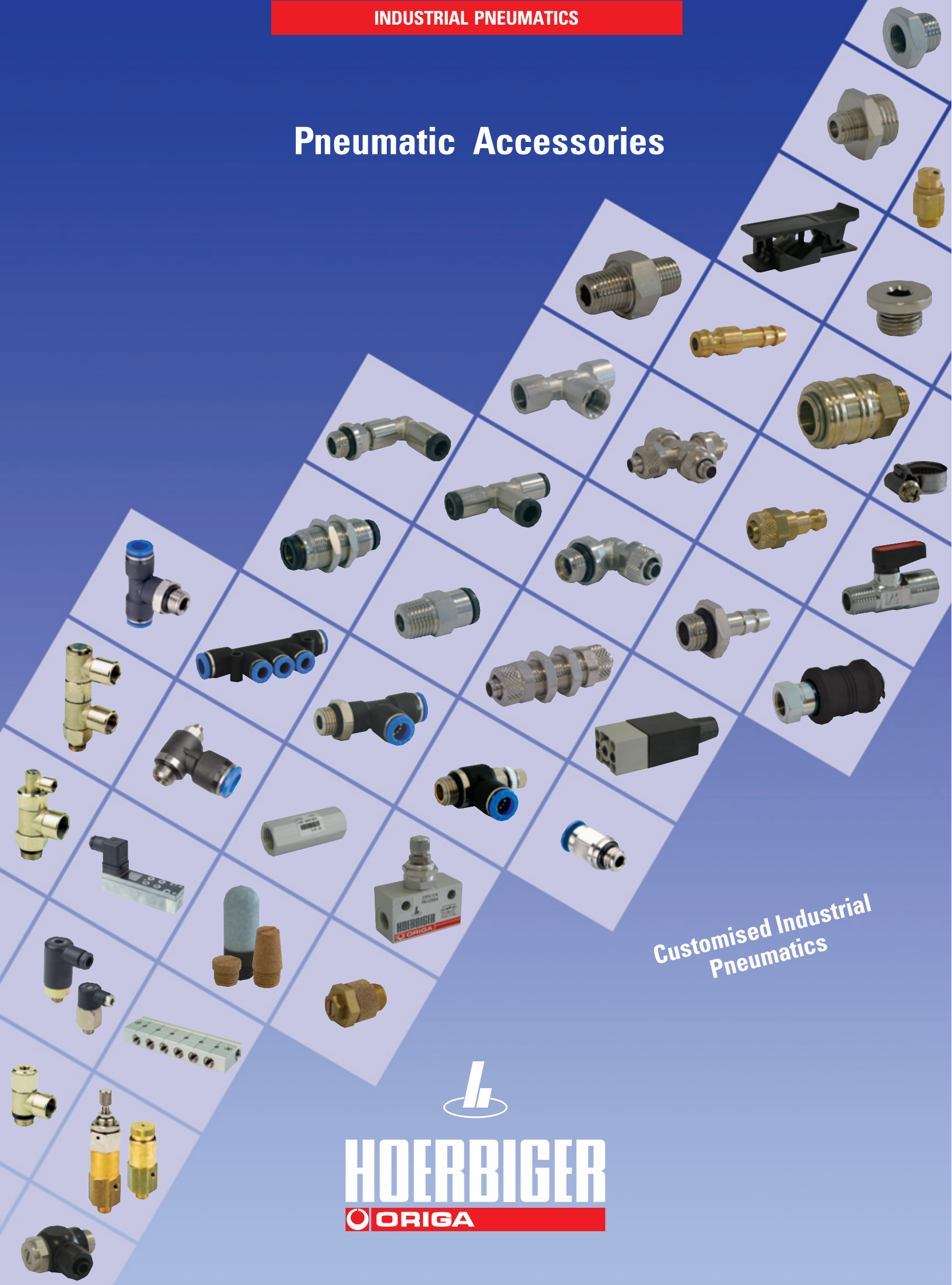


Pneumatic Accessories



Customised Industrial
Pneumatics



HOERBIGER
ORIGA

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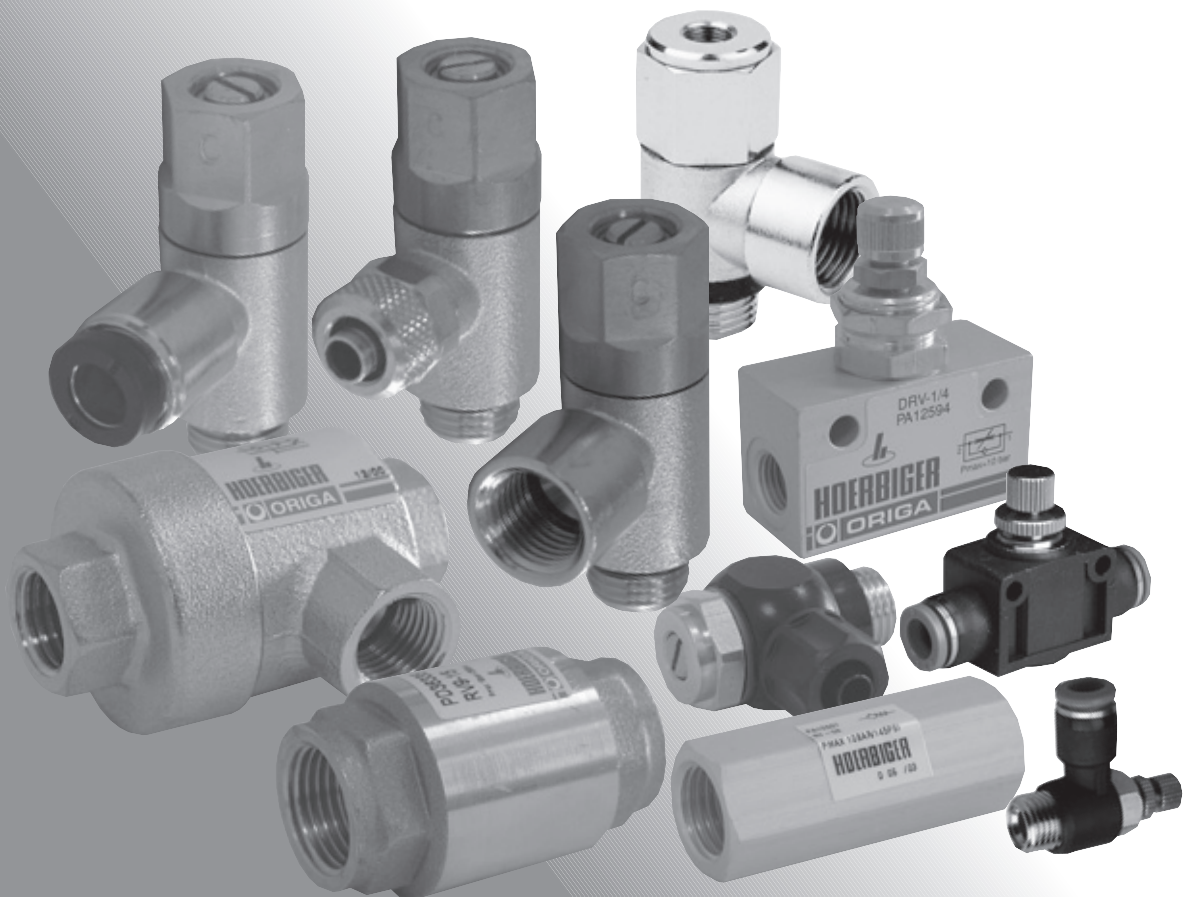
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Check Valves

- Check valves, in-line
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-
- Metal version
 - Plastic version



Check Valves G1/8, G1/4

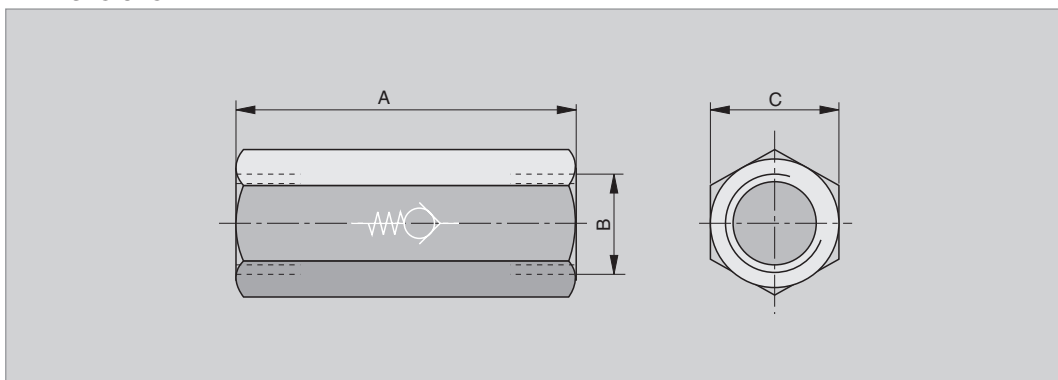


RV series check valves are designed for continuous flow (not suitable for pulsating flow).

Characteristics according to VDI 3293 Pressures quoted as gauge pressure

Characteristics	Symbol	Unit	Description	
General features				
Type			Spring loaded check valve	
Mounting			Directly in tubing	
Tube connection			Thread	
Port size			G1/8	G1/4
Weight (mass)		kg	0.02	0.02
Installation			In any position	
Ambient temperature range	ϑ_{\min} ϑ_{\max}	°C	-20 +80	Note: When using below freezing point (0 °C) it is necessary to consult us
Medium temperature range	ϑ_{\min} ϑ_{\max}	°C	0 +80	
Medium			Filtered compressed air, gases, fluids	
Lubrication			Oil mist lubrication compatible with Buna N	
Pneumatic Characteristics				
Nominal pressure	p_n	bar	6	
Operating pressure range	p_{\min} p_{\max}	bar bar	0.5 10	
Nominal flow	Q_N	l/min	700	1000
Flow direction			In one direction	
Differential pressure for opening		bar	<0.5	

Dimensions



Dimension Table and Order Instructions

Order Instructions		A	B	C
Type	Order No.			
RV-06	PA10024	40	G1/8	SW17
RV-08	PA12007	45	G1/4	SW17

Check Valves Series RV9

Characteristics according to VDI 3293 Pressures quoted as gauge pressure

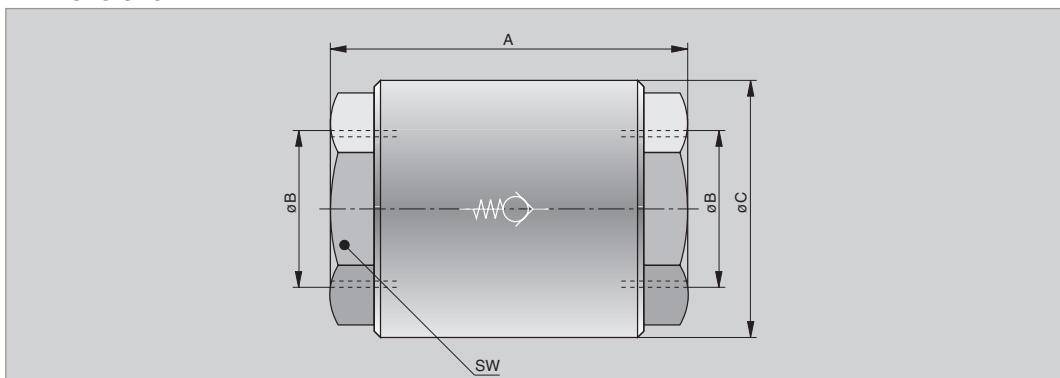
Characteristics	Symbol	Unit	Description					
General features								
Type			Spring loaded check valve					
Mounting			Directly in tubing					
Tube connection			Thread					
Port size			G3/8	G1/2	G3/4	G1	G11/4	G11/2
Weight (mass)		kg	0.18	0.19	0.27	0.49	0.74	0.98
Installation			In any position					
Ambient temperature range	ϑ_{\min} ϑ_{\max}	°C	-20	Note: When using below freezing point (0 °C) it is necessary to consult us				
		°C	+80					
Medium temperature range	ϑ_{\min} ϑ_{\max}	°C	0					
		°C	+110					
Medium			Filtered compressed air, cold and warm water, various oils					
Lubrication			Oil mist lubrication compatible with Buna N					
Material			Housing: brass Valve disc and guide: brass Seal/spring interface dish: stainless CrNi steel Spring: stainless CrNi steel Valve seal disc: special synthetic rubber composition					
Pneumatic Characteristics								
Nominal pressure	p_n	bar	6					
Operating pressure range	p_{\min} p_{\max}	bar bar	0.2 18					
Nominal flow rate	Q_N	l/min	3400	4335	7585	12500	20835	33335
Flow direction			In one direction					
Differential pressure for opening		bar	0.2					

Check Valves G3/8 – G11/2



RV9 series check valves are designed for continuous flow (not suitable for pulsating flow).

