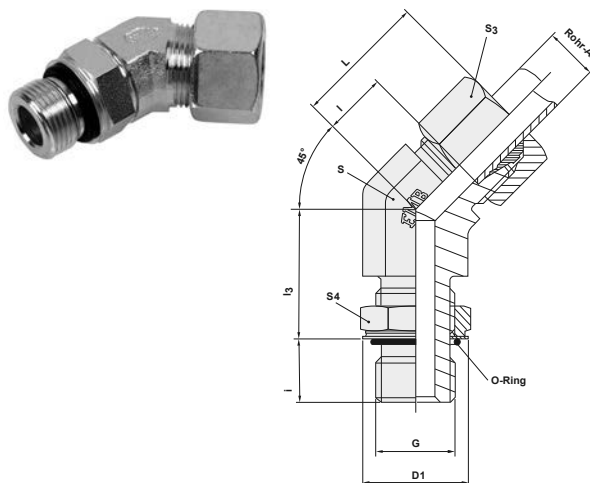
ADJUSTABLE LOCKNUT COUPLING

BFE ADJUSTABLE 45° LOCKNUT ELBOW

BFE ADJUSTABLE 45° LOCKNUT ELBOW UNF/UN

UNF / UN parallel with O-ring seal.

O-ring NBR (e.g. Perbunan), FPM (e.g. Viton) upon request.



description	pipe OD	PN series	S ₄	S	S ₃	L	l	L ₃	D ₁	i	G	MA* Nm	O-Ring	kg / 100 pcs
DS-BFE 6-L/7/16-20UNF	6	L 315	14	14	14	24	9	19	16.5	10	7/16-20UNF-2A	19	8.92x1.83	5.7
DS-BFE 8-L/7/16-20UNF	8	L 315	14	14	17	27	12	19	16.5	10	7/16-20UNF-2A	19	8.92x1.83	6.2
DS-BFE 10-L/9/16-18UNF	10	L 315	17	19	19	27	12	24	20.2	11	9/16-18UNF-2A	40	11.89x1.98	10.5
DS-BFE 12-L/9/16-18UNF	12	L 315	17	19	22	28	14	24	20.2	11	9/16-18UNF-2A	40	11.89x1.98	10.1
DS-BFE 12-L/3/4-16UNF	12	L 315	22	19	22	28	14	24	25.7	13	3/4-16UNF-2A	60	16.36x2.21	14.7
DS-BFE 15-L/3/4-16UNF	15	L 315	22	22	27	32	17	24	25.7	13	3/4-16UNF-2A	60	16.36x2.21	20.3
DS-BFE 15-L/7/8-14UNF	15	L 315	27	22	27	32	17	24	29.3	15	7/8-14UNF-2A	80	19.18x2.46	18.0
DS-BFE 18-L/7/8-14UNF	18	L 315	27	27	32	33	17	30	29.3	15	7/8-14UNF-2A	80	19.18x2.46	26.4
DS-BFE 18-L/1 1/6-12UN	18	L 160	32	30	32	33	17	30	36.7	17	1 1/16-12UN-2A	110	23.47x2.95	36.4
DS-BFE 22-L/1 1/6-12UN	22	L 160	32	30	36	35	19	33	36.7	17	1 1/16-12UN-2A	110	23.47x2.95	38.8
DS-BFE 28-L/1 5/16-12UN	28	L 160	41	36	41	39	23	35	44.0	17	1 5/16-12UN-2A	160	29.74x2.95	50.0
DS-BFE 35-L/1 5/8-12UN	35	L 160	50	50	50	48	27	37	55.0	17	1 5/8-12UN-2A	300	37.46x3	73.1
DS-BFE 42-L/1 7/8-12UN	42	L 16	55	50	60	49	26	37	62.3	17	1 7/8-12UN-2A	340	43.69x3	81.5
DS-BFE 6-S/7/16-20UNF	6	S 400	14	14	17	24	9	18	16.5	11	7/16-20UNF-2A	21	8.92x1.83	6.5
DS-BFE 8-S/9/16-18UNF	8	S 400	17	19	19	27	12	21	20.2	12	9/16-18UNF-2A	50	11.89x1.98	10.6
DS-BFE 10-S/9/16-18UNF	10	S 400	17	19	22	29	13	21	20.2	12	9/16-18UNF-2A	50	11.89x1.98	11.5
DS-BFE 12-S/3/4-16UNF	12	S 400	22	22	24	33	17	22	25.7	14	3/4-16UNF-2A	80	16.36x2.21	17.1
DS-BFE 16-S/7/8-14UNF	16	S 400	27	27	30	34	16	29	29.3	16	7/8-14UNF-2A	140	19.18x2.46	26.6
DS-BFE 20-S/1 1/16-12UN	20	S 400	32	30	36	38	16	31	36.7	19	1 1/16-12UN-2A	190	23.47x2.95	40.7
DS-BFE 25-S/1 1/16-12UN	25	S 400	32	36	46	43	19	33	36.7	19	1 1/16-12UN-2A	190	23.47x2.95	55.8
DS-BFE 30-S/1 5/8-12UN	30	S 250	50	50	50	50	24	35	55.0	19	1 5/8-12UN-2A	350	37.46x3	81.9
DS-BFE 38-S/1 7/8-12UN	38	S 250	55	50	60	52	21	35	62.3	19	1 7/8-12UN-2A	430	43.69x3	92.9

* Recommended tightening torques for stud threads G, with mating material steel

Please see "Engineering and technical data - Selecting the correct tube fitting" for more information on pressure.

COUPLINGS

ADJUSTABLE LOCKNUT COUPLING

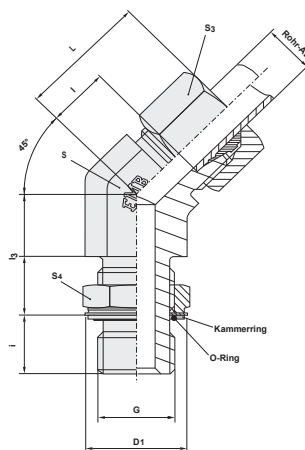
BFE ADJUSTABLE 45° LOCKNUT ELBOW

THE WORLD OF TUBE FITTINGS

BFE ADJUSTABLE 45° LOCKNUT ELBOW BSP RR

BSP parallel for small or wide spot face.

Retaining ring and O-ring NBR (e.g. Perbunan), FPM (e.g. Viton) upon request.



description	pipe OD	PN series	S ₄	S	S ₃	L	l	l ₃	D ₁	i	G	MA* Nm	O-Ring	Support ring small	kg / 100 pcs
DS-BFE 6-RL/OA	6	L 315	14	4	14	24	9	24.5	15	5.5	G 1/8"A	25	8x1.88	KAM R1/8	9.3
DS-BFE 8-RL/OA	8	L 315	19	14	17	27	12	21.0	20	7.0	G 1/4"A	50	10.77x2.62	KAM R1/4	10.3
DS-BFE 10-RL/OA	10	L 315	19	19	19	27	12	25.0	20	7.0	G 1/4"A	50	10.77x2.62	KAM R1/4	17.1
DS-BFE 12-RL/OA	12	L 250	22	19	22	28	14	27.0	23	7.0	G 3/8"A	80	13.94x2.62	KAM R3/8	20.6
DS-BFE 15-RL/OA	15	L 250	27	22	27	32	17	27.5	28	10.5	G 1/2"A	105	17x3	KAM R1/2	31.3
DS-BFE 18-RL/OA	18	L 250	27	27	32	33	17	33.5	28	10.5	G 1/2"A	105	17x3	KAM R1/2	42.8
DS-BFE 22-RL/OA	22	L 160	36	30	36	35	19	36.5	33	10.5	G 3/4"A	220	23.6x2.9	KAM R3/4	71.9
DS-BFE 28-RL/OA	28	L 160	41	36	41	40	23	39.5	41	12.5	G 1"A	370	29.74x3.53	KAM R1	81.2
DS-BFE 35-RL/OA	35	L 160	50	50	50	48	27	40.5	51	12.5	G 1 1/4"A	500	37.69x3.53	KAM R1 1/4	126.0
DS-BFE 42-RL/OA	42	L 160	55	50	60	49	26	40.5	56	12.5	G 1 1/2"A	600	44.04x3.53	KAM R1 1/2	142.8
DS-BFE 6-RS/OA	6	S 315	19	14	17	24	9	21.0	20	7.0	G 1/4"A	50	10.77x2.62	KAM R1/4	10.9
DS-BFE 8-RS/OA	8	S 315	19	19	19	27	12	25.0	20	7.0	G 1/4"A	50	10.77x2.62	KAM R1/4	15.3
DS-BFE 10-RS/OA	10	S 250	22	19	22	29	13	27.0	23	7.0	G 3/8"A	80	13.94x2.62	KAM R3/8	19.1
DS-BFE 12-RS/OA	12	S 250	22	22	24	33	17	27.0	23	7.0	G 3/8"A	80	13.94x2.62	KAM R3/8	23.8
DS-BFE 16-RS/OA	16	S 250	27	27	30	34	16	33.5	28	10.5	G 1/2"A	105	17x3	KAM R1/2	43.2
DS-BFE 20-RS/OA	20	S 250	36	30	36	38	16	36.5	33	10.5	G 3/4"A	220	23.6x2.9	KAM R3/4	75.7
DS-BFE 25-RS/OA	25	S 250	41	36	46	43	19	39.5	41	12.5	G 1"A	370	29.74x3.53	KAM R1	104.2
DS-BFE 30-RS/OA	30	S 160	50	50	50	50	24	40.5	51	12.5	G 1 1/4"A	500	37.69x3.53	KAM R1 1/4	143.6
DS-BFE 38-RS/OA	38	S 160	55	50	60	52	21	40.5	56	12.5	G 1 1/2"A	600	44.04x3.53	KAM R1 1/2	165.6

* Recommended tightening torques for stud threads G, with mating material steel

Please see "Engineering and technical data - Selecting the correct tube fitting" for more information on pressure.

COUPLINGS

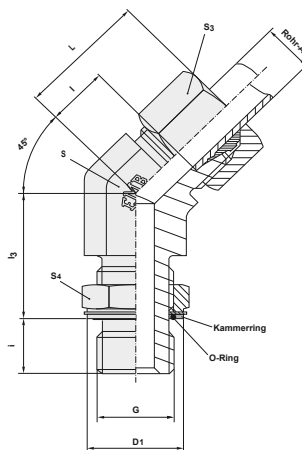
ADJUSTABLE LOCKNUT COUPLING

BFE ADJUSTABLE 45° LOCKNUT ELBOW

BFE ADJUSTABLE 45° LOCKNUT ELBOW METRIC RR

Metric parallel for small or wide spot face.

Retaining ring and O-ring NBR (e.g. Perbunan),
FPM (e.g. Viton) upon request.



description	pipe OD	PN series	S ₄	S	S ₃	L	l	L ₃	D ₁	i	G	MA* Nm	O-Ring	Support ring small	kg / 100 pcs
DS-BFE 6-ML/OA	6	L 315	14	14	14	24	9	20.5	15	5.5	M10x1	18	8x1.88	KAM M10x1	5.7
DS-BFE 8-ML/OA	8	L 315	17	14	17	27	12	20.5	18	8.5	M12x1.5	35	9.3x2.2	KAM M12x1.5	6.2
DS-BFE 10-ML/OA	10	L 315	19	19	19	27	12	25.5	20	8.5	M14x1.5	55	11.3x2.2	KAM M14x1.5	10.4
DS-BFE 12-ML/OA	12	L 315	22	19	22	28	14	25.5	23	8.5	M16x1.5	80	13.3x2.2	KAM M16x1.5	14.0
DS-BFE 15-ML/OA	15	L 315	24	22	27	32	17	26.0	25	9.0	M18x1.5	105	15.54x2.62	KAM M18x1.5	19.8
DS-BFE 18-ML/OA	18	L 250	27	27	32	33	17	32.5	28	9.5	M22x1.5	125	19.2x3	KAM M22x1.5	26.0
DS-BFE 22-ML/OA	22	L 160	32	30	36	35	19	35.5	33	11.5	M27x2	220	23.47x2.95	KAM M27x2	38.2
DS-BFE 28-ML/OA	28	L 160	41	36	41	40	23	37.5	41	11.5	M33x2	370	29.2x3	KAM M33x2	40.6
DS-BFE 35-ML/OA	35	L 160	50	50	50	48	27	39.5	51	11.5	M42x2	500	37.69x3.53	KAM M42x2	72.9
DS-BFE 42-ML/OA	42	L 160	55	50	60	49	26	39.5	56	13.5	M48x2	600	43.69x3	KAM M48x2	81.3
DS-BFE 6-MS/OA	6	S 315	17	14	17	24	9	19.5	18	8.5	M12x1.5	35	9.3x2.2	KAM M12x1.5	6.4
DS-BFE 8-MS/OA	8	S 315	19	19	19	27	12	22.5	20	8.5	M14x1.5	55	11.3x2.2	KAM M14x1.5	10.5
DS-BFE 10-MS/OA	10	S 315	22	19	22	29	13	22.5	23	9.5	M16x1.5	80	13.3x2.2	KAM M16x1.5	11.4
DS-BFE 12-MS/OA	12	S 315	24	22	24	33	17	24.0	25	10.0	M18x1.5	105	15.54x2.62	KAM M18x1.5	14.9
DS-BFE 16-MS/OA	16	S 250	27	27	30	34	16	31.5	28	11.5	M22x1.5	125	19.2x3	KAM M22x1.5	22.2
DS-BFE 20-MS/OA	20	S 250	32	30	36	38	16	33.5	33	13.5	M27x2	220	23.47x2.95	KAM M27x2	40.1
DS-BFE 25-MS/OA	25	S 160	41	36	46	43	19	35.5	41	13.5	M33x2	370	29.2x3	KAM M33x2	52.1
DS-BFE 30-MS/OA	30	S 160	50	50	50	50	24	37.5	51	14.5	M42x2	500	37.69x3.53	KAM M42x2	81.7
DS-BFE 38-MS/OA	38	S 160	55	50	60	52	21	37.5	56	16.5	M48x2	600	43.69x3	KAM M48x2	92.7

* Recommended tightening torques for stud threads G, with mating material steel

Please see "Engineering and technical data - Selecting the correct tube fitting" for more information on pressure.

COUPLINGS

ADJUSTABLE LOCKNUT COUPLING

CE ADJUSTABLE LOCKNUT BRANCH TEE

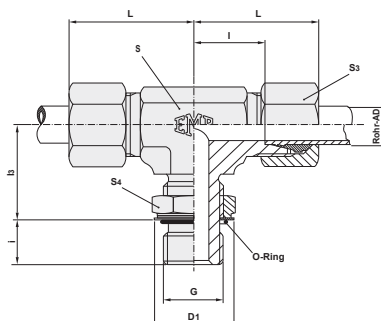
THE WORLD OF TUBE FITTINGS

CE ADJUSTABLE LOCKNUT BRANCH TEE METRIC

Metric parallel.

ISO 6149 with O-ring seal.

O-ring NBR (e.g. Perbunan), FPM (e.g. Viton) upon request.



description	pipe OD	PN series	S ₄	S	S ₃	L	l	l ₃	D ₁	i	G	MA* Nm	O-Ring	kg / 100 pcs
DS-CE 6-ML/O	6	L 315	14	14	14	29	14	20	15	7	M 10x1	15	8.1x1.6	9.3
DS-CE 8-ML/O	8	L 315	17	14	17	31	16	22	18	10	M 12x1.5	25	9.3x2.2	10.3
DS-CE 10-ML/O	10	L 315	19	19	19	32	17	25	20	10	M 14x1.5	35	11.3x2.2	17.5
DS-CE 12-ML/O	12	L 315	22	19	22	34	19	26	23	10	M 16x1.5	40	13.3x2.2	19.1
DS-CE 15-ML/O	15	L 315	24	22	27	36	21	30	25	11	M 18x1.5	45	15.3x2.2	33.1
DS-CE 18-ML/O	18	L 315	27	27	32	40	24	33	28	12	M 22x1.5	60	19.3x2.2	42.3
DS-CE 22-ML/O	22	L 160	32	30	36	44	28	35	33	14	M 27x2	100	23.6x2.9	73.7
DS-CE 28-ML/O	28	L 160	41	36	41	47	31	38	41	14	M 33x2	160	29.6x2.9	77.7
DS-CE 35-ML/O	35	L 160	50	50	50	59	38	48	51	14	M 42x2	210	38.6x2.9	126.0
DS-CE 42-ML/O	42	L 160	55	50	60	61	38	49	56	16	M 48x2	260	44.6x2.9	142.8
DS-CE 6-MS/O	6	S 400	17	14	17	30	15	22	18	10	M 12x1.5	35	9.3x2.2	10.6
DS-CE 8-MS/O	8	S 400	19	19	19	32	17	26	20	10	M 14x1.5	45	11.3x2.2	17.7
DS-CE 10-MS/O	10	S 400	22	19	22	34	18	27	23	11	M 16x1.5	55	13.3x2.2	19.5
DS-CE 12-MS/O	12	S 400	24	22	24	38	22	31	25	12	M 18x1.5	70	15.3x2.2	31.3
DS-CE 16-MS/O	16	S 400	27	27	30	43	25	35	28	14	M 22x1.5	100	19.3x2.2	42.7
DS-CE 20-MS/O	20	S 400	32	30	36	49	28	39	33	16	M 27x2	170	23.6x2.9	77.5
DS-CE 25-MS/O	25	S 315	41	36	46	54	30	44	41	16	M 33x2	310	29.6x2.9	100.7
DS-CE 30-MS/O	30	S 250	50	50	50	62	36	51	51	17	M 42x2	330	38.6x2.9	143.6
DS-CE 38-MS/O	38	S 200	55	50	60	65	34	54	56	19	M 48x2	420	44.6x2.9	165.6

* Recommended tightening torques for stud threads G, with mating material steel

Please see "Engineering and technical data - Selecting the correct tube fitting" for more information on pressure.

COUPLINGS

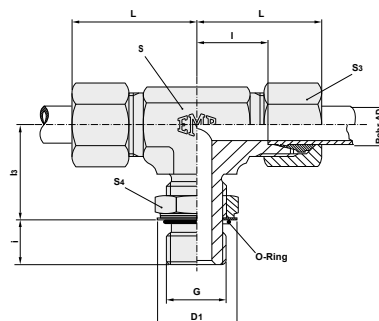
ADJUSTABLE LOCKNUT COUPLING

CE ADJUSTABLE LOCKNUT BRANCH TEE

CE ADJUSTABLE LOCKNUT BRANCH TEE UNF/UN

UNF / UN parallel with O-ring seal.

O-ring NBR (e.g. Perbunan), FPM (e.g. Viton) upon request.



description	pipe OD	PN series	S ₄	S	S ₃	L	l	l ₃	D ₁	i	G	MA* Nm	O-Ring	kg / 100 pcs
DS-CE 6-L/7/16-20UNF	6	L 315	14	14	14	29	14	19	16.5	10	7/16-20UNF-2A	19	8.92x1.83	9.1
DS-CE 8-L/7/16-20UNF	8	L 315	14	14	17	31	16	19	16.5	10	7/16-20UNF-2A	19	8.92x1.83	10.1
DS-CE 10-L/9/16-18UNF	10	L 315	17	19	19	32	17	24	20.2	11	9/16-18UNF-2A	40	11.89x1.98	17.5
DS-CE 12-L/9/16-18UNF	12	L 315	17	19	22	34	19	25	20.2	11	9/16-18UNF-2A	40	11.89x1.98	19.5
DS-CE 12-L/3/4-16UNF	12	L 315	22	19	22	34	19	25	25.7	13	3/4-16UNF-2A	60	16.36x2.21	24.7
DS-CE 15-L/3/4-16UNF	15	L 315	22	22	27	36	21	28	25.7	13	3/4-16UNF-2A	60	16.36x2.21	32.9
DS-CE 15-L/7/8-14UNF	15	L 315	27	22	27	36	21	28	29.3	15	7/8-14UNF-2A	80	19.18x2.46	32.9
DS-CE 18-L/7/8-14UNF	18	L 315	27	27	32	40	24	32	29.3	15	7/8-14UNF-2A	80	19.18x2.46	41.9
DS-CE 18-L/1 1/6-12UN	18	L 315	32	30	32	40	24	32	36.7	17	1 1/16-12UN-2A	110	23.47x2.95	58.1
DS-CE 22-L/1 1/6-12UN	22	L 160	32	30	36	44	28	35	36.7	17	1 1/16-12UN-2A	110	23.47x2.95	62.9
DS-CE 28-L/1 5/8-12UN	28	L 160	41	36	41	47	31	42	44.0	17	1 5/8-12UN-2A	160	29.74x2.95	75.1
DS-CE 35-L/1 5/8-12UN	35	L 160	50	50	50	59	38	46	55.0	17	1 5/8-12UN-2A	300	37.46x3	126.2
DS-CE 42-L/1 7/8-12UN	42	L 160	55	50	60	61	38	47	62.3	17	1 7/8-12UN-2A	340	43.69x3	148.2
DS-CE 6-S/7/16-20UNF	6	S 400	14	14	17	30	15	20	16.5	11	7/16-20UNF-2A	21	8.92x1.83	10.7
DS-CE 8-S/9/16-18UNF	8	S 400	17	19	19	32	17	25	20.2	12	9/16-18UNF-2A	50	11.89x1.98	17.7
DS-CE 10-S/9/16-18UNF	10	S 400	17	19	22	34	18	26	20.2	12	9/16-18UNF-2A	50	11.89x1.98	19.5
DS-CE 12-S/3/4-16UNF	12	S 400	22	22	24	38	22	30	25.7	14	3/4-16UNF-2A	80	16.36x2.21	31.1
DS-CE 16-S/7/8-14UNF	16	S 400	27	27	30	43	25	34	29.3	16	7/8-14UNF-2A	140	19.18x2.46	42.3
DS-CE 20-S/1 1/16-12UN	20	S 400	32	30	36	49	28	37	36.7	19	1 1/16-12UN-2A	190	23.47x2.95	66.7
DS-CE 25-S/1 1/16-12UN	25	S 400	32	36	46	54	30	50	36.7	19	1 1/16-12UN-2A	190	23.47x2.95	98.1
DS-CE 30-S/1 5/8-12UN	30	S 250	50	50	50	62	36	50	55.0	19	1 5/8-12UN-2A	350	37.46x3	143.8
DS-CE 38-S/1 7/8-12UN	38	S 250	55	50	60	65	34	51	63.0	19	1 7/8-12UN-2A	430	43.69x3	165.8

* Recommended tightening torques for stud threads G, with mating material steel

Please see "Engineering and technical data - Selecting the correct tube fitting" for more information on pressure.

COUPLINGS

ADJUSTABLE LOCKNUT COUPLING

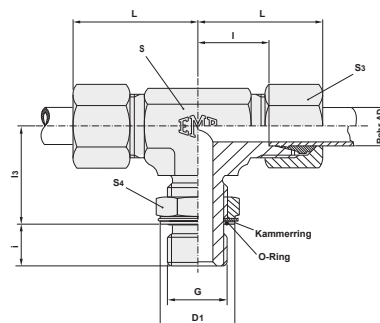
CE ADJUSTABLE LOCKNUT BRANCH TEE

THE WORLD OF TUBE FITTINGS

CE ADJUSTABLE LOCKNUT BRANCH TEE BSP RR

BSP parallel for small or wide spot face.

Retaining ring and O-ring NBR (e.g. Perbunan), FPM (e.g. Viton) upon request.



description	pipe OD	PN series	S ₄	S	S ₃	L	l	l ₃	D ₁	i	G	MA* Nm	O-Ring	Support ring small	kg / 100 pcs
DS-CE 6-RL/OA	6	L 315	14	14	14	29	14	20.5	15	5.5	G 1/8"A	25	8x1.88	KAM R1/8	9.3
DS-CE 8-RL/OA	8	L 315	19	14	17	31	16	25.0	20	7.0	G 1/4"A	50	10.77x2.62	KAM R1/4	10.3
DS-CE 10-RL/OA	10	L 315	19	19	19	32	17	27.0	20	7.0	G 1/4"A	50	10.77x2.62	KAM R1/4	17.1
DS-CE 12-RL/OA	12	L 250	22	19	22	34	19	30.0	23	7.0	G 3/8"A	80	13.94x2.62	KAM R3/8	20.6
DS-CE 15-RL/OA	15	L 250	27	22	27	36	21	32.5	28	10.5	G 1/2"A	105	17x3	KAM R1/2	31.3
DS-CE 18-RL/OA	18	L 250	27	27	32	40	24	38.5	28	10.5	G 1/2"A	105	17x3	KAM R1/2	42.8
DS-CE 22-RL/OA	22	L 160	36	30	36	44	28	38.5	33	10.5	G 3/4"A	220	23.6x2.9	KAM R3/4	71.9
DS-CE 28-RL/OA	28	L 160	41	36	41	47	31	46.5	41	12.5	G 1"A	370	29.74x3.53	KAM R1	81.2
DS-CE 35-RL/OA	35	L 160	50	50	50	59	38	52.5	51	12.5	G 1 1/4"A	500	37.69x3.53	KAM R1 1/4	126.0
DS-CE 42-RL/OA	42	L 160	55	50	60	61	38	54.5	56	12.5	G 1 1/2"A	600	44.04x3.53	KAM R1 1/2	142.8
DS-CE 6-RS/OA	6	S 315	19	14	17	30	15	25.0	20	7.0	G 1/4"A	50	10.77x2.62	KAM R1/4	10.9
DS-CE 8-RS/OA	8	S 315	19	19	19	32	17	27.0	20	7.0	G 1/4"A	50	10.77x2.62	KAM R1/4	15.3
DS-CE 10-RS/OA	10	S 250	22	19	22	34	18	30.0	23	7.0	G 3/8"A	80	13.94x2.62	KAM R3/8	19.1
DS-CE 12-RS/OA	12	S 250	22	22	24	38	22	30.0	23	7.0	G 3/8"A	80	13.94x2.62	KAM R3/8	23.8
DS-CE 16-RS/OA	16	S 250	27	27	30	43	25	38.5	28	10.5	G 1/2"A	105	17x3	KAM R1/2	43.2
DS-CE 20-RS/OA	20	S 250	36	30	36	49	28	38.5	33	10.5	G 3/4"A	220	23.6x2.9	KAM R3/4	75.7
DS-CE 25-RS/OA	25	S 250	41	36	46	54	30	46.5	41	12.5	G 1"A	370	29.74x3.53	KAM R1	104.2
DS-CE 30-RS/OA	30	S 160	50	50	50	62	36	51.5	51	12.5	G 1 1/4"A	500	37.69x3.53	KAM R1 1/4	143.6
DS-CE 38-RS/OA	38	S 160	55	50	60	65	34	57.5	56	12.5	G 1 1/2"A	600	44.04x3.53	KAM R1 1/2	165.6

* Recommended tightening torques for stud threads G, with mating material steel

Please see "Engineering and technical data - Selecting the correct tube fitting" for more information on pressure.

COUPLINGS

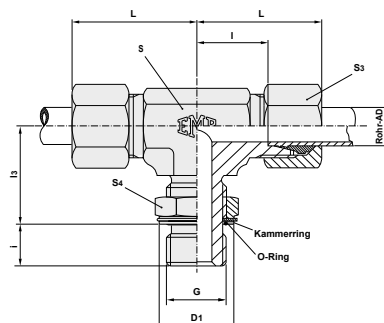
ADJUSTABLE LOCKNUT COUPLING

CE ADJUSTABLE LOCKNUT BRANCH TEE

CE ADJUSTABLE LOCKNUT BRANCH TEE METRIC RR

Metric parallel for small or wide spot face.

Retaining ring and O-ring NBR (e.g. Perbunan), FPM (e.g. Viton) upon request.



description	pipe OD	PN series	S ₄	S	S ₃	L	l	l ₃	D ₁	i	G	MA* Nm	O-Ring	Support ring small	kg / 100 pcs
DS-CE 6-ML/OA	6	L 315	14	14	14	29	14	21.5	15	5.5	M 10x1	18	8x1.88	KAM M10x1	9.3
DS-CE 8-ML/OA	8	L 315	17	14	17	31	16	23.5	18	8.5	M 12x1.5	35	9.3x2.2	KAM M12x1.5	10.3
DS-CE 10-ML/OA	10	L 315	19	19	19	32	17	26.5	20	8.5	M 14x1.5	55	11.3x2.2	KAM M14x1.5	17.5
DS-CE 12-ML/OA	12	L 315	22	19	22	34	19	27.5	23	8.5	M 16x1.5	80	13.3x2.2	KAM M16x1.5	19.1
DS-CE 15-ML/OA	15	L 315	24	22	27	36	21	32.0	25	9.0	M 18x1.5	105	15.54x2.62	KAM M18x1.5	33.1
DS-CE 18-ML/OA	18	L 250	27	27	32	40	24	35.5	28	9.5	M 22x1.5	125	19.2x3	KAM M22x1.5	42.3
DS-CE 22-ML/OA	22	L 160	32	30	36	44	28	37.5	33	11.5	M 27x2	220	23.47x2.95	KAM M27x2	73.7
DS-CE 28-ML/OA	28	L 160	41	36	41	47	31	40.5	41	11.5	M 33x2	370	29.2x3	KAM M33x2	77.7
DS-CE 35-ML/OA	35	L 160	50	50	50	59	38	50.5	51	11.5	M 42x2	500	37.69x3.53	KAM M42x2	126.0
DS-CE 42-ML/OA	42	L 160	55	50	60	61	38	51.5	56	13.5	M 48x2	600	43.69x3	KAM M48x2	142.8
DS-CE 6-MS/OA	6	S 315	17	14	17	30	15	23.5	18	8.5	M 12x1.5	35	9.3x2.2	KAM M12x1.5	10.6
DS-CE 8-MS/OA	8	S 315	19	19	19	32	17	27.5	20	8.5	M 14x1.5	55	11.3x2.2	KAM M14x1.5	17.7
DS-CE 10-MS/OA	10	S 315	22	19	22	34	18	28.5	23	9.5	M 16x1.5	80	13.3x2.2	KAM M16x1.5	19.5
DS-CE 12-MS/OA	12	S 315	24	22	24	38	22	33.0	25	10.0	M 18x1.5	105	15.54x2.62	KAM M18x1.5	31.3
DS-CE 16-MS/OA	16	S 250	27	27	30	43	25	37.5	28	11.5	M 22x1.5	125	19.2x3	KAM M22x1.5	42.7
DS-CE 20-MS/OA	20	S 250	32	30	36	49	28	41.5	33	13.5	M 27x2	220	23.47x2.95	KAM M27x2	77.5
DS-CE 25-MS/OA	25	S 160	41	36	46	54	30	46.5	41	13.5	M 33x2	370	29.2x3	KAM M33x2	100.7
DS-CE 30-MS/OA	30	S 160	50	50	50	62	36	53.5	51	14.5	M 42x2	500	37.69x3.53	KAM M42x2	143.6
DS-CE 38-MS/OA	38	S 160	55	50	60	65	34	56.5	56	16.5	M 48x2	600	43.69x3	KAM M48x2	165.6

* Recommended tightening torques for stud threads G, with mating material steel

Please see "Engineering and technical data - Selecting the correct tube fitting" for more information on pressure.

COUPLINGS

ADJUSTABLE LOCKNUT COUPLING

DE ADJUSTABLE LOCKNUT RUN TEE

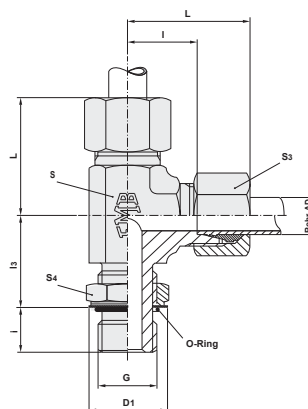
THE WORLD OF TUBE FITTINGS

DE ADJUSTABLE LOCKNUT RUN TEE METRIC

Metric parallel.

ISO 6149 with O-ring seal.

O-ring NBR (e.g. Perbunan), FPM (e.g. Viton) upon request.



description	pipe OD	PN series	S ₄	S	S ₃	L	l	l ₃	D ₁	i	G	MA* Nm	O-Ring	kg / 100 pcs
DS-DE 6-ML/O	6	L 315	14	14	14	29	14	20	15	7	M 10x1	15	8.1x1.6	9.3
DS-DE 8-ML/O	8	L 315	17	14	17	31	16	22	18	10	M 12x1.5	25	9.3x2.2	10.3
DS-DE 10-ML/O	10	L 315	19	19	19	32	17	25	20	10	M 14x1.5	35	11.3x2.2	17.5
DS-DE 12-ML/O	12	L 315	22	19	22	34	19	26	23	10	M 16x1.5	40	13.3x2.2	19.1
DS-DE 15-ML/O	15	L 315	24	22	27	36	21	30	25	11	M 18x1.5	45	15.3x2.2	33.1
DS-DE 18-ML/O	18	L 315	27	27	32	40	24	33	28	12	M 22x1.5	60	19.3x2.2	42.3
DS-DE 22-ML/O	22	L 160	32	30	36	44	28	35	33	14	M 27x2	100	23.6x2.9	73.7
DS-DE 28-ML/O	28	L 160	41	36	41	47	31	38	41	14	M 33x2	160	29.6x2.9	77.7
DS-DE 35-ML/O	35	L 160	50	50	50	59	38	48	51	14	M 42x2	210	38.6x2.9	126.0
DS-DE 42-ML/O	42	L 160	55	50	60	61	38	49	56	16	M 48x2	260	44.6x2.9	142.8
DS-DE 6-MS/O	6	S 400	17	14	17	30	15	22	18	10	M 12x1.5	35	9.3x2.2	10.6
DS-DE 8-MS/O	8	S 400	19	19	19	32	17	26	20	10	M 14x1.5	45	11.3x2.2	17.7
DS-DE 10-MS/O	10	S 400	22	19	22	34	18	27	23	11	M 16x1.5	55	13.3x2.2	19.5
DS-DE 12-MS/O	12	S 400	24	22	24	38	22	31	25	12	M 18x1.5	70	15.3x2.2	31.3
DS-DE 16-MS/O	16	S 400	27	27	30	43	25	35	28	14	M 22x1.5	100	19.3x2.2	42.7
DS-DE 20-MS/O	20	S 400	32	30	36	49	28	39	33	16	M 27x2	170	23.6x2.9	77.5
DS-DE 25-MS/O	25	S 250	41	36	46	54	30	44	41	16	M 33x2	310	29.6x2.9	100.7
DS-DE 30-MS/O	30	S 200	50	50	50	62	36	51	51	17	M 42x2	330	38.6x2.9	143.6
DS-DE 38-MS/O	38	S 200	55	50	60	65	34	54	56	19	M 48x2	420	44.6x2.9	165.6

* Recommended tightening torques for stud threads G, with mating material steel

Please see "Engineering and technical data - Selecting the correct tube fitting" for more information on pressure.

COUPLINGS

ADJUSTABLE LOCKNUT COUPLING

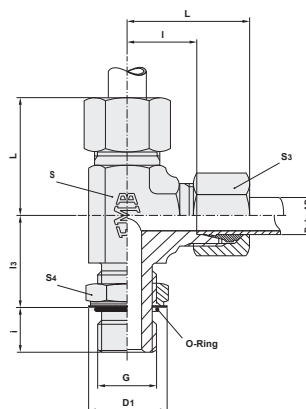
DE ADJUSTABLE LOCKNUT RUN TEE

DE ADJUSTABLE LOCKNUT RUN TEE UNF/UN

UNF / UN parallel with O-ring seal.

ISO 6149 with O-ring seal.

O-ring NBR (e.g. Perbunan), FPM (e.g. Viton) upon request.



description	pipe OD	PN series	S ₄	S	S ₃	L	l	l ₃	D ₁	i	G	MA* Nm	O-Ring	kg / 100 pcs
DS-DE 6-L/7/16-20UNF	6	L 315	14	14	14	29	14	19	16.5	10	7/16-20UNF-2A	19	8.92x1.83	9.1
DS-DE 8-L/7/16-20UNF	8	L 315	14	14	17	31	16	19	16.5	10	7/16-20UNF-2A	19	8.92x1.83	10.1
DS-DE 10-L/9/16-18UNF	10	L 315	17	19	19	32	17	24	20.2	11	9/16-18UNF-2A	40	11.89x1.98	17.5
DS-DE 12-L/9/16-18UNF	12	L 315	17	19	22	34	19	25	20.2	11	9/16-18UNF-2A	40	11.89x1.98	19.5
DS-DE 12-L/3/4-16UNF	12	L 315	22	19	22	34	19	25	25.7	13	3/4-16UNF-2A	60	16.36x2.21	24.7
DS-DE 15-L/3/4-16UNF	15	L 315	22	22	27	36	21	28	25.7	13	3/4-16UNF-2A	60	16.36x2.21	32.9
DS-DE 15-L/7/8-14UNF	15	L 315	27	22	27	36	21	28	29.3	15	7/8-14UNF-2A	80	19.18x2.46	32.9
DS-DE 18-L/7/8-14UNF	18	L 315	27	27	32	40	24	32	29.3	15	7/8-14UNF-2A	80	19.18x2.46	41.9
DS-DE 18-L/1 1/6-12UN	18	L 315	32	30	32	40	24	32	36.7	17	1 1/6-12UN-2A	110	23.47x2.95	58.1
DS-DE 22-L/1 1/6-12UN	22	L 160	32	30	36	44	28	35	36.7	17	1 1/6-12UN-2A	110	23.47x2.95	62.9
DS-DE 28-L/1 5/8-12UN	28	L 160	41	36	41	47	31	42	44.0	17	1 5/8-12UN-2A	160	29.74x2.95	75.1
DS-DE 35-L/1 5/8-12UN	35	L 160	50	50	50	59	38	46	55.0	17	1 5/8-12UN-2A	300	37.46x3	126.2
DS-DE 42-L/1 7/8-12UN	42	L 160	55	50	60	61	38	47	62.3	17	1 7/8-12UN-2A	340	43.69x3	148.2
DS-DE 6-S/7/16-20UNF	6	S 400	14	14	17	30	15	20	16.5	11	7/16-20UNF-2A	21	8.92x1.83	10.7
DS-DE 8-S/9/16-18UNF	8	S 400	17	19	19	32	17	25	20.2	12	9/16-18UNF-2A	50	11.89x1.98	17.7
DS-DE 10-S/9/16-18UNF	10	S 400	17	19	22	34	18	26	20.2	12	9/16-18UNF-2A	50	11.89x1.98	19.5
DS-DE 12-S/3/4-16UNF	12	S 400	22	22	24	38	22	30	25.7	14	3/4-16UNF-2A	80	16.36x2.21	31.1
DS-DE 16-S/7/8-14UNF	16	S 400	27	27	30	43	25	34	29.3	16	7/8-14UNF-2A	140	19.18x2.46	42.3
DS-DE 20-S/1 1/6-12UN	20	S 400	32	30	36	49	28	37	36.7	19	1 1/6-12UN-2A	190	23.47x2.95	66.7
DS-DE 25-S/1 1/6-12UN	25	S 400	32	36	46	54	30	50	36.7	19	1 1/6-12UN-2A	190	23.47x2.95	98.1
DS-DE 30-S/1 5/8-12UN	30	S 250	50	50	50	62	36	50	55.0	19	1 5/8-12UN-2A	350	37.46x3	143.8
DS-DE 38-S/1 7/8-12UN	38	S 250	55	50	60	65	34	51	63.0	19	1 7/8-12UN-2A	430	43.69x3	165.8

* Recommended tightening torques for stud threads G, with mating material steel

Please see "Engineering and technical data - Selecting the correct tube fitting" for more information on pressure.

COUPLINGS

ADJUSTABLE LOCKNUT COUPLING

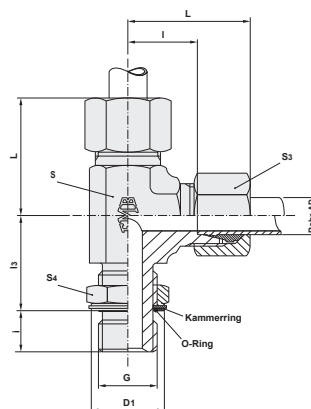
DE ADJUSTABLE LOCKNUT RUN TEE

THE WORLD OF TUBE FITTINGS

DE ADJUSTABLE LOCKNUT RUN TEE BSP RR

BSP parallel for small or wide spot face.

Retaining ring and O-ring NBR (e.g. Perbunan), FPM (e.g. Viton) upon request.



description	pipe OD	PN series	S ₄	S	S ₃	L	l	l ₃	D ₁	i	G	MA* Nm	O-Ring	Support ring small	kg / 100 pcs
DS-DE 6-RL/OA	6	L 315	14	14	14	29	14	20.5	15	5.5	G 1/8"A	25	8x1.88	KAM R1/8	9.3
DS-DE 8-RL/OA	8	L 315	19	14	17	31	16	25.0	20	7.0	G 1/4"A	50	10.77x2.62	KAM R1/4	10.3
DS-DE 10-RL/OA	10	L 315	19	19	19	32	17	27.0	20	7.0	G 1/4"A	50	10.77x2.62	KAM R1/4	17.1
DS-DE 12-RL/OA	12	L 250	22	19	22	34	19	30.0	23	7.0	G 3/8"A	80	13.94x2.62	KAM R3/8	20.6
DS-DE 15-RL/OA	15	L 250	27	22	27	36	21	32.5	28	10.5	G 1/2"A	105	17x3	KAM R1/2	31.3
DS-DE 18-RL/OA	18	L 250	27	27	32	40	24	38.5	28	10.5	G 1/2"A	105	17x3	KAM R1/2	42.8
DS-DE 22-RL/OA	22	L 160	36	30	36	44	28	38.5	33	10.5	G 3/4"A	220	23.6x2.9	KAM R3/4	71.9
DS-DE 28-RL/OA	28	L 160	41	36	41	47	31	46.5	41	12.5	G 1"A	370	29.74x3.53	KAM R1	81.2
DS-DE 35-RL/OA	35	L 160	50	50	50	59	38	52.5	51	12.5	G 1 1/4"A	500	37.69x3.53	KAM R1 1/4	126.0
DS-DE 42-RL/OA	42	L 160	55	50	60	61	38	54.5	56	12.5	G 1 1/2"A	600	44.04x3.53	KAM R1 1/2	142.8
DS-DE 6-RS/OA	6	S 315	19	14	17	30	15	25.0	20	7.0	G 1/4"A	50	10.77x2.62	KAM R1/4	10.9
DS-DE 8-RS/OA	8	S 315	19	19	19	32	17	27.0	20	7.0	G 1/4"A	50	10.77x2.62	KAM R1/4	15.3
DS-DE 10-RS/OA	10	S 250	22	19	22	34	18	30.0	23	7.0	G 3/8"A	80	13.94x2.62	KAM R3/8	19.1
DS-DE 12-RS/OA	12	S 250	22	22	24	38	22	30.0	23	7.0	G 3/8"A	80	13.94x2.62	KAM R3/8	23.8
DS-DE 16-RS/OA	16	S 250	27	27	30	43	25	38.5	28	10.5	G 1/2"A	105	17x3	KAM R1/2	43.2
DS-DE 20-RS/OA	20	S 250	36	30	36	49	28	38.5	33	10.5	G 3/4"A	220	23.6x2.9	KAM R3/4	75.7
DS-DE 25-RS/OA	25	S 250	41	36	46	54	30	46.5	41	12.5	G 1"A	370	29.74x3.53	KAM R1	104.2
DS-DE 30-RS/OA	30	S 160	50	50	50	62	36	51.5	51	12.5	G 1 1/4"A	500	37.69x3.53	KAM R1 1/4	143.6
DS-DE 38-RS/OA	38	S 160	55	50	60	65	34	57.5	56	12.5	G 1 1/2"A	600	44.04x3.53	KAM R1 1/2	165.6

* Recommended tightening torques for stud threads G, with mating material steel

Please see "Engineering and technical data - Selecting the correct tube fitting" for more information on pressure.

COUPLINGS

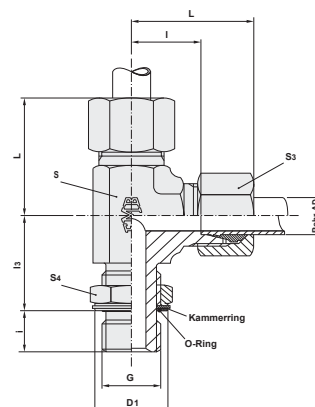
ADJUSTABLE LOCKNUT COUPLING

DE ADJUSTABLE LOCKNUT RUN TEE

DE ADJUSTABLE LOCKNUT RUN TEE METRIC RR

Metric parallel for small or wide spot face.

Retaining ring and O-ring NBR (e.g. Perbunan),
FPM (e.g. Viton) upon request.



description	pipe OD	PN series	S ₄	S	S ₃	L	l	l ₃	D ₁	i	G	MA* Nm	O-Ring	Support ring small	kg / 100 pcs
DS-DE 6-ML/OA	6	L 315	14	14	14	29	14	21.5	15	5.5	M 10x1	18	8x1.88	KAM M10x1	9.3
DS-DE 8-ML/OA	8	L 315	17	14	17	31	16	23.5	18	8.5	M 12x1.5	35	9.3x2.2	KAM M12x1.5	10.3
DS-DE 10-ML/OA	10	L 315	19	19	19	32	17	26.5	20	8.5	M 14x1.5	55	11.3x2.2	KAM M14x1.5	17.5
DS-DE 12-ML/OA	12	L 315	22	19	22	34	19	27.5	23	8.5	M 16x1.5	80	13.3x2.2	KAM M16x1.5	19.1
DS-DE 15-ML/OA	15	L 315	24	22	27	36	21	32.0	25	9.0	M 18x1.5	105	15.54x2.62	KAM M18x1.5	33.1
DS-DE 18-ML/OA	18	L 250	27	27	32	40	24	35.5	28	9.5	M 22x1.5	125	19.2x3	KAM M22x1.5	42.3
DS-DE 22-ML/OA	22	L 160	32	30	36	44	28	37.5	33	11.5	M 27x2	220	23.47x2.95	KAM M27x2	73.7
DS-DE 28-ML/OA	28	L 160	41	36	41	47	31	40.5	41	11.5	M 33x2	370	29.2x3	KAM M33x2	77.7
DS-DE 35-ML/OA	35	L 160	50	50	50	59	38	50.5	51	11.5	M 42x2	500	37.69x3.53	KAM M42x2	126.0
DS-DE 42-ML/OA	42	L 160	55	50	60	61	38	51.5	56	13.5	M 48x2	600	43.69x3	KAM M48x2	142.8
DS-DE 6-MS/OA	6	S 315	17	14	17	30	15	23.5	18	8.5	M 12x1.5	35	9.3x2.2	KAM M12x1.5	10.6
DS-DE 8-MS/OA	8	S 315	19	19	19	32	17	27.5	20	8.5	M 14x1.5	55	11.3x2.2	KAM M14x1.5	17.7
DS-DE 10-MS/OA	10	S 315	22	19	22	34	18	28.5	23	9.5	M 16x1.5	80	13.3x2.2	KAM M16x1.5	19.5
DS-DE 12-MS/OA	12	S 315	24	22	24	38	22	33.0	25	10.0	M 18x1.5	105	15.54x2.62	KAM M18x1.5	31.3
DS-DE 16-MS/OA	16	S 250	27	27	30	43	25	37.5	28	11.5	M 22x1.5	125	19.2x3	KAM M22x1.5	42.7
DS-DE 20-MS/OA	20	S 250	32	30	36	49	28	41.5	33	13.5	M 27x2	220	23.47x2.95	KAM M27x2	77.5
DS-DE 25-MS/OA	25	S 160	41	36	46	54	30	46.5	41	13.5	M 33x2	370	29.2x3	KAM M33x2	100.7
DS-DE 30-MS/OA	30	S 160	50	50	50	62	36	53.5	51	14.5	M 42x2	500	37.69x3.53	KAM M42x2	143.6
DS-DE 38-MS/OA	38	S 160	55	50	60	65	34	56.5	56	16.5	M 48x2	600	43.69x3	KAM M48x2	165.6

* Recommended tightening torques for stud threads G, with mating material steel

Please see "Engineering and technical data - Selecting the correct tube fitting" for more information on pressure.

THE WORLD OF TUBE FITTINGS
INTEGRATED FLUID POWER SOLUTIONS



PIPE CONNECTIONS



PIPE CONNECTIONS

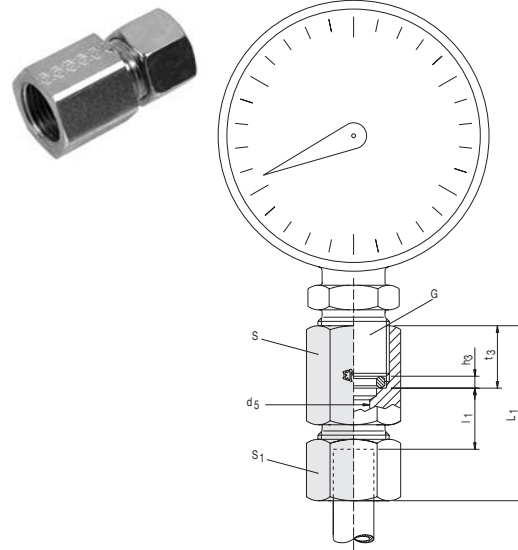
GAUGE COUPLINGS

THE WORLD OF TUBE FITTINGS

O GAUGE COUPLING BSP

BSP parallel.

With sealing ring DKI.



description	pipe OD	PN series	S ₁	S	L ₁	l ₁	G	d ₅	t ₃	h ₃	kg / 100 pcs
DS-0 6-L	6	L 400 (1700)	14	19	37	7.5	G 1/4"	2.5	14.5	4.5	4.6
DS-0 8-L	8	L 400 (1700)	17	19	37	7.5	G 1/4"	5.5	14.5	4.5	5.3
DS-0 10-L	10	L 400 (1700)	19	19	38	8.5	G 1/4"	5.5	14.5	4.5	6.2
DS-0 12-L	12	L 400 (1700)	22	19	38	8.5	G 1/4"	5.5	14.5	4.5	7.0
DS-0 6-S	6	S 630 (2700)	17	27	46	11.0	G 1/2"	3.5	20.0	5.0	10.5
DS-0 8-S	8	S 630 (2700)	19	27	46	11.0	G 1/2"	3.5	20.0	5.0	10.7
DS-0 10-S	10	S 630 (2700)	22	27	47	10.5	G 1/2"	7.0	20.0	5.0	12.5
DS-0 12-S	12	S 630 (2700)	24	27	47	10.5	G 1/2"	7.0	20.0	5.0	13.4

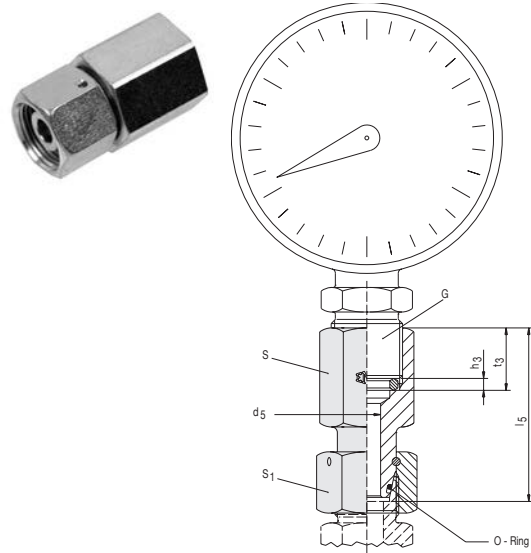
L₁ = approximate length, with nut tightened

Please see "Engineering and technical data - Selecting the correct tube fitting" for more information on pressure.

PIPE CONNECTIONS GAUGE COUPLINGS

VODKO GAUGE COUPLING TAPER

With taper, sealing ring DKI and O-ring according to DIN 3865.



description	pipe OD	PN series	l_5	d_5	t_3	S	S_1	h_3	G	O-ring	kg / 100 pcs
VODKO 6-L	6	L 400 (1700)	38.0	2.5	14.5	19	17	4.5	G 1/4"	4x1.5	4.6
VODKO 8-L	8	L 400 (1700)	38.0	4.0	14.5	19	17	4.5	G 1/4"	6x1.5	5.3
VODKO 10-L	10	L 400 (1700)	39.5	5.5	14.5	19	19	4.5	G 1/4"	7.5x1.5	6.2
VODKO 12-L	12	L 400 (1700)	40.5	5.5	14.5	19	22	4.5	G 1/4"	9x1.5	7.0
VODKO 6-S	6	S 630 (2700)	45.0	2.5	20.0	27	17	5.0	G 1/2"	4x1.5	10.5
VODKO 8-S	8	S 630 (2700)	45.0	4.0	20.0	27	19	5.0	G 1/2"	6x1.5	10.7
VODKO 10-S	10	S 630 (2700)	47.0	6.0	20.0	27	22	5.0	G 1/2"	7.5x1.5	12.5
VODKO 12-S	12	S 630 (2700)	47.5	7.0	20.0	27	24	5.0	G 1/2"	9x1.5	13.4

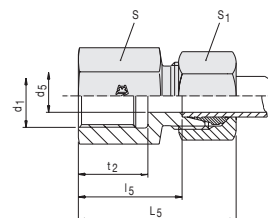
Please see "Engineering and technical data - Selecting the correct tube fitting" for more information on pressure.

PIPE CONNECTIONS FEMALE STUD COUPLINGS

THE WORLD OF TUBE FITTINGS

AI FEMALE STUD COUPLING BSP

BSP parallel.



description	pipe OD	PB series	l_5	d_5	L_5	S	S_1	t_2	G	kg / 100 pcs
DS-AI 6-L/R 1/8"	6	L 315 (863)	19.0	4	34	14	14	12.0	G 1/8"	2.5
DS-AI 8-L/R 1/4"	8	L 315 (863)	24.0	6	39	19	17	17.0	G 1/4"	4.5
DS-AI 10-L/R 1/4"	10	L 315 (863)	25.0	8	40	19	19	17.0	G 1/4"	5.5
DS-AI 12-L/R 3/8"	12	L 315 (863)	26.0	10	41	24	22	17.0	G 3/8"	9.0
DS-AI 15-L/R 1/2"	15	L 315 (863)	31.0	12	46	27	27	20.0	G 1/2"	13.0
DS-AI 18-L/R 1/2"	18	L 315 (863)	30.5	15	47	27	32	20.0	G 1/2"	15.0
DS-AI 22-L/R 3/4"	22	L 160 (400)	35.5	19	52	36	36	22.0	G 3/4"	25.5
DS-AI 28-L/R 1"	28	L 160 (400)	38.0	24	55	41	41	24.5	G 1"	30.0
DS-AI 35-L/R 1 1/4"	35	L 160 (400)	41.0	30	63	55	50	26.5	G 1 1/4"	42.0
DS-AI 42-L/R 1 1/2"	42	L 160 (400)	42.5	36	65	60	60	28.5	G 1 1/2"	60.5
DS-AI 6-S/R 1/4"	6	S 630 (1575)	26.0	4	41	19	17	17.0	G 1/4"	6.0
DS-AI 8-S/R 1/4"	8	S 630 (1575)	26.0	5	41	19	19	17.0	G 1/4"	6.5
DS-AI 10-S/R 3/8"	10	S 630 (1575)	26.5	7	43	24	22	17.0	G 3/8"	9.0
DS-AI 12-S/R 3/8"	12	S 630 (1575)	26.5	8	43	24	24	17.0	G 3/8"	10.5
DS-AI 14-S/R 1/2"	14	S 630 (1575)	32.0	10	50	27	27	20.0	G 1/2"	13.0
DS-AI 16-S/R 1/2"	16	S 630 (1575)	31.5	12	50	27	30	20.0	G 1/2"	16.0
DS-AI 20-S/R 3/4"	20	S 400 (1000)	34.5	16	56	36	36	22.0	G 3/4"	26.0
DS-AI 25-S/R 1"	25	S 400 (1000)	37.5	20	62	41	46	24.5	G 1"	40.0
DS-AI 30-S/R 1 1/4"	30	S 400 (1000)	42.0	25	69	55	50	26.5	G 1 1/4"	72.0
DS-AI 38-S/R 1 1/2"	38	S 400 (1000)	43.5	32	74	60	60	28.5	G 1 1/2"	85.5

L_5 = approximate length, with nut tightened

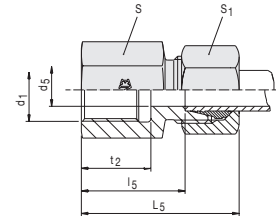
Please see "Engineering and technical data - Selecting the correct tube fitting" for more information on pressure.

PIPE CONNECTIONS

FEMALE STUD COUPLINGS

AI FEMALE STUD COUPLING METRIC

Metric parallel.



description	pipe OD	PB series	l_5	d_5	L_5	S	S_1	t_2	G	kg / 100 pcs
DS-AI 6-L/M 10x1	6	L 315 [863]	19.5	4	34	14	14	12.5	M 10x1	2.9
DS-AI 8-L/M 12x1.5	8	L 315 [863]	24.0	6	39	17	17	17.0	M 12x1.5	4.7
DS-AI 10-L/M 14x1.5	10	L 315 [863]	25.0	8	40	19	19	17.0	M 14x1.5	5.9
DS-AI 12-L/M 16x1.5	12	L 315 [863]	26.0	10	41	22	22	17.0	M 16x1.5	7.9
DS-AI 15-L/M 18x1.5	15	L 315 [863]	28.0	12	43	24	27	17.0	M 18x1.5	11.2
DS-AI 18-L/M 22x1.5	18	L 315 [863]	29.5	15	46	30	32	19.0	M 22x1.5	17.4
DS-AI 22-L/M 26x1.5	22	L 160 [400]	34.5	19	51	32	36	21.0	M 26x1.5	20.9
DS-AI 28-L/M 33x2	28	L 160 [400]	37.5	24	54	41	41	24.0	M 33x2	31.2
DS-AI 35-L/M 42x2	35	L 160 [400]	40.5	30	62	55	50	26.0	M 42x2	57.9
DS-AI 42-L/M 48x2	42	L 160 [400]	42.0	36	65	60	60	28.0	M 48x2	76.0
DS-AI 6-S/M 12x1.5	6	S 630 [1575]	26.0	4	41	17	17	17.0	M 12x1.5	5.3
DS-AI 8-S/M 14x1.5	8	S 630 [1575]	26.0	5	41	19	19	17.0	M 14x1.5	6.4
DS-AI 10-S/M 16x1.5	10	S 630 [1575]	26.5	7	43	22	22	17.0	M 16x1.5	9.0
DS-AI 12-S/M 18x1.5	12	S 630 [1575]	27.5	8	44	22	24	17.0	M 18x1.5	10.6
DS-AI 14-S/M 20x1.5	14	S 630 [1575]	31.0	10	49	27	27	19.0	M 20x1.5	14.9
DS-AI 16-S/M 22x1.5	16	S 630 [1575]	30.5	12	49	27	30	19.0	M 22x1.5	18.3
DS-AI 20-S/M 27x2	20	S 400 [1000]	34.5	16	56	36	36	22.0	M 27x2	29.9
DS-AI 25-S/M 33x2	25	S 400 [1000]	37.0	20	61	41	46	24.0	M 33x2	45.5
DS-AI 30-S/M 42x2	30	S 400 [1000]	41.5	25	68	55	50	26.0	M 42x2	73.0
DS-AI 38-S/M 48x2	38	S 400 [1000]	43.0	32	74	60	60	28.0	M 48x2	93.8

L_5 = approximate length, with nut tightened

Please see "Engineering and technical data - Selecting the correct tube fitting" for more information on pressure.

PIPE CONNECTIONS REDUCING ADAPTORS

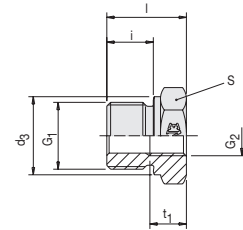
THE WORLD OF TUBE FITTINGS

RI REDUCING ADAPTOR

BSP parallel.

Stud face form B.

Other sizes and threads upon request.



description G1-G2	PB	l	i	S	d ₃	t ₁	kg / 100 pcs
RI 3/8" - 1/8"	630	22.5	12	22	22	8.0	4.0
RI 1/2-1/4	400	24.0	14	27	26	8.0	6.0
RI 1/2-1/8	400	24.0	14	27	26	12.0	6.0
RI 3/4-1/4	400	26.0	16	32	32	12.0	9.5
RI 3/4-3/8	400	26.0	16	32	32	12.0	9.0
RI 1-1/4	400	29.0	18	41	39	12.0	20.0
RI 1-3/8	400	29.0	18	41	39	12.0	18.0
RI 1-1/2	400	29.0	18	41	39	14.0	16.0
RI 1 1/4-1/2	250	32.0	20	50	49	14.0	31.0
RI 1 1/4-3/4	250	32.0	20	50	49	16.0	27.0
RI 1 1/2-1/2	250	36.0	22	55	55	14.0	47.0
RI 1 1/2-3/4	250	36.0	22	55	55	16.0	43.0
RI 1 1/2-1	250	36.0	22	55	55	18.0	34.5
RI 1/8-1/4	630	31.0	8	19	14	17.0	3.6
RI 1/8-3/8	630	32.0	8	24	14	17.0	4.5
RI 1/4-1/8	630	28.0	12	19	18	12.0	3.6
RI 1/4-3/8	630	36.0	12	24	18	17.0	6.6
RI 1/4-1/2	630	40.0	12	30	18	20.0	8.5
RI 1/4-3/4	400	43.0	12	36	18	22.0	17.3
RI 3/8-1/4	630	36.0	12	22	22	17.0	3.0
RI 3/8-1/2	630	41.0	12	30	22	20.0	9.0
RI 3/8-3/4	400	44.0	12	36	22	22.0	17.5
RI 1/2-3/8	400	36.0	14	27	26	17.0	9.5
RI 1/2-3/4	400	46.0	14	36	26	22.0	18.0
RI 1/2-1	400	49.0	14	41	26	24.5	22.5
RI 1/2-1 1/4	250	53.0	14	55	26	26.5	47.0
RI 3/4-1/2	400	41.0	16	32	32	20.0	15.0
RI 3/4-1	400	51.0	16	41	32	24.5	23.5
RI 3/4-1 1/4	250	55.0	16	55	32	26.5	48.3
RI 3/4-1 1/2	250	57.0	16	60	32	28.5	54.5
RI 1-3/4	400	47.0	18	41	39	22.0	28.0
RI 1-1 1/4	250	57.0	18	55	39	26.5	51.0
RI 1-1 1/2	250	59.0	18	60	39	28.5	56.5
RI 1 1/4-1	250	52.0	20	50	49	24.5	45.5
RI 1 1/4-1 1/2	250	60.0	20	60	49	28.5	58.0
RI 1 1/2-1 1/4	250	58.0	22	55	55	26.5	53.0

Please see "Engineering and technical data - Selecting the correct tube fitting" for
- reducing example.
- more information on pressure.

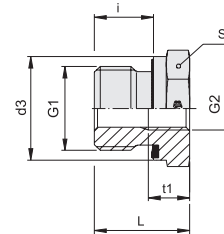
PIPE CONNECTIONS REDUCING ADAPTORS

RI REDUCING ADAPTOR WITH CAPTIVE SEAL

BSP parallel.

Captive seal O-ring NBR (e.g. Perbunan),
FPM (e.g. Viton) upon request.

Other sizes and threads upon request.



description G1-G2	PB	l	i	S	d ₃	t ₁	kg / 100 pcs
RI 3/8"WD - 1/8"	630	22.5	12	22	22	8.0	3.9
RI 1/2"WD - 1/8"	630	24.0	14	27	27	8.0	6.6
RI 1/2"WD - 1/4"	630	24.0	14	27	27	12.0	5.6
RI 3/4"WD - 1/4"	400	26.0	16	32	32	12.0	10.3
RI 3/4"WD - 3/8"	400	26.0	16	32	32	12.0	8.7
RI 1"WD - 1/4"	400	29.0	18	41	40	12.0	19.5
RI 1"WD - 3/8"	400	29.0	18	41	40	12.0	17.9
RI 1"WD - 1/2"	400	29.0	18	41	40	14.0	15.7
RI 1 1/4"WD - 1/2"	400	32.0	20	50	50	14.0	30.8
RI 1 1/4"WD - 3/4"	400	32.0	20	50	50	16.0	26.6
RI 1 1/2"WD - 1/2"	315	36.0	22	55	55	14.0	47.0
RI 1 1/2"WD - 3/4"	315	36.0	22	55	55	16.0	40.2
RI 1 1/2"WD - 1"	315	36.0	22	55	55	18.0	33.7
RI 1/8"WD - 1/4"	630	31.0	8	19	14	17.0	3.9
RI 1/8"WD - 3/8"	630	32.0	8	24	14	17.0	6.3
RI 1/4"WD - 1/8"	630	29.0	12	19	19	12.0	3.8
RI 1/4"WD - 3/8"	630	36.0	12	24	19	17.0	6.7
RI 1/4"WD - 1/2"	630	40.0	12	30	19	20.0	11.6
RI 1/4"WD - 3/4"	630	43.0	12	36	19	22.0	17.0
RI 3/8"WD - 1/4"	630	36.0	12	22	22	17.0	6.8
RI 3/8"WD - 1/2"	630	41.0	12	30	22	20.0	14.3
RI 3/8"WD - 3/4"	400	44.0	12	36	22	22.0	18.3
RI 1/2"WD - 3/8"	630	37.0	14	27	27	17.0	9.1
RI 1/2"WD - 3/4"	400	46.0	14	36	27	22.0	18.2
RI 1/2"WD - 1"	400	49.0	14	41	27	24.5	22.1
RI 1/2"WD - 1 1/4"	400	53.0	14	55	27	26.5	48.2
RI 3/4"WD - 1/2"	400	43.0	16	32	32	20.0	14.3
RI 3/4"WD - 1"	400	51.0	16	41	32	24.5	23.5
RI 3/4"WD - 1 1/4"	400	55.0	16	55	32	26.5	48.1
RI 3/4"WD - 1 1/2"	315	57.0	16	60	32	28.5	56.0
RI 1"WD - 3/4"	400	49.0	18	41	40	22.0	26.8
RI 1"WD - 1 1/4"	400	57.0	18	55	40	26.5	50.3
RI 1"WD - 1 1/2"	315	59.0	18	60	40	28.5	58.5
RI 1 1/4"WD - 1"	400	53.0	20	50	50	24.5	45.8
RI 1 1/4"WD - 1 1/2"	315	60.0	20	60	50	28.5	61.6
RI 1 1/2"WD - 1 1/4"	315	58.0	22	55	55	26.5	54.2

Please see "Engineering and technical data - Selecting the correct tube fitting" for
- reducing example.
- more information on pressure.

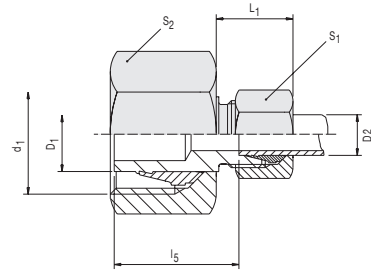
PIPE CONNECTIONS REDUCING CONNECTIONS

THE WORLD OF TUBE FITTINGS

RL REDUCING CONNECTION

These parts are ready mounted;
not pre-assembled.