Dimensions



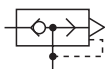
Dimension Table and Order Instructions

Order Instructions		A	B	C	SW
Type*	Order No.				
RV9-10	PD 36114	54	G3/8x10 deep	34	23
RV9-15	PD 36335	57	G1/2x10 deep	34	27
RV9-20	PD 36336	64	G3/4x10 deep	41	33
RV9-25	PD 36337	75	G1x12 deep	48	40
RV9-32	PD 36338	82	G11/4x12 deep	60	50
RV9-40	PD 36339	93	G11/2x14 deep	71	55

* other sizes on request

Dimensions in mm

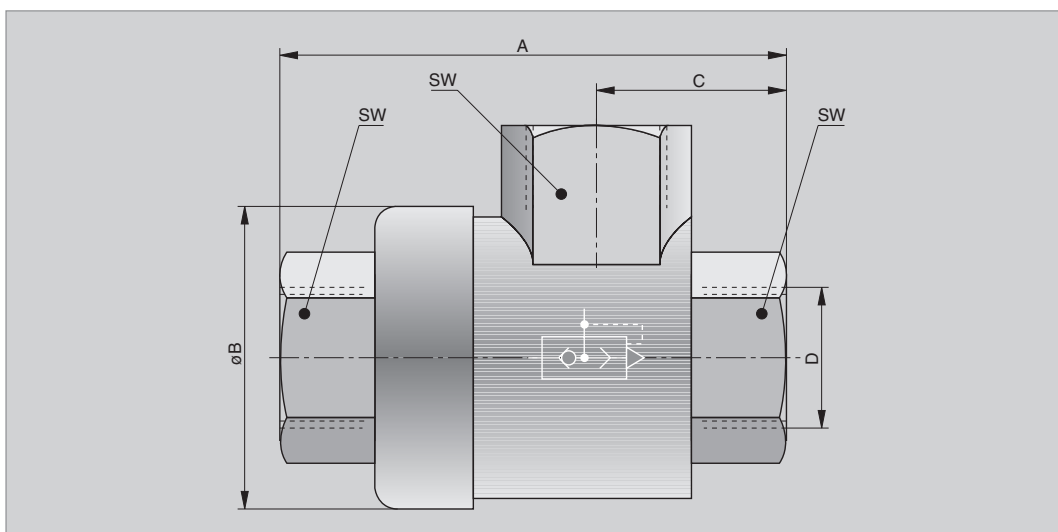
Quick Exhaust Valves G1/8 – G3/4



Characteristics according to VDI 3293 Pressures quoted as gauge pressure

Characteristics	Symbol	Unit	Description			
General Features						
Type			Poppet valve			
Mounting			Directly in tubing			
Tube connection			Thread			
Port size			G1/8	G1/4	G1/2	G3/4
Weight (mass)		kg	0.088	0.143	0.334	0.790
Installation			In any position			
Ambient temperature range	ϑ_{\min} ϑ_{\max}	°C	-10 +80	Note: When using below freezing point (0 °C) it is necessary to consult us		
Medium temperature range	ϑ_{\min} ϑ_{\max}	°C	0 +80			
Medium			Filtered compressed air			
Lubrication			Oil mist lubrication compatible with Buna N			
Pneumatic Characteristics						
Nominal pressure	p_n	bar	6			
Operating pressure range	p_{\min} p_{\max}	bar bar	0.5 10			
Nominal flow A→R	Q_N	l/min	800	1670	4500	10750

Dimensions



Dimension Table, Weight and Order Instructions

Order Instructions		A	B	C	D	SW	Weight (mass) (kg)
Type	Order No.						
SV-06-2	PD39152	42	Ø 27.5	15	G1/8	15	0.088
SV-08-2	PD39153	54	Ø 33	19	G1/4	19	0.143
SV-10-2	PD39154	54	Ø 33	19	G3/8	19	0.140
SV-15-2	PD39155	72	Ø 43	27	G1/2	26	0.334
SV-20-2	PD39156	87	Ø 49	35,5	G3/4	32	0.790

Throttle Check Valves Series DRV

Characteristics according to VDI 3293 Pressures quoted as gauge pressure

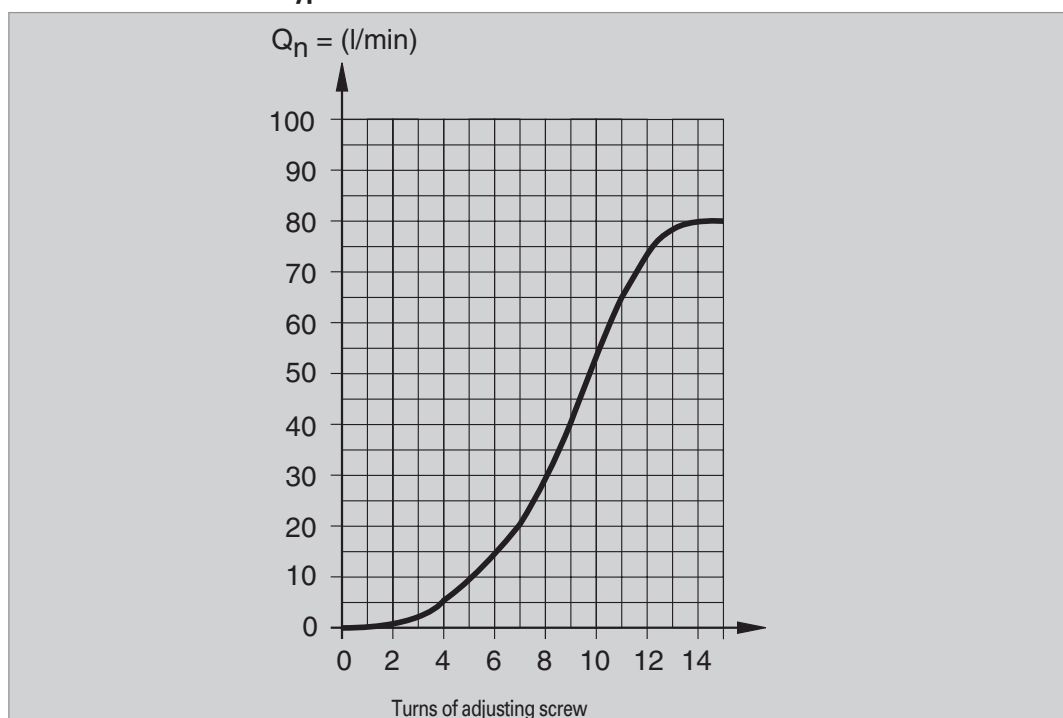
Characteristics	Symbol	Unit	Description				
General Features							
Type			Throttle valve with parallel check valve				
Mounting			Directly in tubing 2 through-bolts panel mounting				
Tube connection			Thread				
Port size			M5	G1/8	G1/4	G3/8	G1/2
Weight (mass)		kg	0.020	0.035	0.130	0.225	0.245
Installation			In any position				
Ambient temperature range	ϑ_{\min} ϑ_{\max}	°C	-20 +80	Note: When using below freezing point (0 °C)			
Medium temperature range	ϑ_{\min} ϑ_{\max}	°C	0 +80	it is necessary to consult us			
Medium			Filtered compressed air, lubricated or unlubricated				
Lubrication			Oil mist lubrication compatible with Buna N				
Pneumatic Characteristics							
Nominal pressure	p_n	bar	6				
Operating pressure range	p_{\min} p_{\max}	bar bar	0.5 10				
Nominal flow ¹⁾ (Throttle valve)	Q_N	l/min	80	125	450	1100	1200
Nominal flow ²⁾ (Check valve)	Q_N	l/min	80	125	450	1100	1200
Differential pressure for opening the check valve		bar	<0.5				

- 1) If the throttle is completely open
2) If the throttle is completely closed

Throttle Check Valves M5 – G1/2



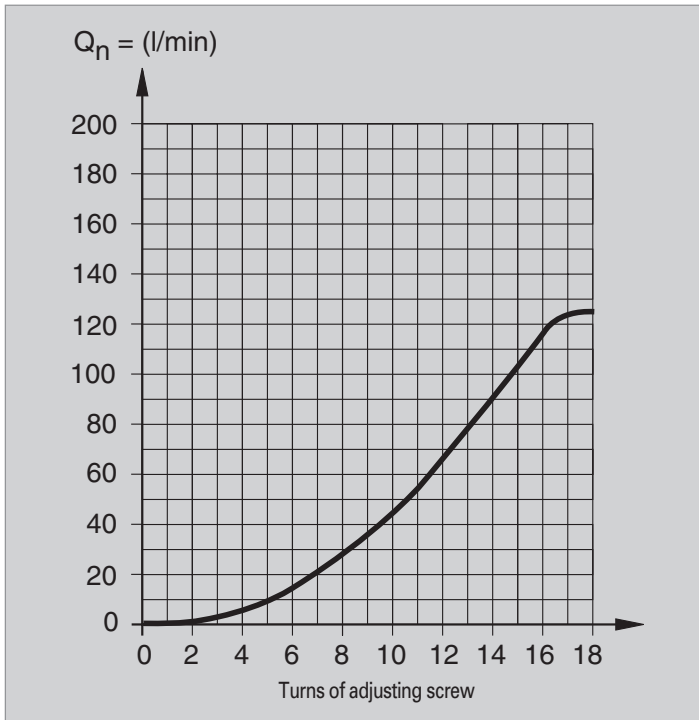
Flow Characteristics Type: DRV-M5



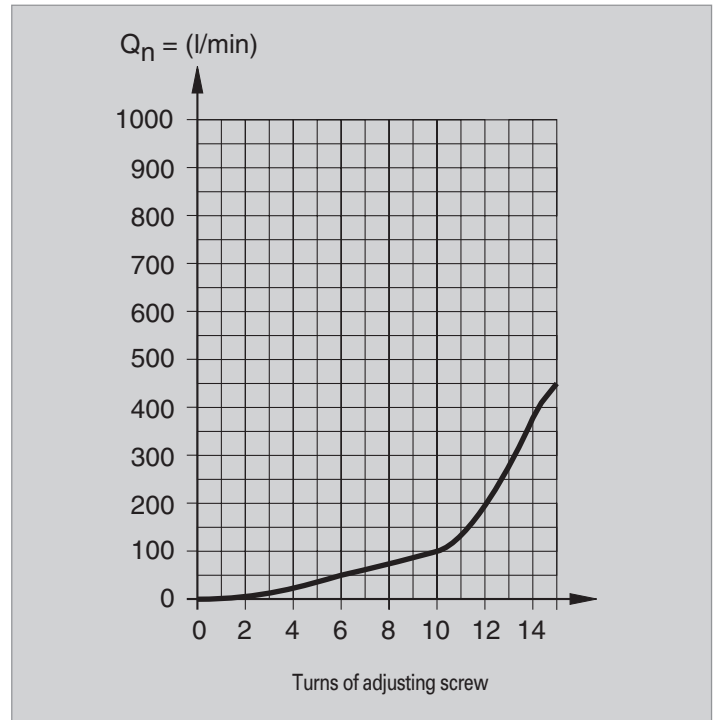
Check Valves – In-line

Throttle Check Valves Series DRV

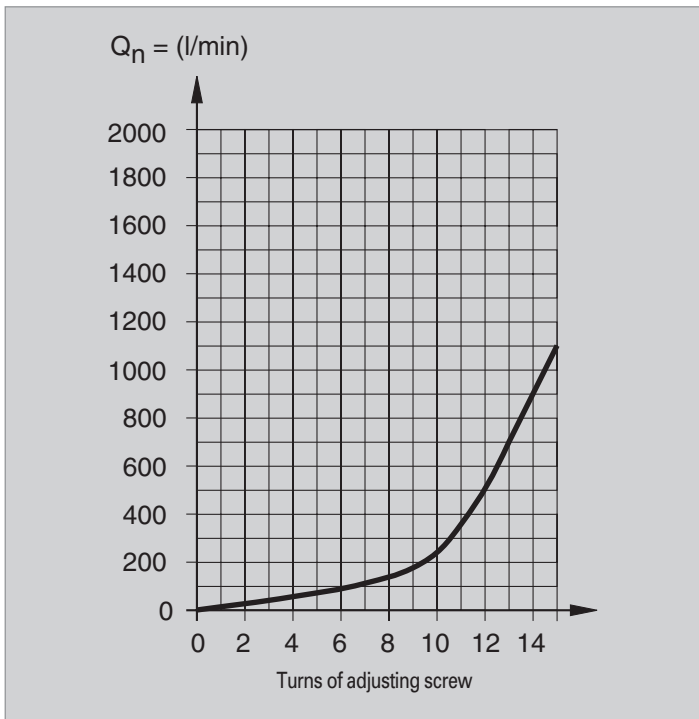
Flow Characteristics Type: DRV-1/8



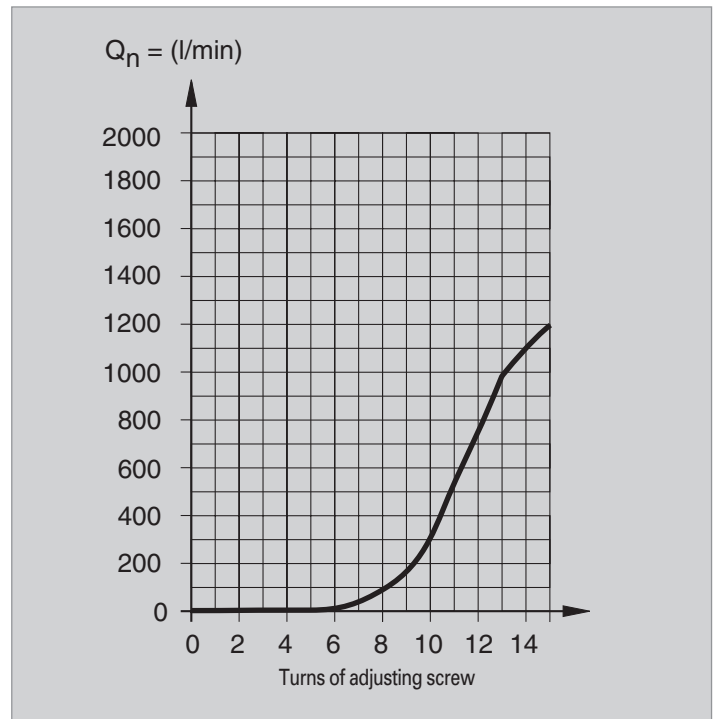
Flow Characteristics Type: DRV-1/4



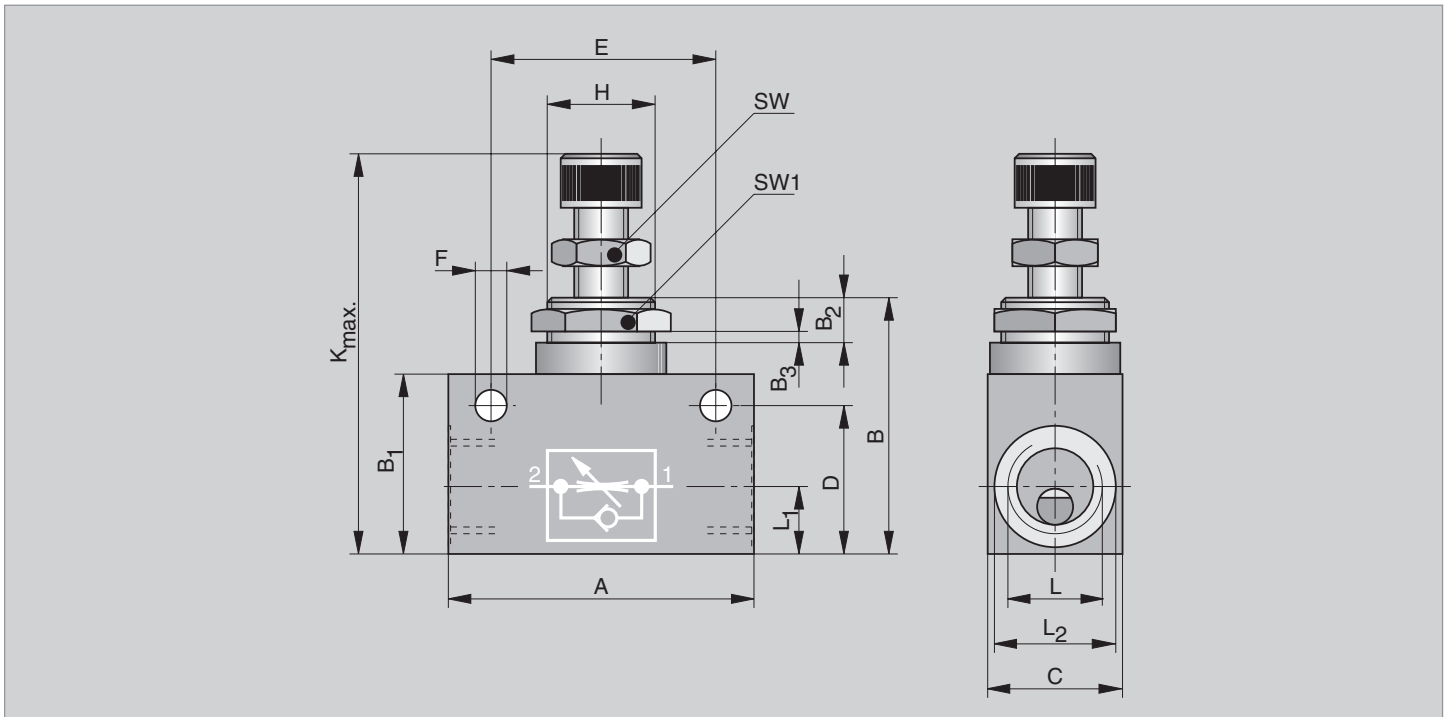
Flow Characteristics Type: DRV-3/8



Flow Characteristics Type: DRV-1/2



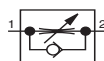
Dimensions



Dimension Table and Order Instructions

Order Instructions Type	Order No.	A	B	B ₁	B ₂	B ₃	C	D	E	ØF	H	L	L ₁	ØL ₂	K _{max}	SW	SW ₁
DRV-M5	PA 10232	26	16	26.5	6	2.5	14	12.5	18	4.4	M10x1	M5	5.5	8.5	44	7	14
DRV-1/8	PA 10233	32.5	22	31.5	6	2.5	16	17.5	24	4.4	M12x1	G1/8	9	13.5	52	10	17
DRV-1/4	PA 12594	55	32	48	10	4.5	25	25	35	6.5	M20x1.5	G1/4	12	19	72	13	22
DRV-3/8	PA 16143	58	40	57	10	5.0	30	33	43	6.5	M24x1.5	G3/8	13.5	23	92	19	27
DRV-1/2	PA 16144	68	40	57	10	5.0	30	33	50	6.5	M24x1.5	G1/2	15	27.5	92	19	27

Throttle Check Valves, Plastic, with push-in connections



Characteristics

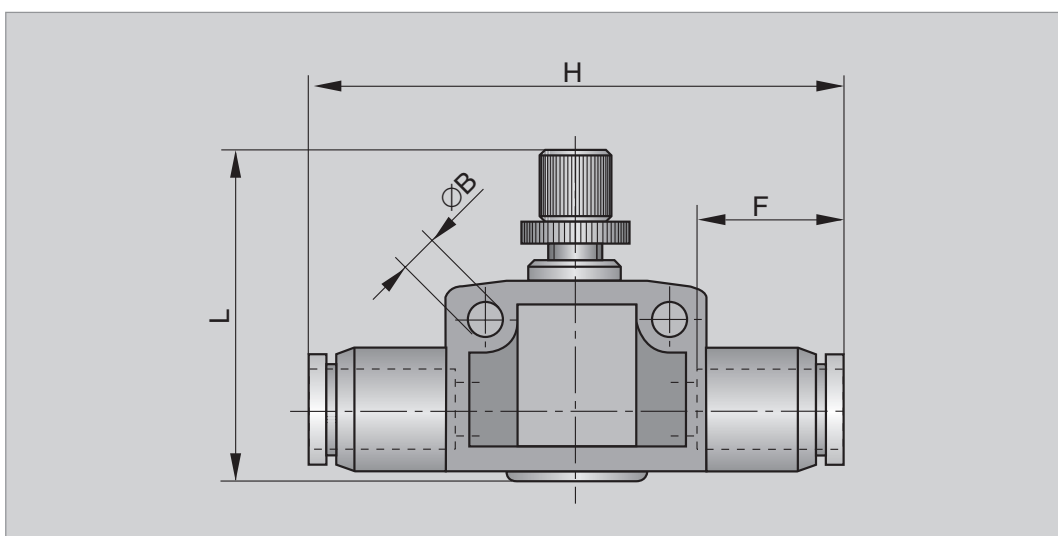
Pressures quoted as gauge pressure

Characteristics	Symbol	Unit	Description				
General features							
Tube connection			Push-in connections				
Tube diameter	ØDA	mm	4	6	8	10	12
Installation			In any position				
Ambient and medium temperature range	ϑ_{\min} ϑ_{\max}	°C °C	-20 +60	Note: When using below freezing point (0 °C) it is necessary to consult us			
Material			Housing – aluminium/plastic Throttle spindle – brass, anodized Seals – Buna N				
Pneumatic Characteristics							
Nominal pressure	p_n	bar	6				
Operating pressure range	p_{\min} p_{\max}	bar bar	0 10				
Nominal flow ¹⁾ (throttle valve)	Q_N	l/min	117	183	300	467	767
Nominal flow ²⁾ (check valve)	Q_N	l/min	117	183	300	467	767

1) If the throttle is completely open

2) If the throttle is completely closed

Dimensions



Dimension Table and Order Instructions

Order Instructions		Tube	L_{\max}	ØB	H	F
Type	Order No.	ØOD				
DRV-4MsvKU	KT0447	4	29.9	3.3	45.1	16.8
DRV-6MsvKU	KT0448	6	35.0	4.3	50.3	17.6
DRV-8MsvKU	KT0449	8	37.4	4.4	55.7	18.7
DRV-10MsvKU	KT0450	10	43.8	4.4	61.2	19.6
DRV-12MsvKU	KT0451	12	47.4	4.4	69.8	21.9

Check Valves – Screw-in

Check Valves Series ERV

Characteristics according to VDI 3293 Pressures quoted as gauge pressure

Characteristics	Symbol	Unit	Description
General features			
Type			Spring loaded check valve with cone-shaped seal element and elastic seal
Connections			Port 1: internal thread to ISO 228, push-in fitting Port 2: external thread to ISO 228 Port 12: M5, G1/8 internal
Port sizes			See dimension table
Weight (mass)		kg	See table
Installation			In any position – rings can be rotated 360° after the valve has been installed
Ambient temperature range	ϑ_{\min} ϑ_{\max}	°C	-10 +60
Medium temperature range	ϑ_{\min} ϑ_{\max}	°C	-10 +60
Medium			Filtered compressed air, neutral gases *
Lubrication			With or without oil mist lubrication ¹⁾
Material			Metal parts: nickel-plated brass or stainless steel Springs: stainless steel Seals: Buna N (NBR) Sealing ring: Polyamide
Pneumatic Characteristics			
Nominal pressure	p_n	bar	6
Operating pressure range	p_{\min} p_{\max}	bar bar	0.3 10
Nominal flow rate	Q_N	l/min	See table
Actuation:			
pneumatic			Direct
Actuation pressure range	p_{st}	bar	See diagram

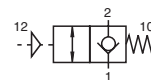
* other media on request

¹⁾ We recommend the use of mineral oil type VG32 to ISO 3448

Nominal Flow Rate, Tightening Torque, Opening Pressure, Weight (mass)

Port Size	DN [mm]	Q_N 1→2 [l/min]	Q_N 2→1 [l/min]	Max. Tightening Torque [Nm]	p_{\min} 2→1 [bar]	Weight mass [kg]
G1/8	3.0	220	280	1.2	0.2	0.068 – no hollow screw 0.048 – with thread G1/8 0.048 – fitting \varnothing 6
G1/4	4.4	340	460	1.8	0.2	0.050 – no hollow screw 0.075 – with thread G1/4 0.075 – fitting \varnothing 6 0.082 – fitting \varnothing 8
G3/8	5.7	700	910	3.5	0.2	0.150 – with thread G3/8 0.145 – fitting \varnothing 8 0.155 – fitting \varnothing 10
G1/2	8.8	1450	1660	4.0	0.15	0.210 – with thread G1/2 0.240 – fitting \varnothing 12

Screw-in Check Valves G1/8 – G1/2

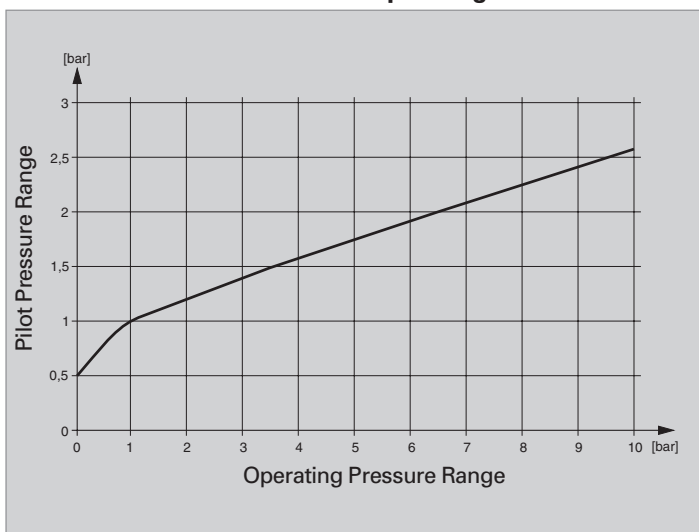


Actuation:
pneumatic deblocking

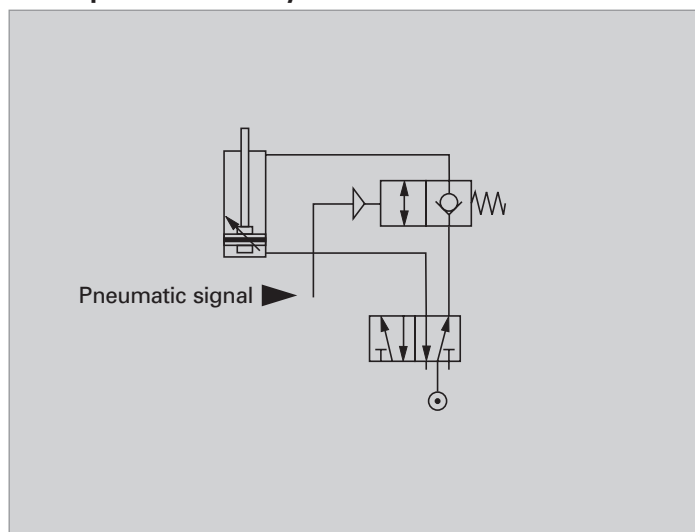
Check Valves – Screw-in

Check Valves Series ERV

Pilot Pressure in Relation to Operating Pressure



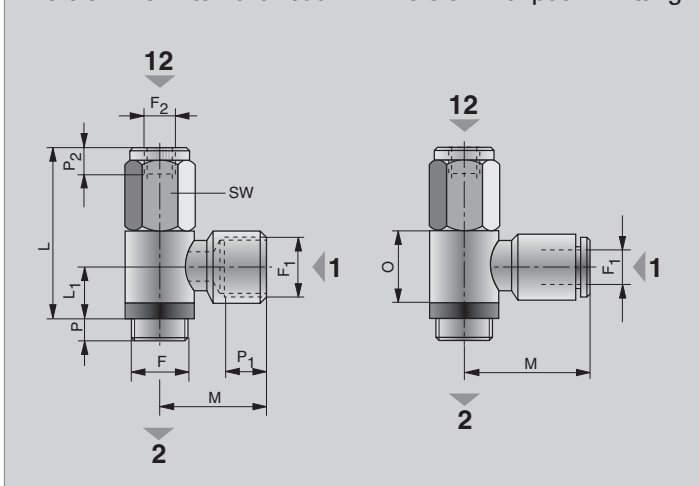
Example of Control System



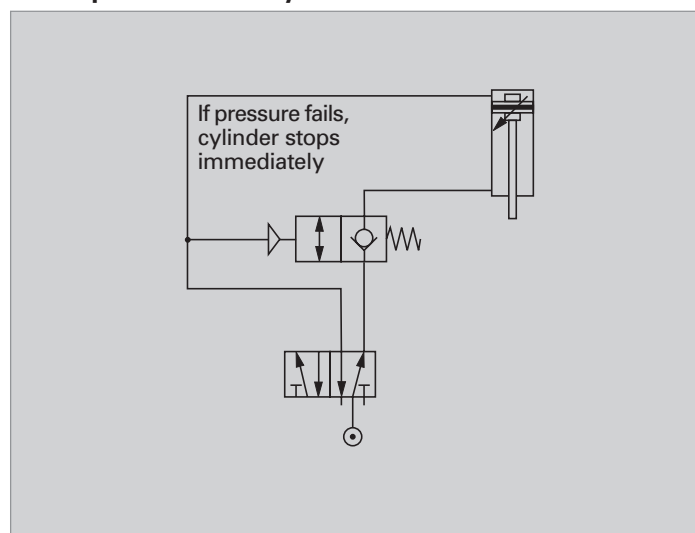
Dimensions

Version with internal thread

Version with push-in fitting



Example of Control System with Vertical Load



Dimension Table and Order Instructions

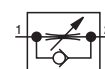
F	F ₁	F ₂	L	L ₁	M	O*	P	P ₁	P ₂	SW	Order Instructions	
											Type	Order No.
G1/8	G1/8	M5	37.5	12.5	21	15	6.5	7	6	14	ERV-1/8	KL4077
G1/8	∅ 6	M5	37.5	12.5	25	15	6.5	–	6	14	ERV-1/8	KL4078
G1/4	G1/4	G1/8	42.5	13.5	25	17	7	8	7	17	ERV-1/4	KL4080
G1/4	∅ 6	G1/8	42.5	13.5	27.5	17	7	–	7	17	ERV-1/4	KL4081
G1/4	∅ 8	G1/8	42.5	13.5	32	17	7	–	7	17	ERV-1/4	KL4082
G3/8	G3/8	G1/8	46	15	31	20	9	10	7	19	ERV-3/8	KL4083
G3/8	∅ 8	G1/8	46	15	31.5	20	9	–	7	19	ERV-3/8	KL4084
G3/8	∅ 10	G1/8	46	15	36	20	9	–	7	19	ERV-3/8	KL4085
G1/2	G1/2	G1/8	51.5	17	40	24	10	14	7	24	ERV-1/2	KL4086
G1/2	∅ 12	G1/8	51.5	17	40.5	24	10	–	7	24	ERV-1/2	KL4087

Throttle Check Valves Series EDRV

Characteristics according to VDI 3291 Pressures quoted as gauge pressure

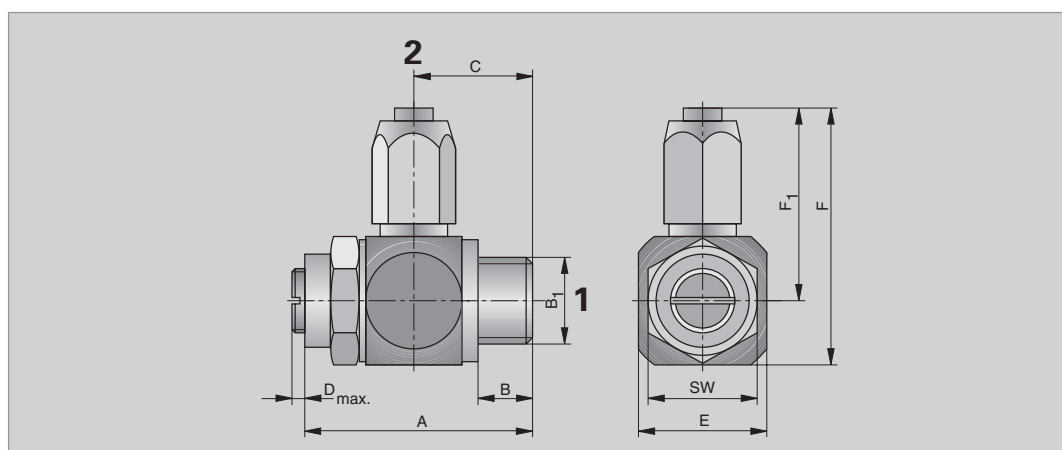
Characteristics	Symbol	Unit	Description	
General Features				
Type			Spring loaded throttle check valve	
Mounting			Screw-in valve	
Tube connection			Thread	
Port size			G1/8	G1/4
Weight (mass)		kg	0.03	0.04
Installation			In any position	
Ambient temperature range	ϑ_{\min} ϑ_{\max}	°C	-10 +60	Note: When using below freezing point (0 °C) it is necessary to consult us
Medium temperature range	ϑ_{\min} ϑ_{\max}	°C	-10 +60	
Medium			Filtered compressed air	
Lubrication			Oil mist lubrication compatible with Buna N	
Pneumatic Characteristics				
Nominal pressure	p_n	bar	6	
Operating pressure range	p_{\min} p_{\max}	bar bar	0.5 10	
Nominal flow rate, throttle valve (throttle completely open)	Q_N	l/min	250	400
Nominal flow rate, check valve (throttle completely closed)	Q_N	l/min	350	450

Screw-in Throttle Check Valves G1/8, G1/4



Speed Regulating Valve
This valve is used for regulating the piston speed of pneumatic cylinders.