After screwing on by hand, tighten with a spanner
until tight, and then apply final 30 ° turn.



description	pipe OD1	pipe OD2	PN series	L ₁	l ₅	S ₁	S ₂	d ₁	kg / 100 pcs
DS-RL 8/6	8	6	L 500 (2200)	24	23.5	14	17	M 14x1.5	4.0
DS-RL 10/6	10	6	L 500 (2200)	24	23.5	14	19	M 16x1.5	4.7
DS-RL 10/8	10	8	L 500 (2200)	24	23.5	17	19	M 16x1.5	5.2
DS-RL 12/6	12	6	L 400 (1700)	24	23.5	14	22	M 18x1.5	5.9
DS-RL 12/8	12	8	L 400 (1700)	24	23.5	17	22	M 18x1.5	6.3
DS-RL 12/10	12	10	L 400 (1700)	25	24.5	19	22	M 18x1.5	6.9
DS-RL 15/6	15	6	L 400 (1700)	23	23.5	14	27	M 22x1.5	8.2
DS-RL 15/8	15	8	L 400 (1700)	23	23.5	17	27	M 22x1.5	8.9
DS-RL 15/10	15	10	L 400 (1700)	24	24.5	19	27	M 22x1.5	9.3
DS-RL 15/12	15	12	L 400 (1700)	24	24.5	22	27	M 22x1.5	10.0
DS-RL 18/6	18	6	L 400 (1700)	23	24.5	14	32	M 26x1.5	10.8
DS-RL 18/8	18	8	L 400 (1700)	23	24.5	17	32	M 26x1.5	11.0
DS-RL 18/10	18	10	L 400 (1700)	24	25.5	19	32	M 26x1.5	11.7
DS-RL 18/12	18	12	L 400 (1700)	24	25.5	22	32	M 26x1.5	12.5
DS-RL 18/15	18	15	L 400 (1700)	26	26.5	27	32	M 26x1.5	14.9
DS-RL 22/6	22	6	L 250 (1100)	24	25.5	14	36	M 30x2	14.1
DS-RL 22/8	22	8	L 250 (1100)	24	25.5	17	36	M 30x2	14.9
DS-RL 22/10	22	10	L 250 (1100)	25	26.5	19	36	M 30x2	15.1
DS-RL 22/12	22	12	L 250 (1100)	25	26.5	22	36	M 30x2	16.0
DS-RL 22/15	22	15	L 250 (1100)	27	27.5	27	36	M 30x2	18.0
DS-RL 22/18	22	18	L 250 (1100)	27	27.0	32	36	M 30x2	19.8
DS-RL 28/6	28	6	L 250 (1100)	25	26.5	14	41	M 36x2	18.5
DS-RL 28/8	28	8	L 250 (1100)	25	26.5	17	41	M 36x2	19.3
DS-RL 28/10	28	10	L 250 (1100)	26	27.5	19	41	M 36x2	20.0
DS-RL 28/12	28	12	L 250 (1100)	26	27.5	22	41	M 36x2	20.5
DS-RL 28/15	28	15	L 250 (1100)	27	28.5	27	41	M 36x2	22.5
DS-RL 28/18	28	18	L 250 (1100)	28	28.0	32	41	M 36x2	24.5
DS-RL 28/22	28	22	L 250 (1100)	30	30.0	36	41	M 36x2	26.8
DS-RL 35/6	35	6	L 250 (1100)	25	31.5	14	50	M 45x2	30.8
DS-RL 35/8	35	8	L 250 (1100)	25	31.5	17	50	M 45x2	31.2
DS-RL 35/10	35	10	L 250 (1100)	26	32.5	19	50	M 45x2	32.0
DS-RL 35/12	35	12	L 250 (1100)	26	32.5	22	50	M 45x2	32.0
DS-RL 35/15	35	15	L 250 (1100)	27	33.5	27	50	M 45x2	34.8
DS-RL 35/18	35	18	L 250 (1100)	28	33.0	32	50	M 45x2	36.2
DS-RL 35/22	35	22	L 250 (1100)	30	35.0	36	50	M 45x2	37.8
DS-RL 35/28	35	28	L 250 (1100)	30	35.0	41	50	M 45x2	39.5
DS-RL 42/6	42	6	L 250 (1100)	24	32.5	14	60	M 52x2	44.0
DS-RL 42/8	42	8	L 250 (1100)	24	32.5	17	60	M 52x2	45.0
DS-RL 42/10	42	10	L 250 (1100)	26	33.5	19	60	M 52x2	45.0
DS-RL 42/12	42	12	L 250 (1100)	26	33.5	22	60	M 52x2	45.9
DS-RL 42/15	42	15	L 250 (1100)	27	34.5	27	60	M 52x2	47.0
DS-RL 42/18	42	18	L 250 (1100)	28	34.0	32	60	M 52x2	48.9
DS-RL 42/22	42	22	L 250 (1100)	30	36.0	36	60	M 52x2	51.0
DS-RL 42/28	42	28	L 250 (1100)	30	36.0	41	60	M 52x2	53.0
DS-RL 42/35	42	35	L 250 (1100)	34	34.0	50	60	M 52x2	58.3

L₁ = approximate length. with nut tightened

Please see "Engineering and technical data - Selecting the correct tube fitting" for
- reducing example.

- more information on pressure.

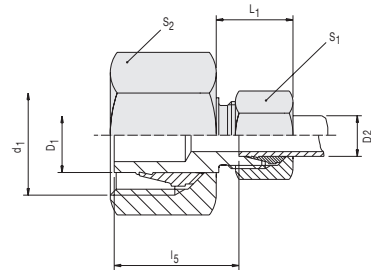
PIPE CONNECTIONS

REDUCING CONNECTIONS

RS REDUCING CONNECTION

These parts are ready mounted;
not pre-assembled.

After screwing on by hand, tighten with a spanner
until tight, and then apply final 30 ° turn.



description	pipe OD1	pipe OD2	PN series	L ₁	l ₅	S ₁	S ₂	d ₁	kg / 100 pcs
DS-RS 8/6	8	6	S 800 (3400)	25	25.0	17	19	M 16x1.5	6.5
DS-RS 10/6	10	6	S 800 (3400)	25	26.0	17	22	M 18x1.5	7.0
DS-RS 10/8	10	8	S 800 (3400)	25	26.0	19	22	M 18x1.5	7.5
DS-RS 12/6	12	6	S 630 (2700)	26	27.0	17	24	M 20x1.5	8.0
DS-RS 12/8	12	8	S 630 (2700)	26	27.0	19	24	M 20x1.5	8.5
DS-RS 12/10	12	10	S 630 (2700)	27	26.5	22	24	M 20x1.5	9.9
DS-RS 14/6	14	6	S 630 (2700)	26	29.0	17	27	M 22x1.5	10.4
DS-RS 14/8	14	8	S 630 (2700)	26	29.0	19	27	M 22x1.5	10.9
DS-RS 14/10	14	10	S 630 (2700)	27	28.5	22	27	M 22x1.5	12.1
DS-RS 14/12	14	12	S 630 (2700)	27	28.5	24	27	M 22x1.5	12.6
DS-RS 16/6	16	6	S 630 (2700)	26	29.0	17	30	M 24x1.5	12.1
DS-RS 16/8	16	8	S 630 (2700)	26	29.0	19	30	M 24x1.5	12.6
DS-RS 16/10	16	10	S 630 (2700)	27	28.5	22	30	M 24x1.5	14.0
DS-RS 16/12	16	12	S 630 (2700)	27	28.5	24	30	M 24x1.5	14.5
DS-RS 16/14	16	14	S 630 (2700)	30	30.0	27	30	M 24x1.5	16.1
DS-RS 20/6	20	6	S 400 (1700)	27	34.0	17	36	M 30x2	17.8
DS-RS 20/8	20	8	S 400 (1700)	27	34.0	19	36	M 30x2	18.4
DS-RS 20/10	20	10	S 400 (1700)	28	33.5	22	36	M 30x2	19.5
DS-RS 20/12	20	12	S 400 (1700)	28	33.5	24	36	M 30x2	20.4
DS-RS 20/14	20	14	S 400 (1700)	31	35.0	27	36	M 30x2	22.5
DS-RS 20/16	20	16	S 400 (1700)	31	34.5	30	36	M 30x2	23.9
DS-RS 25/6	25	6	S 400 (1700)	28	37.0	17	46	M 36x2	31.3
DS-RS 25/8	25	8	S 400 (1700)	28	37.0	19	46	M 36x2	31.9
DS-RS 25/10	25	10	S 400 (1700)	29	36.5	22	46	M 36x2	33.0
DS-RS 25/12	25	12	S 400 (1700)	29	36.5	24	46	M 36x2	33.6
DS-RS 25/14	25	14	S 400 (1700)	31	37.0	27	46	M 36x2	36.0
DS-RS 25/16	25	16	S 400 (1700)	31	36.5	30	46	M 36x2	36.8
DS-RS 25/20	25	20	S 400 (1700)	35	37.5	36	46	M 36x2	40.8
DS-RS 30/6	30	6	S 400 (1700)	27	39.0	17	50	M 42x2	37.7
DS-RS 30/8	30	8	S 400 (1700)	27	39.0	19	50	M 42x2	38.7
DS-RS 30/10	30	10	S 400 (1700)	28	38.5	22	50	M 42x2	39.8
DS-RS 30/12	30	12	S 400 (1700)	28	38.5	24	50	M 42x2	40.4
DS-RS 30/14	30	14	S 400 (1700)	31	40.0	27	50	M 42x2	42.3
DS-RS 30/16	30	16	S 400 (1700)	31	39.5	30	50	M 42x2	43.4
DS-RS 30/20	30	20	S 400 (1700)	35	39.5	36	50	M 42x2	47.6
DS-RS 30/25	30	25	S 400 (1700)	38	40.0	46	50	M 42x2	59.1
DS-RS 38/6	38	6	S 400 (1700)	27	43.0	17	60	M 52x2	55.5
DS-RS 38/8	38	8	S 400 (1700)	27	43.0	19	60	M 52x2	55.7
DS-RS 38/10	38	10	S 400 (1700)	28	42.5	22	60	M 52x2	57.6
DS-RS 38/12	38	12	S 400 (1700)	28	42.5	24	60	M 52x2	58.0
DS-RS 38/14	38	14	S 400 (1700)	31	44.0	27	60	M 52x2	60.0
DS-RS 38/16	38	16	S 400 (1700)	31	43.5	30	60	M 52x2	61.3
DS-RS 38/20	38	20	S 400 (1700)	35	43.5	36	60	M 52x2	65.2
DS-RS 38/25	38	25	S 400 (1700)	38	44.0	46	60	M 52x2	76.9
DS-RS 38/30	38	30	S 400 (1700)	41	44.5	50	60	M 52x2	80.0

L₁ = approximate length. with nut tightened

Please see "Engineering and technical data - Selecting the correct tube fitting" for
- reducing example.

- more information on pressure.

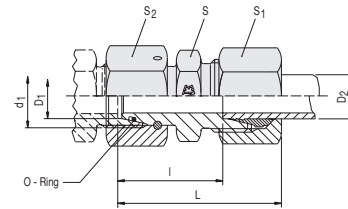
PIPE CONNECTIONS REDUCING CONNECTIONS

THE WORLD OF TUBE FITTINGS

RLDKO REDUCING CONNECTION WITH TAPER

With taper and O-ring according to DIN 3865.

Supplied with fitted NBR O-ring (e.g. Perbunan),
FPM O-ring (e.g. Viton) upon request.



description	pipe OD1	pipe OD2	PN series	L	l	S	S ₁	S ₂	d ₁	O-ring	kg / 100 pcs
DS-RLDKO 8/6	8	6	L 500 (2200)	38.0	23.5	12	14	17	M 14x1.5	6x1.5	3.9
DS-RLDKO 10/6	10	6	L 500 (2200)	39.5	25.0	14	14	19	M 16x1.5	7.5x1.5	4.9
DS-RLDKO 10/8	10	8	L 500 (2200)	39.5	25.0	14	17	19	M 16x1.5	7.5x1.5	5.3
DS-RLDKO 12/6	12	6	L 400 (1700)	39.5	25.0	17	14	22	M 18x1.5	9x1.5	6.3
DS-RLDKO 12/8	12	8	L 400 (1700)	39.5	25.0	17	17	22	M 18x1.5	9x1.5	6.8
DS-RLDKO 12/10	12	10	L 400 (1700)	40.5	26.0	17	19	22	M 18x1.5	9x1.5	7.0
DS-RLDKO 15/6	15	6	L 400 (1700)	43.5	29.0	22	14	27	M 22x1.5	12x2	5.5
DS-RLDKO 15/8	15	8	L 400 (1700)	43.5	29.0	22	17	27	M 22x1.5	12x2	9.8
DS-RLDKO 15/10	15	10	L 400 (1700)	44.0	29.5	22	19	27	M 22x1.5	12x2	10.7
DS-RLDKO 15/12	15	12	L 400 (1700)	44.0	29.5	22	22	27	M 22x1.5	12x2	11.0
DS-RLDKO 18/6	18	6	L 400 (1700)	42.5	28.0	24	14	32	M 26x1.5	15x2	11.9
DS-RLDKO 18/8	18	8	L 400 (1700)	42.5	28.0	24	17	32	M 26x1.5	15x2	12.4
DS-RLDKO 18/10	18	10	L 400 (1700)	43.5	29.0	24	19	32	M 26x1.5	15x2	12.8
DS-RLDKO 18/12	18	12	L 400 (1700)	43.5	29.0	24	22	32	M 26x1.5	15x2	17.2
DS-RLDKO 18/15	18	15	L 400 (1700)	45.0	30.0	24	27	32	M 26x1.5	15x2	19.0
DS-RLDKO 22/6	22	6	L 250 (1100)	46.5	32.0	27	14	36	M 30x2	20x2	16.9
DS-RLDKO 22/8	22	8	L 250 (1100)	46.5	32.0	27	17	36	M 30x2	20x2	17.6
DS-RLDKO 22/10	22	10	L 250 (1100)	47.5	33.0	27	19	36	M 30x2	20x2	17.8
DS-RLDKO 22/12	22	12	L 250 (1100)	47.5	33.0	27	22	36	M 30x2	20x2	18.6
DS-RLDKO 22/15	22	15	L 250 (1100)	49.0	34.0	27	27	36	M 30x2	20x2	20.8
DS-RLDKO 22/18	22	18	L 250 (1100)	49.5	33.5	27	32	36	M 30x2	20x2	24.4
DS-RLDKO 28/6	28	6	L 250 (1100)	48.5	34.0	36	14	41	M 36x2	26x2	29.3
DS-RLDKO 28/8	28	8	L 250 (1100)	48.5	34.0	36	17	41	M 36x2	26x2	29.3
DS-RLDKO 28/10	28	10	L 250 (1100)	49.5	35.0	36	19	41	M 36x2	26x2	29.9
DS-RLDKO 28/12	28	12	L 250 (1100)	49.5	35.0	36	22	41	M 36x2	26x2	30.8
DS-RLDKO 28/15	28	15	L 250 (1100)	51.0	36.0	36	27	41	M 36x2	26x2	33.0
DS-RLDKO 28/18	28	18	L 250 (1100)	51.5	35.5	36	32	41	M 36x2	26x2	38.3
DS-RLDKO 28/22	28	22	L 250 (1100)	53.5	37.5	36	36	41	M 36x2	26x2	39.1
DS-RLDKO 35/6	35	6	L 250 (1100)	51.5	37.0	46	14	50	M 45x2	32x2.5	33.2
DS-RLDKO 35/8	35	8	L 250 (1100)	51.5	37.0	46	17	50	M 45x2	32x2.5	33.7
DS-RLDKO 35/10	35	10	L 250 (1100)	52.5	38.0	46	19	50	M 45x2	32x2.5	34.2
DS-RLDKO 35/12	35	12	L 250 (1100)	52.5	38.0	46	22	50	M 45x2	32x2.5	35.3
DS-RLDKO 35/15	35	15	L 250 (1100)	54.0	39.0	46	27	50	M 45x2	32x2.5	37.1
DS-RLDKO 35/18	35	18	L 250 (1100)	54.5	38.5	46	32	50	M 45x2	32x2.5	39.1
DS-RLDKO 35/22	35	22	L 250 (1100)	56.5	40.5	46	36	50	M 45x2	32x2.5	41.6
DS-RLDKO 35/28	35	28	L 250 (1100)	57.0	40.5	46	41	50	M 45x2	32x2.5	42.6
DS-RLDKO 42/6	42	6	L 250 (1100)	52.0	37.5	50	14	60	M 52x2	38x2.5	51.2
DS-RLDKO 42/8	42	8	L 250 (1100)	52.0	37.5	50	17	60	M 52x2	38x2.5	51.8
DS-RLDKO 42/10	42	10	L 250 (1100)	56.0	41.5	50	19	60	M 52x2	38x2.5	52.3
DS-RLDKO 42/12	42	12	L 250 (1100)	56.0	41.5	50	22	60	M 52x2	38x2.5	53.4
DS-RLDKO 42/15	42	15	L 250 (1100)	57.5	42.5	50	27	60	M 52x2	38x2.5	55.1
DS-RLDKO 42/18	42	18	L 250 (1100)	58.0	42.0	50	32	60	M 52x2	38x2.5	60.7
DS-RLDKO 42/22	42	22	L 250 (1100)	60.0	44.0	50	36	60	M 52x2	38x2.5	66.5
DS-RLDKO 42/28	42	28	L 250 (1100)	60.5	44.0	50	41	60	M 52x2	38x2.5	68.0
DS-RLDKO 42/35	42	35	L 250 (1100)	64.5	43.0	50	50	60	M 52x2	38x2.5	69.5

L = approximate length, with nut tightened

Please see "Engineering and technical data - Selecting the correct tube fitting" for

- reducing example.

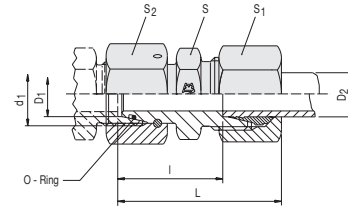
- more information on pressure.

PIPE CONNECTIONS REDUCING CONNECTIONS

RSDKO REDUCING CONNECTION WITH TAPER

With taper and O-ring according to DIN 3865.

Supplied with fitted NBR O-ring (e.g. Perbunan),
FPM O-ring (e.g. Viton) upon request.



description	pipe OD1	pipe OD2	PN series	L	l	S	S ₁	S ₂	d ₁	O-ring	kg / 100 pcs
DS-RSDKO 8/6	8	6	S 800 (3400)	41.5	27.0	14	17	19	M 16x1.5	6x1.5	3.4
DS-RSDKO 10/6	10	6	S 800 (3400)	42.0	27.5	17	17	22	M 18x1.5	7.5x1.5	7.2
DS-RSDKO 10/8	10	8	S 800 (3400)	42.0	27.5	17	19	22	M 18x1.5	7.5x1.5	7.8
DS-RSDKO 12/6	12	6	S 630 (2700)	43.5	29.0	19	17	24	M 20x1.5	9x1.5	8.3
DS-RSDKO 12/8	12	8	S 630 (2700)	43.5	29.0	19	19	24	M 20x1.5	9x1.5	9.3
DS-RSDKO 12/10	12	10	S 630 (2700)	45.5	29.5	19	22	24	M 20x1.5	9x1.5	10.7
DS-RSDKO 14/6	14	6	S 630 (2700)	48.0	33.5	22	17	27	M 22x1.5	10x2	9.2
DS-RSDKO 14/8	14	8	S 630 (2700)	48.0	33.5	22	19	27	M 22x1.5	10x2	9.9
DS-RSDKO 14/10	14	10	S 630 (2700)	49.0	33.0	22	22	27	M 22x1.5	10x2	11.0
DS-RSDKO 14/12	14	12	S 630 (2700)	49.0	33.0	22	24	27	M 22x1.5	10x2	11.9
DS-RSDKO 16/6	16	6	S 630 (2700)	46.5	32.0	22	17	30	M 24x1.5	12x2	12.7
DS-RSDKO 16/8	16	8	S 630 (2700)	46.5	32.0	22	19	30	M 24x1.5	12x2	14.8
DS-RSDKO 16/10	16	10	S 630 (2700)	47.5	31.5	22	22	30	M 24x1.5	12x2	14.8
DS-RSDKO 16/12	16	12	S 630 (2700)	47.5	31.5	22	24	30	M 24x1.5	12x2	15.5
DS-RSDKO 16/14	16	14	S 630 (2700)	50.5	33.0	24	27	30	M 24x1.5	12x2	16.3
DS-RSDKO 20/6	20	6	S 400 (1700)	50.5	36.0	27	17	36	M 30x2	16.3x2.4	18.9
DS-RSDKO 20/8	20	8	S 400 (1700)	50.5	36.0	27	19	36	M 30x2	16.3x2.4	20.5
DS-RSDKO 20/10	20	10	S 400 (1700)	51.5	35.5	27	22	36	M 30x2	16.3x2.4	20.6
DS-RSDKO 20/12	20	12	S 400 (1700)	51.5	35.5	27	24	36	M 30x2	16.3x2.4	21.3
DS-RSDKO 20/14	20	14	S 400 (1700)	54.5	37.0	27	27	36	M 30x2	16.3x2.4	23.2
DS-RSDKO 20/16	20	16	S 400 (1700)	54.5	36.5	27	30	36	M 30x2	16.3x2.4	25.9
DS-RSDKO 25/6	25	6	S 400 (1700)	53.0	38.5	36	17	46	M 36x2	20.3x2.4	30.8
DS-RSDKO 25/8	25	8	S 400 (1700)	53.0	38.5	36	19	46	M 36x2	20.3x2.4	31.9
DS-RSDKO 25/10	25	10	S 400 (1700)	54.0	38.0	36	22	46	M 36x2	20.3x2.4	33.2
DS-RSDKO 25/12	25	12	S 400 (1700)	54.0	38.0	36	24	46	M 36x2	20.3x2.4	33.4
DS-RSDKO 25/14	25	14	S 400 (1700)	57.0	39.5	36	27	46	M 36x2	20.3x2.4	35.1
DS-RSDKO 25/16	25	16	S 400 (1700)	57.0	39.0	36	30	46	M 36x2	20.3x2.4	37.3
DS-RSDKO 25/20	25	20	S 400 (1700)	60.5	39.0	36	36	46	M 36x2	20.3x2.4	43.6
DS-RSDKO 30/6	30	6	S 400 (1700)	58.5	44.0	41	17	50	M 42x2	25.3x2.4	42.9
DS-RSDKO 30/8	30	8	S 400 (1700)	58.5	44.0	41	19	50	M 42x2	25.3x2.4	43.1
DS-RSDKO 30/10	30	10	S 400 (1700)	59.5	43.5	41	22	50	M 42x2	25.3x2.4	43.6
DS-RSDKO 30/12	30	12	S 400 (1700)	59.5	43.5	41	24	50	M 42x2	25.3x2.4	44.3
DS-RSDKO 30/14	30	14	S 400 (1700)	62.5	45.0	41	27	50	M 42x2	25.3x2.4	46.1
DS-RSDKO 30/16	30	16	S 400 (1700)	62.5	44.5	41	30	50	M 42x2	25.3x2.4	48.7
DS-RSDKO 30/20	30	20	S 400 (1700)	66.0	44.5	41	36	50	M 42x2	25.3x2.4	53.6
DS-RSDKO 30/25	30	25	S 400 (1700)	69.0	45.0	41	46	50	M 42x2	25.3x2.4	67.3
DS-RSDKO 38/6	38	6	S 400 (1700)	62.0	47.5	50	17	60	M 52x2	33.3x2.4	70.8
DS-RSDKO 38/8	38	8	S 400 (1700)	62.0	47.5	50	19	60	M 52x2	33.3x2.4	71.0
DS-RSDKO 38/10	38	10	S 400 (1700)	63.0	47.0	50	22	60	M 52x2	33.3x2.4	71.4
DS-RSDKO 38/12	38	12	S 400 (1700)	63.0	47.0	50	24	60	M 52x2	33.3x2.4	72.0
DS-RSDKO 38/14	38	14	S 400 (1700)	66.0	48.5	50	27	60	M 52x2	33.3x2.4	74.3
DS-RSDKO 38/16	38	16	S 400 (1700)	66.0	48.0	50	30	60	M 52x2	33.3x2.4	77.0
DS-RSDKO 38/20	38	20	S 400 (1700)	69.5	48.0	50	36	60	M 52x2	33.3x2.4	81.2
DS-RSDKO 38/25	38	25	S 400 (1700)	72.5	48.5	50	46	60	M 52x2	33.3x2.4	85.0
DS-RSDKO 38/30	38	30	S 400 (1700)	75.5	49.0	50	50	60	M 52x2	33.3x2.4	87.8

L = approximate length, with nut tightened

Please see "Engineering and technical data - Selecting the correct tube fitting" for

- reducing example.

- more information on pressure.

THE WORLD OF TUBE FITTINGS
INTEGRATED FLUID POWER SOLUTIONS



VALVES

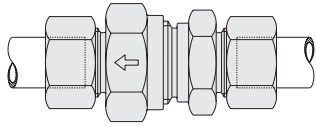


VALVES

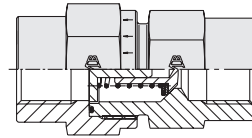
NON-RETURN VALVES WITH CONE

THE WORLD OF TUBE FITTINGS

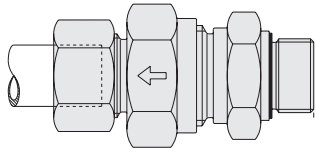
NON-RETURN VALVES – INTRODUCTION



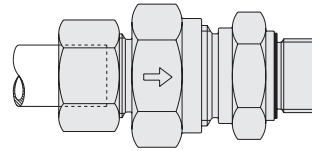
Order code RD



Order code RF



Order code RV



Order code RZ

SEALING

Guided cone with valve lift stop.

No diminished cross section.

Max flow speed is about 8 m/sec.

OPENING PRESSURE

1 bar. Further opening pressures upon request.

Tolerance opening pressure $\pm 20\%$.

BACK PRESSURE VALVES RV AND RZ

Sealing at screwed thread by Gates-EMB elastic seal (WD).

TEMPERATURE

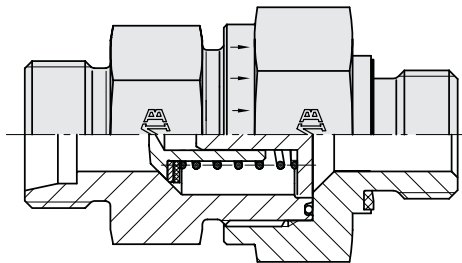
Perbunan standard -35°C up to $+100^{\circ}\text{C}$.

Viton optional -40°C up to $+200^{\circ}\text{C}$.

MATERIAL

Drawn steel, galvanised surface.

Other materials upon request.

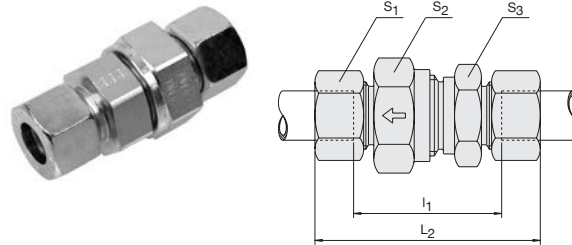


VALVES

NON-RETURN VALVES WITH CONE

RD NON-RETURN VALVES

Tube connection both ends.



description		pipe OD	PB series	DN nominal size		S ₁	S ₂	S ₃	L ₁	I ₁	bore	kg / 100 pcs
DS-RD 6-L		6	L 250 (625)	4		14	17	17	58.0	29.0	3.5	6.5
DS-RD 8-L		8	L 250 (625)	6	1/8"	17	19	19	59.0	30.0	5.5	8.0
DS-RD 10-L		10	L 250 (625)	8	1/4"	19	24	22	69.5	40.5	7.5	14.0
DS-RD 12-L		12	L 250 (625)	10	3/8"	22	30	27	72.5	43.5	9.5	21.0
DS-RD 15-L		15	L 250 (625)	12	1/2"	27	32	27	77.5	47.5	11.5	25.0
DS-RD 18-L		18	L 160 (400)	16	1/2"	32	36	36	83.5	51.5	14.0	40.0
DS-RD 22-L		22	L 160 (400)	20	3/4"	36	46	41	93.5	61.5	18.0	61.0
DS-RD 28-L		28	L 100 (250)	25	1"	41	55	50	102.5	69.5	23.0	88.0
DS-RD 35-L		35	L 100 (250)	32	1 1/4"	50	60	60	117.5	74.5	29.0	130.0
DS-RD 42-L	1)	42	L 100 (250)	32	1 1/4"	60	70	65	119.0	74.0	29.0	200.0
DS-RD 6-S		6	S 400 (1000)	3		17	19	19	63.5	34.5	3.5	9.5
DS-RD 8-S		8	S 400 (1000)	4		19	19	19	63.5	34.5	3.5	11.0
DS-RD 10-S		10	S 400 (1000)	6	1/8"	22	24	22	72.5	40.5	5.5	18.0
DS-RD 12-S		12	S 400 (1000)	8	1/4"	24	27	24	74.5	42.5	7.5	21.5
DS-RD 14-S		14	S 400 (1000)	10	3/8"	27	32	27	82.5	47.5	9.5	30.0
DS-RD 16-S	1)	16	S 400 (1000)	12	1/2"	30	36	32	86.5	50.5	11.5	40.0
DS-RD 20-S	1)	20	S 400 (1000)	16	1/2"	36	46	41	97.5	54.5	15.0	69.0
DS-RD 25-S	1)	25	S 250 (625)	20	3/4"	46	50	46	106.5	58.5	19.0	103.5
DS-RD 30-S		30	S 250 (625)	25	1"	50	60	60	122.5	69.5	24.0	159.0
DS-RD 38-S	1)	38	S 250 (625)	32	1 1/4"	60	70	65	136.5	75.5	29.0	227.0

L₁ = approximate length with nut tightened

1) valve halves with O-ring sealing

Please see "Engineering and technical data - Selecting the correct tube fitting" for more information on pressure

VALVES NON-RETURN VALVES WITH CONE

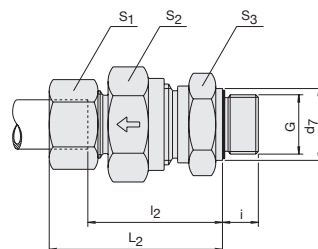
THE WORLD OF TUBE FITTINGS

RV NON-RETURN VALVES BSP

Flow from male stud end.

BSP parallel.

Captive seal O-ring NBR (e.g. Perbunan),
FPM (e.g. Viton) upon request.



description	pipe OD	PB series	DN nominal size		S ₁	S ₂	S ₃	L ₂	l ₂	d ₇	i	bore	BSP thread	kg / 100 pcs
DS-RV 6-RL/WD	6	L 250 (625)	4		14	17	17	42.5	28.0	14	8	3.5	G 1/8" A	5.0
DS-RV 8-RL/WD	8	L 250 (625)	6	1/8"	17	19	19	44.5	30.0	19	12	5.5	G 1/4" A	7.2
DS-RV 10-RL/WD	10	L 250 (625)	8	1/4"	19	24	22	53.0	38.5	19	12	7.5	G 1/4" A	9.0
DS-RV 12-RL/WD	12	L 250 (625)	10	3/8"	22	30	27	57.0	42.5	22	12	9.5	G 3/8" A	18.5
DS-RV 15-RL/WD	15	L 250 (625)	12	1/2"	27	32	27	60.5	45.5	27	14	11.5	G 1/2" A	22.5
DS-RV 18-RL/WD	18	L 160 (400)	16	1/2"	32	36	36	66.0	50.0	27	14	14.0	G 1/2" A	33.5
DS-RV 22-RL/WD	22	L 160 (400)	20	3/4"	36	46	41	71.0	55.0	32	16	18.0	G 3/4" A	50.0
DS-RV 28-RL/WD	28	L 100 (250)	25	1"	41	55	50	79.5	63.0	40	18	23.0	G 1" A	78.5
DS-RV 35-RL/WD	35	L 100 (250)	32	1 1/4"	50	60	60	90.5	69.0	50	20	29.0	G 1 1/4" A	115.2
DS-RV 42-RL/WD 1)	42	L 100 (250)	32	1 1/4"	60	70	65	91.0	68.5	55	22	29.0	G 1 1/2" A	179.0
DS-RV 6-RS/WD	6	S 400 (1000)	3		17	19	19	46.0	31.5	19	12	3.5	G 1/4" A	9.0
DS-RV 8-RS/WD	8	S 400 (1000)	4		19	19	19	46.0	31.5	19	12	3.5	G 1/4" A	11.5
DS-RV 10-RS/WD	10	S 400 (1000)	6	1/8"	22	24	22	54.0	38.0	22	12	5.5	G 3/8" A	15.0
DS-RV 12-RS/WD	12	S 400 (1000)	8	1/4"	24	27	24	57.0	41.0	22	12	7.5	G 3/8" A	18.5
DS-RV 14-RS/WD	14	S 400 (1000)	10	3/8"	27	32	27	62.0	44.5	27	14	11.5	G 1/2" A	25.5
DS-RV 16-RS/WD 1)	16	S 400 (1000)	12	1/2"	30	36	32	66.0	48.0	27	14	11.5	G 1/2" A	32.0
DS-RV 20-RS/WD 1)	20	S 400 (1000)	16	1/2"	36	46	41	73.5	52.0	32	16	15.0	G 3/4" A	59.5
DS-RV 25-RS/WD 1)	25	S 250 (625)	20	3/4"	46	50	46	78.5	54.5	40	18	19.0	G 1" A	85.0
DS-RV 30-RS/WD 1)	30	S 250 (625)	25	1"	50	60	60	90.5	64.0	50	20	24.0	G 1 1/4" A	136.0
DS-RV 38-RS/WD 1)	38	S 250 (625)	32	1 1/4"	60	70	65	100.0	69.5	55	22	29.0	G 1 1/2" A	195.0

L₂ = approximate length with nut tightened

1) valve halves with O-ring sealing

Please see "Engineering and technical data - Selecting the correct tube fitting" for more information on pressure.

VALVES

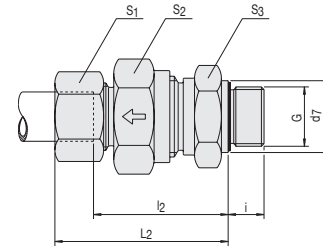
NON-RETURN VALVES WITH CONE

RV NON-RETURN VALVES METRIC

Flow from male stud end.

Metric parallel.