Dimensions

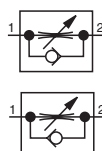


Dimension Table and Order Instructions

Order Instructions		Tube ØOD/ID	A	B	B ₁	C	D _{max}	E	F	F ₁	SW
Type	Order No.										
EDRV-06-5/3	PA 10018	5/3	34	8	G1/8	16.5	1	16	18.5	26.5	14
EDRV-06-6/4	PA 10019	6/4	34	8	G1/8	16.5	1	16	21.5	29.5	14
EDRV-06-8/6	PA 10020	8/6	34	8	G1/8	16.5	1	16	22.5	30.5	14
EDRV-08-6/4	PA 12001	6/4	38	10.5	G1/4	19	1.2	20	23	33	17
EDRV-08-8/6	PA 12002	8/6	38	10.5	G1/4	19	1.2	20	24	34	17
EDRV-08-10/8	PA 12003	10/8	38	10.5	G1/4	19	1.2	20	26	36	17

Dimensions in mm

Screw-in Throttle Check Valves M5 – G1/4



for air outlet throttling

for air inlet throttling

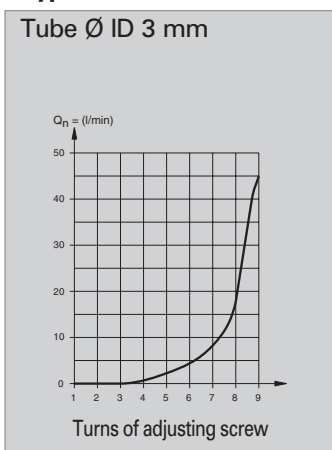
Characteristics according to VDI 3293 Pressures quoted as gauge pressure

Characteristics	Symbol	Unit	Description		
General Features					
Type			Spring loaded throttle check valve		
Mounting			Screw-in valve		
Tube connection			Thread		
Port size			M5	G1/8	G1/4
Weight (mass)		kg	0.019	0.042	0.083
Installation			In any position		
Ambient temperature range	ϑ_{\min} ϑ_{\max}	°C °C	-10 +70	Note: When using below freezing point (0 °C) it is necessary to consult us	
Medium temperature range	ϑ_{\min} ϑ_{\max}	°C °C	-10 +70		
Medium			Filtered compressed air		
Lubrication			Oil mist lubrication compatible with Buna N		
Pneumatic Characteristics					
Nominal pressure	p_n	bar	6		
Operating pressure range	p_{\min} p_{\max}	bar bar	0.5 10		
Nominal flow rate, throttle valve (throttle completely open)	Q_N	l/min	45	200	450
Nominal flow rate, check valve (throttle completely closed)	Q_N	l/min	30	140	380

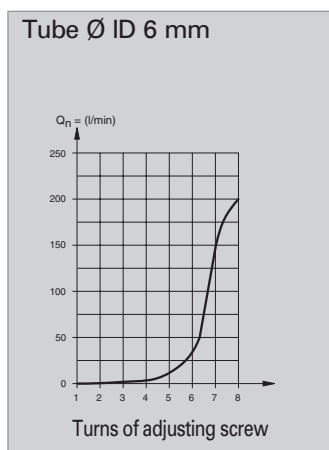
- with tube connection
- for air inlet and air outlet throttling

This valve is used for regulating the piston speed of pneumatic cylinders.

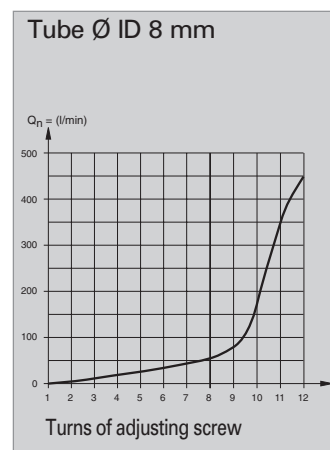
Flow Characteristics
Type: EDRV/SEDRV-M5



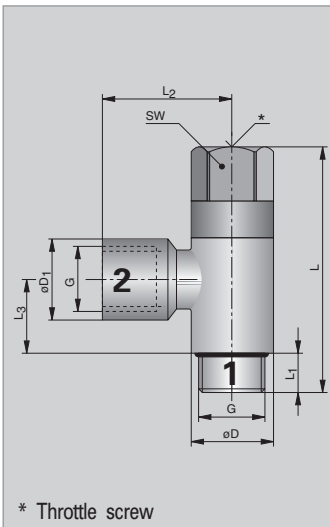
Flow Characteristics
Type: EDRV/SEDRV-G1/8



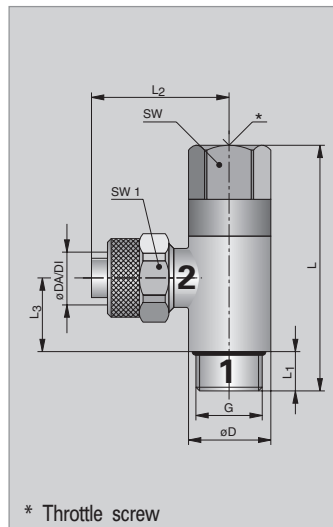
Flow Characteristics
Type: EDRV/SEDRV-G1/4



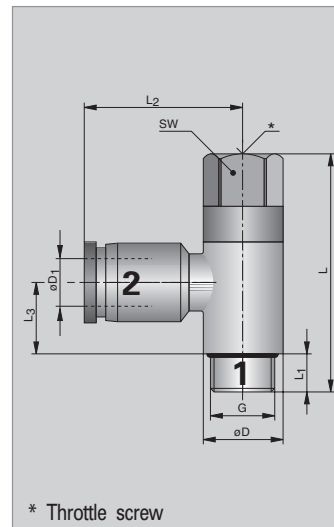
**Screw-in Throttle Check Valves
Type: EDRV-....BI**



**Screw-in Throttle Check Valves
Type: EDRV-....B**



**Screw-in Throttle Check Valves
Type: SEDRV-....B**



**Versions for
air inlet throttling**



**Screw-in Throttle Check Valves with push-in fittings – Type SEDRV-....B
Dimension Table and Order Instructions**

Order Instructions Type	Order No.	Tube ØOD	Port Size G	SW	SW1	ØD	ØD ₁	L	L ₁	L ₂	L ₃
SEDRV-184B	KW 0530	4	G1/8	12	-	14	11	37	7	25	11.5
SEDRV-185B	KW 0531	5	G1/8	12	-	14	12	37	7	25	11.5
SEDRV-186B	KW 0532	6	G1/8	12	-	14	13	37	7	26	11.5
SEDRV-146B	KW 0533	6	G1/4	16	-	18	13	50	9	28	15
SEDRV-188B	KW 0534	8	G1/8	12	-	14	15	37	7	31	11.5
SEDRV-148B	KW 0535	8	G1/4	16	-	18	15	50	9	31	15
SEDRV-1410B	KW 0536	10	G1/4	16	-	18	18	50	9	36	15

**Screw-in Throttle Check Valves with union nut – Type EDRV-....B
Dimension Table and Order Instructions**

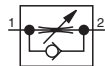
Order Instructions Type	Order No.	Tube ØDA/DI*	Port Size G	SW	SW1	ØD	ØD ₁	L	L ₁	L ₂	L ₃
EDRV-184B	KW 0539	4/2	G1/8	12	10	14	-	37	6	28	11.5
EDRV-185B	KW 0540	5/3	G1/8	12	10	14	-	37	6	28	11.5
EDRV-186B	KW 0541	6/4	G1/8	12	12	14	-	37	6	27.5	11.5
EDRV-146B	KW 0542	6/4	G1/4	16	12	18	-	50	8	30	15
EDRV-188B	KW 0543	8/6	G1/8	12	14	14	-	37	6	28	11.5
EDRV-148B	KW 0544	8/6	G1/4	16	14	18	-	50	8	31	15
EDRV-1410B	KW 0545	10/8	G1/4	16	16	18	-	50	8	29.5	15

**Screw-in Throttle Check Valves with internal thread – Type EDRV-....BI
Dimension Table and Order Instructions**

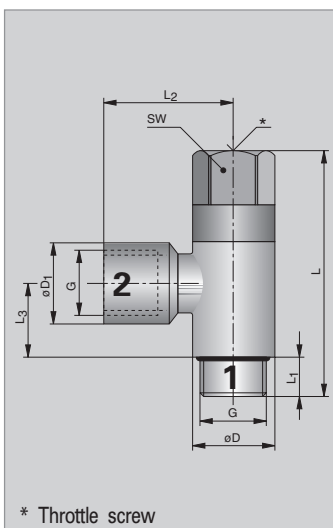
Order Instructions Type	Order No.	Internal Thread D1	Port Size G	SW	SW1	ØD	ØD ₁	L	L ₁	L ₂	L ₃
EDRV-1818BI	KW 0537	G1/8	G1/8	12	-	14	13.5	37	7	20.5	11.5
EDRV-1414BI	KW 0538	G1/4	G1/4	16	-	18	17	50	8	29.5	15

* = Tube ØOD/ID

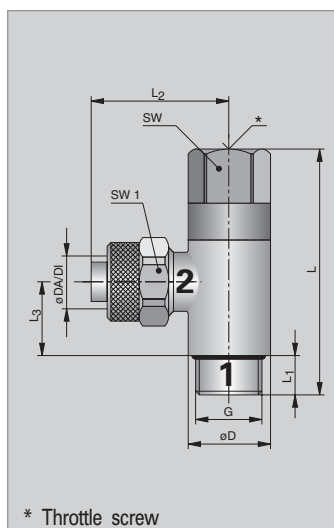
Versions for air outlet throttling



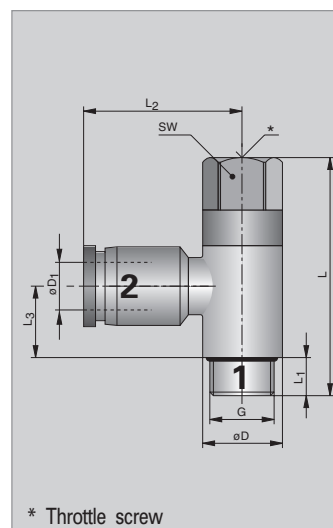
Screw-in Throttle Check Valves
Type: EDRV-....AI



Screw-in Throttle Check Valves
Type: EDRV-....A



Screw-in Throttle Check Valves
Type: SEDRV-....A



Screw-in Throttle Check Valves with push-in fittings – Type SEDRV-....A Dimension Table and Order Instructions

Order Instructions Type	Order No.	Tube ØOD	Port Size G	SW	SW1	ØD	ØD ₁	L	L ₁	L ₂	L ₃
SEDRV-54A	KW0511	4	M5	9	-	10	10	28	5	24	5.5
SEDRV-184A	KW0512	4	G1/8	12	-	14	11	37	7	25	11.5
SEDRV-55A	KW0513	5	M5	9	-	10	11	28	5	25	5.5
SEDRV-185A	KW0514	5	G1/8	12	-	14	12	37	7	25	11.5
SEDRV-186A	KW0515	6	G1/8	12	-	14	13	37	7	26	11.5
SEDRV-146A	KW0516	6	G1/4	16	-	18	13	50	9	28	15
SEDRV-188A	KW0517	8	G1/8	12	-	14	15	37	7	31	11.5
SEDRV-148A	KW0518	8	G1/4	16	-	18	15	50	9	31	15
SEDRV-1410A	KW0519	10	G1/4	16	-	18	18	50	9	36	15

Screw-in Throttle Check Valves with union nut – Type EDRV-....A Dimension Table and Order Instructions

Order Instructions Type	Order No.	Tube ØDA/DI*	Port Size G	SW	SW1	ØD	ØD ₁	L	L ₁	L ₂	L ₃
EDRV-54A	KW0522	4/2	M5	9	9	10	-	28	4.5	23.5	6
EDRV-184A	KW0523	4/2	G1/8	12	10	14	-	37	6	28	11.5
EDRV-185A	KW0524	5/3	G1/8	12	10	14	-	37	6	28	11.5
EDRV-186A	KW0525	6/4	G1/8	12	12	14	-	37	6	27.5	11.5
EDRV-146A	KW0526	6/4	G1/4	16	12	18	-	50	8	30	15
EDRV-188A	KW0527	8/6	G1/8	12	14	14	-	37	6	28	11.5
EDRV-148A	KW0528	8/6	G1/4	16	14	18	-	50	8	31	15
EDRV-1410A	KW0529	10/8	G1/4	16	16	18	-	50	8	29.5	15

Screw-in Throttle Check Valves with internal thread – Type EDRV-....AI Dimension Table and Order Instructions

Order Instructions Type	Order No.	Internal thread D1	Port Size G	SW	SW1	ØD	ØD ₁	L	L ₁	L ₂	L ₃
EDRV-1818AI	KW0520	G1/8	G1/8	12	-	14	13.5	37	7	20.5	11.5
EDRV-1414AI	KW0521	G1/4	G1/4	16	-	18	17	50	8	29.5	15