Captive seal O-ring NBR (e.g. Perbunan),
FPM (e.g. Viton) upon request.



description	pipe OD	PB series	DN nominal size		S ₁	S ₂	S ₃	L ₂	L ₁	d ₇	i	bore	Metric thread	kg / 100 pcs
DS-RV 6-ML/WD	6	L 250 (625)	4		14	17	17	42.5	28.0	14	8	3.5	M 10x1	5.0
DS-RV 8-ML/WD	8	L 250 (625)	6	1/8"	17	19	19	43.5	30.0	17	12	5.5	M 12x1.5	7.2
DS-RV 10-ML/WD	10	L 250 (625)	8	1/4"	19	24	22	53.0	38.5	19	12	7.5	M 14x1.5	5.0
DS-RV 12-ML/WD	12	L 250 (625)	10	3/8"	22	30	27	57.0	42.5	22	12	9.5	M 16x1.5	18.5
DS-RV 15-ML/WD	15	L 250 (625)	12	1/2"	27	32	27	60.6	45.5	24	12	11.5	M 18x1.5	22.5
DS-RV 18-ML/WD	18	L 160 (400)	16	1/2"	32	36	36	66.0	50.0	27	14	14.0	M 22x1.5	33.5
DS-RV 22-ML/WD	22	L 160 (400)	20	3/4"	36	46	41	71.0	55.0	32	16	18.0	M 26x1.5	50.0
DS-RV 28-ML/WD	28	L 100 (250)	25	1"	41	55	50	79.5	63.0	40	18	23.0	M 33x2	78.5
DS-RV 35-ML/WD	35	L 100 (250)	32	1 1/4"	50	60	60	90.5	69.0	50	20	29.0	M 42x2	115.2
DS-RV 42-ML/WD 1)	42	L 100 (250)	32	1 1/4"	60	70	65	91.0	67.5	55	22	29.0	M 48x2	179.0
DS-RV 6-MS/WD	6	S 400 (1000)	3		17	19	19	46.0	31.5	17	12	3.5	M 12x1.5	9.0
DS-RV 8-MS/WD	8	S 400 (1000)	4		19	19	19	46.0	31.5	19	12	3.5	M 14x1.5	11.5
DS-RV 10-MS/WD	10	S 400 (1000)	6	1/8"	22	24	22	54.0	38.0	22	12	5.5	M 16x1.5	15.0
DS-RV 12-MS/WD	12	S 400 (1000)	8	1/4"	24	27	24	57.0	41.0	24	12	7.5	M 18x1.5	18.5
DS-RV 14-MS/WD	14	S 400 (1000)	10	3/8"	27	32	27	62.0	44.5	26	14	9.5	M 20x1.5	25.5
DS-RV 16-MS/WD	16	S 400 (1000)	12	1/2"	30	36	32	66.0	48.0	27	14	11.5	M 22x1.5	32.0
DS-RV 20-MS/WD 1)	20	S 400 (1000)	16	1/2"	36	46	41	73.5	52.0	32	16	15.0	M 27x2	59.5
DS-RV 25-MS/WD	25	S 250 (625)	20	3/4"	46	50	46	78.5	54.5	40	18	19.0	M 33x2	84.5
DS-RV 30-MS/WD 1)	30	S 250 (625)	25	1"	50	60	60	90.5	64.0	50	20	24.0	M 42x2	135.0
DS-RV 38-MS/WD 1)	38	S 250 (625)	32	1 1/4"	60	70	65	100.0	69.5	55	22	29.0	M 48x2	196.8

L₂ = approximate length with nut tightened

1) valve halves with O-ring sealing

Please see "Engineering and technical data - Selecting the correct tube fitting" for more information on pressure.

VALVES NON-RETURN VALVES WITH CONE

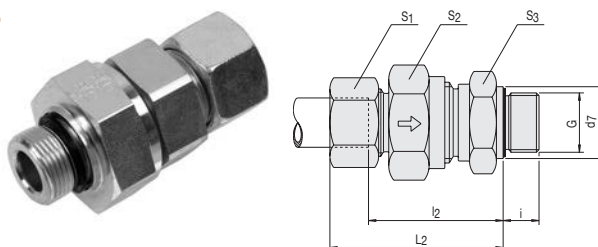
THE WORLD OF TUBE FITTINGS

RZ NON-RETURN VALVES BSP

Flow towards male stud end.

BSP parallel.

Captive seal O-ring NBR (e.g. Perbunan),
FPM (e.g. Viton) upon request.



description	pipe OD	PB series	DN nominal size		S ₁	S ₂	S ₃	L ₂	l ₂	d ₇	i	bore	BSP thread	kg / 100 pcs
DS-RZ 6-RL/WD	6	L 250 (625)	4		14	17	17	41.0	26.5	14	8	3.5	G 1/8" A	5.1
DS-RZ 8-RL/WD	8	L 250 (625)	6	1/8"	17	19	19	43.0	28.5	19	12	5.5	G 1/4" A	6.5
DS-RZ 10-RL/WD	10	L 250 (625)	8	1/4"	19	24	22	53.0	38.5	19	12	7.5	G 1/4" A	8.5
DS-RZ 12-RL/WD	12	L 250 (625)	10	3/8"	22	27	30	55.0	40.5	22	12	9.5	G 3/8" A	18.0
DS-RZ 15-RL/WD	15	L 250 (625)	12	1/2"	27	27	32	57.5	42.5	27	12	11.5	G 1/2" A	21.0
DS-RZ 18-RL/WD	18	L 160 (400)	16	1/2"	32	36	36	64.0	48.0	27	14	14.0	G 1/2" A	32.0
DS-RZ 22-RL/WD	22	L 160 (400)	20	3/4"	36	41	46	72.0	56.0	32	16	18.0	G 3/4" A	49.0
DS-RZ 28-RL/WD	28	L 100 (250)	25	1"	41	50	55	80.5	64.0	40	18	23.0	G 1" A	77.0
DS-RZ 35-RL/WD	35	L 100 (250)	32	1 1/4"	50	60	60	91.5	70.0	50	20	29.0	G 1 1/4" A	114.0
DS-RZ 42-RL/WD 1)	42	L 100 (250)	32	1 1/4"	60	65	70	93.0	70.5	55	22	29.0	G 1 1/2" A	182.0
DS-RZ 6-RS/WD	6	S 400 (1000)	3		17	19	19	46.0	31.5	19	12	3.5	G 1/4" A	7.5
DS-RZ 8-RS/WD	8	S 400 (1000)	4		19	19	19	46.0	31.5	19	12	3.5	G 1/4" A	8.5
DS-RZ 10-RS/WD	10	S 400 (1000)	6	1/8"	22	22	24	54.0	38.0	22	12	5.5	G 3/8" A	15.0
DS-RZ 12-RS/WD	12	S 400 (1000)	8	1/4"	24	24	27	57.0	41.0	22	12	7.5	G 3/8" A	18.0
DS-RZ 14-RS/WD	14	S 400 (1000)	10	3/8"	27	27	32	61.0	43.5	27	14	9.5	G 1/2" A	25.2
DS-RZ 16-RS/WD 1)	16	S 400 (1000)	12	1/2"	30	32	36	64.0	46.0	27	14	11.5	G 1/2" A	32.5
DS-RZ 20-RS/WD 1)	20	S 400 (1000)	16	1/2"	36	41	46	71.5	50.0	32	16	15.0	G 3/4" A	59.0
DS-RZ 25-RS/WD 1)	25	S 250 (625)	20	3/4"	46	46	50	78.5	54.5	40	18	19.0	G 1" A	82.5
DS-RZ 30-RS/WD	30	S 250 (625)	25	1"	50	60	60	90.5	64.0	50	20	24.0	G 1 1/4" A	133.2
DS-RZ 38-RS/WD 1)	38	S 250 (625)	32	1 1/4"	60	65	70	102.0	71.5	55	22	29.0	G 1 1/2" A	197.5

L₂ = approximate length with nut tightened

1) valve halves with O-ring sealing

Please see "Engineering and technical data - Selecting the correct tube fitting" for more information on pressure.

VALVES

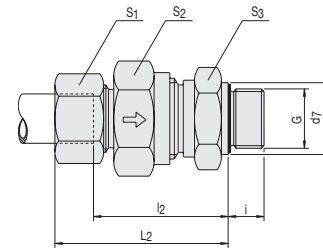
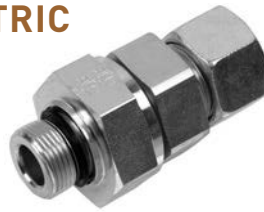
NON-RETURN VALVES WITH CONE

RZ NON-RETURN VALVES METRIC

Flow from male stud end.

Metric parallel.

Captive seal O-ring NBR (e.g. Perbunan),
FPM (e.g. Viton) upon request.



description	pipe OD	PB series	DN nominal size		S ₁	S ₂	S ₃	L ₂	l ₂	d ₇	i	bore	Metric thread	kg / 100 pcs
DS-RZ 6-ML/WD	6	L 250 [625]	4		14	17	17	41.0	26.5	14	8	3.5	M 10x1	5.1
DS-RZ 8-ML/WD	8	L 250 [625]	6	1/8"	17	19	19	43.0	28.5	17	12	5.5	M 12x1.5	6.5
DS-RZ 10-ML/WD	10	L 250 [625]	8	1/4"	19	22	24	53.0	38.5	19	12	7.5	M 14x1.5	8.5
DS-RZ 12-ML/WD	12	L 250 [625]	10	3/8"	22	27	30	55.0	40.5	22	12	9.5	M 16x1.5	18.0
DS-RZ 15-ML/WD	15	L 250 [625]	12	1/2"	27	27	32	57.5	42.5	24	12	11.5	M 18x1.5	21.0
DS-RZ 18-ML/WD	18	L 160 [400]	16	1/2"	32	36	36	64.0	48.0	27	14	14.0	M 22x1.5	32.0
DS-RZ 22-ML/WD	22	L 160 [400]	20	3/4"	36	41	46	72.0	56.0	32	16	18.0	M 26x1.5	49.0
DS-RZ 28-ML/WD	28	L 100 [250]	25	1"	41	50	55	80.5	64.0	40	18	23.0	M 33x2	77.0
DS-RZ 35-ML/WD	35	L 100 [250]	32	1 1/4"	50	60	60	91.5	70.0	50	20	29.0	M 42x2	114.0
DS-RZ 42-ML/WD 1)	42	L 100 [250]	32	1 1/4"	60	65	70	93.0	70.5	55	22	29.0	M 48x2	180.0
DS-RZ 6-MS/WD	6	S 400 (1000)	3		17	19	19	46.0	31.5	17	12	3.5	M 12x1.5	7.5
DS-RZ 8-MS/WD	8	S 400 (1000)	4	1/8"	19	19	19	46.0	31.5	19	12	3.5	M 14x1.5	8.5
DS-RZ 10-MS/WD	10	S 400 (1000)	6	1/8"	22	22	24	54.0	38.0	22	12	5.5	M 16x1.5	15.0
DS-RZ 12-MS/WD	12	S 400 (1000)	8	1/4"	24	24	27	57.0	41.0	24	12	7.5	M 18x1.5	18.0
DS-RZ 14-MS/WD	14	S 400 (1000)	10	3/8"	27	27	32	61.0	43.5	26	14	9.5	M 20x1.5	25.2
DS-RZ 16-MS/WD 1)	16	S 400 (1000)	12	1/2"	30	32	36	64.0	46.0	27	14	11.5	M 22x1.5	32.5
DS-RZ 20-MS/WD 1)	20	S 400 (1000)	16	1/2"	36	41	46	71.5	50.0	32	16	15.0	M 27x2	59.0
DS-RZ 25-MS/WD 1)	25	S 250 [625]	20	3/4"	46	46	50	78.5	54.5	40	18	19.0	M 33x2	84.0
DS-RZ 30-MS/WD	30	S 250 [625]	25	1"	50	60	60	90.5	64.0	50	20	24.0	M 42x2	134.5
DS-RZ 38-MS/WD 1)	38	S 250 [625]	32	1 1/4"	60	65	70	102.0	71.5	55	22	29.0	M 48x2	199.5

L₂ = approximate length with nut tightened

1) valve halves with O-ring sealing

Please see "Engineering and technical data - Selecting the correct tube fitting" for more information on pressure.

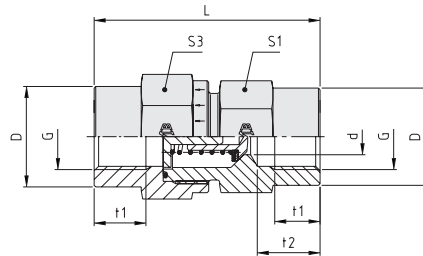
VALVES

NON-RETURN VALVES WITH CONE

THE WORLD OF TUBE FITTINGS

RF NON-RETURN VALVES

Twin-face inner pipe thread.



description	PB	DN nominal size	S ₁	S ₃	L	t ₁ min.	t ₂	D	d	G	kg / 100 pcs
RF 1/8"	400	3	19	19	42.5	8.0	12.0	19	3.5	G 1/8	7.6
RF 1/4"	400	4	19	19	51	12.0	16.0	19	3.5	G 1/4	8.5
RF 3/8"	400	8	24	27	60	12.0	17.0	24	7.5	G 3/8	15.6
RF 1/2"	400	12	32	36	72	15.0	20.0	32	11.5	G 1/2	34.4
RF 3/4"	1) 400	16	41	46	84	16.5	22.0	41	15.0	G 3/4	59.0
RF 1"	1) 250	20	46	50	95	19.0	25.5	46	19.0	G 1	82.3
RF 1 1/4"	1) 250	25	60	60	110	21.5	28.0	60	24.0	G 1 1/4	153.6
RF 1 1/2"	1) 250	32	65	70	114	22.0	28.5	65	29.0	G 1 1/2	193.3

1) valve halves with O-ring sealing

Please see "Engineering and technical data - Selecting the correct tube fitting" for more information on pressure.

RVS INSIDE PARTS NON-RETURN VALVES

Zinc plated steel. Other materials on request.

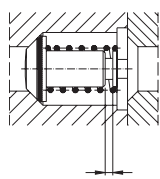
Perbunan standard -20°C up to +90°C.

Viton optional -20°C up to +120°C.

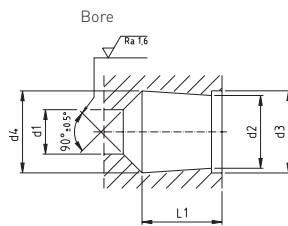
Valve lift pressure: Standard 1 bar, alternative valve lift pressure supplied upon request.



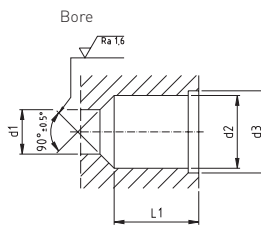
Assembly



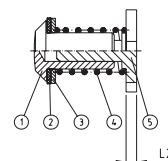
Travel of spring



Bore (RVS 6-L/S / 8-S only)
Bore (must align exactly)



Inside valve parts



- 1) Bolt
- 2) Seal
- 3) Supporting ring
- 4) Spring
- 5) Cone guide

description	d ₁	d ₂ [+0.1]	d ₃ [+0.05]	L ₁ [± 0.1]	L ₂	deflection	d ₄ [+0.2]
X RVS 6-L/S/8-S	4	7.7	8.6	10.3	2.3	2.5	8.5
X RVS 8-L/10-S	6	10.8	11.6	12.7	2.3	2.7	10.75 [d2]
X RVS 10-L/12-S	8	13.4	14.1	16.3	2.3	3.3	13.35 [d2]
X RVS 12-L/14-S	10	16.9	18.1	18.9	2.8	3.8	16.9 [d2]
X RVS 15-L/16-S	12	19.5	20.6	21.4	2.8	4.7	19.5 [d2]
X RVS 18-L/20-S	15	25.2	27.1	25.4	3.4	4.7	25.2 [d2]
X RVS 22-L/25-S	19	30.8	32.6	29.6	3.4	5.5	30.8 [d2]
X RVS 28-L/30-S	24	38.7	40.6	34.7	3.8	7.0	38.7 [d2]
X RVS 35-L/38-S	29	45.7	48.1	40.7	3.8	10.0	45.7 [d2]

Please see "Engineering and technical data - Selecting the correct tube fitting" for more information on pressure.

VALVES

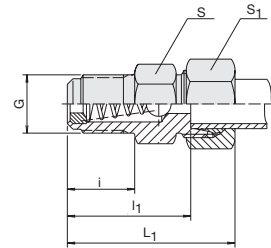
BALL CHECK VALVES

ARVA BALL CHECK VALVES

Flow towards male stud end.

BSP parallel.

Opening pressure 3 bar.



description	pipe OD	PB series	L ₁	l ₁	i	S	S ₁	G
ARVA 4-RLL	4	LL 100	30	21.0	11	11	10	G 1/8" A
ARVA 6-RLL	6	LL 100	30	19.5	11	11	12	G 1/8" A
ARVA 8-RLL	8	LL 100	31	20.5	11	12	14	G 1/8" A
DS-ARVA 8-RL	8	L 250	42	27.0	14	17	17	G 1/4" A
DS-ARVA 10-RL	10	L 250	41	26.0	14	19	19	G 1/4" A
DS-ARVA 6-RS	6	S 400	44	29.0	14	17	17	G 1/4" A

Please see "Engineering and technical data - Selecting the correct tube fitting" for more information on pressure.

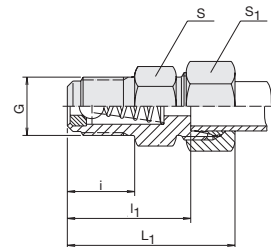
ARVV BALL CHECK VALVES

Flow towards male stud end.

BSP parallel.

Opening pressure 3 bar.

Pressure difference maximum 125 bar in closing direction.



description	pipe OD	PB series	L ₁	l ₁	i	S	S ₁	G
ARVV 4-RLL	4	LL 100	30	21.0	11	11	10	G 1/8" A
ARVV 6-RLL	6	LL 100	30	19.5	11	11	12	G 1/8" A
ARVV 8-RLL	8	LL 100	31	20.5	11	12	14	G 1/8" A
DS-ARVV 8-RL	8	L 250	42	27.0	14	17	17	G 1/4" A
DS-ARVV 10-RL	10	L 250	41	26.0	14	19	19	G 1/4" A
DS-ARVV 6-RS	6	S 400	44	29.0	14	17	17	G 1/4" A

Please see "Engineering and technical data - Selecting the correct tube fitting" for more information on pressure.

THE WORLD OF TUBE FITTINGS
INTEGRATED FLUID POWER SOLUTIONS



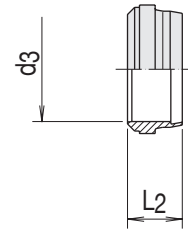
SINGLE PARTS



SINGLE PARTS CUTTING RING

THE WORLD OF TUBE FITTINGS

DS CUTTING RING

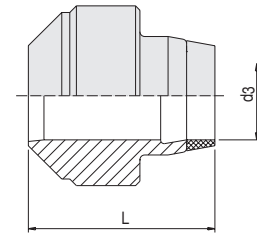


description	pipe OD	L ₂	d ₃
S 4-LL	4	6.0	4
S 6-LL	6	7.0	6
S 8-LL	8	7.0	8
DS 6-L/S	6	9.5	6
DS 8-L/S	8	9.5	8
DS 10-L/S	10	10.0	10
DS 12-L/S	12	10.0	12
DS 15-L	15	10.2	15
DS 18-L	18	10.2	18
DS 22-L	22	11.5	22
DS 28-L	28	11.5	28
DS 35-L	35	13.5	35
DS 42-L	42	13.5	42
DS 6-L/S	6	9.5	6
DS 8-L/S	8	9.5	8
DS 10-L/S	10	10.0	10
DS 12-L/S	12	10.0	12
DS 14-S	14	10.5	14
DS 16-S	16	10.5	16
DS 20-S	20	12.7	20
DS 25-S	25	12.7	25
DS 30-S	30	13.5	30
DS 38-S	38	13.5	38

Please see "Engineering and technical data - Selecting the correct tube fitting" for more information on pressure.

SINGLE PARTS CUTTING RING

DSW CUTTING RING



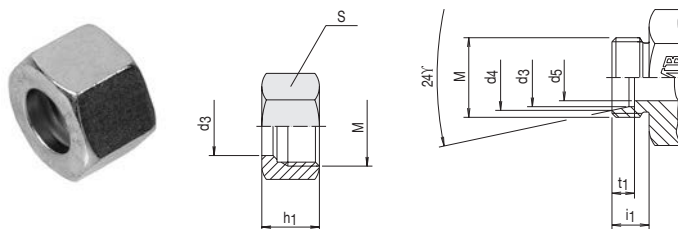
description	pipe OD	PN series	d ₃	L
DSW 6-L/S	6	L 500	6	10.5
DSW 8-L/S	8	L 500	8	10.5
DSW 10-L/S	10	L 500	10	10.5
DSW 12-L/S	12	L 400	12	10.5
DSW 15-L	15	L 400	15	10.5
DSW 18-L	18	L 400	18	11.0
DSW 22-L	22	L 250	22	11.7
DSW 28-L	28	L 250	28	11.7
DSW 35-L	35	L 250	35	14.5
DSW 42-L	42	L 250	42	14.5
DSW 6-L/S	6	S 800	6	10.5
DSW 8-L/S	8	S 800	8	10.5
DSW 10-L/S	10	S 800	10	10.5
DSW 12-L/S	12	S 630	12	10.5
DSW 14-S	14	S 630	14	11.0
DSW 16-S	16	S 630	16	11.0
DSW 20-S	20	S 400	20	14.0
DSW 25-S	25	S 400	25	14.0
DSW 30-S	30	S 400	30	15.0
DSW 38-S	38	S 400	38	15.0

Please see "Engineering and technical data - Selecting the correct tube fitting" for more information on pressure.

SINGLE PARTS NUT

THE WORLD OF TUBE FITTINGS

M LOCK NUT



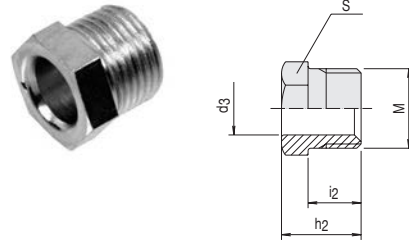
description	pipe OD	M	d ₃	d ₄	d ₅	t ₁	i ₁	S	h ₁
M 4-LL	4	M 8x1	4	5.0	3.0	4.0	8	10	11.5
M 6-LL	6	M 10x1	6	7.5	4.5	5.5	8	12	12.0
M 8-LL	8	M 12x1	8	9.5	6.0	5.5	9	14	12.5
M 6-L	6	M 12x1.5	6	8.1	4.0	7.0	10	14	15.0
M 8-L	8	M 14x1.5	8	10.1	6.0	7.0	10	17	15.0
M 10-L	10	M 16x1.5	10	12.3	8.0	7.0	11	19	16.0
M 12-L	12	M 18x1.5	12	14.3	10.0	7.0	11	22	16.0
M 15-L	15	M 22x1.5	15	17.3	12.0	7.0	12	27	17.5
M 18-L	18	M 26x1.5	18	20.3	15.0	7.5	12	32	18.0
M 22-L	22	M 30x2	22	24.3	19.0	7.5	14	36	20.5
M 28-L	28	M 36x2	28	30.3	24.0	7.5	14	41	22.0
M 35-L	35	M 45x2	35	38.0	30.0	10.5	16	50	25.0
M 42-L	42	M 52x2	42	45.0	36.0	11.0	16	60	25.0
M 6-S	6	M 14x1.5	6	8.1	4.0	7.0	12	17	16.0
M 8-S	8	M 16x1.5	8	10.1	5.0	7.0	12	19	16.0
M 10-S	10	M 18x1.5	10	12.3	7.0	7.5	12	22	17.5
M 12-S	12	M 20x1.5	12	14.3	8.0	7.5	12	24	18.0
M 14-S	14	M 22x1.5	14	16.3	10.0	8.0	14	27	20.0
M 16-S	16	M 24x1.5	16	18.3	12.0	8.5	14	30	21.0
M 20-S	20	M 30x2	20	22.9	16.0	10.5	16	36	24.0
M 25-S	25	M 36x2	25	27.9	20.0	12.0	18	46	26.5
M 30-S	30	M 42x2	30	33.0	25.0	13.5	20	50	29.5
M 38-S	38	M 52x2	38	41.0	32.0	16.0	22	60	32.5

Please see "Engineering and technical data - Selecting the correct tube fitting" for more information on pressure.

SINGLE PARTS NUT

UES INTERNAL COUPLING NUT

Thread: Metric, parallel.

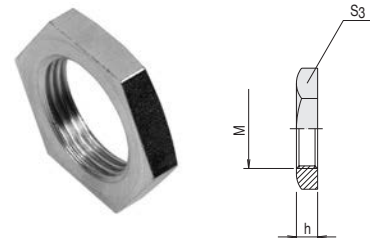


description	pipe OD	PN series	M	d ₃	h ₂	i ₂	S	kg / 100 pcs
UE S 4-LL	4	LL 100	M 8x1	4	12	8.0	8	0.2
UE S 6-LL	6	LL 100	M 10x1	6	13	9.0	10	0.4
UE S 8-LL	8	LL 100	M 12x1	8	14	9.5	12	0.6
UE S 6-L	6	L 500	M 12x1.5	6	16	11.5	12	0.9
UE S 8-L	8	L 500	M 14x1.5	8	16	11.5	14	1.1
UE S 10-L	10	L 500	M 16x1.5	10	17	11.5	17	1.5
UE S 12-L	12	L 400	M 18x1.5	12	18	12.0	19	1.9

Please see "Engineering and technical data - Selecting the correct tube fitting" for more information on pressure.

GM COUNTER NUT

For bulkhead connections.



description	M	S ₃	h	kg / 100 pcs
GM 6-L	M 12x1.5	17	6	0.7
GM 6-S/ 8-L	M 14x1.5	19	6	0.8
GM 8-S/10-L	M 16x1.5	22	6	1.1
GM 10-S/12-L	M 18x1.5	24	6	1.2
GM 12-S	M 20x1.5	27	6	1.5
GM 14-S/15-L	M 22x1.5	30	7	2.2
GM 16-S	M 24x1.5	32	7	2.4
GM 18-L	M 26x1.5	36	8	3.7
GM 20-S/22-L	M 30x2	41	8	4.6
GM 25-S/28-L	M 36x2	46	9	6.0
GM 30-S	M 42x2	50	9	5.8
GM 35-L	M 45x2	55	9	7.5
GM 38-S/42-L	M 52x2	65	10	12.3

Please see "Engineering and technical data - Selecting the correct tube fitting" for more information on pressure.

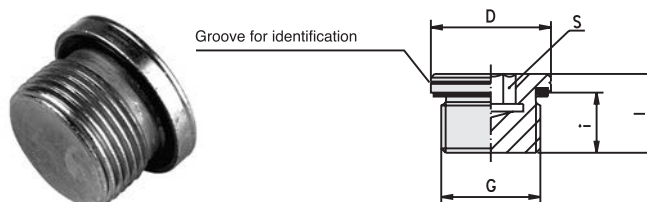
SINGLE PARTS PLUG

THE WORLD OF TUBE FITTINGS

VSCH BLANKING PLUG

With internal hexagon and captive seal NBR (e.g. Perbunan).

Thread: BSP parallel, metric parallel.



description	PN	G	D	I	i	S	MA*/NM
VSCH-M10x1/WD	400	M 10x1	14	12.0	8	5	10
VSCH-M 12x1.5/WD	400	M 12x1.5	17	17.0	12	6	20
VSCH-M 14x1.5/WD	400	M 14x1.5	19	17.0	12	6	30
VSCH-M 16x1.5/WD	400	M 16x1.5	22	17.0	12	8	40
VSCH-M 18x1.5/WD	400	M 18x1.5	24	17.0	12	8	50
VSCH-M 20x1.5/WD	400	M 20x1.5	26	19.0	14	10	60
VSCH-M 22x1.5/WD	400	M 22x1.5	27	19.0	14	10	80
VSCH-M 26x1.5/WD	400	M 26x1.5	32	21.0	16	12	100
VSCH-M 27x2/WD	400	M 27x2	32	21.0	16	12	120
VSCH-M 33x2/WD	400	M 33x2	40	22.5	16	17	200
VSCH-M 42x2/WD	315	M 42x2	50	22.5	16	22	350
VSCH-M 48x2/WD	315	M 48x2	55	22.5	16	24	400
VSCH-R 1/8"/WD	400	G 1/8" A	14	12.0	8	5	10
VSCH-R 1/4"/WD	400	G 1/4" A	19	17.0	12	6	30
VSCH-R 3/8"/WD	400	G 3/8" A	22	17.0	12	8	40
VSCH-R 1/2"/WD	400	G 1/2" A	27	19.0	14	10	80
VSCH-R 3/4"/WD	400	G 3/4" A	32	21.0	16	12	120
VSCH-R 1"/WD	400	G 1" A	40	22.5	16	17	200
VSCH-R 1 1/4"/WD	315	G 1 1/4" A	50	22.5	16	22	350
VSCH-R 1 1/2"/WD	315	G 1 1/2" A	55	22.5	16	24	400

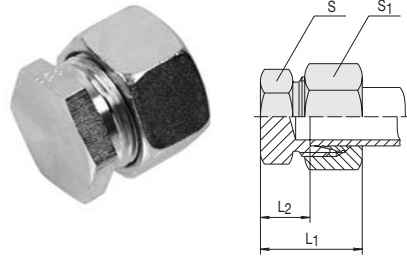
* MA = tightening torques relate to steel counterparts

Please see "Engineering and technical data - Selecting the correct tube fitting" for more information on
- internal screw threads.
- pressure.

SINGLE PARTS PLUG

VSCHK STANDPIPE END PLUG

With 24° inner cone.



description	pipe OD	PN series	S	S ₁	L ₁	L ₂
DS-VSCHK 6-L	6	L 500 (2200)	12	14	22	7.0
DS-VSCHK 8-L	8	L 500 (2200)	14	17	23	8.0
DS-VSCHK 10-L	10	L 500 (2200)	17	19	24	9.0
DS-VSCHK 12-L	12	L 400 (1700)	19	22	25	10.0
DS-VSCHK 15-L	15	L 400 (1700)	24	27	26	11.0
DS-VSCHK 18-L	18	L 400 (1700)	27	32	28	11.5
DS-VSCHK 22-L	22	L 250 (1100)	32	36	30	13.5
DS-VSCHK 28-L	28	L 250 (1100)	41	41	31	14.5
DS-VSCHK 35-L	35	L 250 (1100)	46	50	36	14.5
DS-VSCHK 42-L	42	L 250 (1100)	55	60	39	16.0
DS-VSCHK 6-S	6	S 800 (3400)	14	17	26	11.0
DS-VSCHK 8-S	8	S 800 (3400)	17	19	28	13.0
DS-VSCHK 10-S	10	S 800 (3400)	19	22	29	12.5
DS-VSCHK 12-S	12	S 630 (2700)	22	24	31	14.5
DS-VSCHK 14-S	14	S 630 (2700)	24	27	34	16.0
DS-VSCHK 16-S	16	S 630 (2700)	27	30	34	15.5
DS-VSCHK 20-S	20	S 400 (1700)	32	36	39	17.5
DS-VSCHK 25-S	25	S 400 (1700)	41	46	44	20.0
DS-VSCHK 30-S	30	S 400 (1700)	46	50	47	20.5
DS-VSCHK 38-S	38	S 400 (1700)	55	60	54	23.0

L₁ = approximate length with tightened nut

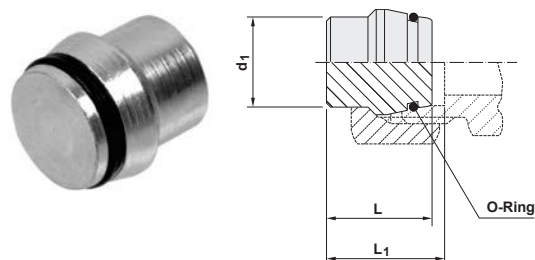
*Please see "Engineering and technical data - Selecting the correct tube fitting" for more information on
- internal screw threads.
- pressure.*

SINGLE PARTS PLUG

THE WORLD OF TUBE FITTINGS

STO BLANKING PLUG

For cones with taper and O-ring according to DIN 3865.



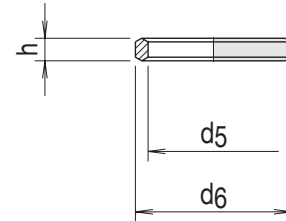
description	pipe OD	PN series	L	L ₁	O-Ring	kg / 100 pcs
STO 6-L/S/O	6	L 500 (2200)	18.5	20.0	4x1.5	0.6
STO 8-L/S/O	8	L 500 (2200)	18.5	20.0	6x1.5	0.9
STO 10-L/S/O	10	L 500 (2200)	20.0	21.0	7.5x1.5	1.4
STO 12-L/S/O	12	L 400 (1700)	20.5	21.5	9x1.5	1.9
STO 15-L/O	15	L 400 (1700)	20.5	21.5	12x2	3.1
STO 18-L/O	18	L 400 (1700)	22.5	24.0	15x2	6.2
STO 22-L/O	22	L 250 (1100)	25.0	26.5	20x2	9.9
STO 28-L/O	28	L 250 (1100)	25.5	27.0	26x2	15.1
STO 35-L/O	35	L 250 (1100)	30.0	33.0	32x2.5	25.2
STO 42-L/O	42	L 250 (1100)	30.0	33.5	38x2.5	35.9
STO 6-L/S/O	6	S 800 (3400)	18.5	20.0	4x1.5	0.6
STO 8-L/S/O	8	S 800 (3400)	18.5	20.0	6x1.5	0.9
STO 10-L/S/O	10	S 800 (3400)	20.0	21.5	7.5x1.5	1.4
STO 12-L/S/O	12	S 630 (2700)	20.5	22.0	9x1.5	1.9
STO 14-S/O	14	S 630 (2700)	22.5	24.5	10x2	2.6
STO 16-S/O	16	S 630 (2700)	23.5	26.0	12x2	4.6
STO 20-S/O	20	S 400 (1700)	28.5	31.5	16.3x2.4	7.7
STO 25-S/O	25	S 400 (1700)	29.0	32.5	20.3x2.4	11.9
STO 30-S/O	30	S 400 (1700)	30.5	35.5	25.3x2.4	17.9
STO 38-S/O	38	S 400 (1700)	33.0	40.5	33.4x2.4	30.8

Please see "Engineering and technical data - Selecting the correct tube fitting" for more information on pressure.