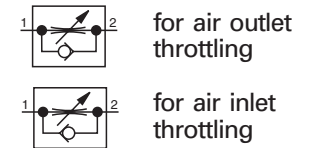
* = Tube ØOD/ID

Series SEDRV

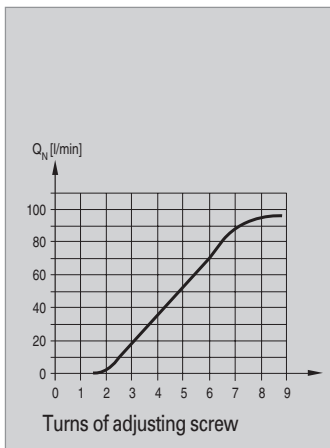
Characteristics according to VDI 3293 Pressures quoted as gauge pressure

Characteristics	Symbol	Unit	Description
General Features			
Type			Spring loaded throttle check valve
Mounting			Screw-in valve
Tube connection			Thread
Installation			In any position
Ambient temperature range	ϑ_{\min} ϑ_{\max}	°C °C	-10 +70
Medium temperature range	ϑ_{\min} ϑ_{\max}	°C °C	-10 +70
Medium			Filtered compressed air
Lubrication			Oil mist lubrication compatible with Buna N
Pneumatic Characteristics			
Nominal pressure	p_n	bar	6
Operating pressure range	p_{\min} p_{\max}	bar bar	0.5 10

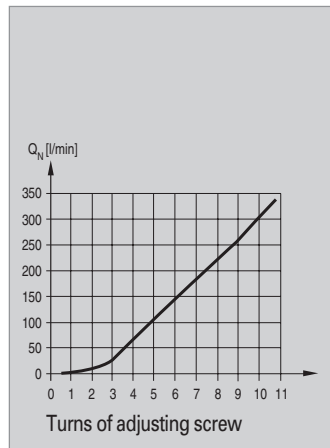
Screw-in Throttle Check Valves M5 – G1/2



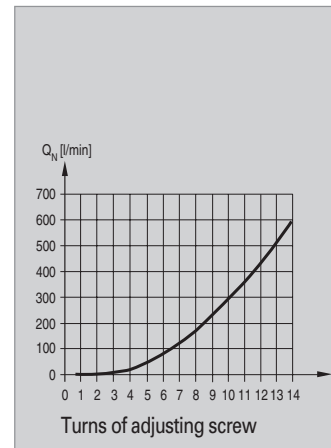
**Flow Characteristics
M5**



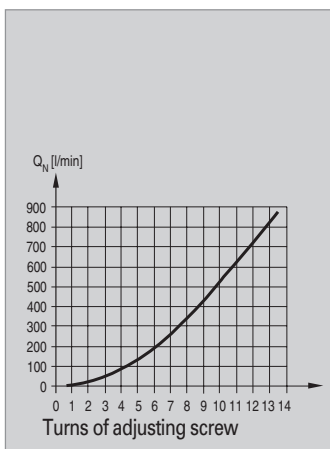
**Flow Characteristics
G1/8**



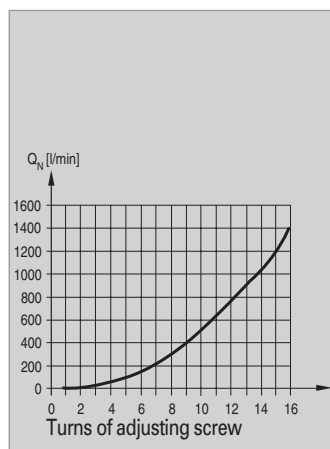
**Flow Characteristics
G1/4**



**Flow Characteristics
G3/8**



**Flow Characteristics
G1/2**



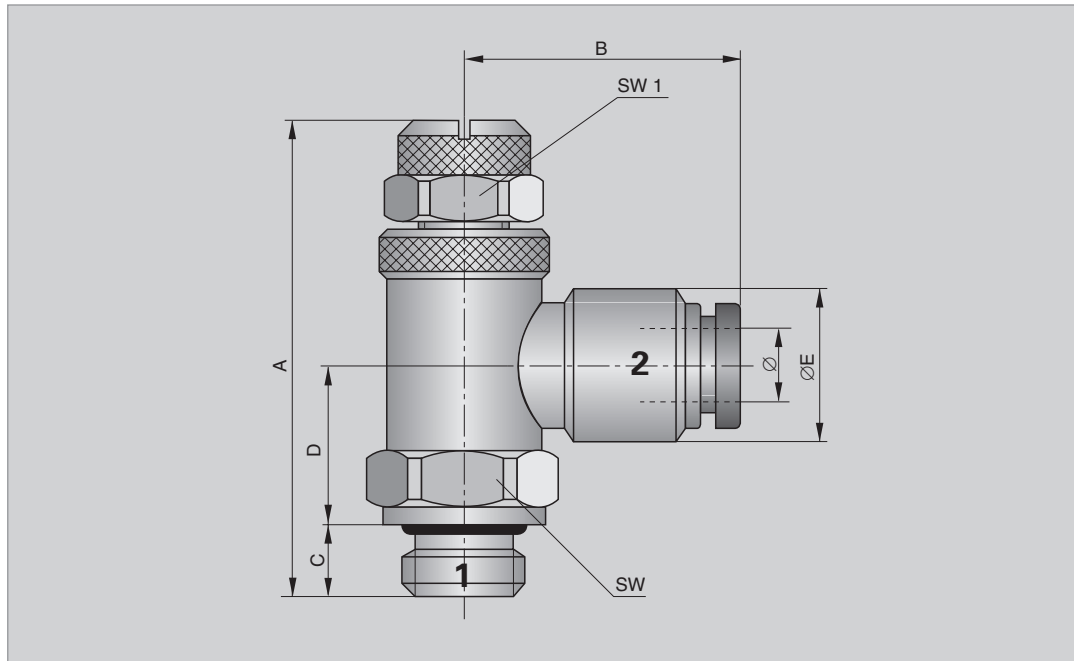
- with tube connection
- for air inlet and air outlet throttling

This valve is used for regulating the piston speed of pneumatic cylinders.

Versions for air inlet throttling



Screw-in Throttle Check Valves Type: SEDRV-....B

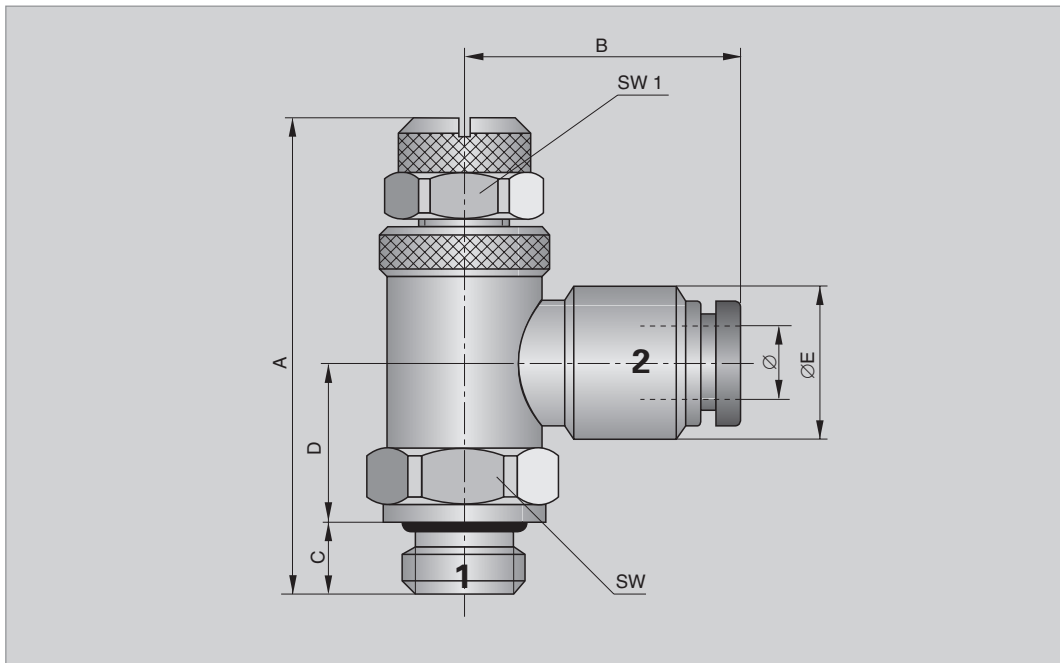


Screw-in Throttle Check Valves with push-in fittings – Type SEDRV-....B
Dimension Table and Order Instructions

Order Instructions		Tube Ø*	Port Size	SW	SW1	ØE	B	A	D	C	Q _N [Nl/min]
Type	Order No.										
SEDRV-54B-Msv	KW1001	4	M5	9	9	10.9	23.5	28.2	9.3	4	95
SEDRV-55B-Msv	KW1002	5	M5	9	9	12	24.5	28.2	9.3	4	95
SEDRV-56B-Msv	KW1003	6	M5	9	9	13.5	24.5	28.2	9.3	4	95
SEDRV-184B-Msv	KW1004	4	G1/8	15	12	11.5	25	42	13.7	6	340
SEDRV-185B-Msv	KW1005	5	G1/8	15	12	12.0	25	42	13.7	6	340
SEDRV-186B-Msv	KW1006	6	G1/8	15	12	13.5	25	42	13.7	6	340
SEDRV-188B-Msv	KW1007	8	G1/8	15	12	15.5	30	42	13.7	6	340
SEDRV-146B-Msv	KW1008	6	G1/4	18	12	13.5	27.5	48	16	8	600
SEDRV-148B-Msv	KW1009	8	G1/4	18	12	15.5	32	48	16	8	600
SEDRV-1410B-Msv	KW1010	10	G1/4	18	12	18	34.3	48	16	8	600
SEDRV-1412B-Msv	KW1011	12	G1/4	18	12	20.2	37.5	48	16	8	600
SEDRV-3810B-Msv	KW1012	10	G3/8	21	14	18	36.3	53	19	9	870
SEDRV-3812B-Msv	KW1013	12	G3/8	21	14	20.2	40.5	53	19	9	870
SEDRV-1212B-Msv	KW1014	12	G1/2	26	17	20.2	40.5	60.5	22	11	1400

* = Tube ØOD

Screw-in Throttle Check Valves Type: SEDRV-....A



Versions for air outlet throttling



Screw-in Throttle Check Valves with push-in fittings – Type SEDRV-....A Dimension Table and Order Instructions

Order Instructions		Tube Ø*	Port Size G	SW	SW1	ØE	B	A	D	C	Q _N [Nl/min]
Type	Order No.										
SEDRV-54A-Msv	KW 1015	4	M5	9	9	10.9	23.5	28.2	9.3	4	95
SEDRV-55A-Msv	KW 1016	5	M5	9	9	12	24.5	28.2	9.3	4	95
SEDRV-56A-Msv	KW 1017	6	M5	9	9	13.5	24.5	28.2	9.3	4	95
SEDRV-184A-Msv	KW 1018	4	G1/8	15	12	11.5	25	42	13.7	6	340
SEDRV-185A-Msv	KW 1019	5	G1/8	15	12	12.0	25	42	13.7	6	340
SEDRV-186A-Msv	KW 1020	6	G1/8	15	12	13.5	25	42	13.7	6	340
SEDRV-188A-Msv	KW 1021	8	G1/8	15	12	15.5	30	42	13.7	6	340
SEDRV-146A-Msv	KW 1022	6	G1/4	18	12	13.5	27.5	48	16	8	600
SEDRV-148A-Msv	KW 1023	8	G1/4	18	12	15.5	32	48	16	8	600
SEDRV-1410A-Msv	KW 1024	10	G1/4	18	12	18	34.3	48	16	8	600
SEDRV-1412A-Msv	KW 1025	12	G1/4	18	12	20.2	37.5	48	16	8	600
SEDRV-3810A-Msv	KW 1026	10	G3/8	21	14	18	36.3	53	19	9	870
SEDRV-3812A-Msv	KW 1027	12	G3/8	21	14	20.2	40.5	53	19	9	870
SEDRV-1212A-Msv	KW 1028	12	G1/2	26	17	20.2	40.5	60.5	22	11	1400

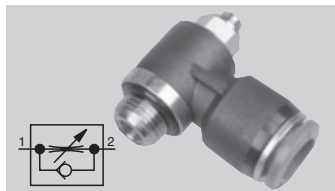
* = Tube ØOD

Check Valves – Screw-in

Throttle Check Valves Series EDRVK, Plastic

Screw-in Throttle Check Valve Type: EDRV...B
Short design, with slot and hexagon socket

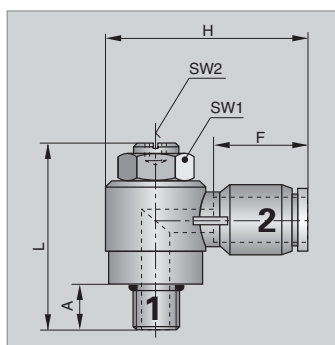
Versions for air inlet throttling



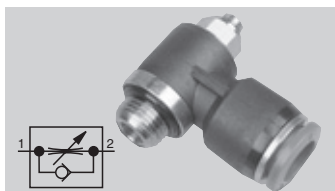
Order Instructions		Port Size	Tube \varnothing OD	A	L_{max}^*	H	F	SW1	SW2	Q_N [NI/min]
Type	Order No.									
EDRVK-54B-MsvKU	KT0452	M5	4	3.6	23.1	25.1	16.3	8	–	130
EDRVK-56B-MsvKU	KT0453	M5	6	3.6	23.1	27.8	17.6	8	2	130
EDRVK-184B-MsvKU	KT0454	G1/8	4	6	30.4	30.5	16.3	8	2	300
EDRVK-186B-MsvKU	KT0455	G1/8	6	6	30.4	31.2	17.6	8	2	400
EDRVK-188B-MsvKU	KT0456	G1/8	8	6	30.4	33.0	18.7	8	2	400
EDRVK-146B-MsvKU	KT0457	G1/4	6	8	36.3	35.0	17.6	12	2	620
EDRVK-148B-MsvKU	KT0458	G1/4	8	8	36.3	36.8	18.7	12	2	720
EDRVK-1410B-MsvKU	KT0459	G1/4	10	8	36.3	38.8	19.6	12	2	720

Material:
plastic/nickel-plated brass

* If the throttle is completely open



Versions for air outlet throttling

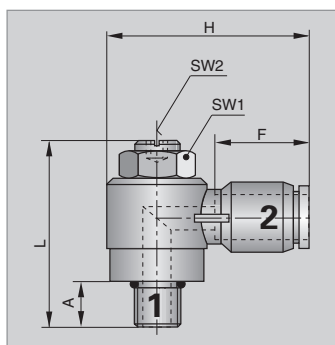


Screw-in Throttle Check Valve Type: EDRV...A
Short design, with slot and hexagon socket

Order Instructions		Port Size	Tube \varnothing OD	A	L_{max}^*	H	F	SW1	SW2	Q_N [NI/min]
Type	Order No.									
EDRVK-54A-MsvKU	KT0460	M5	4	3.6	23.1	25.1	16.3	8	–	130
EDRVK-56A-MsvKU	KT0461	M5	6	3.6	23.1	27.8	17.6	8	2	130
EDRVK-184A-MsvKU	KT0462	G1/8	4	6	30.4	30.5	16.3	8	2	300
EDRVK-186A-MsvKU	KT0463	G1/8	6	6	30.4	31.2	17.6	8	2	400
EDRVK-188A-MsvKU	KT0464	G1/8	8	6	30.4	33.0	18.7	8	2	400
EDRVK-146A-MsvKU	KT0465	G1/4	6	8	36.3	35.0	17.6	12	2	620
EDRVK-148A-MsvKU	KT0466	G1/4	8	8	36.3	36.8	18.7	12	2	720
EDRVK-1410A-MsvKU	KT0467	G1/4	10	8	36.3	38.8	19.6	12	2	720

Material:
plastic/nickel-plated brass

* If the throttle is completely open



Throttle Check Valves Series EDRV, Plastic

Screw-in Throttle Check Valve Type: EDRV...B

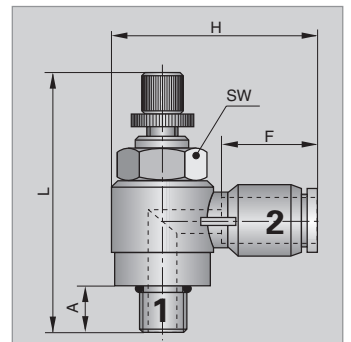
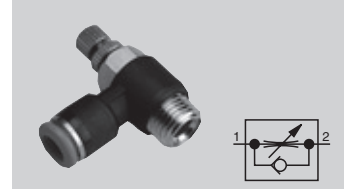
Order Instruction		Tube	Port	A	L _{max} *	H	F	SW	Q _N
Type	Order No.	∅OD	Size						[Nl/min]
EDRV-54B-MsvKU	KT0417	4	M5	4.6	37.0	26.6	16.8	8	100
EDRV-56B-MsvKU	KT0418	6	M5	4.6	37.0	27.2	17.6	8	100
EDRV-184B-MsvKU	KT0419	4	G1/8	4.5	40.1	30.9	16.3	8	165
EDRV-186B-MsvKU	KT0420	6	G1/8	4.5	40.1	31.4	17.6	8	165
EDRV-188B-MsvKU	KT0421	8	G1/8	4.5	40.1	34.2	18.7	8	165
EDRV-146B-MsvKU	KT0422	6	G1/4	5.5	47.6	35.6	17.6	12	410
EDRV-148B-MsvKU	KT0423	8	G1/4	5.5	47.6	38.3	18.7	12	410
EDRV-1410B-MsvKU	KT0424	10	G1/4	5.5	47.6	39.5	19.6	12	410
EDRV-1412B-MsvKU	KT0425	12	G1/4	5.5	47.6	41.8	21.9	12	410
EDRV-386B-MsvKU	KT0426	6	G3/8	6.0	55.9	39.0	17.6	12	500
EDRV-388B-MsvKU	KT0427	8	G3/8	6.0	55.9	40.0	18.7	12	500
EDRV-3810B-MsvKU	KT0428	10	G3/8	6.0	55.9	42.5	19.6	12	500
EDRV-3812B-MsvKU	KT0429	12	G3/8	6.0	55.9	45.5	21.9	12	500
EDRV-1210B-MsvKU	KT0430	10	G1/2	7.0	59.6	47.1	19.6	19	900
EDRV-1212B-MsvKU	KT0431	12	G1/2	7.0	59.6	50.3	21.9	19	900

Material:
plastic/nickel-plated brass

* If the throttle is completely open

Complete with:
rotating ring, two seals and O-ring, preassembled

Versions for air inlet throttling



Screw-in Throttle Check Valve Type: EDRV...A

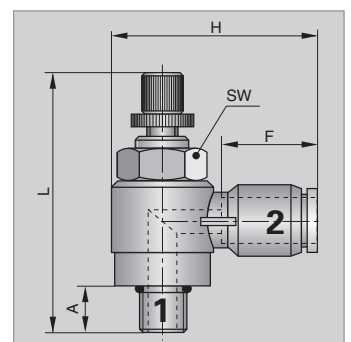
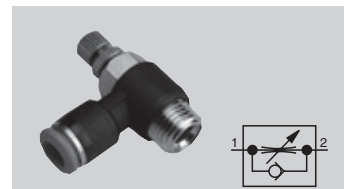
Order Instruction		Tube	Port	A	L _{max} *	H	F	SW	Q _N
Type	Order No.	∅OD	Size						[Nl/min]
EDRV-54A-MsvKU	KT0432	4	M5	4.6	37.0	26.6	16.8	8	100
EDRV-56A-MsvKU	KT0433	6	M5	4.6	37.0	27.2	17.6	8	100
EDRV-184A-MsvKU	KT0434	4	G1/8	4.5	40.1	30.9	16.3	8	165
EDRV-186A-MsvKU	KT0435	6	G1/8	4.5	40.1	31.4	17.6	8	165
EDRV-188A-MsvKU	KT0436	8	G1/8	4.5	40.1	34.2	18.7	8	165
EDRV-146A-MsvKU	KT0437	6	G1/4	5.5	47.6	35.6	17.6	12	410
EDRV-148A-MsvKU	KT0438	8	G1/4	5.5	47.6	38.3	18.7	12	410
EDRV-1410A-MsvKU	KT0439	10	G1/4	5.5	47.6	39.5	19.6	12	410
EDRV-1412A-MsvKU	KT0440	12	G1/4	5.5	47.6	41.8	21.9	12	410
EDRV-386A-MsvKU	KT0441	6	G3/8	6.0	55.9	39.0	17.6	14	500
EDRV-388A-MsvKU	KT0442	8	G3/8	6.0	55.9	40.0	18.7	14	500
EDRV-3810A-MsvKU	KT0443	10	G3/8	6.0	55.9	42.0	19.6	14	500
EDRV-3812A-MsvKU	KT0444	12	G3/8	6.0	55.9	45.5	21.9	14	500
EDRV-1210A-MsvKU	KT0445	10	G1/2	7.0	59.6	47.1	19.6	19	900
EDRV-1212A-MsvKU	KT0446	12	G1/2	7.0	59.6	50.3	21.9	19	900

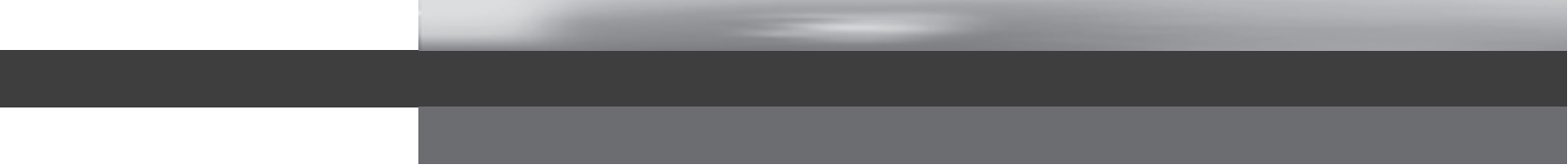
Material:
plastic/nickel-plated brass

* If the throttle is completely open

Complete with:
rotating ring, two seals and O-ring, preassemble

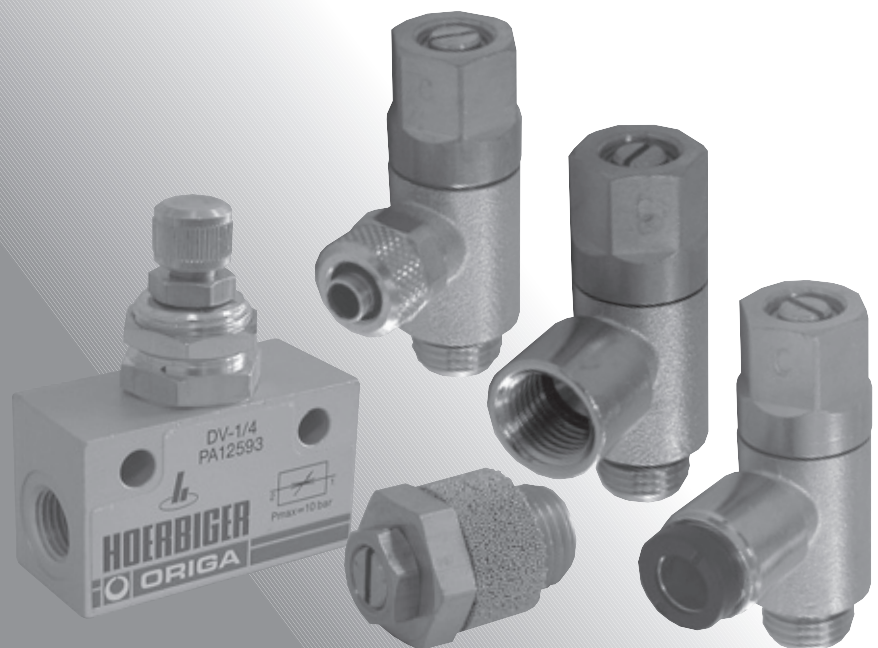
Versions for air outlet throttling



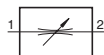


Flow Control Valves

- Flow control valves, in-line
- Flow control valves, screw-in
- Metal version



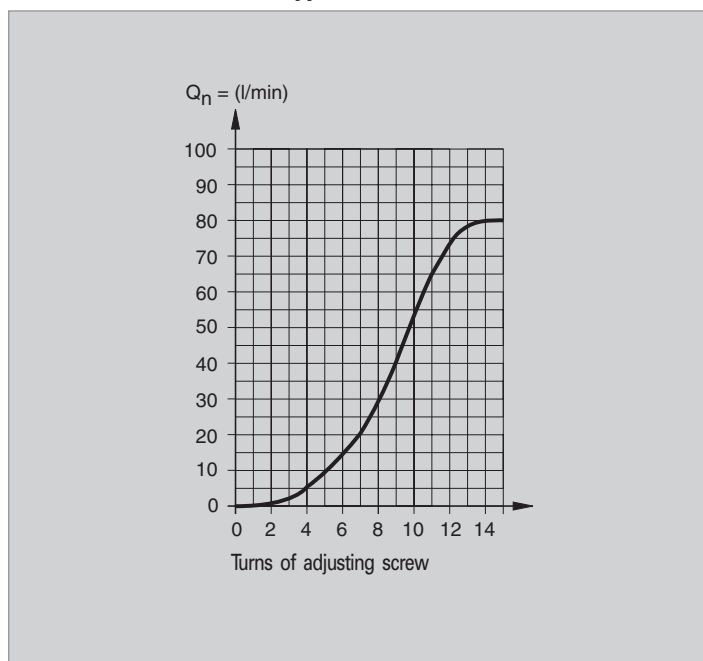
Flow Control Valves M5 – G1/2



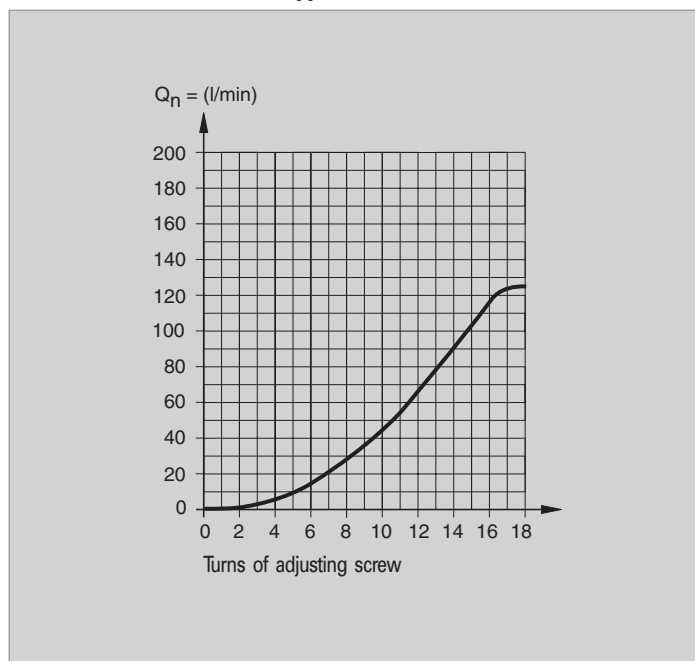
Characteristics according to VDI 3291 Pressures quoted as gauge pressure

Characteristics	Symbol	Unit	Description				
General Features							
Type			Throttle Valve				
Mounting			Directly in tubing 2 through-bolts panel mounting				
Tube connection			Thread				
Port size			M5	G1/8	G1/4	G3/8	G1/2
Weight (mass)		kg	0.020	0.035	0.130	0.225	0.245
Installation			In any position				
Ambient temperature range	ϑ_{\min} ϑ_{\max}	°C °C	-20 +80	Note: When using below freezing point (0 °C) it is necessary to consult us			
Medium temperature range	ϑ_{\min} ϑ_{\max}	°C °C	0 +80				
Medium			Filtered, lubricated or unlubricated compressed air				
Lubrication			Oil mist lubrication compatible with Buna N				
Pneumatic Characteristics							
Nominal pressure	p_n	bar	6				
Operating pressure range	p_{\min} p_{\max}	bar bar	0.5 10				
Nominal flow when throttle is completely open	Q_N	l/min	80	125	450	1100	1200