SINGLE PARTS SEALING RING

DKA/DKAD SEAL EDGE RING

For banjo couplings and swiveling screw-fittings SBE, SGE, SB, and SBD.



description	use SBE../SGE..	h	kg / 100 pcs	G	d ₅	d ₆
DKA R 1/8"/SA 2.5	6-RL	2.5	0.1	G 1/8" A	10.0	14
DKA R 1/4"/SA 3	8-RL; 6-RS	3.0	0.2	G 1/4" A	13.2	18
DKA R 3/8"/SA 3	12-RL; 10-RS	3.0	0.3	G 3/8" A	16.7	22
DKA R 1/2"/SA 4.5	15-RL; 14-RS	4.5	0.6	G 1/2" A	21.0	26
DKAD R 3/4"	22-RL; 20-RS	3.5	0.6	G 3/4" A	26.4	32
DKA R 1"/M33/SA3.5	28-RL; 25-RS	3.5	0.9	G 1" A	33.3	39
DKA R 1 1/4"/M42/SA3.5	35-RL; 30-RS	3.5	1.2	G 1 1/4" A	42.0	49
DKA R 1 1/2"/M48/SA3.5	42-RL; 38-RS	3.5	1.4	G 1 1/2" A	48.0	55
DKA M10/SA2.5	6-ML	2.5	0.1	M 10x1	10.0	14
DKA M12/SA3	8-ML; 6-MS	3.0	0.2	M 12x1.5	12.0	17
DKA M14/SA3	10-ML; 8-MS	3.0	0.3	M 14x1.5	14.0	19
DKA M16/SA3	12-ML; 10-MS	3.0	0.3	M 16x1.5	16.0	21
DKA M18/SA3	15-ML; 12-MS	3.0	0.3	M 18x1.5	18.0	23
DKA M20/SA3	14-MS	3.0	0.4	M 20x1.5	20.0	25
DKA M22	18-ML; 16-MS	4.5	0.6	M 22x1.5	22.0	27
DKAD M26	22-ML	3.5	0.5	M 26x1.5	26.0	31
DKAD M27	20-MS	3.5	0.6	M 27x2	27.0	32
DKA R 1"/M33/SA3.5	28-ML; 25-MS	3.5	0.8	M 33x2	33.3	39
DKA R 1 1/4"/M42/SA3.5	35-ML; 30-MS	3.5	1.2	M 42x2	42.0	49
DKA R 1 1/2"/M48/SA3.5	42-ML; 38-MS	3.5	1.4	M 48x2	48.0	55

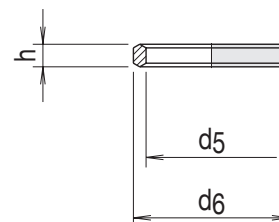
Please see "Engineering and technical data - Selecting the correct tube fitting" for more information on pressure.

SINGLE PARTS SEALING RING

THE WORLD OF TUBE FITTINGS

DKA/DKAD SEAL EDGE RING

For banjo couplings and swiveling screw-fittings SBE, SGE, SB, and SBD.



description	use SB../	h	kg / 100 pcs	G	d ₅	d ₆
DKA R 1/8"/M10	6-RL	3.7	0.2	G 1/8" A	10.0	14
DKA R 1/4"	8-RL; 6-RS	4.5	0.3	G 1/4" A	13.2	18
DKA R 3/8"	12-RL; 10-RS	4.5	0.4	G 3/8" A	16.7	22
DKA R 1/2"	15-RL; 14-RS	5.5	0.7	G 1/2" A	21.0	26
DKA R 3/4"	22-RL; 20-RS	5.0	0.7	G 3/4" A	26.4	32
DKA R 1"/M33	28-RL; 25-RS	6.0	1.1	G 1" A	33.3	39
DKA R 1 1/4"/M42	35-RL; 30-RS	6.5	1.3	G 1 1/4" A	42.0	49
DKA R 1 1/2"/M48	42-RL; 38-RS	6.5	1.5	G 1 1/2" A	48.0	55
DKA R 1/8"/M10	6-ML	3.7	0.2	M 10x1	10.0	14
DKA M12	8-ML; 6-MS	4.5	0.3	M 12x1.5	12.0	17
DKA M14	10-ML; 8-MS	4.5	0.4	M 14x1.5	14.0	19
DKA M16	12-ML; 10-MS	4.5	0.4	M 16x1.5	16.0	21
DKA M18	15-ML; 12-MS	4.5	0.4	M 18x1.5	18.0	23
DKA M20	14-MS	4.5	0.5	M 20x1.5	20.0	25
DKA M22	18-ML; 16-MS	4.5	0.6	M 22x1.5	22.0	27
DKA M26	22-ML	4.5	0.6	M 26x1.5	26.0	31
DKA M27	20-MS	5.5	0.7	M 27x2	27.0	32
DKA R 1"/M33	28-ML; 25-MS	6.0	1.0	M 33x2	33.3	39
DKA R 1 1/4"/M42	35-ML; 30-MS	6.5	1.3	M 42x2	42.0	49
DKA R 1 1/2"/M48	42-ML; 38-MS	6.5	1.5	M 48x2	48.0	55

Please see "Engineering and technical data - Selecting the correct tube fitting" for more information on pressure.

description	use SB../	h	kg / 100 pcs	G	d ₅	d ₆
DKAD R 1/2"	18-RL	3.5	0.5	G 1/2" A	21.0	26
DKAD R 3/4"	22-RL	3.5	0.6	G 3/4" A	26.5	32
DKAD R 1/2"	16-RS	3.5	0.5	G 1/2" A	21.0	26
DKAD R 3/4"	20-RS	3.5	0.6	G 3/4" A	26.5	32
DKAD M 22	18-ML	3.5	0.5	M 22 x 1.5	22.0	27
DKAD M 26	22-ML	3.5	0.6	M 26 x 1.5	26.0	31
DKAD M 22	16-MS	3.5	0.5	M 22 x 1.5	22.0	27
DKAD M 27	20-MS	3.5	0.6	M 27 x 2	27.0	32

Please see "Engineering and technical data - Selecting the correct tube fitting" for more information on pressure.

SINGLE PARTS SEALING RING

DKI SEAL EDGE RING

Packing rings for pressure gauge screw connection.

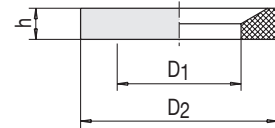
description	for internal thread	d_5	d_6	h
DKI R 1/4"	G 1/4"	6	11.3	4.5
DKI R 1/2"	G 1/2"	12	18.5	5.0

Please see "Engineering and technical data - Selecting the correct tube fitting" for more information on pressure.

WD CAPTIVE SEAL

For stud threads DIN 3852-11.

Materials WD: NBR (e.g. Perbunan),
and FPM (e.g. Viton).



description	stud thread	mm DIN 3869	D_1	D_2	h
WD M 8 x 1 / ...	M 8 x 1	8	6.5	9.9	1.0
WD R 1/8" / M 10 x 1 / ...	M 10 x 1 / G 1/8" A	10	8.4	11.9	1.0
WD M 12 x 1.5 / ...	M 12 x 1.5	12	9.8	14.4	1.5
WD R 1/4" / M 14 x 1.5 / ...	M 14 x 1.5 / G 1/4" A	14	11.6	16.5	1.5
WD M 16 x 1.5 / ...	M 16 x 1.5	16	13.8	18.9	1.5
WD R 3/8" / ...	G 3/8" A	17	14.7	18.9	1.5
WD M 18 x 1.5 / ...	M 18 x 1.5	18	15.7	20.9	1.5
WD M 20 x 1.5 / ...	M 20 x 1.5	20	17.8	22.9	1.5
WD R 1/2" / ...	G 1/2" A	21	18.5	23.9	1.5
WD M 22 x 1.5 / ...	M 22 x 1.5	22	19.6	24.3	1.5
WD R 3/4" / M 26 / M 27 / ...	M 26 x 1.5 / M 27 x 2 / G 3/4" A	27	23.9	29.2	1.5
WD R 1" / M 33 x 2 / ...	M 33 x 2 / G 1" A	33	29.7	35.7	2.0
WD R 1 1/4" / M 42 x 2 / ...	M 42 x 2 / G 1 1/4" A	42	38.8	45.8	2.0
WD R 1 1/2" / M 48 x 2 / ...	M 48 x 2 / G 1 1/2" A	48	44.7	50.7	2.0

Please see "Engineering and technical data - Selecting the correct tube fitting" for more information on pressure.

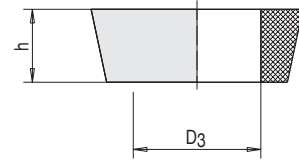
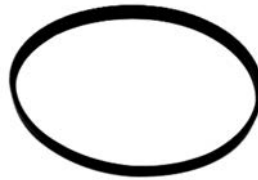
SINGLE PARTS SEALING RING

THE WORLD OF TUBE FITTINGS

TR SEALING RING

For DSW-rings.

Materials WD: NBR (e.g. Perbunan),
and FPM (e.g. Viton).



description	h	D ₃
TR 6-L/S	1.5	5.7
TR 8-L/S	1.5	7.7
TR 10-L/S	1.5	9.7
TR 12-L/S	1.5	11.7
TR 15-L	1.5	14.7
TR 18-L	1.5	17.7
TR 22-L	1.2	21.7
TR 28-L	1.2	27.7
TR 35-L	2.0	34.6
TR 42-L	2.0	41.6
TR 6-L/S	1.5	5.7
TR 8-L/S	1.5	7.7
TR 10-L/S	1.5	9.7
TR 12-L/S	1.5	11.7
TR 14-S	1.5	13.7
TR 16-S	1.5	15.7
TR 20-S	2.0	19.7
TR 25-S	2.0	24.7
TR 30-S	2.0	29.6
TR 38-S	2.0	37.6

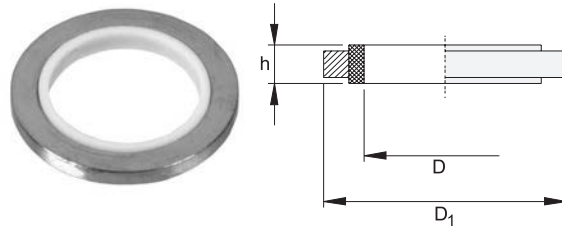
Please see "Engineering and technical data - Selecting the correct tube fitting" for more information on pressure.

SINGLE PARTS SEALING RING

KDE RETAINING RING

For banjo couplings SBE.

Matches counter bore according to DIN 3852.



description	use SBE...	D ₁	D	h
KDE R 1/8" / M10	6-RL	17	10.2	2.5
KDE R 1/4"	6-RS; 8-RL/-RS; 10-RL	22	13.3	3.0
KDE R 3/8"	10-RS; 12-RL/-RS	27	16.8	3.0
KDE R 1/2"	14-RS; 15-RL; 16-RS; 18-RL	32	21.1	4.5
KDE R 3/4" / M26 / M27	20-RS/-MS; 22-RL	41	27.3	3.5
KDE R 1" / M33	25-RS/-MS; 28-RL/-ML	46	33.4	3.5
KDE R 1 1/4" / M42	30-RS/-MS; 35-RL/-ML	57	42.4	3.5
KDE R 1 1/2" / M48	38-RS/-RL; 42-RL/-ML	64	48.4	3.5
KDE M12	6-MS; 8-ML	22	12.2	3.0
KDE M14	8-MS; 10-ML	23	14.3	3.0
KDE M16	10-MS; 12-ML	27	16.3	3.0
KDE M18	12-MS; 15-ML	29	18.3	3.0
KDE M20	14-MS	32	20.3	3.0
KDE M22	16-MS; 18-ML	32	22.3	4.5

Please see "Engineering and technical data - Selecting the correct tube fitting" for more information on pressure.

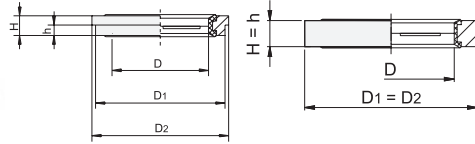
SINGLE PARTS SEALING RING

THE WORLD OF TUBE FITTINGS

EDE RETAINING RING

With captive seal (NBR) for banjo couplings SBE/SGE.

Matches „narrow” counter bore according to DIN 3852.



description	use SBE./ SGE..	Version	fem. thread	D	D ₁	D ₂	H	h	kg / 100 pcs
EDE R 1/8" - M 10	6-ML/RL	1	M 10 x 1 / G 1/8" A	10.1	14.9	16.0	2.5	1.1	0.2
EDE M 12	6-MS/8-ML	1	M 12 x 1.5	12.1	16.9	18.0	3.0	1.6	0.5
EDE R 1/4" - M 14	6-RS	1	M 14 x1.5 / G 1/4" A	14.1	18.9	20.0	3.0	1.6	0.4
EDE R 1/4" - M 14	8-RL/MS/RS	1	M 14 x1.5 / G 1/4" A	14.1	18.9	20.0	3.0	1.6	0.4
EDE R 1/4" - M 14	10-ML/RL	1	M 14 x1.5 / G 1/4" A	14.1	18.9	20.0	3.0	1.6	0.4
EDE R 3/8" - M 16	10-MS/RS	1	M 16 x 1.5 / G 3/8" A	16.7	21.9	24.0	3.0	2.1	0.6
EDE R 3/8" - M 16	12-ML/RL/RS	1	M 16 x 1.5 / G 3/8" A	16.7	21.9	24.0	3.0	2.1	0.6
EDE M 18	12-MS/15-ML	2	M 18 x 1.5	18.1	23.9	23.9	3.0	-	0.7
EDE R 1/2" - M 22	14-RS/15-RL	1	M 22 x 1.5 / G 1/2" A	22.1	26.9	30.0	4.5	2.6	1.2
EDE R 1/2" - M 22	16-MS/RS	1	M 22 x 1.5 / G 1/2" A	22.1	26.9	30.0	4.5	2.6	1.2
EDE R 1/2" - M 22	18-ML/RL	1	M 22 x 1.5 / G 1/2" A	22.1	26.9	30.0	4.5	2.6	1.2
EDE M 26	22-ML	1	M 26 x 1.5	26.1	31.9	35.0	3.5	2.6	1.8
EDE R 3/4" - M 27	20-MS/RS	1	M 27 x 2 / G 3/4" A	27.1	32.9	38.0	3.5	2.6	1.7
EDE R 3/4" - M 27	22-RL	1	M 27 x 2 / G 3/4" A	27.1	32.9	38.0	3.5	2.6	1.7
EDE R 1" - M 33	25-MS/RS	1	M 33 x 2 / G 1" A	33.3	39.9	42.0	3.5	2.6	1.7
EDE R 1" - M 33	28-ML/RL	1	M 33 x 2 / G 1" A	33.3	39.9	42.0	3.5	2.6	1.7
EDE R 1 1/4" - M 42	30-MS/RS	2	M 42 x 2 / G 1 1/4" A	42.2	49.9	49.9	3.5	-	2.6
EDE R 1 1/4" - M 42	35-ML/RL	2	M 42 x 2 / G 1 1/4" A	42.2	49.9	49.9	3.5	-	2.6
EDE R 1 1/2" - M 48	38-MS/RS	1	M 48 x 2 / G 1 1/2" A	48.2	55.9	60.0	3.5	2.6	3.2
EDE R 1 1/2" - M 48	42-ML/RL	1	M 48 x 2 / G 1 1/2" A	48.2	55.9	60.0	3.5	2.6	3.2

Version 1: with countersink

Version 2: without countersink $D_1=D_2$

Please see "Engineering and technical data - Selecting the correct tube fitting" for more information on pressure.

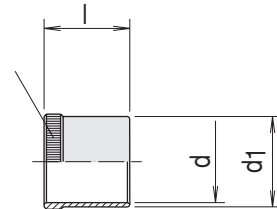
SINGLE PARTS

VSH SUPPORT SLEEVE

VSH SUPPORT SLEEVE

For safe assembly of couplings on plastic, non-ferrous metal and thin-walled steel tubes.

Available in stainless steel (1.4571) as well.



description	Tube OD x wall thickness	Tube int. Ø	l	d	d ₁
VSH 6x1	6x1	4.0	15.5	2.6	3.8
VSH 6x0.75	6x0.75	4.5	15.5	3.1	4.3
VSH 6x0.5	6x0.5	5.0	15.5	3.6	4.8
VSH 8x1	8x1	6.0	15.5	4.6	5.8
VSH 8x0.5/10x1.5	8x0.5/10x1.5	7.0	17.0	5.6	6.8
VSH 10x1	10x1	8.0	16.5	6.6	7.8
VSH 12x1.5	12x1.5	9.0	16.5	7.6	8.8
VSH 12x1	12x1	10.0	16.5	8.6	9.8
VSH 14x1/15x1.5	14x1/15x1.5	12.0	17.5	10.6	11.8
VSH 15x1/16x1.5	15x1/16x1.5	13.0	18.5	11.6	12.8
VSH 16x1/18x2	16x1/18x2	14.0	18.5	12.2	13.8
VSH 18x1.5	18x1.5	15.0	17.5	13.2	14.8
VSH 18x1/20x2	18x1/20x2	16.0	22.0	14.2	15.8
VSH 20x1.5	20x1.5	17.0	22.0	15.2	16.8
VSH 20x1/22x2	20x1/22x2	18.0	22.0	16.2	17.8
VSH 22x1.5	22x1.5	19.0	18.0	17.2	18.8
VSH 22x1/25x2.5	22x1/25x2.5	20.0	23.5	18.2	19.8
VSH 25x2	25x2	21.0	23.5	19.2	20.8
VSH 25x1.5	25x1.5	22.0	23.5	20.2	21.8
VSH 28x2	28x2	24.0	18.0	22.2	23.8
VSH 28x1.5	28x1.5	25.0	18.0	23.2	24.8
VSH 28x1/30x2	28x1/30x2	26.0	25.5	24.2	25.8
VSH 35x2.5	35x2.5	30.0	22.5	27.8	29.8
VSH 35x2	35x2	31.0	22.5	28.8	30.8
VSH 35x1.5	35x1.5	32.0	22.5	29.8	31.8
VSH 38x2.5	38x2.5	33.0	22.5	30.8	32.8
VSH 42x2	42x2	38.0	23.5	35.8	37.8

Please see "Engineering and technical data - Selecting the correct tube fitting" for
 - the table on the application of reinforcing sleeves.
 - more information on pressure.

THE WORLD OF TUBE FITTINGS
INTEGRATED FLUID POWER SOLUTIONS



WELDING NIPPLE-PIPE SCREW JOINTS



WELDING NIPPLE-PIPE SCREW JOINTS WELDING NIPPLES

THE WORLD OF TUBE FITTINGS

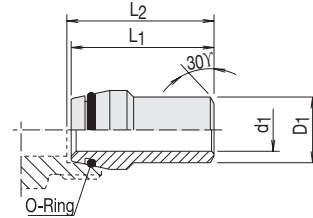
SNO WELDING NIPPLE WITH O-RING SEAL

NBR O-ring (e.g. Perbunan) supplied separately, to be fitted after welding.

FPM O-ring (e.g. Viton) supplied on request.

Special dimensions and materials upon request.

Welding end without tube centre.



description	pipe dimension	PN-V*	PB**	d ₁	L ₁	L ₂	O-Ring	kg / 100 pcs
SNO 15x1.5	15x1.5	400	160	12.0	33.5	33.5	12x2	2.3
SNO 15x2	15x2	400	160	11.0	33.5	33.5	12x2	2.7
SNO 18x2	18x2	400	100	14.0	35.0	33.5	15x2	3.2
SNO 18x2.75	18x2.75	400	160	12.5	35.0	33.5	15x2	4.4
SNO 22x2	22x2	250	100	18.0	37.5	33.5	20x2	4.0
SNO 22x2.5	22x2.5	250	100	17.0	37.5	33.5	20x2	5.0
SNO 22x3	22x3	250	160	16.0	37.5	40.5	20x2	5.6
SNO 28x2.5	28x2.5	250	100	23.0	40.5	40.5	26x2	7.4
SNO 28x3	28x3	250	100	22.0	40.5	40.5	26x2	8.2
SNO 35x3	35x3	250	100	29.0	46.0	40.5	32x2	12.0
SNO 42x3	42x3	250	100	36.0	46.0	47.0	38x2	14.7
SNO 42x4	42x4	250	100	34.0	46.0	47.0	38x2	18.6

* Rated Pressure (PN) for the equivalent fitting. L-series ** Maximum operating pressure (PB) for SNO and tube
Please see "Engineering and technical data - Selecting the correct tube fitting" for more information on pressure.

description	pipe dimension	PN-V*	PB**	d ₁	L ₁	L ₂	O-Ring	kg / 100 pcs
SNO 10x1	10x1	800	249	8	31.5	33.5	7.5x1.5	1.0
SNO 10x1.5	10x1.5	800	358	7	31.5	33.5	7.5x1.5	1.3
SNO 10x2	10x2	800	460	6	31.5	33.5	7.5x1.5	1.5
SNO 12x1.5	12x1.5	630	305	9	31.5	33.5	9x1.5	1.5
SNO 12x2	12x2	630	391	8	31.5	33.5	9x1.5	1.9
SNO 12x2.5	12x2.5	630	474	7	31.5	33.5	9x1.5	2.2
SNO 16x1.5	16x1.5	630	234	13	37.5	40.5	12x2	2.7
SNO 16x2	16x2	630	303	12	37.5	40.5	12x2	3.1
SNO 16x2.5	16x2.5	630	370	11	37.5	40.5	12x2	3.6
SNO 16x3	16x3	630	433	10	37.5	40.5	12x2	4.1
SNO 20x2	20x2	400	249	16	43.5	47.0	16.3x2.4	5.4
SNO 20x2.5	20x2.5	400	305	15	43.5	47.0	16.3x2.4	5.7
SNO 20x3	20x3	400	357	14	43.5	47.0	16.3x2.4	6.2
SNO 20x4	20x4	400	458	12	43.5	47.0	16.3x2.4	7.8
SNO 25x3	25x3	400	292	19	49.5	53.5	20.3x2.4	8.9
SNO 25x4	25x4	400	378	17	49.5	53.5	20.3x2.4	11.1
SNO 25x5	25x5	400	458	15	49.5	53.5	20.3x2.4	12.5
SNO 30x3	30x3	400	249	24	52.0	57.5	25.3x2.4	13.5
SNO 30x4	30x4	400	321	22	52.0	57.5	25.3x2.4	14.0
SNO 30x5	30x5	400	391	20	52.0	57.5	25.3x2.4	16.6
SNO 30x6	30x6	400	460	18	52.0	57.5	25.3x2.4	17.1
SNO 38x4	38x4	400	260	30	56.5	64.5	33.3x2.4	19.5
SNO 38x5	38x5	400	318	28	56.5	64.5	33.3x2.4	23.6
SNO 38x6	38x6	400	373	26	56.5	64.5	33.3x2.4	27.0
SNO 38x7	38x7	400	428	24	56.5	64.5	33.3x2.4	28.6

* Rated Pressure (PN) for the equivalent fitting. S-series ** Maximum operating pressure (PB) for SNO and tube
Please see "Engineering and technical data - Selecting the correct tube fitting" for more information on pressure.

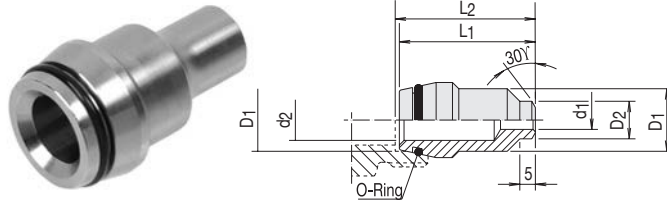
WELDING NIPPLE-PIPE SCREW JOINTS WELDING NIPPLES

SNR WELDING NIPPLE REDUCER

NBR O-ring (e.g. Perbunan) supplied separately, to be fitted after welding.

FPM O-ring (e.g. Viton) supplied on request.

Special dimensions and materials upon request.



description	D1	D2	PN-V*	PB**	d ₁	d ₂	L ₁	L ₂	O-Ring	kg / 100 pcs
SNR 10/6x2	10	6	800	638	2	4	31.5	33.5	7.5x1.5	1.5
SNR 10/8x2.5	10	8	800	630	3	4	31.5	33.5	7.5x1.5	1.7
SNR 12/8x2.5	12	8	630	624	3	5	31.5	33.5	9 x1.5	2.0
SNR 12/10x3	12	10	630	624	4	5	31.5	33.5	9 x1.5	1.8
SNR 16/12x3.5	16	12	630	433	5	10	37.5	40.5	12 x2	4.3
SNR 20/12x3.5	20	12	400	458	5	12	43.5	47.0	16.3x2.4	8.0
SNR 20/16x3	20	16	400	433	10	12	43.5	47.0	16.3x2.4	7.8
SNR 25/16x3	25	16	400	433	10	15	49.5	53.5	20.3x2.4	12.3
SNR 25/20x4	25	20	400	458	12	15	49.5	53.5	20.3x2.4	12.4
SNR 30/16x3	30	16	400	433	10	18	52.0	57.5	25.3x2.4	16.5
SNR 30/20x4	30	20	400	458	12	18	52.0	57.5	25.3x2.4	15.9
SNR 30/25x5	30	25	400	458	15	18	52.0	57.5	25.3x2.4	14.4
SNR 38/16x3	38	16	400	433	10	22	56.5	64.5	33.3x2.4	27.9
SNR 38/20x4	38	20	400	458	12	22	56.5	64.5	33.3x2.4	27.8
SNR 38/25x5	38	25	400	458	15	22	56.5	64.5	33.3x2.4	26.2
SNR 38/30x4	38	30	400	321	22	22	56.5	64.5	33.3x2.4	25.2

* Rated Pressure (PN) for the equivalent fitting. S-series

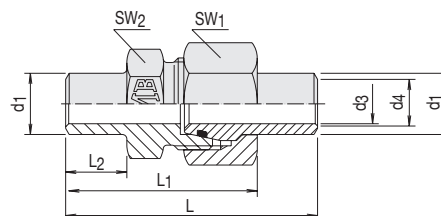
** Maximum operating pressure (PB) for SNO and tube

Please see "Engineering and technical data - Selecting the correct tube fitting" for more information on pressure.

WELDING NIPPLE-PIPE SCREW JOINTS WELDING TYPE SCREW JOINTS

THE WORLD OF TUBE FITTINGS

SNO-V WELDING TYPE SCREW JOINT



description	PB*	d ₁	d ₄	d ₃	SW ₂	SW ₁	L	L ₁	L ₂	kg / 100 pcs
SNO-V-10x1-S/SA	249	10	7	8	19	22	60.0	43.0	14	5.6
SNO-V-10x1.5-S/SA	358	10	7	7	19	22	60.0	43.0	14	7.3
SNO-V-10x2-S/SA	460	10	7	6	19	22	60.0	43.0	14	8.5
SNO-V-12x1.5-S/SA	305	12	8	9	22	24	62.0	45.5	14	7.4
SNO-V-12x2-S/SA	391	12	8	10	22	24	62.0	45.5	14	9.3
SNO-V-12x2.5-S/SA	474	12	8	7	22	24	62.0	45.5	14	10.8
SNO-V-16x1.5-S/SA	234	16	12	13	27	30	71.0	49.0	14	12.4
SNO-V-16x2-S/SA	303	16	12	12	27	30	71.0	49.0	14	14.3
SNO-V-16x2.5-S/SA	370	16	12	11	27	30	71.0	49.0	14	16.6
SNO-V-16x3-S/SA	433	16	12	10	27	30	71.0	49.0	14	19.1
SNO-V-20x2-S/SA	249	20	15	16	32	36	84.5	60.5	20	22.7
SNO-V-20x2.5-S/SA	305	20	15	15	32	36	84.5	60.5	20	23.9
SNO-V-20x3-S/SA	357	20	15	14	32	36	84.5	60.5	20	26.1
SNO-V-20x4-S/SA	400	20	15	12	32	36	84.5	60.5	20	32.3
SNO-V-25x3-S/SA	292	25	20	19	41	46	93.5	65.5	20	41.8
SNO-V-25x4-S/SA	378	25	20	17	41	46	93.5	65.5	20	55.5
SNO-V-25x5-S/SA	400	25	20	15	41	46	93.5	65.5	20	58.5
SNO-V-30x3-S/SA	249	30	25	24	46	50	98.0	68.5	20	59.4
SNO-V-30x4-S/SA	321	30	25	22	46	50	98.0	68.5	20	68.5
SNO-V-30x5-S/SA	391	30	25	20	46	50	98.0	68.5	20	73.3
SNO-V-30x6-S/SA	400	30	25	18	46	50	98.0	68.5	20	75.3
SNO-V-38x4-S/SA	260	38	32	30	55	60	107.5	75.0	20	82.0
SNO-V-38x5-S/SA	318	38	32	28	55	60	107.5	75.0	20	104.5
SNO-V-38x6-S/SA	373	38	32	26	55	60	107.5	75.0	20	111.0
SNO-V-38x7-S/SA	400	38	32	24	55	60	107.5	75.0	20	120.1

* Maximum operating pressure (PB) for SNO and tube

Please see "Engineering and technical data - Selecting the correct tube fitting" for more information on pressure.

WELDING NIPPLE-PIPE SCREW JOINTS

WELDING TYPE SCREW JOINTS

SNO-A ORDER EXAMPLE SCREW JOINT

SNO-A 25X3-RS/WD

SNO	Code for welding nipple (steel nipple O-ring)
A	Type of fitting
25	Outside pipe diameter
3	Wall thickness of welding nipple
R	Stud thread
S	Series
WD	Soft seal
xxx	Additional code



SNO-A 25X3-RS/WD/VIT/1.4571

SNO	Code for welding nipple (steel nipple O-ring)
A	Type of fitting
25	Outside pipe diameter
3	Wall thickness of welding nipple
R	Stud thread
S	Series
WD	Soft seal
VIT	Code Viton
1.4517	Code stainless steel

THE WORLD OF TUBE FITTINGS
INTEGRATED FLUID POWER SOLUTIONS



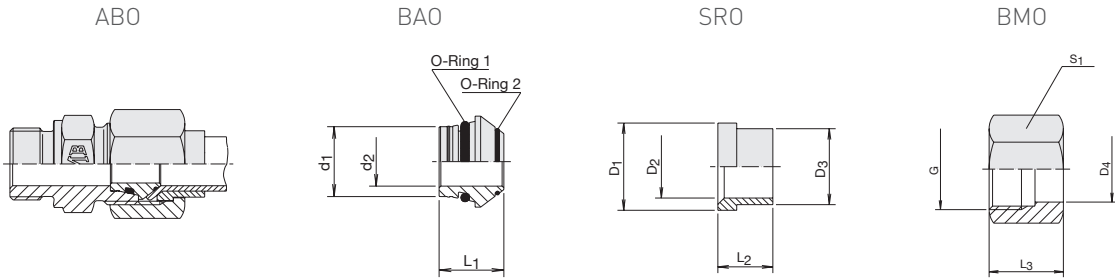
FLARE COUPLINGS



FLARE COUPLINGS

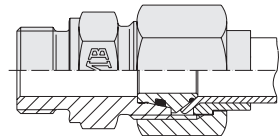
ABO FLARE CONNECTION PARTS

THE WORLD OF TUBE FITTINGS



FLARE CONNECTION PARTS

BAO supplied with NBR O-rings (e.g. Perbunan).
FKM O-rings (e.g. Viton) upon request.



description	flare adaptor	support ring	nut
ABO 6-L	BAO 6-L/S	SRO 6-L/S	BM0-6L
ABO 8-L	BAO 8-L/S	SRO 8-L/S	BM0-8L
ABO 10-L	BAO 10-L/S	SRO 10-L/S	BM0-10L
ABO 12-L	BAO 12-L/S	SRO 12-L/S	BM0-12L
ABO 15-L	BAO 15-L	SRO 15-L	BM0-15L
ABO 18-L	BAO 18-L	SRO 18-L	BM0-18L
ABO 22-L	BAO 22-L	SRO 22-L	BM0-22L
ABO 28-L	BAO 28-L	SRO 28-L	BM0-28L
ABO 35-L	BAO 35-L	SRO 35-L	BM0-35L
ABO 42-L	BAO 42-L	SRO 42-L	BM0-42L
ABO 6-S	BAO 6-L/S	SRO 6-L/S	BM0-6S
ABO 8-S	BAO 8-L/S	SRO 8-L/S	BM0-8S
ABO 10-S	BAO 10-L/S	SRO 10-L/S	BM0-10S
ABO 12-S	BAO 12-L/S	SRO 12-L/S	BM0-12S
ABO 14-S	BAO 14-S	SRO 14-S	BM0-14S
ABO 16-S	BAO 16-S	SRO 16-S	BM0-16S
ABO 20-S	BAO 20-S	SRO 20-S	BM0-20S
ABO 25-S	BAO 25-S	SRO 25-S	BM0-25S
ABO 30-S	BAO 30-S	SRO 30-S	BM0-30S
ABO 38-S	BAO 38-S	SRO 38-S	BM0-38S

Please see "Engineering and technical data – Selecting the correct tube fitting" for functional characteristics, tube length determination and assembly instructions.

FLARE COUPLINGS

ABO FLARE CONNECTION PARTS

description	PN series	Tube OD	d ₁	d ₂	L ₁	O-Ring 1	O-Ring 2
BAO 6-L/S	L500	6	6	3	11.5	4x1.5	4.4x0.8
BAO 8-L/S	L500	8	8	5	12.0	6x1.5	6x0.8
BAO 10-L/S	L500	10	10	6	12.5	7.5x1.5	7.5x0.8
BAO 12-L/S	L400	12	12	8	12.5	9x1.5	9.5x0.8
BAO 15-L	L400	15	15	11	12.5	12x2	12.5x0.8
BAO 18-L	L400	18	18	14	13.0	15x2	15x1
BAO 22-L	L250	22	22	17	14.2	20x2	18x1
BAO 28-L	L250	28	28	23	14.7	26x2	23x1
BAO 35-L	L250	35	35	28	18.5	32x2.5	30x1
BAO 42-L	L250	42	42	35	20.5	38x2.5	36.5x1
BAO 6-L/S	S630	6	6	3	11.5	4x1.5	4.4x0.8
BAO 8-L/S	S630	8	8	5	12.0	6x1.5	6x0.8
BAO 10-L/S	S630	10	10	6	12.5	7.5x1.5	7.5x0.8
BAO 12-L/S	S630	12	12	8	12.5	9x1.5	9.5x0.8
BAO 14-S	S630	14	14	9	14.0	10x2	11x1
BAO 16-S	S630	16	16	11	15.0	12x2	12.5x1
BAO 20-S	S400	20	20	14	18.5	16.3x2.4	16x1
BAO 25-S	S400	25	25	19	20.0	20.3x2.4	20x1
BAO 30-S	S400	30	30	23	22.0	25.3x2.4	25x1
BAO 38-S	S400	38	38	30	26.0	33.3x2.4	31.47x1.78

description	PN series	Tube OD	D ₁	D ₂	D ₃	L ₂
SRO 6-L/S	L500	6	10.2	6	7.6	10.5
SRO 8-L/S	L500	8	12.2	8	9.3	11.0
SRO 10-L/S	L500	10	14.2	10	11.5	12.5
SRO 12-L/S	L400	12	16.2	12	13.6	13.0
SRO 15-L	L400	15	20.2	15	17.5	14.0
SRO 18-L	L400	18	24.2	18	21.0	14.5
SRO 22-L	L250	22	27.8	22	24.2	18.0
SRO 28-L	L250	28	33.8	28	30.2	17.0
SRO 35-L	L250	35	42.7	35	38.0	19.0
SRO 42-L	L250	42	49.7	42	45.0	21.0
SRO 6-L/S	S630	6	10.2	6	7.6	10.5
SRO 8-L/S	S630	8	12.2	8	9.3	11.0
SRO 10-L/S	S630	10	14.2	10	11.5	12.5
SRO 12-L/S	S630	12	16.2	12	13.6	13.0
SRO 14-S	S630	14	20.2	14	17.5	14.5
SRO 16-S	S630	16	22.0	16	18.5	17.0
SRO 20-S	S400	20	27.8	20	24.2	17.5
SRO 25-S	S400	25	32.8	25	28.5	20.0
SRO 30-S	S400	30	39.0	30	34.0	21.5
SRO 38-S	S400	38	48.5	38	42.0	26.5

description	thread	D ₄	L ₃	S ₁
BMO-6L	12x1.5	7.8	17.0	14
BMO-8L	14x1.5	9.5	18.0	17
BMO-10L	16x1.5	11.7	19.5	19
BMO-12L	18x1.5	13.8	20.5	22
BMO-15L	22x1.5	17.7	23.0	27
BMO-18L	26x1.5	21.2	23.0	32
BMO-22L	30x2	24.4	27.5	36
BMO-28L	36x2	30.4	27.5	41
BMO-35L	45x2	38.3	30.0	50
BMO-42L	52x2	45.3	34.0	60
BMO-6S	14x1.5	7.8	18.0	17
BMO-8S	16x1.5	9.5	19.0	19
BMO-10S	18x1.5	11.7	20.5	22
BMO-12S	20x1.5	13.8	21.0	24
BMO-14S	22x1.5	17.7	23.0	27
BMO-16S	24x1.5	18.7	26.5	30
BMO-20S	30x2	24.4	27.5	36
BMO-25S	36x2	28.7	30.5	46
BMO-30S	42x2	34.2	32.0	50
BMO-38S	52x2	42.3	38.0	60

Please see "Engineering and technical data – Selecting the correct tube fitting" for functional characteristics, tube length determination and assembly instructions.