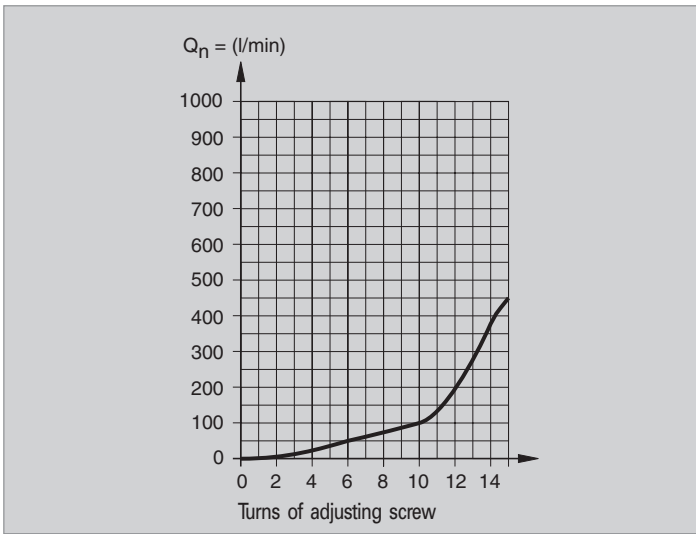
Flow Characteristics Type: DV-M5



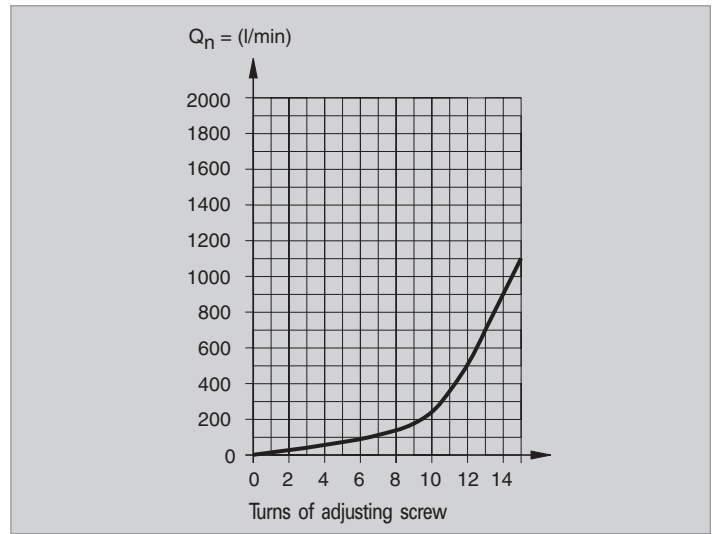
Flow Characteristics Type: DV-1/8



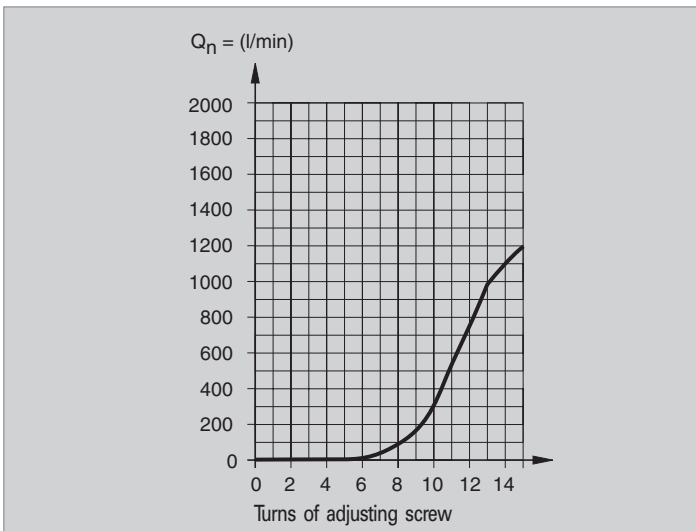
Flow Characteristics Type: DRV-1/4



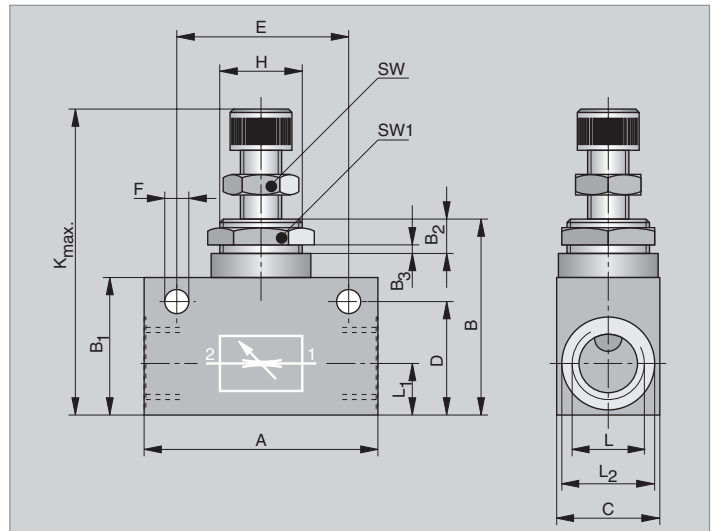
Flow Characteristics Type: DRV-3/8



Flow Characteristics Type: DRV-1/2



Dimensions



Dimension Table and Order Instructions

Order Instructions Type	Order No.	A	B	B ₁	B ₂	B ₃	C	D	E	ØF	H	L	L1	ØL ₂	K _{max}	SW	SW ₁
DV-M5	PA 10230	26	16	26.5	6	2.5	14	12.5	18	4.4	M10x1	M5	5.5	8.5	44	7	14
DV-1/8	PA 10231	32.5	22	31.5	6	2.5	16	17.5	24	4.4	M12x1	G1/8	9	13.5	52	10	17
DV-1/4	PA 12593	55	32	48	10	4.5	25	25	35	6.5	M20x1.5	G1/4	12	19	72	13	22
DV-3/8	PA 16141	58	40	57	10	5.0	30	33	43	6.5	M24x1.5	G3/8	13.5	23	92	19	27
DV-1/2	PA 16142	68	40	57	10	5.0	30	33	50	6.5	M24x1.5	G1/2	15	27.5	92	19	27

Screw-in Flow Control Valves M5 – G1/4

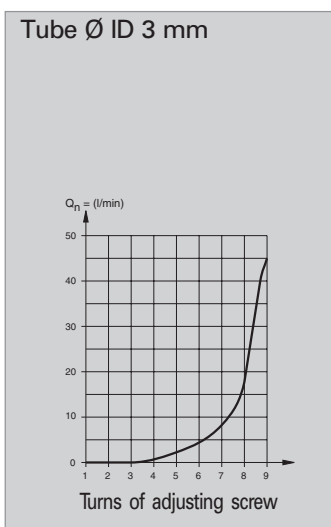


– with tube connection

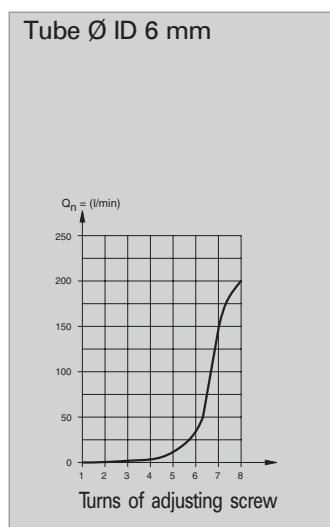
Characteristics according to VDI 3291 Pressures quoted as gauge pressure

Characteristics	Symbol	Unit	Description		
General Features					
Type			Throttle Valve		
Mounting			Screw-in valve		
Tube connection			Thread		
Port size			M5	G1/8	G1/4
Weight (mass)		kg	0.019	0.042	0.083
Installation			In any position		
Ambient temperature range	ϑ_{\min} ϑ_{\max}	°C	-10 +70	Note: When using below freezing point (0 °C) it is necessary to consult us	
Medium temperature range	ϑ_{\min} ϑ_{\max}	°C	-10 +70		
Medium			Filtered compressed air		
Lubrication			Oil mist lubrication compatible with Buna N		
Pneumatic Characteristics					
Nominal pressure	p_n	bar	6		
Operating pressure range	p_{\min} p_{\max}	bar bar	0.5 10		
Nominal flow rate, throttle valve (throttle completely open)	Q_N	l/min	45	200	450

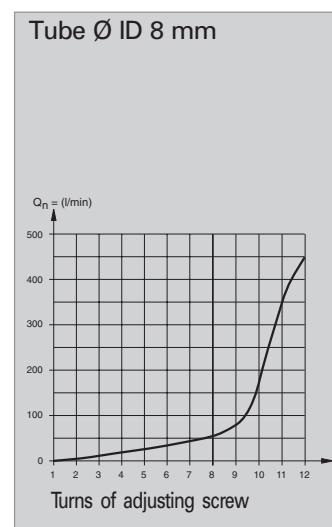
Flow Characteristics
Type: EDV/SEDV-M5



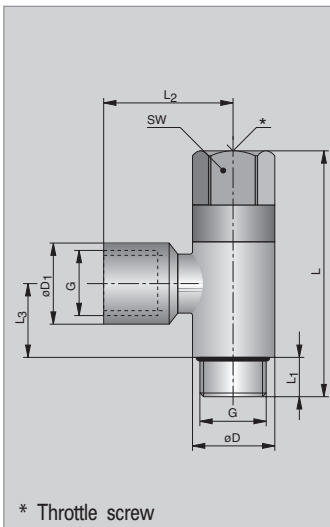
Flow Characteristics
Type: EDV/SEDV-G1/8



Flow Characteristics
Type: EDV/SEDV-G1/4

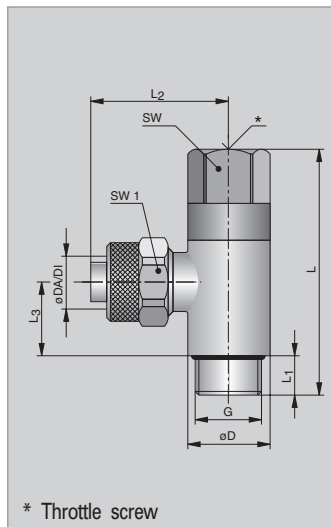


**Screw-in Flow Control Valves
Type: EDV-....C**



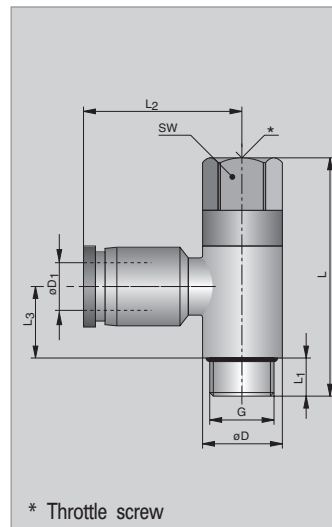
* Throttle screw

**Screw-in Flow Control Valves
Type: EDV-....C**



* Throttle screw

**Screw-in Flow Control Valves
Type: SEDV-....C**



* Throttle screw

**Screw-in Flow Control Valves with push-in fittings – Type SEDV-....C
Dimension Table and Order Instructions**

Order Type	Instructions Order No.	Tube ØOD	Port Size G	SW	SW1	ØD	ØD ₁	L	L ₁	L ₂	L ₃
SEDV-54C	KW0546	4	M5	9	-	10	10	28	5	24	5.5
SEDV-184C	KW0547	4	G1/8	12	-	14	11	37	7	25	11.5
SEDV-55C	KW0548	5	M5	9	-	10	11	28	5	25	5.5
SEDV-185C	KW0549	5	G1/8	12	-	14	12	37	7	25	11.5
SEDV-186C	KW0550	6	G1/8	12	-	14	13	37	7	26	11.5
SEDV-146C	KW0551	6	G1/4	16	-	18	13	50	9	28	15
SEDV-188C	KW0552	8	G1/8	12	-	14	15	37	7	31	11.5
SEDV-148C	KW0553	8	G1/4	16	-	18	15	50	9	31	15
SEDV-1410C	KW0554	10	G1/4	16	-	18	18	50	9	36	15

**Screw-in Flow Control Valves with union nut – Type EDV-....C
Dimension Table and Order Instructions**

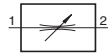
Order Type	Instructions Order No.	Tube ØDA/DI*	Port Size G	SW	SW1	ØD	ØD ₁	L	L ₁	L ₂	L ₃
EDV-54C	KW0557	4/2	M5	9	9	10	-	28	4.5	23.5	6
EDV-184C	KW0558	4/2	G1/8	12	10	14	-	37	6	28	11.5
EDV-185C	KW0559	5/3	G1/8	12	10	14	-	37	6	28	11.5
EDV-186C	KW0560	6/4	G1/8	12	12	14	-	37	6	27.5	11.5
EDV-146C	KW0561	6/4	G1/4	16	12	18	-	50	8	30	15
EDV-188C	KW0562	8/6	G1/8	12	14	14	-	37	6	28	11.5
EDV-148C	KW0563	8/6	G1/4	16	14	18	-	50	8	31	15
EDV-1410C	KW0564	10/8	G1/4	16	16	18	-	50	8	29.5	15

**Screw-in Flow Control Valves with internal thread – Type EDV-....CI
Dimension Table and Order Instructions**

Order Type	Instructions Order No.	Internal thread. D1	Port Size G	SW	SW1	ØD	ØD ₁	L	L ₁	L ₂	L ₃
EDV-1818CI	KW0555	G1/8	G1/8	12	-	14	13.5	37	7	20.5	11.5
EDV-1414CI	KW0556	G1/4	G1/4	16	-	18	17	50	8	29.5	15

* = Tube ØOD/ID

Screw-in Flow Control Valves M5 – G1/2



– with tube connection

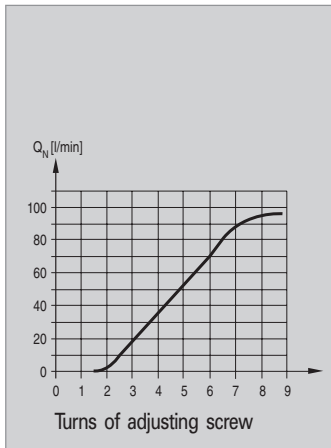
This valve is used for regulating the piston speed of pneumatic cylinders.

Characteristics according to VDI 3291

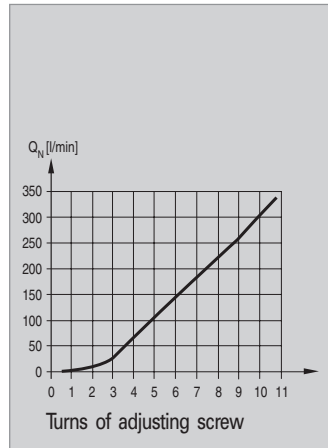
Pressures quoted as gauge pressure

Characteristics	Symbol	Unit	Description
General Features			
Type			Throttle Valve
Mounting			Screw-in valve
Tube connection			Thread
Installation			In any position
Ambient temperature range	ϑ_{\min} ϑ_{\max}	°C °C	-10 +70
Medium temperature range	ϑ_{\min} ϑ_{\max}	°C °C	-10 +70
Medium			Filtered compressed air
Lubrication			Oil mist lubrication compatible with Buna N
Pneumatic Characteristics			
Nominal pressure	p_n	bar	6
Operating pressure range	p_{\min} p_{\max}	bar bar	0.5 10