FLARE COUPLINGS

ABO FLARE CONNECTION PARTS

THE WORLD OF TUBE FITTINGS

ABO-A ORDER EXAMPLE SCREW JOINT

If ordering complete fittings with flare connection parts, add the letters ABO to the normal Order No.

ABO-A 20-RS

ABO	Code for flare coupling
A	Type of fitting
20	Outside pipe diameter
R	Stud thread
S	Series

ABO -A 20-RS/VIT/1.4571

ABO	Code for welding nipple (steel nipple O-ring)
A	Type of fitting
20	Outside pipe diameter
R	Stud thread
S	Series
VIT	Code Viton
1.4517	Code stainless steel



Please see "Engineering and technical data – Selecting the correct tube fitting" for functional characteristics, tube length determination and assembly instructions.

THE WORLD OF TUBE FITTINGS
INTEGRATED FLUID POWER SOLUTIONS



CONTROL SYSTEM



CONTROL SYSTEM

CST CONNECT TEST SYSTEM WITH PIN LOCK 400 BAR

THE WORLD OF TUBE FITTINGS

CST SYSTEM INTRODUCTION

CST APPLICATION

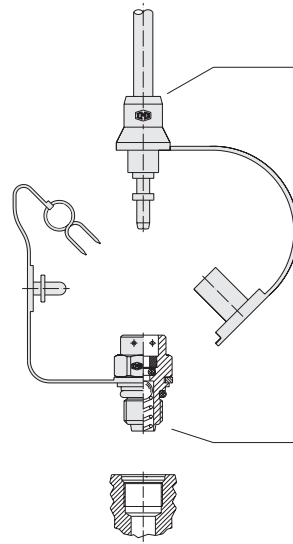
- › Fast coupling for monitoring and control of pressure.
- › Venting and sampling in high, low and vacuum systems up to 400 bar.

CST ADVANTAGES

- › Coupling at system pressure level.
- › Leak proof connection before ball valve is open.
- › Simple connection with measuring, control and switching devices.

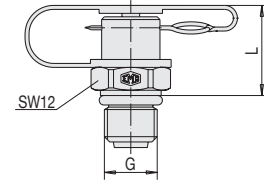
CST MATERIALS

- › Metal parts: Steel, Stainless Steel on request.
- › Ball: Stainless Steel.
- › Seals (add the letter to the description):
 - P = Buna N (Temperature range -20°C to +100°C).
 - VIT = Viton (Temperature range -20°C to +200°C).
 - E = Ethylene Propylene on request (for brake fluid).
- › Hose: Polyamide (+100°C maximum).
- › Data in this catalogue is according to technical standard current at the time of printing and is subject to change without notification.



CONTROL SYSTEM CST CONNECT TEST SYSTEM WITH PIN LOCK 400 BAR

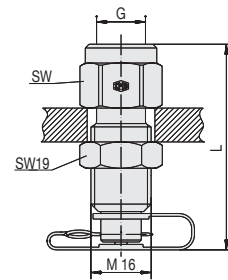
CST CONNECT TEST SYSTEM WITH PIN LOCK



description	PN	G	L	Seal
CST M 8 x 1	250	M 8 x 1	18	O-Ring
CST M 10 x 1	400	M 10 x 1	18	O-Ring
CST R 1/8" K	400	R 1/8"	18	Taper Form D

Please see "Engineering and technical data - Selecting the correct tube fitting" for more information on port connections and seals.

CST PRESSURE GAUGE FITTING WITH PIN LOCK



description	G	L	SW1	SW2
CSTO-G 1/4"	G 1/4"	66	19	19
CSTO-G 1/2"	G 1/2"	75	27	24
CSTO-1/4 NPT	1/4 NPT	68	19	19
CSTO-1/2 NPT	1/2 NPT	75	27	27

Please see "Engineering and technical data - Selecting the correct tube fitting" for more information on port connections and seals.

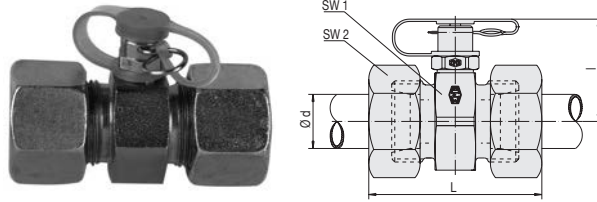
CONTROL SYSTEM

CST CONNECT TEST SYSTEM WITH PIN LOCK 400 BAR

THE WORLD OF TUBE FITTINGS

CST TEST COUPLING FOR CUTTING RING CONNECTION E

Test coupling with straight connection.

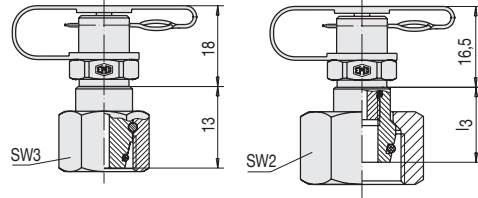


description	PN series	pipe OD	l	SW1	SW2
DS-CSTE 6-L	L 315	6	29.0	22	14
DS-CSTE 8-L	L 315	8	30.0	24	17
DS-CSTE 10-L	L 315	10	30.0	24	19
DS-CSTE 12-L	L 315	12	31.5	27	22
DS-CSTE 15-L	L 315	15	33.0	30	27
DS-CSTE 18-L	L 315	18	34.0	32	32
DS-CSTE 22-L	L 160	22	36.0	36	36
DS-CSTE 28-L	L 160	28	38.5	41	41
DS-CSTE 35-L	L 160	35	41.0	46	50
DS-CSTE 42-L	L 160	42	45.5	55	60
DS-CSTE 6-S	S 630	6	30.0	24	17
DS-CSTE 8-S	S 630	8	30.0	24	19
DS-CSTE 10-S	S 630	10	30.0	24	22
DS-CSTE 12-S	S 630	12	30.0	24	24
DS-CSTE 14-S	S 630	14	31.5	27	27
DS-CSTE 16-S	S 400	16	33.0	30	30
DS-CSTE 20-S	S 400	20	34.0	32	36
DS-CSTE 25-S	S 400	25	38.5	41	46
DS-CSTE 30-S	S 400	30	41.0	46	50
DS-CSTE 38-S	S 315	38	45.5	55	60

CONTROL SYSTEM CST CONNECT TEST SYSTEM WITH PIN LOCK 400 BAR

CST TEST COUPLING FOR CUTTING RING CONNECTION S

Test coupling with taper and O-ring.

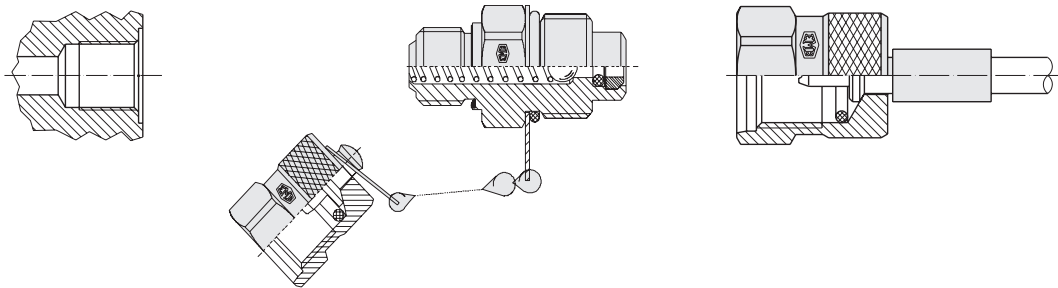


description	PN series	pipe OD	l_3	SW2/3
CSTS 6-L	L 315	6	32.5	14
CSTS 8-L	L 315	8	32.5	17
CSTS 10-L	L 315	10	32.5	19
CSTS 12-L	L 315	12	32.5	22
CSTS 15-L	L 315	15	20.0	27
CSTS 18-L	L 315	18	22.0	32
CSTS 22-L	L 160	22	22.0	36
CSTS 28-L	L 160	28	24.0	41
CSTS 35-L	L 160	35	27.0	50
CSTS 42-L	L 160	42	28.0	60
CSTS 6-S	S 630	6	33.5	17
CSTS 8-S	S 630	8	33.5	19
CSTS 10-S	S 630	10	33.5	22
CSTS 12-S	S 630	12	33.5	24
CSTS 14-S	S 630	14	20.0	27
CSTS 16-S	S 400	16	20.0	30
CSTS 20-S	S 400	20	25.0	36
CSTS 25-S	S 400	25	27.0	46
CSTS 30-S	S 400	30	29.0	50
CSTS 38-S	S 315	38	32.0	60

CONTROL SYSTEM

CSH TEST COUPLING WITH SCREW LOCK 630 BAR

THE WORLD OF TUBE FITTINGS



CSH SYSTEM INTRODUCTION

CSH APPLICATION

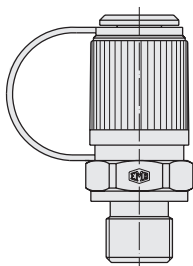
- › Monitoring and control of pressure.
- › Venting and sampling in high, low and vacuum systems up to 630 bar working pressure.
- › Connecting under pressure up to 400 bar.

CSH ADVANTAGES

- › Coupling at system pressure level.
- › Leak proof connection before ball valve is open.
- › Simple connection with measuring, control and switching devices.
- › Self-locking metal guard cap.

CSH MATERIALS

- › Metal parts: Steel, Stainless Steel on request.
- › Ball: Stainless Steel.
- › Seals (add the letter to the description):
 - P = Buna N (Temperature range -20°C to +100°C).
 - VIT = Viton (Temperature range -20°C to +200°C).
 - E = Ethylene Propylene on request (for brake fluid).
- › Data in this catalogue is according to technical standard current at the time of printing and is subject to change without notification.



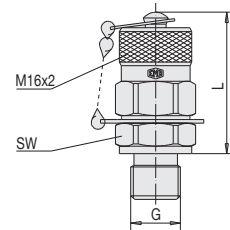
The complete CSH range is available with hexagonal plastic caps

CONTROL SYSTEM

CSH TEST COUPLING WITH SCREW LOCK 630 BAR

CSH TEST COUPLING WITH SCREW LOCK

Type series M16x2.



description	G	L	SW	sealing
CSH M 8 x 1	M 8 x 1	37	17	O-Ring Form A
CSH M 10 x 1	M 10 x 1	37	17	O-Ring Form A
CSH M 12 x 1.5/WD	M 12 x 1.5	37	17	WD Form C
CSH M 14 x 1.5	M 14 x 1.5	37	19	Metaljoint Form B
CSH M 16 x 1.5	M 16 x 1.5	37	22	Metaljoint Form B
CSH R 1/8"	R 1/8"	37	17	Metaljoint Form B
CSH R 1/8"/WD	R 1/8"	39	17	WD Form C
CSH R 1/8" K	R 1/8" K	35	17	Taper Form D
CSH R 1/4"	R 1/4"	37	19	Metaljoint Form B
CSH R 1/4"/WD	R 1/4"	37	19	WD Form C
CSH R 1/4" K	R 1/4" K	35	17	Taper Form D
CSH R 3/8"	R 3/8"	37	22	Metaljoint Form B
CSH R 3/8"/WD	R 3/8"	37	22	WD Form C
CSH 1/8" NPT	1/8" NPT	36	17	Taper Form D
CSH 1/4" NPT	1/4" NPT	35	17	Taper Form D
CSH 5/16" UNF	5/16"-24 UNF	38	17	O-Ring Form E
CSH 1/2" UNF	1/2"-20 UNF	38	17	O-Ring Form E
CSH 7/16" UNF	7/16"-20 UNF	38	17	O-Ring Form E
CSH 9/16" UNF	9/16"-18 UNF	38	19	O-Ring Form E

Please see "Engineering and technical data - Selecting the correct tube fitting" for more information on port connections and seals.

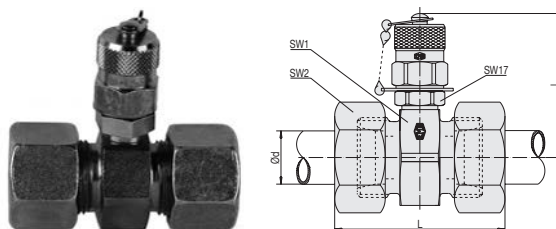
CONTROL SYSTEM

CSH TEST COUPLING WITH SCREW LOCK 630 BAR

THE WORLD OF TUBE FITTINGS

CSH TEST COUPLING FOR CUTTING RING CONNECTION E

Test coupling with straight connection.



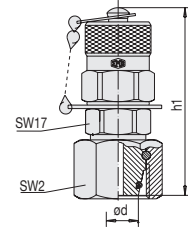
description	PN series	pipe OD	l	SW1	SW2
DS-CSHE 6-L	L 315	6	48.0	22	14
DS-CSHE 8-L	L 315	8	49.0	24	17
DS-CSHE 10-L	L 315	10	49.0	24	19
DS-CSHE 12-L	L 315	12	50.5	27	22
DS-CSHE 15-L	L 315	15	52.0	30	27
DS-CSHE 18-L	L 315	18	53.0	32	32
DS-CSHE 22-L	L 160	22	55.0	36	36
DS-CSHE 28-L	L 160	28	57.5	41	41
DS-CSHE 35-L	L 160	35	60.0	46	50
DS-CSHE 42-L	L 160	42	64.5	55	60
DS-CSHE 6-S	S 630	6	49.0	24	17
DS-CSHE 8-S	S 630	8	49.0	24	19
DS-CSHE 10-S	S 630	10	49.0	24	22
DS-CSHE 12-S	S 630	12	49.0	24	24
DS-CSHE 14-S	S 630	14	50.5	27	27
DS-CSHE 16-S	S 400	16	52.0	30	30
DS-CSHE 20-S	S 400	20	53.0	32	36
DS-CSHE 25-S	S 400	25	57.5	41	46
DS-CSHE 30-S	S 400	30	60.0	46	50
DS-CSHE 38-S	S 315	38	64.5	55	60

CONTROL SYSTEM

CSH TEST COUPLING WITH SCREW LOCK 630 BAR

CSH TEST COUPLING FOR CUTTING RING CONNECTION S

Test coupling with taper and O-ring.



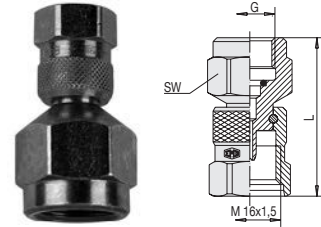
description	PN series	pipe OD	h ₁	h ₂	SW1	SW2
CSHS 6-L	L 315	6	53		14	17
CSHS 8-L	L 315	8	53		17	17
CSHS 10-L	L 315	10	50		19	17
CSHS 12-L	L 315	12	50		22	17
CSHS 15-L	L 315	15	51		27	19
CSHS 18-L	L 315	18		22	32	
CSHS 22-L	L 160	22		22	36	
CSHS 28-L	L 160	28		24	41	
CSHS 35-L	L 160	35		27	50	
CSHS 42-L	L 160	42		28	60	
CSHS 6-S	S 630	6	54		17	17
CSHS 8-S	S 630	8	51		19	17
CSHS 10-S	S 630	10	51		22	17
CSHS 12-S	S 630	12	51		24	17
CSHS 14-S	S 630	14	53		27	19
CSHS 16-S	S 400	16		20	30	
CSHS 20-S	S 400	20		25	36	
CSHS 25-S	S 400	25		27	46	
CSHS 30-S	S 400	30		29	50	
CSHS 38-S	S 315	38		32	60	

CONTROL SYSTEM

CSH TEST COUPLING WITH SCREW LOCK 630 BAR

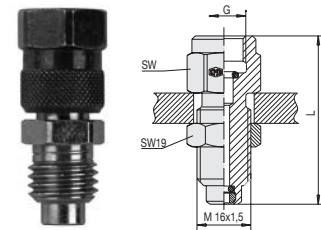
THE WORLD OF TUBE FITTINGS

CSH DIRECT GAUGE ADAPTOR



description	G	L	SW
CSHD-G 1/4	G 1/4	54	19
CSHD-G 1/2	G 1/2	58	27
CSHD-1/4 NPT	1/4 NPT	53	19
CSHD-1/2 NPT	1/2 NPT	59	27

CSH GAUGE ADAPTOR

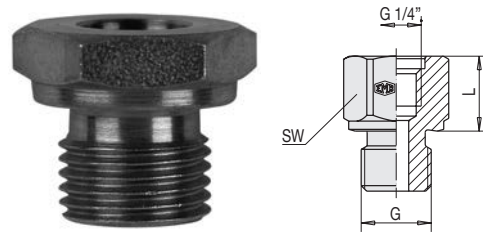


description	G	L	SW
CSHO-R 1/4"	R 1/4	57	19
CSHO-R 1/2"	R 1/2	66	27

CONTROL SYSTEM

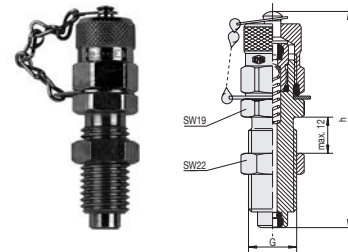
CSH TEST COUPLING WITH SCREW LOCK 630 BAR

CSH REDUCING FITTING



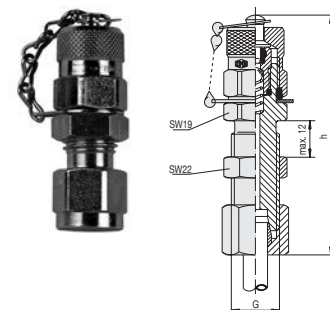
description	G	L	SW	sealing
CSH-RS-M 16 x 1.5	M 16 x 1.5	12	22	Metaljoint Form B
CSH-RS-G 1/8	G 1/8	17	17	Metaljoint Form B
CSH-RS-G 3/8	G 3/8	12	12	Metaljoint Form B
CSH-RS-G 1/2	G 1/2	12	27	Metaljoint Form B
CSH-RS-R 1/4 K	R 1/4 kegelig	17	19	Tape Form D

CSH BULKHEAD COUPLING A



description	form	G	h	SW
CSH SK	A	M 16 x 2	72	19

CSH BULKHEAD COUPLING B



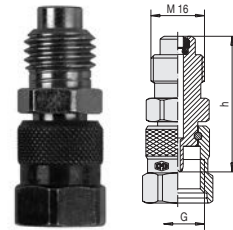
description	form	G	h	
CSH SK 8-S	B	M 16 x 1.5*	72	compression ring assembly 8 S/12 L acc. to DIN 2353
CSH SK 12-L	B	M 18 x 1.5*	72	compression ring assembly 8 S/12 L acc. to DIN 2353

CONTROL SYSTEM

CSH TEST COUPLING WITH SCREW LOCK 630 BAR

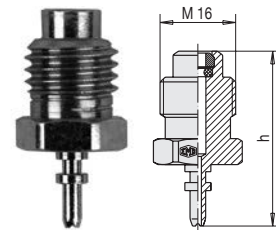
THE WORLD OF TUBE FITTINGS

CSH THREAD TYPE ADAPTOR A



description	form	G1	G2	h1	h2	SW1	
CSAD/CSH-CSS	A	M 16 x 2	M 16 x 1.5	39	56	17	
CSAD/CSH-CS 12	A	M 16 x 2	S 12x1.5	39	50	17	butress thread S 12.65 x 1.5

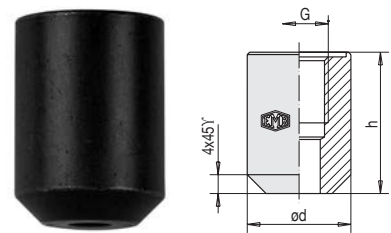
CSH THREAD TYPE ADAPTOR B



description	form	G	h
CSAD/CSH-CST	B	CST	37.5

CSH WELDING ADAPTOR

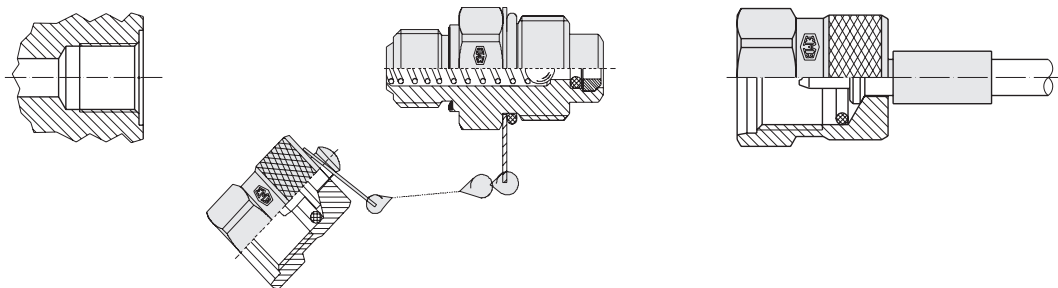
Material: St 37.



description	OD	G	h
CSAS-M 10 x 1	20	M 10 x 1	25
CSAS-G 1/4"	22	G 1/4"	30

CONTROL SYSTEM

CSS TEST COUPLING WITH SCREW LOCK 630 BAR



CSS SYSTEM INTRODUCTION

CSS APPLICATION

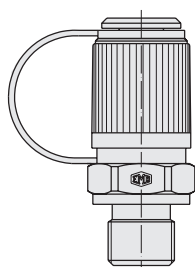
- > Monitoring and control of pressure.
- > Venting and sampling in high, low and vacuum systems up to 630 bar working pressure.

CSS ADVANTAGES

- > Coupling at system pressure level.
- > Leak proof connection before ball valve is open.
- > Simple connection with measuring, control and switching devices.
- > Self-locking metal guard cap.

CSS MATERIALS

- > Metal parts: Steel, Stainless Steel on request.
- > Ball: Stainless Steel.
- > Seals (add the letter to the description):
 - P = Buna N (Temperature range -20°C to +90°C).
 - VIT = Viton (Temperature range -20°C to +200°C).
 - E = Ethylene Propylene on request (for brake fluid).
- > Data in this catalogue is according to technical standard current at the time of printing and is subject to change without notification.



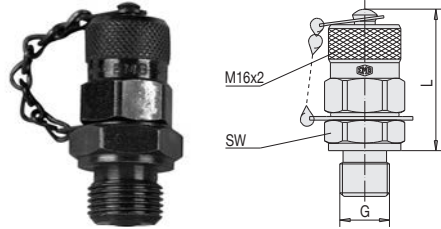
The complete CSS range is available with hexagonal steel or plastic caps

CONTROL SYSTEM

CSS TEST COUPLING WITH SCREW LOCK 630 BAR

THE WORLD OF TUBE FITTINGS

CSS TEST COUPLING WITH SCREW LOCK



description	G	L	SW	sealing
CSS M 10 x 1	M 10 x 1	37	17	O-Ring Form A
CSS M 14 x 1.5	M 14 x 1.5	37	19	Metaljoint Form B
CSS M 16 x 1.5	M 16 x 1.5	37	22	Metaljoint Form B
CSS R 1/4"	R 1/4"	37	19	Metaljoint Form B
CSS R 1/4"/WD	R 1/4"	37	19	WD Form C
CSS R 1/4" K	R 1/4" K	35	17	Taper Form D
CSS R 3/8"	R 3/8"	37	22	Metaljoint Form B
CSS 1/4" NPT	1/4" NPT	35	17	Taper Form D
CSS 9/16" UNF	9/16"-18 UNF	38	19	O-Ring Form E

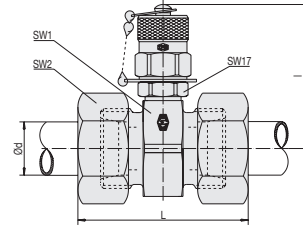
Please see "Engineering and technical data - Selecting the correct tube fitting" for more information on port connections and seals.

CONTROL SYSTEM

CSS TEST COUPLING WITH SCREW LOCK 630 BAR

CSS TEST COUPLING FOR CUTTING RING CONNECTION E

Model E: Test coupling with straight coupling.



description	PN series	pipe OD	l	SW1	SW2
DS-CSSE 6-L	L 315	6	48.0	22	14
DS-CSSE 8-L	L 315	8	49.0	24	17
DS-CSSE 10-L	L 315	10	49.0	24	19
DS-CSSE 12-L	L 315	12	50.5	27	22
DS-CSSE 15-L	L 315	15	52.0	30	27
DS-CSSE 18-L	L 315	18	53.0	32	32
DS-CSSE 22-L	L 160	22	55.0	36	36
DS-CSSE 28-L	L 160	28	57.5	41	41
DS-CSSE 35-L	L 160	35	60.0	46	50
DS-CSSE 42-L	L 160	42	64.5	55	60
DS-CSSE 6-S	S 630	6	49.0	24	17
DS-CSSE 8-S	S 630	8	49.0	24	19
DS-CSSE 10-S	S 630	10	49.0	24	22
DS-CSSE 12-S	S 630	12	49.0	24	24
DS-CSSE 14-S	S 630	14	50.5	27	27
DS-CSSE 16-S	S 400	16	52.0	30	30
DS-CSSE 20-S	S 400	20	53.0	32	36
DS-CSSE 25-S	S 400	25	57.5	41	46
DS-CSSE 30-S	S 400	30	60.0	46	50
DS-CSSE 38-S	S 315	38	64.5	55	60

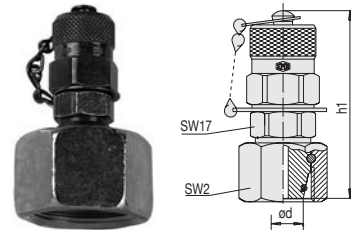
CONTROL SYSTEM

CSS TEST COUPLING WITH SCREW LOCK 630 BAR

THE WORLD OF TUBE FITTINGS

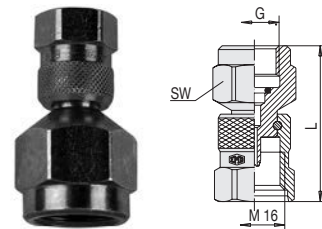
CSS TEST COUPLING FOR CUTTING RING CONNECTION S

Model S: Test coupling with taper and O-ring.



description	PN series	pipe OD	h ₁	h ₂	SW1	SW2
CSSS 6-L	L 315	6	53		14	17
CSSS 8-L	L 315	8	53		17	17
CSSS 10-L	L 315	10	50		19	17
CSSS 12-L	L 315	12	50		22	17
CSSS 15-L	L 315	15	51		27	19
CSSS 18-L	L 315	18		22	32	
CSSS 22-L	L 160	22		22	36	
CSSS 28-L	L 160	28		24	41	
CSSS 35-L	L 160	35		27	50	
CSSS 42-L	L 160	42		28	60	
CSSS 6-S	S 630	6	54		17	17
CSSS 8-S	S 630	8	51		19	17
CSSS 10-S	S 630	10	51		22	17
CSSS 12-S	S 630	12	51		24	17
CSSS 14-S	S 630	14	53		27	19
CSSS 16-S	S 400	16		20	30	
CSSS 20-S	S 400	20		25	36	
CSSS 25-S	S 400	25		27	46	
CSSS 30-S	S 400	30		29	50	
CSSS 38-S	S 315	38		32	60	

CSS DIRECT GAUGE ADAPTOR

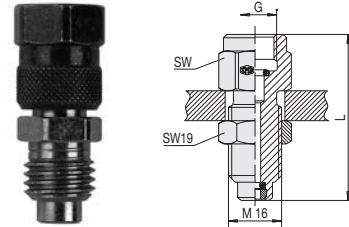


description	G	L	SW
CSSD-G 1/4	G 1/4	54	19
CSSD-G 1/2	G 1/2	58	27
CSSD-1/4 NPT	1/4 NPT	53	19
CSSD-1/2 NPT	1/2 NPT	61	27

CONTROL SYSTEM

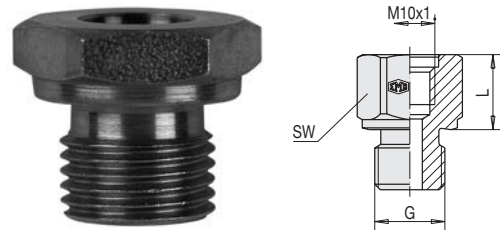
CSS TEST COUPLING WITH SCREW LOCK 630 BAR

CSS GAUGE ADAPTOR



description	G	L	SW
CSS0-R 1/4"	G 1/4	57	19
CSS0-R 1/2"	G 1/2	66	27
CSS0-1/4 NPT	1/4 NPT	55	19
CSS0-1/2 NPT	1/2 NPT	64	27

CSS REDUCING FITTING



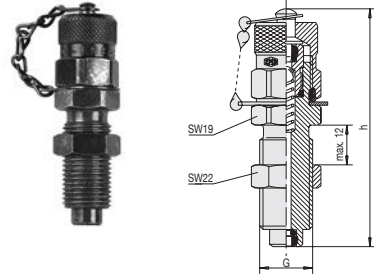
description	G	L	SW	sealing
CSS-RS-M 18 x 1.5	M 18 x 1.5	24	24	Metaljoint Form B
CSS-RS-M 20 x 1.5	M 20 x 1.5	24	27	Metaljoint Form B
CSS-RS-G 3/8	G 3/8	24	22	Metaljoint Form B
CSS-RS-G 1/2	G 1/2	12	27	Metaljoint Form B

CONTROL SYSTEM

CSS TEST COUPLING WITH SCREW LOCK 630 BAR

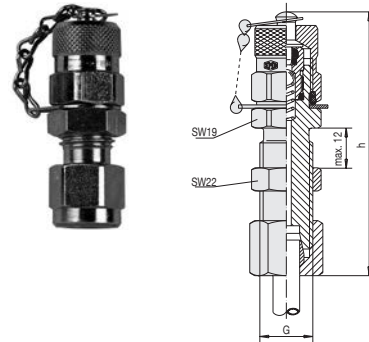
THE WORLD OF TUBE FITTINGS

CSS BULKHEAD COUPLING A



description	G	h	form	SW
CSS SK	M 16 x 2	72	A	19

CSS BULKHEAD COUPLING B

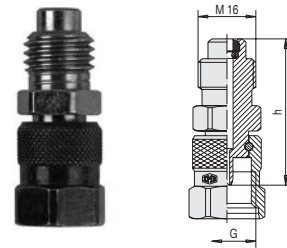


description	G	h	form	SW
CSS SK 8-S	M 16 x 1.51]	74	B	19

CONTROL SYSTEM

CSS TEST COUPLING WITH SCREW LOCK 630 BAR

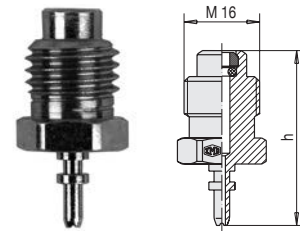
CSS THREAD TYPE ADAPTOR A



description	G	h	form
CSAD/CSS-CSH	M 16 x 2	36	A
CSAD/CSS-CS 12	S12*	36	A

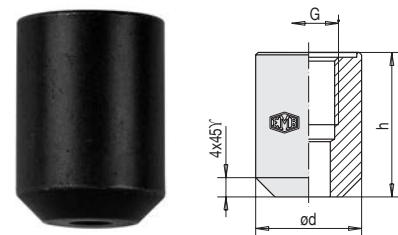
* Special thread S 12,65 x 1,5

CSS THREAD TYPE ADAPTOR B



description	G	h	form
CSAD/CSS-CST	CST	37.5	B

CSS WELDING ADAPTOR

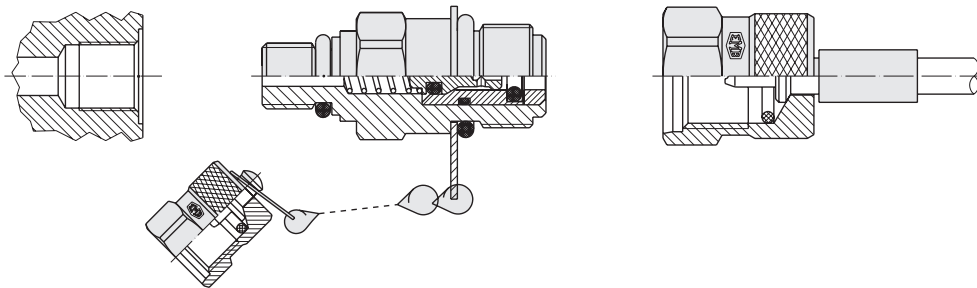


description	OD	G	h
CSAS-M 10 x 1	20	M 10 x 1	25
CSAS-G 1/4"	22	G 1/4"	30

CONTROL SYSTEM

CSHK TEST COUPLING WITH SCREW LOCK 630 BAR

THE WORLD OF TUBE FITTINGS



CSHK SYSTEM INTRODUCTION

CSHK APPLICATION

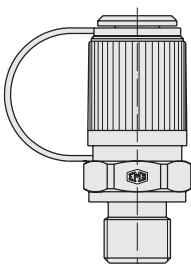
- › Monitoring and control of pressure.
- › Venting and sampling in high, low and vacuum systems up to 630 bar working pressure.
- › Connecting under pressure up to 400 bar.

CSHK ADVANTAGES

- › Coupling at system pressure level.
- › Leak proof connection before ball valve is open.
- › Simple connection with measuring, control and switching devices.
- › Self-locking metal guard cap.

CSHK MATERIALS

- › Metal parts: Steel, Stainless Steel on request.
- › Ball: Stainless Steel.
- › Seals (add the letter to the description):
 - P = Buna N (Temperature range -20°C to +90°C).
 - VIT = Viton (Temperature range -20°C to +200°C).
 - E = Ethylene Propylene on request (for brake fluid).
- › Data in this catalogue is according to technical standard current at the time of printing and is subject to change without notification.

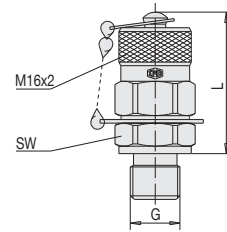


The complete CSHK range is available with hexagonal steel or plastic caps

CONTROL SYSTEM

CSHK TEST COUPLING WITH SCREW LOCK 630 BAR

CSHK TEST COUPLING WITH SCREW LOCK



description	G	L	SW	sealing
CSHK M 8 x 1	M 8 x 1	38	17	O-Ring Form A
CSHK M 10 x 1	M 10 x 1	38	17	O-Ring Form A
CSHK M 12 x 1.5/WD	M 12 x 1.5	39	17	WD Form C
CSHK M 14 x 1.5	M 14 x 1.5	37	19	Metaljoint Form B
CSHK M 16 x 1.5	M 16 x 1.5	37	22	Metaljoint Form B
CSHK R 1/8"/WD	R 1/8"	39	17	WD Form C
CSHK R 1/8" K	R 1/8" K	36	17	Taper Form D
CSHK R 1/4"	R 1/4"	37	19	Metaljoint Form B
CSHK R 1/4"/WD	R 1/4"	37	19	WD Form C
CSHK R 1/4" K	R 1/4" K	35	17	Taper Form D
CSHK R 3/8"	R 3/8"	37	22	Metaljoint Form B
CSHK 1/8" NPT	1/8" NPT	36	17	Taper Form D
CSHK 1/4" NPT	1/4" NPT	35	17	Taper Form D
CSHK 5/16" UNF	5/16"-24 UNF	38	17	O-Ring Form E
CSHK 1/2" UNF	1/2"-20 UNF	38	17	O-Ring Form E
CSHK 7/16" UNF	7/16"-20 UNF	38	17	O-Ring Form E
CSHK 9/16" UNF	9/16"-18 UNF	38	19	O-Ring Form E

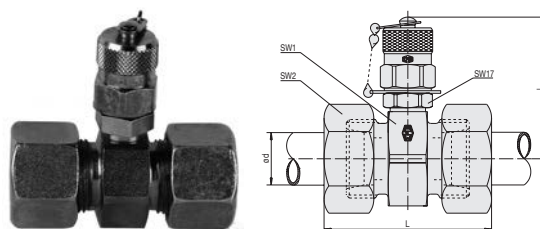
Please see "Engineering and technical data - Selecting the correct tube fitting" for more information on port connections and seals.

CONTROL SYSTEM

CSHK TEST COUPLING WITH SCREW LOCK 630 BAR

THE WORLD OF TUBE FITTINGS

CSHK TEST COUPLING FOR CUTTING RING CONNECTION E

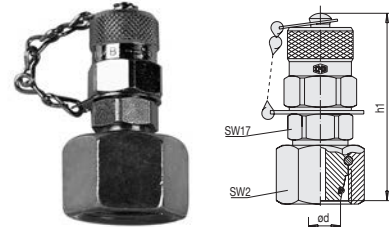


description	PN series	pipe OD	L	SW1	SW2
DS-CSHKE 6-L	L 315	6	48.0	22	14
DS-CSHKE 8-L	L 315	8	49.0	24	17
DS-CSHKE 10-L	L 315	10	49.0	24	19
DS-CSHKE 12-L	L 315	12	50.5	27	22
DS-CSHKE 15-L	L 315	15	52.0	30	27
DS-CSHKE 18-L	L 315	18	53.0	32	32
DS-CSHKE 22-L	L 160	22	55.0	36	36
DS-CSHKE 28-L	L 160	28	57.5	41	41
DS-CSHKE 35-L	L 160	35	60.0	46	50
DS-CSHKE 42-L	L 160	42	64.5	55	60
DS-CSHKE 6-S	S 630	6	49.0	24	17
DS-CSHKE 8-S	S 630	8	49.0	24	19
DS-CSHKE 10-S	S 630	10	49.0	24	22
DS-CSHKE 12-S	S 630	12	49.0	24	24
DS-CSHKE 14-S	S 630	14	50.5	27	27
DS-CSHKE 16-S	S 400	16	52.0	30	30
DS-CSHKE 20-S	S 400	20	53.0	32	36
DS-CSHKE 25-S	S 400	25	57.5	41	46
DS-CSHKE 30-S	S 400	30	60.0	46	50
DS-CSHKE 38-S	S 315	38	64.5	55	60

CONTROL SYSTEM

CSHK TEST COUPLING WITH SCREW LOCK 630 BAR

CSHK TEST COUPLING FOR CUTTING RING CONNECTION S



description	PN series	pipe OD	h_1	h_2	SW1	SW2
CSHKS 6-L	L 315	6	53		14	17
CSHKS 8-L	L 315	8	53		17	17
CSHKS 10-L	L 315	10	50		19	17
CSHKS 12-L	L 315	12	50		22	17
CSHKS 15-L	L 315	15	51		27	19
CSHKS 18-L	L 315	18		22	32	
CSHKS 22-L	L 160	22		22	36	
CSHKS 28-L	L 160	28		24	41	
CSHKS 35-L	L 160	35		27	50	
CSHKS 42-L	L 160	42		28	60	
CSHKS 6-S	S 630	6	54		17	17
CSHKS 8-S	S 630	8	51		19	17
CSHKS 10-S	S 630	10	51		22	17
CSHKS 12-S	S 630	12	51		24	17
CSHKS 14-S	S 630	14	53		27	19
CSHKS 16-S	S 400	16		20	30	
CSHKS 20-S	S 400	20		25	36	
CSHKS 25-S	S 400	25		27	46	
CSHKS 30-S	S 400	30		29	50	
CSHKS 38-S	S 315	38		32	60	

CONTROL SYSTEM PRESSURE TEST KIT

THE WORLD OF TUBE FITTINGS



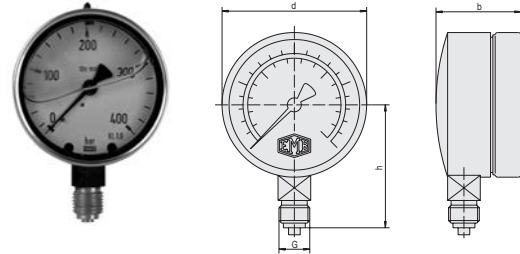
CST 1, 2, 3
CSH 1, 2, 3
CSS 1, 2, 3

Bespoke complement on customer's request.

CONTROL SYSTEM PRESSURE GAUGE

CMM PRESSURE GAUGE

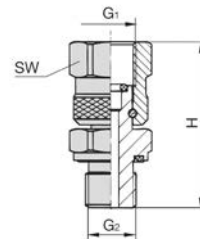
Glycerin filled.



description		pressure range				
G = G 1/4	G = 1/4 NPT	bar	psi	d	b	h
CMM G 1/4-10	CMM 1/4 NPT-10	10	145	63	35.5	53
CMM G 1/4-16	CMM 1/4 NPT-16	16	230	63	35.5	53
CMM G 1/4-25	CMM 1/4 NPT-25	25	360	63	35.5	53
CMM G 1/4-40	CMM 1/4 NPT-40	40	580	63	35.5	53
CMM G 1/4-60	CMM 1/4 NPT-60	60	870	63	35.5	53
CMM G 1/4-100	CMM 1/4 NPT-100	100	1450	63	35.5	53
CMM G 1/4-160	CMM 1/4 NPT-160	160	2300	63	35.5	53
CMM G 1/4-250	CMM 1/4 NPT-250	250	3600	63	35.5	53
CMM G 1/4-400	CMM 1/4 NPT-400	400	5800	63	35.5	53
CMM G 1/4-600	CMM 1/4 NPT-600	600	8700	63	35.5	53

description		pressure range				
G = G 1/2	G = 1/2 NPT	bar	psi	d	b	h
CMM G 1/2-10	CMM 1/2 NPT-10	10	145	100	49	87
CMM G 1/2-16	CMM 1/2 NPT-16	16	230	100	49	87
CMM G 1/2-25	CMM 1/2 NPT-25	25	360	100	49	87
CMM G 1/2-40	CMM 1/2 NPT-40	40	580	100	49	87
CMM G 1/2-60	CMM 1/2 NPT-60	60	870	100	49	87
CMM G 1/2-100	CMM 1/2 NPT-100	100	1450	100	49	87
CMM G 1/2-160	CMM 1/2 NPT-160	160	2300	100	49	87
CMM G 1/2-250	CMM 1/2 NPT-250	250	3600	100	49	87
CMM G 1/2-400	CMM 1/2 NPT-400	400	5800	100	49	87
CMM G 1/2-600	CMM 1/2 NPT-600	600	8700	100	49	87

ADJUSTABLE GAUGE FITTING

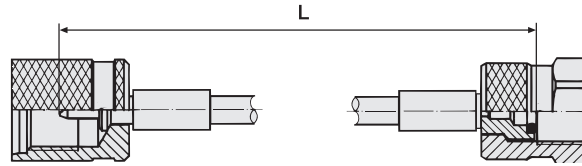


description	G1	G2	H	SW
VO-1/4	1/4	1/4	42.0	19
VO-1/4-1/2	1/4	1/2	47.0	19
VO-1/2-1/4	1/2	1/4	52.0	27
VO-1/2	1/2	1/2	55.5	27

CONTROL SYSTEM HOSE CONNECTOR

THE WORLD OF TUBE FITTINGS

HOSE ORDER DESCRIPTION

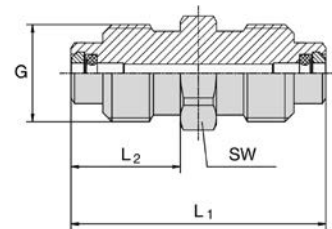


CS...MS¹⁾			1500	T	not specified DN	
Connection 1			Length L	Connection 2		
H	A	J	hose length in mm	H	A	J
S	S	D		S	S	D
T	K	B		T	K	B
12	L	U		12	L	U
M	G	P		M	G	P
N	F			N	F	
W	C			W	C	
				A	= DN2 400 bar	
				B	= DN2 630 bar	
				C	= DN4 340 bar	

1) Order code of hose for gaseous medium "CS...MSG"

for different connection on second side only

HOSE CONNECTOR



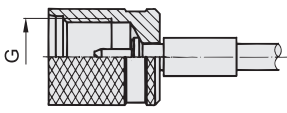
description	G	L1	SW
CSHMSAD	M16X2	42	17
CSSMSAD	M16x1.5	42	17
CS12MSAD	S12x1.5	44	19

CONTROL SYSTEM

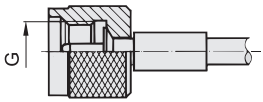
HOSE FITTING

HOSE FITTING FOR CONTROL SYSTEM

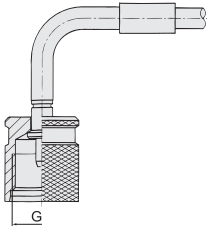
HOSE FITTING TYPE HS

description	hose fitting	type	G	SW	DN
Rows of screws Connection for test couplings		H S	M16x2 M16x1.5		2 and 4


HOSE FITTING TYPE 12

description	hose fitting	type	G	SW	DN
Rows of screws Connection for test couplings		12	S12.65x1.5		2 and 4

HOSE FITTING TYPE O

description	hose fitting	type	G	SW	DN
Rows of screws 90° bent Connection for test couplings		H S 12 O	M16x2 M16x1.5 S12.65x1.5		2

HOSE FITTING TYPE T CONNECT

description	hose fitting	type	G	SW	DN
Plugging line		T	connector system		2

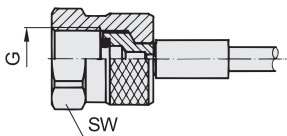
CONTROL SYSTEM

HOSE FITTING

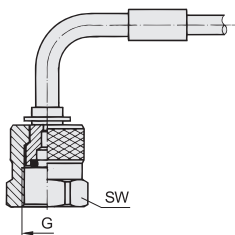
HOSE FITTING FOR CONTROL SYSTEM

THE WORLD OF TUBE FITTINGS

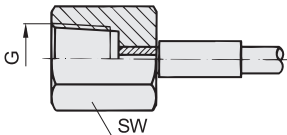
HOSE FITTING TYPE M

description	hose fitting	type	G	SW	DN	
Manometer connection Whitworth pipe thread 90° bent G3/8 and G1/2 outer line See depiction type N		M	1/4	G1/4	19	2 and 4
			1/2	G1/2	27	
			3/8	G3/8	22	2

HOSE FITTING TYPE W

description	hose fitting	type	G	SW	DN	
Manometer connection Whitworth pipe thread 90° bent G3/8 and G1/2 outer line See depiction type N		W	1/4	G1/4	19	2
			1/2	G1/2	27	

HOSE FITTING TYPE N

description	hose fitting	type	G	SW	DN	
Manometer connection With 1/4" NPT outer line See depiction type M		N	1/4	1/4 NPT	19	2
			1/2	1/2 NPT	27	

CONTROL SYSTEM

HOSE FITTING

HOSE FITTING FOR CONTROL SYSTEM

HOSE FITTING TYPE A

description	hose fitting	type	G	SW	DN	
Manometer connection NPT 90° bent With 1/4" NPT outer line See depiction type M		A	1/4	1/4 NPT	19	2 and 4
			1/2	1/2 NPT	27	

HOSE FITTING TYPE S

description	hose fitting	type	G	SW	DN	
Pipe socket for compression type fitting acc. to DIN 2353		S	4	4LL		2
			6	6L - 6S		2 and 4
			8	8L - 8S		2 and 4
			10	10L - 10S		2 and 4
			12	12L - 12S		2
			15	15L		2
			1/4	1/4"		2 and 4

HOSE FITTING TYPE S90°

description	hose fitting	type	G	SW	DN	
Pipe socket for compression type fitting according to DIN 2353		S90° upon request				2 and 4

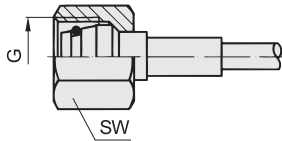
CONTROL SYSTEM

HOSE FITTING

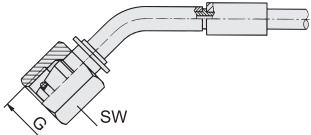
HOSE FITTING FOR CONTROL SYSTEM

THE WORLD OF TUBE FITTINGS

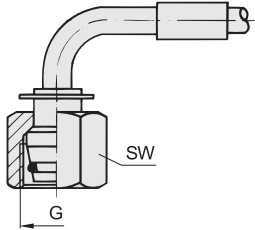
HOSE FITTING TYPE K

description	hose fitting	type	G	SW	DN	
Conical nipple with swivel nut and O-ring for 24° connectors		K	6LL	M10x1.0	12	4
			6L	M12x1.5	14	2 and 4
			8L	M14x1.5	17	2 and 4
			10L	M16x1.5	19	2 and 4
			12L	M18x1.5	22	2 and 4
			6S	M14x1.5	17	2 and 4
			8S	M16x1.5	19	2 and 4
			10S	M18x1.5	22	2 and 4
			12S	M20x1.5	24	2 and 4

HOSE FITTING TYPE R

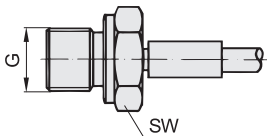
description	hose fitting	type	G	SW	DN	
Conical nipple with swivel nut and O-Ring for 24° connectors 45° bent		R	6S	M14x1.5	17	2 and 4

HOSE FITTING TYPE L

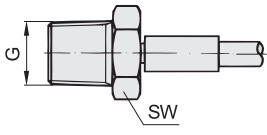
description	hose fitting	type	G	SW	DN	
Conical nipple with swivel nut and O-Ring for 24° connectors 90° bent		L	6L	M12x1.5	14	2 and 4
			8L	M14x1.5	17	
			10L	M16x1.5	19	
			6S	M14x1.5	17	
			8S	M16x1.5	19	
			10S	M18x1.5	24	

CONTROL SYSTEM
HOSE FITTING
HOSE FITTING FOR CONTROL SYSTEM

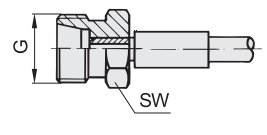
HOSE FITTING TYPE G

description	hose fitting	type	G	SW	DN	
External thread complying with DIN 3852-B		G	12	M12x1.5	17	2 and 4
			1/8	G 1/8	14	
			1/4	G 1/4	19	
			1/2	G 1/2	27	

HOSE FITTING TYPE F

description	hose fitting	type	G	SW	DN	
External thread NPT acc. to ANSI		F	1/8	1/8 NPT	13	2 and 4
			1/4	1/4 NPT	17	

HOSE FITTING TYPE C

description	hose fitting	type	G	SW	DN	
External thread for 24° compression fitting acc. to DIN 3853		C	6L	M12x1.5	14	2 and 4
			8L	M14x1.5	17	
			6S	M14x1.5	17	
			8S	M16x1.5	17	

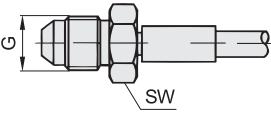
CONTROL SYSTEM

HOSE FITTING

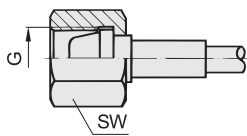
HOSE FITTING FOR CONTROL SYSTEM

THE WORLD OF TUBE FITTINGS

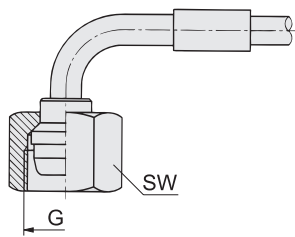
HOSE FITTING TYPE J

description	hose fitting	type		G	SW	DN
External thread acc. to SAE J514		J	1/4	7/16-UNF	14	2 and 4
			5/16	1/2-UNF	14	
			3/8	9/16-UNF	17	

HOSE FITTING TYPE D

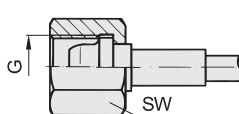
description	hose fitting	type		G	SW	DN
Conical pipe with swivel nut for 24° connector acc. to DIN 2353		D	6L	M12x1.5	14	2 and 4
			8L	M14x1.5	17	
			10L	M16x1.5	19	
			12L	M18x1.5	22	
			6S	M14x1.5	17	
			8S	M16x1.5	19	
			10S	M18x1.5	22	
			12S	M20x1.5	24	

HOSE FITTING TYPE Q

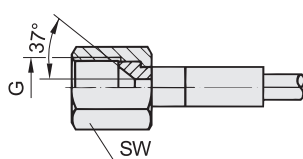
description	hose fitting	type		G	SW	DN
Conical pipe with swivel nut for 24° connector acc. to DIN 2353 standards 90° bent		Q	10L	M16x1.5	19	2 and 4
			10S	M18x1.5	22	

CONTROL SYSTEM
HOSE FITTING
HOSE FITTING FOR CONTROL SYSTEM

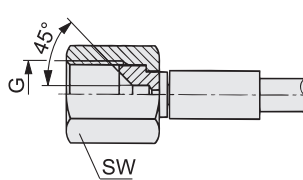
HOSE FITTING TYPE B

description	hose fitting	type	G	SW	DN		
Conical pipe with swivel nut acc. to DIN 8542		B	1/4	G 1/4	17	2 and 4	

HOSE FITTING TYPE U

description	hose fitting	type	G	SW	DN	
Conical pipe with swivel nut complying with SAE J514 for 37° connector		U	1/4	7/16-20 UNF	14	2 and 4
			5/16	1/2-20 UNF	17	
			3/8	9/16-18 UNF	19	

HOSE FITTING TYPE UR

description	hose fitting	type	G	SW	DN		
Conical pipe with swivel nut complying with SAE J516 for 45° connectors		UR	1/4	7/16-20 UNF	14	2	

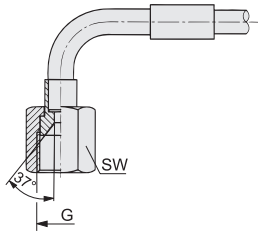
CONTROL SYSTEM

HOSE FITTING

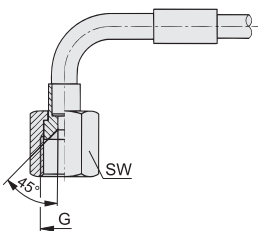
HOSE FITTING FOR CONTROL SYSTEM

THE WORLD OF TUBE FITTINGS

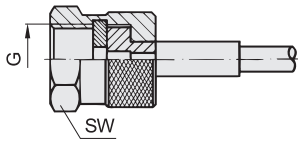
HOSE FITTING TYPE E

description	hose fitting	type	G	SW	DN	
Conical pipe with swivel nut acc. to SAE J514 for 37° connector 90° bent		E	1/4	7/16-20UNF	14	2

HOSE FITTING TYPE ER

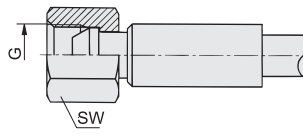
description	hose fitting	type	G	SW	DN	
Conical pipe with swivel nut acc. to SAE J514 for 45° connector 90° bent		ER	1/4	7/16-20UNF	14	2

HOSE FITTING TYPE P

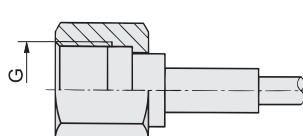
description	hose fitting	type	G	SW	DN	
Measuring hose for vehicle brake systems		P	2	M16x1.5	19	2

CONTROL SYSTEM
HOSE FITTING
HOSE FITTING FOR CONTROL SYSTEM

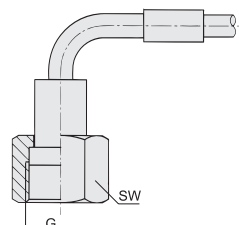
HOSE FITTING TYPE H

description	hose fitting	type	G	SW	DN	
Conical pipe with swivel nut for 60° connector		H	1/4	G 1/4	17	4

HOSE FITTING TYPE T

description	hose fitting	type	G	SW	DN	
Screwed connection ORS acc. to SAE J1453		T	11/16	11/16-16 UN	21	2

HOSE FITTING TYPE V

description	hose fitting	type	G	SW	DN	
Screwed connection ORS acc. to SAE J 1453 90° bent		V	11/16	11/16-16UN	21	2 and 4



INTEGRATED FLUID POWER SOLUTIONS

THE WORLD OF ASSEMBLY MACHINERY



EMB-FS® CONNECTION TECHNOLOGY

THE WORLD OF ASSEMBLY MACHINERY



EASY, QUICK AND RELIABLE

The innovative 'Form & Seal' system was designed for the connection of tubes without specific tube preparation and finishing. It boasts the advantages of a welding system but the number of necessary single parts is reduced to the minimum, optimising the cost-performance ratio and minimising the system costs. The system can also be used for nearly all applications as we provide a comprehensive product portfolio of DIN 2353, ISO 8434-1 tube fittings. The EMB-FS® system and assembly procedure guarantees you minimum tube stress, fast assembly and maximum retention forces.

Improve productivity and keep costs down

The EMB-FS® 93 forming machine works so simply that it helps to reduce tool costs and operation time significantly. The convenient display helps to select tube sizes easily and promptly, making assembly errors impossible. The electronic power path control procedure forms standard hydraulic pipes continuously, ensuring safe tube forming. Different wall thicknesses can be processed with only one tool set, making the tool logistics easier and affordable. When a tool change is needed, this can also happen very quickly and effortlessly with the use of the bayonet catch.



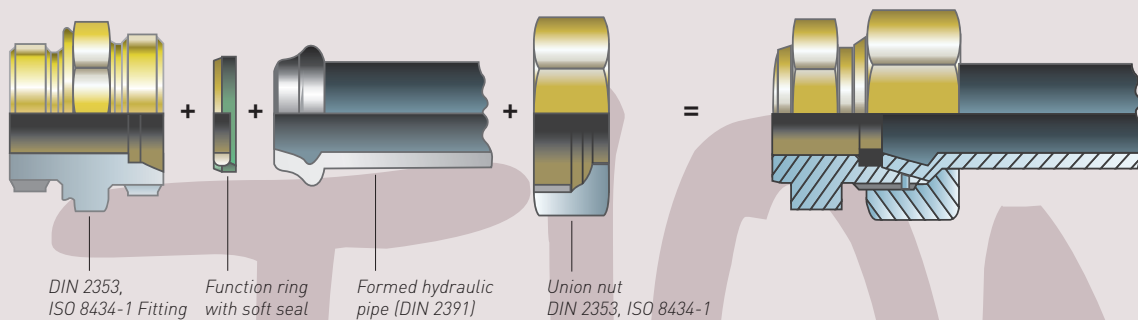
The unmatched tube connecting solution for steel and stainless steel tubes



No compromises, no difficulties

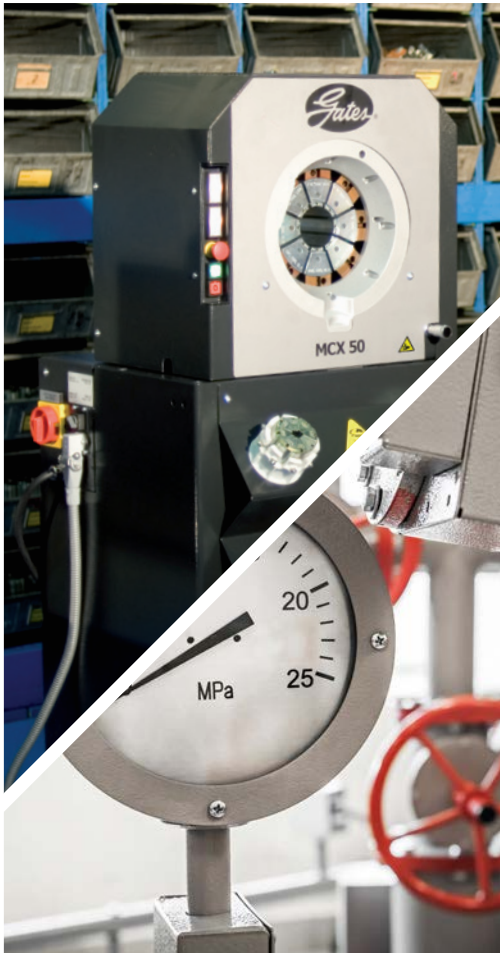
A function ring supports the final assembly. It integrates an elastomer seal into the system and protects against excessive tightening. Frictional tension between tube and fitting cone is assured with the metallic seal function. Vulcanised soft seals ensure the leak-free performance in extreme working conditions as well. Safe assembly is indicated by a clearly noticeable assembly stop.

Form & Seal hydraulic pipes with complete confidence



GATES ASSEMBLY MACHINERY – HIGH PRODUCTIVITY WHEREVER YOU NEED IT!

THE WORLD OF ASSEMBLY MACHINERY



Gates assembly machinery can help you to cut maintenance costs, boost productivity and outperform others thanks to our focus on design, innovation and top-quality materials. The range covers all your needs from workshops to mobile service operations and even on-site field crimping.

Leak-free and reliable high-performance port-to-port solutions call for superiority, both in its components as well as the self-assembly machines to put them together. Our machinery is a vital part of the Gates Integrated System Approach, making every tube connection and every hose assembly a true Gates ambassador.

Gates is the world's most trusted brand name in fluid power transmission because we pay meticulous attention to quality standards in all cutting ring assembly, flaring, tube end forming, tube manipulation, cutting, crimping and marking, and conduct extensive quality testing before shipment.



CUTTING RING ASSEMBLY & FLARING MACHINERY

Today, cutting ring and flaring are still the main technologies used to connect tubes. To guarantee leak-free results, the joint procedure requires reliable machines that support the quality of the connection. Thanks to the Gates assembly machines' accurate processes, a minimum of the operator's individual intervention is required, reducing the need for manual justifications as well as process control.

OVERVIEW



Opticam 34 Cutting Ring Assembly Machine

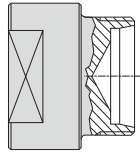
Hydraulic operating machine with SPC unit (storage programmable control) for both pre-assembly and final-assembly of cutting rings. The fully automated assembly procedure ensures total supervision and absolute control of the chosen kind of assembly, preventing mistakes and eliminating additional maintenance and complaints. It is the customer's warranty for 100% leak free connections.

Technical Specifications Opticam 34		CAM 34		CAM 34 power pack	
		400 V / 3-phase		400 V / 3-phase	
working pressure	max. bar	400		400	
assembly pressure	max. tons	20		20	
hydraulic unit	ltr./min	3		3 + 1.25	
electric drive	Hz	50		50	
dimensions (mm)	H	300		620	
	W	610		260	
	D	625		550	
weight	ca. kg	85		50 incl. oil	
cylinder movement	max. sec.	2,4	e.g. Ø 12 mm	1,9	e.g. Ø 12 mm
order code		CAM 34		CAM 34 DP	

Tools	CAM 34
Pre-assembling counter plate	OPT/E
Pre-assembling socket	OPTI
Final assembling counter plate	OPT/F
Final assembling socket	OPTI/F

CUTTING RING ASSEMBLY & FLARING MACHINERY

THE WORLD OF ASSEMBLY MACHINERY



VM Pre-Assembly Bodies

Bodies for the turning-angle-controlled serial assembly of cutting ring fittings in the pre-assembly adaptor VM with subsequent final assembly.

Technical Specifications VM Pre-Assembly Bodies				
Description	tube OD	G	L	S
VM 6-L	6	M 12 x 1.5	28	14
VM 8-L	8	M 14 x 1.5	28	14
VM 10-L	10	M 16 x 1.5	28	14
VM 12-L	12	M 18 x 1.5	28	19
VM 15-L	15	M 22 x 1.5	33	19
VM 18-L	18	M 26 x 1.5	36	24
VM 22-L	22	M 30 x 2	37	27
VM 28-L	28	M 36 x 2	40	32
VM 35-L	35	M 45 x 2	42	41
VM 42-L	42	M 52 x 2	42	50
VM 6-S	6	M 14 x 1.5	28	14
VM 8-S	8	M 16 x 1.5	28	14
VM 10-S	10	M 18 x 1.5	28	14
VM 12-S	12	M 20 x 1.5	28	19
VM 14-S	14	M 22 x 1.5	33	19
VM 16-S	16	M 24 x 1.5	33	24
VM 20-S	20	M 30 x 2	37	27
VM 25-S	25	M 36 x 2	39	32
VM 30-S	30	M 42 x 2	42	41
VM 38-S	38	M 52 x 2	42	50

CUTTING RING ASSEMBLY & FLARING MACHINERY



UP/M Unipress Cutting Ring Assembly

Hand assembly machine allowing easy cutting-ring pre-assembly and flaring 37° systems. The light-weight, user-friendly design makes it perfect for on-site applications and repairs.

Utilises same tools as electro-hydraulic machines.

Tube flaring for 37° Gates-EMB ABO and SAE system.

Technical Specifications UP/M Unipress		UP/M
		manually
tube range cutting ring assembly	mm Ø	6 to 42
tube range flaring	mm Ø	6 to 22
maximum pressure	bar	230
	H	260
dimensions (mm)	W	190
	D	400
weight	ca. kg	15
order code		UNIPRESS M

Tools	UP/M
Pre-assembling counter plate	OPT/E
Pre-assembling socket	OPTI
Flaring device	BÖRDELVORSATZ UPM622
Flaring tools for ABO 37°	UNI-BBO
Flaring tools SAE system	UNI-BB

CUTTING RING ASSEMBLY & FLARING MACHINERY

THE WORLD OF ASSEMBLY MACHINERY



UP 3 Unipress Cutting Ring Assembly & Flaring Machine

Universal combination machine for cutting ring pre-assembly with manual or automatic pressure setting and tube flaring for steel and stainless steel tubes with an outer diameter from 6 to 42 mm.

Technical Specifications UP 3 Unipress		UP 3
		400 V / 3-phase
working pressure	max. bar	0 to 200
electric drive	Hz	50
dimensions (mm)	H	500
	W	450
	D	650
weight	ca. kg	85
order code		UNIPRESS 3
Tools		UP 3
Pre-assembling counter plate		OPT/E
Pre-assembling socket		OPTI
Flaring tools for ABO 37°		UNI-BB0
Flaring tools SAE system		UNI-BB
Flaring tools SAE system		UNI-BB

TUBE END FORMING & TUBE MANIPULATION MACHINERY

Tube forming is not only one of the safest methods for the connection of leak-free hydraulic tube systems but can be used as an alternative for expensive welding procedures in many cases. The result is a huge cost reduction on both labour and system assembly cost. This supports economies of scale and provides extra time and money for further projects. Operator faults are basically excluded due to automated machine functions. Gates-EMB assembly machines are developed with individual customer needs in mind like ease of use, reliability and cost performance.

OVERVIEW



FS 93 Tube Forming Machine

The FS 93 forming machine offers fast and safe tube forming of both steel and stainless steel tubes. The forming happens in one single step with the help of the electronic power path control, reducing tool costs and operation time significantly.

Easy tube size selection via the machine display.

One tool set for different materials and tube wall thicknesses.

The bayonet catch allows very quick change of tools.

Technical Specifications FS 93		FS 93
		400 V / 3-phase
electric drive	Hz	50
fuse	A	16
dimensions (mm)	H	350
	W	760
	D	830
weight	ca. kg	175
order code		FS 93 UMFORMMASCHINE

Tools	FS 93	
Clamping jaws	SPW	
Reshaping tools	FOW	
Function ring	FSR	Ø 6 to 42 mm
Back-up ring	FSSR	Ø 6 to 12 mm

TUBE END FORMING & TUBE MANIPULATION MACHINERY

THE WORLD OF ASSEMBLY MACHINERY

Final Assembly with Function & Back-Up Ring

The FSR function ring and FSR back-up ring FSSR support the final assembly, integrating an elastomer seal into the system which protects against excessive tightening. The frictional tension between tube and fitting cone is assured with the metallic seal function. The vulcanised soft seals ensure the leak-free performance in extreme working conditions. Safe assembly is guaranteed by a clearly noticeable assembly stop. It is recommended to use FSR on tube diameters from 6 to 42 mm, FSSR alternatively from 6 to 12 mm with very thin wall thicknesses.



Function ring FSR	
Description steel	Description stainless steel
FSR 6-L/S	FSR 6 L/S-1.4571
FSR 8-L/S	FSR 8 L/S-1.4571
FSR 10-L/S	FSR 10 L/S-1.4571
FSR 12-L/S	FSR 12 L/S-1.4571
FSR 15	FSR 15 L/S-1.4571
FSR 16	FSR 16 L/S-1.4571
FSR 18	FSR 18 L/S-1.4571
FSR 20	FSR 20 L/S-1.4571
FSR 22	FSR 22 L/S-1.4571
FSR 25	FSR 25 L/S-1.4571
FSR 28	FSR 28 L/S-1.4571
FSR 30	FSR 30 L/S-1.4571
FSR 35	FSR 35 L/S-1.4571
FSR 38	FSR 38 L/S-1.4571
FSR 42	FSR 42 L/S-1.4571



Back-up ring FSSR	
Description steel	Description stainless steel
FSSR 6 L/S	FSSR 6 L/S-1.4571
FSSR 8 L/S	FSSR 8 L/S-1.4571
FSSR 10 L/S	FSSR 10 L/S-1.4571
FSSR 12 L/S	FSSR 12 L/S-1.4571



Tools SPW		
Description	tube OD mm	wall thickness mm
SPW 6L/S	6	1-1.5
SPW 8L/S	8	1-2.5
SPW 10L/S	10	1-3.0
SPW 12L/S	12	1-3.5
SPW 15L/S	15	2-3.0
SPW 16L/S	16	2-4.0
SPW 18L/S	18	2-3.0
SPW 20L/S	20	2.5-4.0
SPW 22L/S	22	2-3.5
SPW 25L/S	25	2.5-5.0
SPW 28L/S	28	2.5-5.0
SPW 30L/S	30	3-6.0
SPW 35L/S	35	2.5-6.0
SPW 38L/S	38	3-6.0
SPW 42L/S	42	3-4.0



Tools FOW		
Description	tube OD mm	wall thickness mm
FOW 6X1-1,5 L/S	6	1-1.5
FOW 8X1-1,5 L/S	8	1-1.5
FOW 8X2+L/S	8	2-2.5
FOW 10X1-1,5L/S	10	1-1.5
FOW 10X2+L/S	10	2-3.0
FOW 12X1-1,5L/S	12	1-1.5
FOW 12X2+L/S	12	2-3.5
FOW 15X2+	15	2-3.0
FOW 16X2+	16	2-4.0
FOW 18X2+	18	2-3.0
FOW 20X2,5+	20	2.5-4.0
FOW 22X2+	22	2-3.5
FOW 25X2,5+	25	2.5-5.0
FOW 28X2,5+	28	2.5-5.0
FOW 30X3+	30	3-6.0
FOW 35X2,5+	35	2.5-6.0
FOW 38X3+	38	3-6.0
FOW 42X3+	42	3-4.0

TUBE END FORMING & TUBE MANIPULATION MACHINERY



Mobilpress PB 642 Tube Bending Machine

Machine for hydraulic bending of tubes of 6-42 mm in steel St35, St37, St52 as well as stainless steel tubes. The maximum bending efficiency is 38x5 mm resp. 42x4 mm.

Three different machines are available.

- > PBEH 642 F
- > PBEH 642
- > PBM 642

Technical Specifications PB 642 Mobilpress		PBEH 642 F	PBEH 642	PBM 642
		400 V / 3-phase	400 V / 3-phase	manual
operating pressure	max. bar	250	250	
electric drive	Hz	50	50	
weight	ca. kg	70		
tube bending efficiency	mm diameter x wall thickness	38x5 or 42x4	38x5 or 42x4	
order code		PRESSBIEGER PBEH 642 - F	PRESSBIEGER PBEH 642	PRESSBIEGER PBM

Tools	PB 642
Bending matrix	TPM
Bending wing head	TPG

Bending Tools TPM



Bending Wing Heads TPG



Tools TPM			
Description	tube OD mm; inch	thread tube OD mm	bending radius
TPM 06	6		2.0xD
TPM 08	8		2.0xD
TPM 10	10		2.0xD
TPM 12	12		2.0xD
TPM 14	14; 1/4	13.5	2.0xD
TPM 15	15		2.0xD
TPM 16	16		2.0xD
TPM 18	18; 3/8	17.2	2.5xD
TPM 20	20		2.0xD
TPM 22	22; 1/2	21.3	2.5xD
TPM 25	25		2.4xD
TPM 28	28; 3/4	26.9	2.7xD
TPM 30	30		2.5xD
TPM 35	35; 1	33.7	3.0xD
TPM 38	38		2.5xD
TPM 42	42; 1 1/4	42.1	3.0xD

Tools TPG	
Description	tube OD mm
TPG 6/8	6 + 8
TPG 10/12	10 + 12
TPG 14/16	14 + 16
TPG 18/20	18 + 20
TPG 22/25	22 + 25
TPG 28/30	28 + 30
TPG 35/38	35 + 38
TPG 42	42

TUBE END FORMING & TUBE MANIPULATION MACHINERY

THE WORLD OF ASSEMBLY MACHINERY

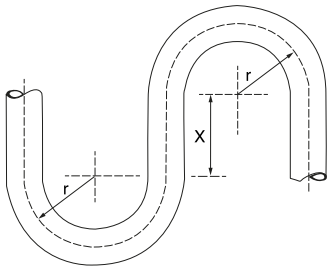


RBV 6/18 Tube Bending Device

This device comes with 6 changeable bending rollers for tubes from 6 to 18 mm.

Weight of each piece: approx. 4 kg

Ease-of-use: ideal for workshop independent, mobile bending operations.



Technical Specifications RBV 6/18

Description	tube OD mm	gas tube	r	~ x	~ kg/pc
RBV 6/18	6		33.0	35	4
	8		34.0	35	
	10	1/8	35.5	35	
	12		36.5	35	
	14	1/4	36.5	35	
	15		44.0	38	
	16		44.0	38	
	18	3/8	51.5	42	

CUTTING MACHINES

Gates cutters – both the hose cutters and steel tube cutters – are robust and compact machines, and distinguish themselves by their safe and high-quality cutting function. Our range of electrical cutters is all hand controlled for guided cutting thus allowing for optimal speed control and a reduction of blade damage. The blades are positioned close to the powerful motors to limit vibration which enhances the durability and reduces maintenance costs. But there is more: low energy consumption, CE compliant brake motors for 3-phase cutting machines, built-in protection, limited smoke production ... all supporting your safe working environment and personnel safety.

OVERVIEW








Unicut TC 080 Metal Saw

Unicut is a compact transportable hand circular saw for all types of metal tubes. The saw can be used for straight and mitre cuts, has an integrated automatic cooler and offers best performance for accurate cuts in order to fit tubes perfectly.

Saw blades high-speed steel with DMO surface coating.

Dimension 250 x 2.0 x 32 with 2 side holes 12/64 mm.

cutting section		45°	90°
	mm Ø	70	80
	mm Ø	40	40
	mm	60	70
	mm	40	40
	mm	65x60	95x60

Technical Specifications Unicut TC 080		TC 080	TC 080
		400 V / 3-phase	220 V
mitre cuts		up to 45°	up to 45°
electric drive	kW/Hz	1.0/50	0.8/50
weight	ca. kg	71	71
rotational speed	rev/min	52	52
dimensions (mm)	H	700	700
	W	850	850
	D	450	450
order code		UNICUT TC 080/380V	UNICUT TC 080/220V

Tools	TC 080
Saw blade for thick-walled profiles and solid materials	HSS-SÄGEBLATT 250/128
Saw blade for thin-walled profiles and tubes	HSS-SÄGEBLATT 250/200

CUTTING MACHINES

THE WORLD OF ASSEMBLY MACHINERY



MKX 40 Hose Cutter

Heavy-duty hose cutter allowing quick and reliable production across all hose size ranges. Cuts up to 2" six spiral wire hose. The brake motor ensures the blade stops turning within 10 seconds after switch-off. For workshop professionals who want to further enhance their set-up and improve ease-of-use.

Ref: 7480-19229: 3 phase

Technical Specifications MKX 40		
		3 phase
power supply		380V
maximum capacity	WB	2"
	4SW	2"
	6SW	2"
motor (kW)		4.6
brake motor		x
noise level		90dB
suction connection (mm)		60
cutting blade		350x3x30
dimensions (mm)	H	430
	W	690
	L	745
weight (kg)		75
product number		7480-19229

CUTTING MACHINES



MKX 30 Hose Cutter

Robust cutter for all types of workshops. Cuts up to 1.1/4" six spiral wire hose. The brake motor ensures the blade stops turning within 10 seconds after switch-off.

Ref: 7480-19191: 3 phase

Technical Specifications MKX 30		
		3 phase
power supply		380V
maximum capacity	WB	1.1/4"
	4SW	1.1/4"
	6SW	1.1/4"
motor (kW)		3.0
brake motor		x
noise level		80dB
suction connection (mm)		80
cutting blade		275x3x30
dimensions (mm)	H	300
	W	440
	L	540
weight (kg)		50
product number		7480-19191

CUTTING MACHINES

THE WORLD OF ASSEMBLY MACHINERY



MKX 25 Hose Cutter

Compact cutting machine, perfectly suitable for the small workshop. Cuts up to 1.1/4" four spiral wire hose.

Ref: 7480-19190: 1 phase / 7480-19189: 12V

Technical Specifications MKX 25			
		DC	1 phase
power supply		12V	220V
maximum capacity	WB	1.1/4"	1.1/4"
	4SW	1.1/4"	1.1/4"
	6SW	--	--
motor (kW)		2.0	2.2
brake motor		--	--
noise level		93dB	90dB
suction connection (mm)		40	40
cutting blade		250x2.5x40	200x1.6x30
dimensions (mm)	H	365	540
	W	567	510
	L	470	400
weight (kg)		29	20
product number		7480-19189	7480-19190

ACCESSORIES



MKX Suction Unit

MKX Suction Unit allowing you to safely remove rubber particles and smoke released during the hose cutting operation. The particles are sucked into the container removing any hindering smell. The spark arrester between the cleaner box and the suction hose also ensures that glowing particles and rubber waste are immediately removed, thus minimizing the risk for fire.

Depending which MKX-cutter you have selected you can select the right adaptor to connect your cutter to the MKX suction unit:

- > MKX40 adaptor ring: 80 mm Ø connection (8000-10395)
- > MKX30 adaptor ring: 50 mm Ø connection (8000-10368)
- > MKX25 adaptor ring: 40 mm Ø connection (8000-10375)

Ref: 8000-10367

CRIMPING MACHINES

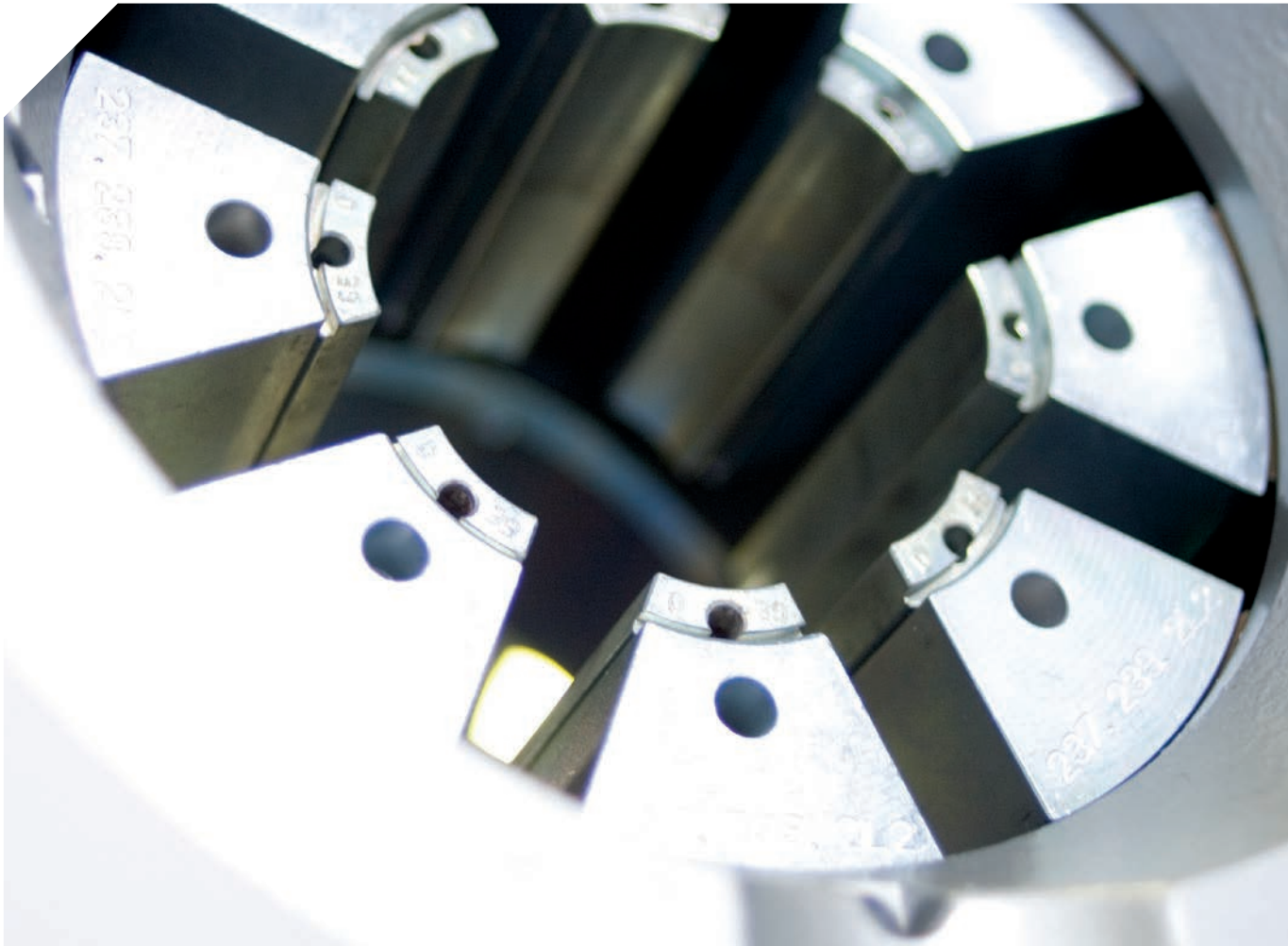
With Gates crimpers safe, fast and efficient assembly of hydraulic hoses and couplings is made simple. All machines are custom-designed to work with a well-defined range of Gates hoses and couplings allowing production of factory-quality assemblies fully complying with European Directives and the most stringent international standards. In addition, our self-assembly machinery offers the highest care and personal safety in your working environment (from workshops to mobile service operations and even on-site field crimping).

Lower maintenance costs from grease-free machines

Gates MCX crimpers cut your maintenance costs by running grease-free. These crimpers come with a unique, self-lubricating slide bearing system that cuts out metal-to-metal abrasion between master dies and the crimper head and cuts friction by 20%. No need for greasing also brings you a safer and cleaner working environment.

Easy-to-use products improve productivity

All Gates applications are designed to ensure fast, comfortable handling and we have incorporated this also in our crimper program. In our electrical-driven crimpers, a standard built-in storage rack lets you choose dies quickly, and die sets are easy-to-reach and organised logically. Field service crimping devices are portable and come with a detachable die storage case, solid and durable handles and resistant rubber protection layers. Our ergonomic design is highly valued both for its contribution to higher productivity figures and its fast approval by local Health and Safety Executives.



CRIMPING MACHINES

THE WORLD OF ASSEMBLY MACHINERY

OVERVIEW



MCX 50

Full-range crimper (up to 2" six spiral wire hose) for the professional workshop. Optional foot pedal to enable hands-free operation. Equipped with a die set storage rack allowing for logically organised die storage within easy reach of the operator, thus speeding up die selection and assembly.

Ref: 7480-19188: 3 phase

Technical Specifications MCX 50		
		3 phase
power supply		380V
maximum capacity	WB	2"
	4SW	2"
	6SW	2"
crimping force (ton)		280
motor (kW)		5.5
die set		239*/237-Dxx
cycle time (sec)		18
die storage		rack
dimensions (mm)	H	1400
	W	580
	L	610
weight (kg)		410
product number		7480-19188
options	marking dies	x**
	quick die change	x
	back stop	7480-19198
	foot pedal	7480-19199

* Only with intermediate dies.

** Marking die in type 239 only up to 239-D37.

CRIMPING MACHINES



MCX 30

Compact, operator-friendly machine to crimp the complete Gates range up to 1.1/4". Equipped with a die set storage rack allowing for logically organised die storage within easy reach of the operator, thus speeding up die selection and assembly. Also available for mobile service with separate DC power pack.

Ref: 7480-19187: 3 phase / 7480-19186: 1 phase / 7480-19186: 12V

Technical Specifications MCX 30				
		DC	1 phase	3 phase
power supply		12V	220V	380V
maximum capacity	WB	1.1/4"	1.1/4"	1.1/4"
	4SW	1.1/4"	1.1/4"	1.1/4"
	6SW	1.1/4"	1.1/4"	1.1/4"
crimping force (ton)		180	180	180
motor (kW)		1.8	2.2	3
die set		239-Dxx	239-Dxx	239-Dxx
cycle time (sec)		41	41	20
die storage		rack	rack	rack
dimensions (mm)	H	550	790	790
	W	475	600	600
	L	395	550	550
weight (kg)		125	170	170
product number		7480-19185	7480-19186	7480-19187
options	marking dies	x*	x*	x*
	quick die change	x	x	x

* Marking die in type 239 only up to 239-D37.

CRIMPING MACHINES

THE WORLD OF ASSEMBLY MACHINERY



MCX 25

Compact crimper for low-volume production. Ideal as starter machine or for small workshops. Crimps no-skive GlobalSpiral couplings up to 1" and no-skive MegaCrimp® couplings for wire-braid hose up to 1.1/4". Equipped with a die set storage rack allowing for logically organised die storage within easy reach of the operator, thus speeding up die selection and assembly. Also available for mobile service with separate DC power pack.

Ref: 7480-19184: 3 phase / 7480-19183: 1 phase / 7480-19182: 12V

Technical Specifications MCX 25				
		DC	1 phase	3 phase
power supply		12V	220V	380V
maximum capacity	WB	1.1/4"	1.1/4"	1.1/4"
	4SW	1"	1"	1"
	6SW	--	--	--
crimping force (ton)		130	130	130
motor (kW)		1.8	2.2	3
die set		239-Dxx	239-Dxx	239-Dxx
cycle time (sec)		39	39	19
die storage		rack	rack	rack
dimensions (mm)	H	550	790	790
	W	475	600	600
	L	395	550	550
weight (kg)		115	160	160
product number		7480-19182	7480-19183	7480-19184
options	marking dies	x*	x*	x*
	quick die change	x	x	x

* Marking die in type 239 only up to 239-D37.

CRIMPING MACHINES



MCX 20

Powerful, lightweight, portable hand-operated crimper, ideal for field service operations. Comes with separate box, designed to contain complete set of dies. Crimps no-skive GlobalSpiral couplings up to 1" and no-skive MegaCrimp® couplings for wire-braid hose up to 1.1/4".

Ref: 7480-19181

Technical Specifications MCX 20		
		manual
power supply		--
maximum capacity	WB	1.1/4"
	4SW	1"
	6SW	--
crimping force (ton)		90
die set		263-Dxx
die storage		box
dimensions (mm)	H	370
	W	450
	L	470
weight (kg)		35
product number		7480-19181
options	marking dies	x*

* Marking die in type 263 only up to 263-D35.



MC 1001

Lightweight, portable crimper designed for reliability in field service. Comes with separate box, designed to contain complete set of dies. The pneumatic version has a foot-operated air pump. Crimps no-skive MegaCrimp® couplings for wire-braid hose up to 1".

Ref: 7480-19164: manual machine / 7480-19165: air operated machine

Technical Specifications MC 1001			
		manual	pneumatic
power supply		--	7bar/100psi
maximum capacity	WB	1"	1"
	4SW	--	--
	6SW	--	--
crimping force (ton)		27	27
die set		MC1000-Dxx	MC1000-Dxx
die storage		box	box
dimensions (mm)	H	460	460
	W	280	280
	L	390	390
weight (kg)		24	22
product number		7480-19164	7480-19165

CRIMPING MACHINES

THE WORLD OF ASSEMBLY MACHINERY

DIE SELECTION MATRIX

Current Machinery

-size	Hose					Coupling	Die	MC1001 MC1000-Dxx	MCX20 MCX 263-Dxx	MCX25 MCX 239-Dxx	MCX30 MCX 239-Dxx
-4	M6K	M5K	M4K	M3K		G	D21	x	x	x	x
	CM2T	G2	G1	TH8	TH7	G	D21	x	x	x	x
	G3H	GTH		ACR		G	D21	x	x	x	x
	2JC	1JC	GP80+	GP60	GP40	G	D21	x	x	x	x
-5		M5K	M4K	M3K		G	D22	x	x	x	x
	CM2T	G2	G1		TH7	G	D22	x	x	x	x
		GTH				G	D22	x	x	x	x
	2JC	1JC	GP80+	GP60	GP40	G	D22	x	x	x	x
-6		M5K	M4K	M3K		G	D22	x	x	x	x
	CM2T	G2	G1	TH8	TH7	G	D22	x	x	x	x
	G3H	GTH		ACR		G	D22	x	x	x	x
	2JC	1JC	GP80+	GP60	GP40	G	D22	x	x	x	x
	EFG6K	EFG5K	EFG4K			GS	D33		x	x	x
-8		M5K	M4K	M3K		G	D33	x	x	x	x
	CM2T	G2	G1	TH8	TH7	G	D33	x	x	x	x
	G3H	GTH		ACR		G	D33	x	x	x	x
	2JC	1JC	GP80+	GP60	GP40	G	D33	x	x	x	x
	EFG6K	EFG5K	EFG4K			GS	D33		x	x	x
-10			M4K	M3K		G	D34	x	x	x	x
	CM2T	G2	G1			G	D34	x	x	x	x
	G3H	GTH		ACR		G	D34	x	x	x	x
			GP80+	GP60	GP40	G	D34	x	x	x	x
	EFG6K	EFG5K	EFG4K		HD-UHP	GS	D35		x	x	x
-12			M4K	M3K		G	D35	x	x	x	x
	CM2T	G2	G1	TH8	TH7	G	D35	x	x	x	x
		GTH	GMV	ACR		G	D35	x	x	x	x
			GP80+	GP60	GP40	G	D35	x	x	x	x
	EFG6K	EFG5K	EFG4K		HD-UHP	GS	D35		x	x	x
-16				M3K		G	D37	x	x	x	x
	CM2T	G2	G1	TH8	TH7	G	D37	x	x	x	x
		GTH	GMV	ACR		G	D37	x	x	x	x
			GP80+	GP60	GP40	G	D37	x	x	x	x
	EFG6K	EFG5K	EFG4K		HD-UHP	GS	D37		x	x	x
-20		G2	G1			G	D39		x	x	x
			GMV	ACR		G	D39		x	x	x
			GP80+		GP40	G	D39		x	x	x
			EFG4K	EFG3K			GS	D39			x
	EFG6K	EFG5K			HD-UHP	GS	D310				x
-24	M2T	G2	G1			GSP	D310				
			GMV	ACR		GSP	D310				
			GP80+		GP40	GSP	D310				
				EFG3K			GSP	D311			
	EFG6K	EFG5K				GSM	D311				
-32	M2T	G2	G1			GSP	D312				
			GMV	ACR		GSP	D312				
			GP80+			GSP	D312				
				EFG3K				D313			
	EFG6K	EFG5K					D314				

wire-braid reinforcement

4 spiral wire reinforcement

6 spiral wire reinforcement

* Only with intermediate dies

Note: High/Low Temp, MTF, XTF & Twin solutions follow the die set recommendation of its standard equivalent

CRIMPING MACHINES

Legacy Machinery

	MCX50 MCX 239-Dxx *	MCX50 237-Dxx	MC5001 - MC3001 - MC2501	MC5000 - MC3000 - MC2000	K2503 - MC1000	K4003 - K7003 - S5101	P32 - FP110 - P51 - FP120 - FP140 - FP160	P20HP - FP20 - P21
	x		MC5001-D21	MC5001-D21	MC1001-D21	K4/K7/S5-D21	FP P32-D21	FP P20-D21
	x		MC5001-D21	MC5001-D21	MC1001-D21	K4/K7/S5-D21	FP P32-D21	FP P20-D21
	x		MC5001-D21	MC5001-D21	MC1001-D21	K4/K7/S5-D21	FP P32-D21	FP P20-D21
	x		MC5001-D21	MC5001-D21	MC1001-D21	K4/K7/S5-D21	FP P32-D21	FP P20-D21
	x		MC5001-D22	MC5001-D22	MC1001-D22	K4/K7/S5-D22	FP P32-D22	FP P20-D22
	x		MC5001-D22	MC5001-D22	MC1001-D22	K4/K7/S5-D22	FP P32-D22	FP P20-D22
	x		MC5001-D22	MC5001-D22	MC1001-D22	K4/K7/S5-D22	FP P32-D22	FP P20-D22
	x		MC5001-D22	MC5001-D22	MC1001-D22	K4/K7/S5-D22	FP P32-D22	FP P20-D22
	x		MC5001-D22	MC5001-D22	MC1001-D22	K4/K7/S5-D22	FP P32-D22	FP P20-D22
	x		MC5001-D22	MC5001-D22	MC1001-D22	K4/K7/S5-D22	FP P32-D22	FP P20-D22
	x		MC5001-D22	MC5001-D22	MC1001-D22	K4/K7/S5-D22	FP P32-D22	FP P20-D22
	x		MC5001-D22	MC5001-D22	MC1001-D22	K4/K7/S5-D22	FP P32-D22	FP P20-D22
	x		MC5001-D33	MC5001-D33		K4/K7/S5-D33	FP P32-D33	FP P20-D33
	x		MC5001-D33	MC5001-D33	MC1001-D33	K4/K7/S5-D33	FP P32-D33	FP P20-D33
	x		MC5001-D33	MC5001-D33	MC1001-D33	K4/K7/S5-D33	FP P32-D33	FP P20-D33
	x		MC5001-D33	MC5001-D33	MC1001-D33	K4/K7/S5-D33	FP P32-D33	FP P20-D33
	x		MC5001-D33	MC5001-D33	MC1001-D33	K4/K7/S5-D33	FP P32-D33	FP P20-D33
	x		MC5001-D33	MC5001-D33		K4/K7/S5-D33	FP P32-D33	FP P20-D33
	x		MC5001-D34	MC5001-D34	MC1001-D34	K4/K7/S5-D34	FP P32-D34	FP P20-D34
	x		MC5001-D34	MC5001-D34	MC1001-D34	K4/K7/S5-D34	FP P32-D34	FP P20-D34
	x		MC5001-D34	MC5001-D34	MC1001-D34	K4/K7/S5-D34	FP P32-D34	FP P20-D34
	x		MC5001-D34	MC5001-D34	MC1001-D34	K4/K7/S5-D34	FP P32-D34	FP P20-D34
	x		MC5001-D35	MC5001-D35			FP P32-D35	FP P20-D35
	x		MC5001-D35	MC5001-D35	MC1001-D35	K4/K7/S5-D35	FP P32-D35	FP P20-D35
	x		MC5001-D35	MC5001-D35	MC1001-D35	K4/K7/S5-D35	FP P32-D35	FP P20-D35
	x		MC5001-D35	MC5001-D35	MC1001-D35	K4/K7/S5-D35	FP P32-D35	FP P20-D35
	x		MC5001-D35	MC5001-D35	MC1001-D35	K4/K7/S5-D35	FP P32-D35	FP P20-D35
	x		MC5001-D35	MC5001-D35			FP P32-D35	FP P20-D35
	x		MC5001-D37	MC5001-D37	MC1001-D37	K4/K7/S5-D37	FP P32-D37	FP P20-D37
	x		MC5001-D37	MC5001-D37	MC1001-D37	K4/K7/S5-D37	FP P32-D37	FP P20-D37
	x		MC5001-D37	MC5001-D37	MC1001-D37	K4/K7/S5-D37	FP P32-D37	FP P20-D37
	x		MC5001-D37	MC5001-D37	MC1001-D37	K4/K7/S5-D37	FP P32-D37	FP P20-D37
	x		MC5001-D37	MC5001-D37			FP P32-D37	FP P20-D37
	x		MC5001-D39	MC5001-D39			FP P32-D39	FP P20-D39
	x		MC5001-D39	MC5001-D39			FP P32-D39	FP P20-D39
	x		MC5001-D39	MC5001-D39			FP P32-D39	FP P20-D39
	x		MC5001-D39	MC5001-D39			FP P32-D39	FP P20-D39
	x		MC5001-D310B	MC5001-D310B			FP P32-D310	
	x		MC5001-D310B	MC5001-D310B			FP P32-D310	
	x		MC5001-D310B	MC5001-D310B			FP P32-D310	
	x		MC5001-D310B	MC5001-D310B			FP P32-D310	
		x	MC5001-D311	MC5001-D311			FP P32-D311	
		x	MC5001-D311	MC5001-D311			FP P32-D311	
		x	MC5001-D312	MC5001-D312			FP P32-D312	
		x	MC5001-D312	MC5001-D312			FP P32-D312	
		x	MC5001-D312	MC5001-D312			FP P32-D312	
		x	MC5001-D313	MC5001-D313			FP P32-D313	
		x	MC5001-D314B	MC5001-D314B			FP P32-D314	

Note: The list of die sets for legacy machines does not indicate the capability of each given machine to the respective hose-coupling combination, but only gives an overview of the die sets available in the respective die type, please refer to your installation and calibration manual for maximum hose-coupling capability of your respective self-assembly machine.

CRIMPING MACHINES

THE WORLD OF ASSEMBLY MACHINERY

ACCESSORIES



Quick die change tool (QDC)

The universal quick die change tool allows fast and easy change of dies without risk of damage to the die sets. The transparent shield of the QDC allows you to quickly and safely position die sets into the master dies of the crimper head. A single press of the closing button is enough to lock the dies safely in place and rapidly produce a perfect hose assembly. When buying an electrical crimper, the QDC that goes together with the respective machine will be included in the package.

Ref: 7480-19194: QDC MCX 25 / 7480-19200: QDC MCX 30 / 7480-19195: QDC MCX 50



Marking dies

To facilitate compliance with the European Machinery Directive, which insists that finished assemblies are marked with the manufacturer's name and the manufacturing date code, a range of marking dies is now available for the MCX 50, MCX 30, MCX 25 and MCX 20 machines.

Please contact Gates for further information.



e-Crimp: online crimp settings in seconds

You no longer need to search through a stockpile of cd-roms to find the correct crimp settings. Go to ww2.gates.com/europe/e-crimp and use our fast sign-up procedure to obtain correct crimp settings in seconds! After logging in, you can access the Crimp Data Sheets, sorted by machine type. Select your machine type and print out an up-to-date sheet with accurate crimp data information or download the pdf documents to your desktop or mobile devices. Regular e-mails from our engineers keep you up to date about the newest crimp settings in the market.

ANCILLARIES



Optigrat OG 642 Tube Deburring Machine

Electrically driven deburring unit for quick and clean inner and outer deburring of tubes from 6 to 42 mm diameter. The device is made of HSS steel to ensure mark-free deburring with extraordinary service life.

Technical Specifications OG 642 Optigrat		OG 642
		400 V / 3-phase
rotational speed inner deburring	rev/min	300
rotational speed outer deburring	rev/min	200
electric drive	Hz	50
weight	ca. kg	30
dimensions (mm)	H	225
	W	492
	D	333
order code		OPTIGRAT OG 642



TC 1036 S Uniclean Tube Rinsing Machine

Tube systems should not be installed without being carefully cleaned to avoid blocked valves and other problems. Uniclean permits easy cleaning directly at the place of assembly and is applicable for tubes from 6-42 mm outer diameter. It is equipped with a two-stage turbo-nozzle and an effective tank sealing with a special air filter for easy maintenance.

Technical Specifications TC 1036 S Uniclean		TC 1036 S
TC 1036 S Uniclean	bar	6
maximum mains air pressure	bar	18
operating pressure	bar	2-8
max. working pressure medium to pistol	bar	32
max. air requirement	ltr./min	400
inner tube diameter	mm	4-40
max. tube length	m	6
max. hose length	m	7.5
medium tank capacity	ltr.	30
electric drive	Hz	50
weight	ca. kg	30
	mm H	500
	mm W	380
dimensions	mm D	640
order code		UNICLEAN TC 1036 S

ANCILLARIES

THE WORLD OF ASSEMBLY MACHINERY



Ref: 7480-19193

MSX Hose Assembly Marking machine

This hand-operated marking machine is a precise, compact service-free bench unit for Gates ferrules, one-piece and two-piece fittings. The MSX 50 is equipped with a hand wheel to adjust the character setting to the ferrule for the requested marking depth. The slot in the character holder allows for easy character placement. The machine is compliant with the European Machinery Directive. Please contact Gates for order info on the required characters.



Ref: 7480-00100

Push-on tool

Pushing couplings on hoses can be a tough job. Gates Push-on tool makes the insertion of couplings on hoses quick and easy. This hand-operated coupling machine, with its rugged cast iron and steel construction, eliminates the hard work of manually pushing stems into hoses and improves your hose assembly cost-efficiency.



Ref: 7482-1342

MegaCrimp® insertion tool

The MegaCrimp® coupling insertion tool offers an easy way to confirm the right insertion depth for all Gates wire-braid hydraulic hoses. It also verifies the squareness of cut!

ANCILLARIES



Hose perforator

Gates hose perforators have needle-studded wooden rollers which perforate the covers on no-skive wire-braid and spiral wire hoses used in pressure gas applications (up to 3.5 MPa). 7482-06565 is recommended for hoses from 3/16" to 3/4", 7482-06566 for hoses from 1" to 2".

Ref: 7482-06565: 3/16" – 3/4" / 7482-06566: 1" – 2"



Rotational table

Rotational table ideal for the unwinding of hose coils. This large diameter hose table will support your complete range of braided and spiral wire hoses.

Ref: 7480-19135