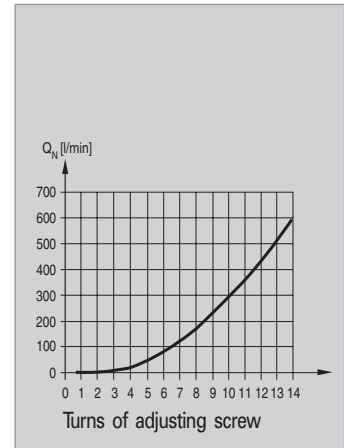
**Flow Characteristics
M5**



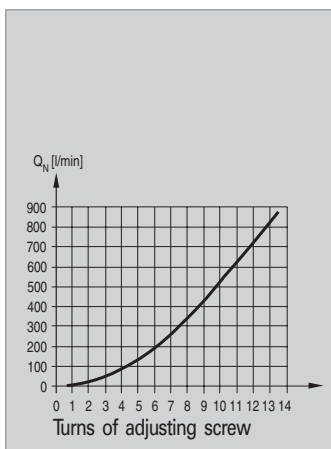
**Flow Characteristics
G1/8**



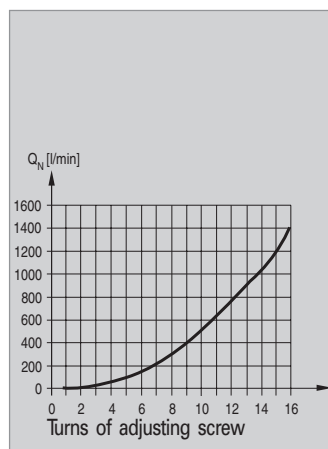
**Flow Characteristics
G1/4**



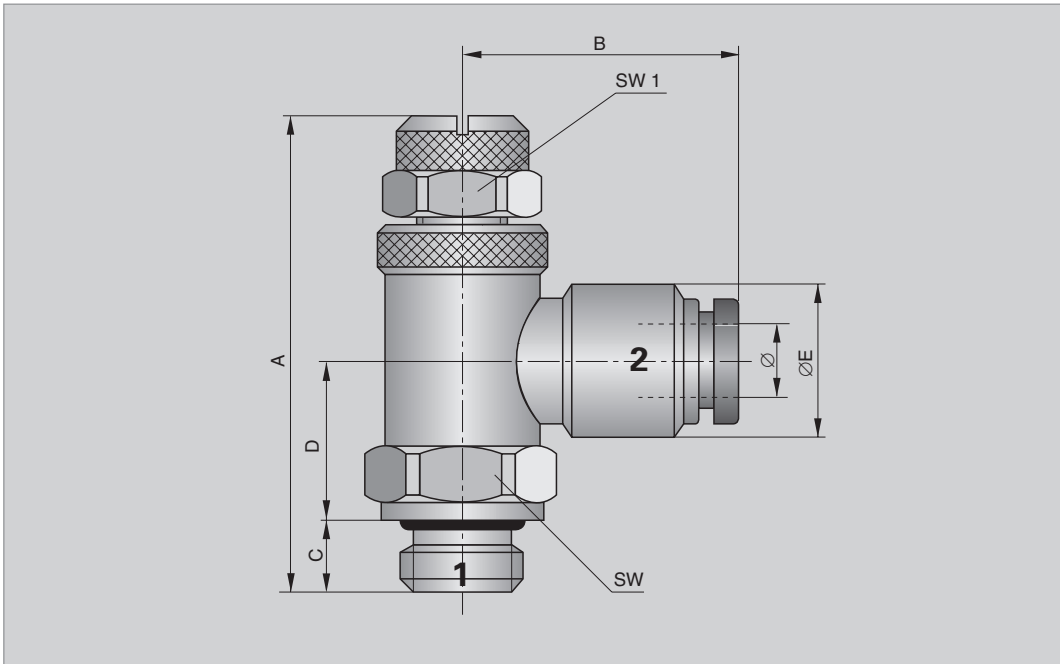
**Flow Characteristics
G3/8**



**Flow Characteristics
G1/2**



Screw-in Flow Control Valves Type: SEDV-...

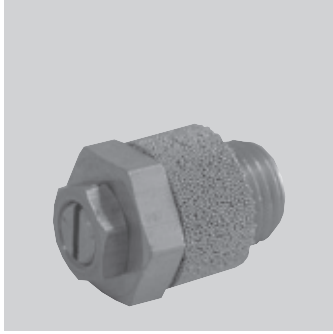


Screw-in Flow Control Valves with push-in fittings – Type SEDV-...
Dimension Table and Order Instructions

Order Instructions		Tube	Port Size	SW	SW1	ØE	B	A	D	C	Q _N
Type	Order No.	ØO*	G								[Nl/min]
SEDV-54-Msv	KW 1029	4	M5	9	9	10.9	23.5	28.2	9.3	4	95
SEDV-55-Msv	KW 1030	5	M5	9	9	12	24.5	28.2	9.3	4	95
SEDV-56-Msv	KW 1031	6	M5	9	9	13.5	24.5	28.2	9.3	4	95
SEDV-184-Msv	KW 1032	4	G1/8	15	12	11.5	25	42	13.7	6	340
SEDV-185-Msv	KW 1033	5	G1/8	15	12	12.0	25	42	13.7	6	340
SEDV-186-Msv	KW 1034	6	G1/8	15	12	13.5	25	42	13.7	6	340
SEDV-188-Msv	KW 1035	8	G1/8	15	12	15.5	30	42	13.7	6	340
SEDV-146-Msv	KW 1036	6	G1/4	18	12	13.5	27.5	48	16	8	600
SEDV-148-Msv	KW 1037	8	G1/4	18	12	15.5	32	48	16	8	600
SEDV-1410-Msv	KW 1038	10	G1/4	18	12	18	34.3	48	16	8	600
SEDV-1412-Msv	KW 1039	12	G1/4	18	12	20.2	37.5	48	16	8	600
SEDV-3810-Msv	KW 1040	10	G3/8	21	14	18	36.3	53	19	9	870
SEDV-3812-Msv	KW 1041	12	G3/8	21	14	20.2	40.5	53	19	9	870
SEDV-1212-Msv	KW 1042	12	G1/2	26	17	20.2	40.5	60.5	22	11	1400

* = Tube ØOD

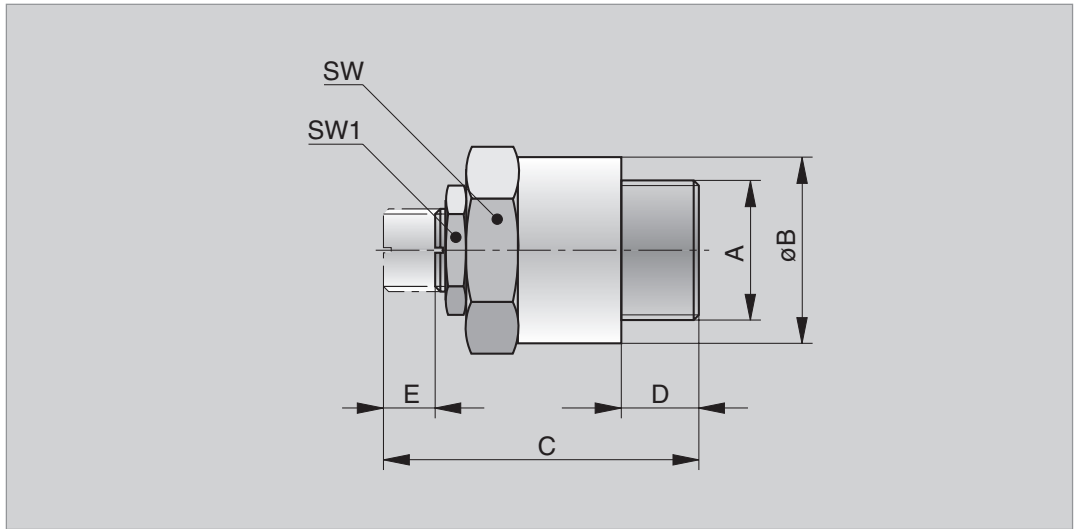
Exhaust Throttle Valves G1/8 – G1/2



Exhaust throttle valves which are screwed directly into the exhaust connections of valves.

Note:
The regulating spindle of this valve can be unscrewed right out of the valve. Therefore the spindle must not be unscrewed more than 8 turns from the closed position and must then be secured immediately with the lock nut.

Dimensions



Dimension Table and Order Instructions

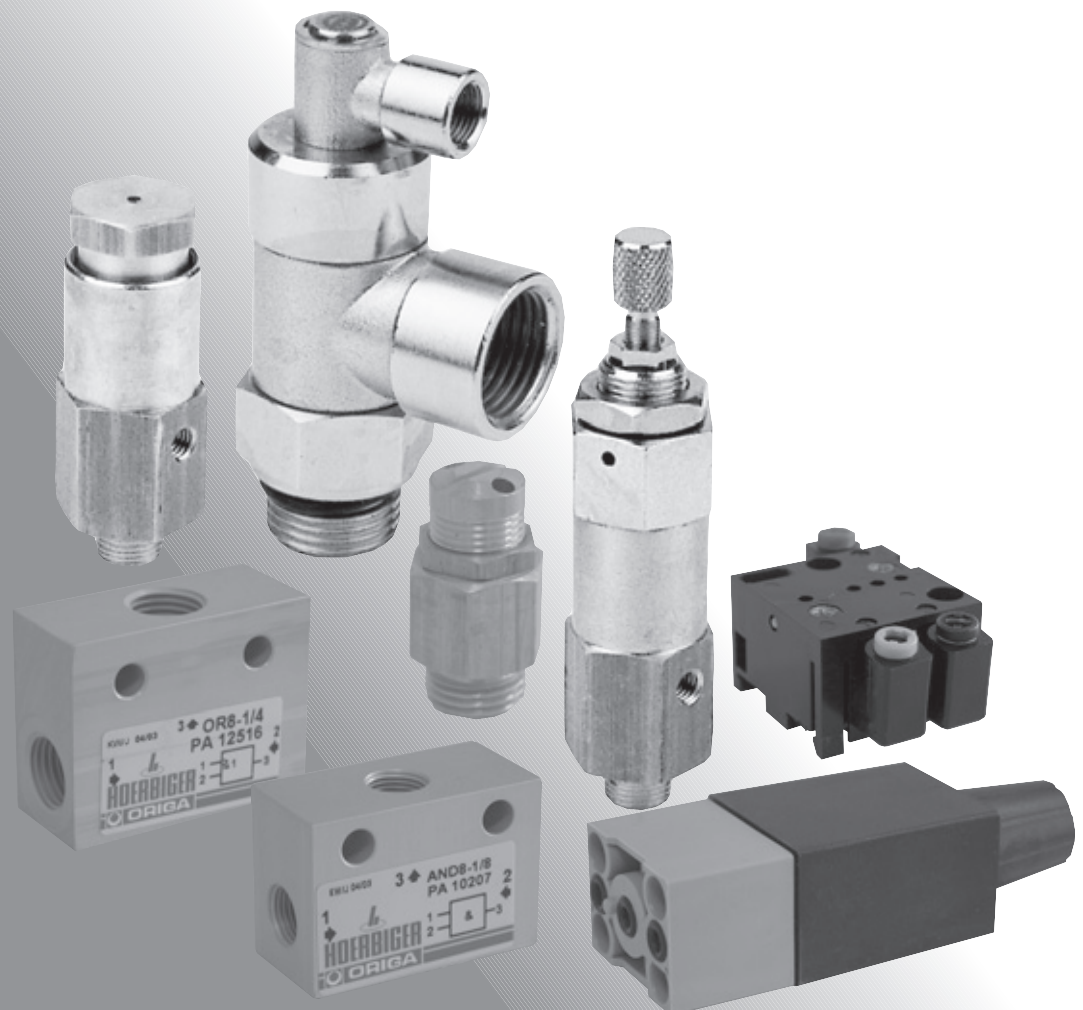
Order Type	Instructions Order No	A	B	C	D	E	SW	SW1	Weight Mass (kg)
DVE-06	KY 6952	G1/8	14	24	5	4	14	9	0.010
DVE-08	KY 6953	G1/4	18	32	7.5	6	17	11	0.025
DVE-15	KY 6954	G1/2	27	45	9.5	10	27	17	0.090

Material: Brass / sintered bronze

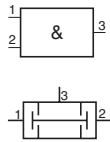
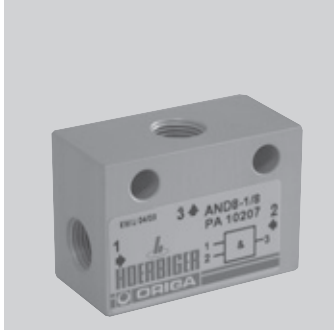
Dimensions in mm

Special Valves

- Logic components AND / OR
- Timer
- 2/2 way screw-in valves
- 3/2 way hollow screw valves
- Miniature screw-in pressure regulators
- Relief valves



AND Valves (Dual Pressure Valves) G1/8



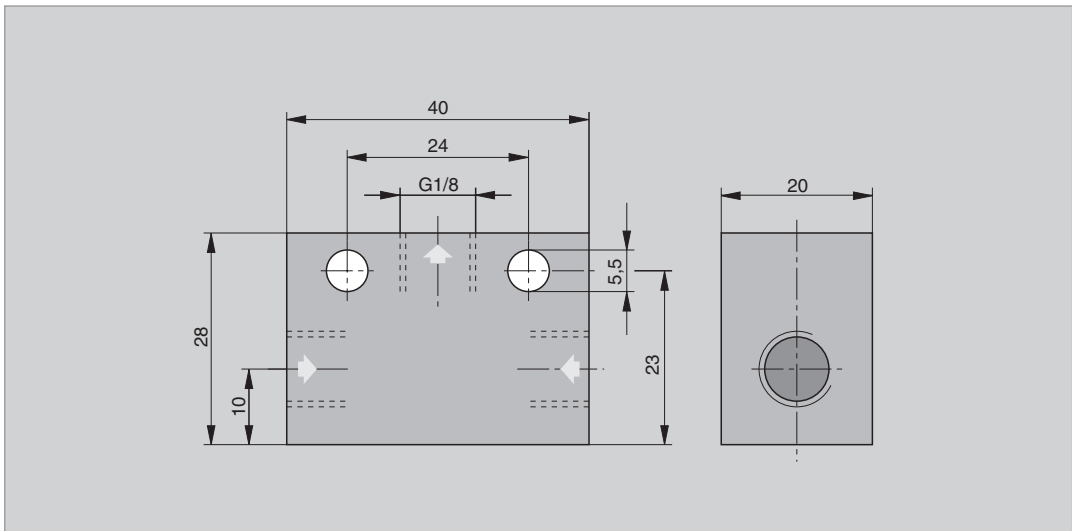
Characteristics according to VDI 3293 Pressures quoted as gauge pressure

Characteristics	Symbol	Unit	Description
General Features			
Type			Poppet valve
Mounting			2 through-bolts M5
Tube connection			Thread
Port size			G1/8
Weight (mass)		kg	0.05
Installation			In any position
Ambient temperature range	ϑ_{\min} ϑ_{\max}	°C	-20 +80
Medium temperature range	ϑ_{\min} ϑ_{\max}	°C	0 +80
Medium			Filtered compressed air
Lubrication			With or without oil mist lubrication
Pneumatic Characteristics			
Nominal pressure	p_n	bar	6
Operating pressure range	p_{\min}	bar	0.5
	p_{\max}	bar	10
Nominal flow rate	Q_N	l/min	134

Note:
When using below freezing point (0 °C)
it is necessary to consult us

Actuation: Pneumatic

Dimensions



Order Instructions

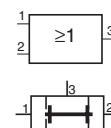
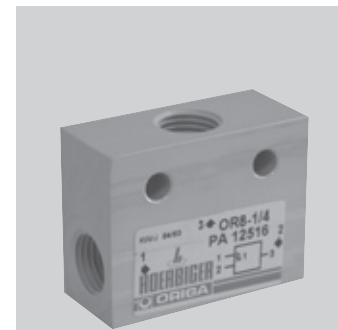
AND8-1/8 PA10207

Shuttle Valves Series OR8

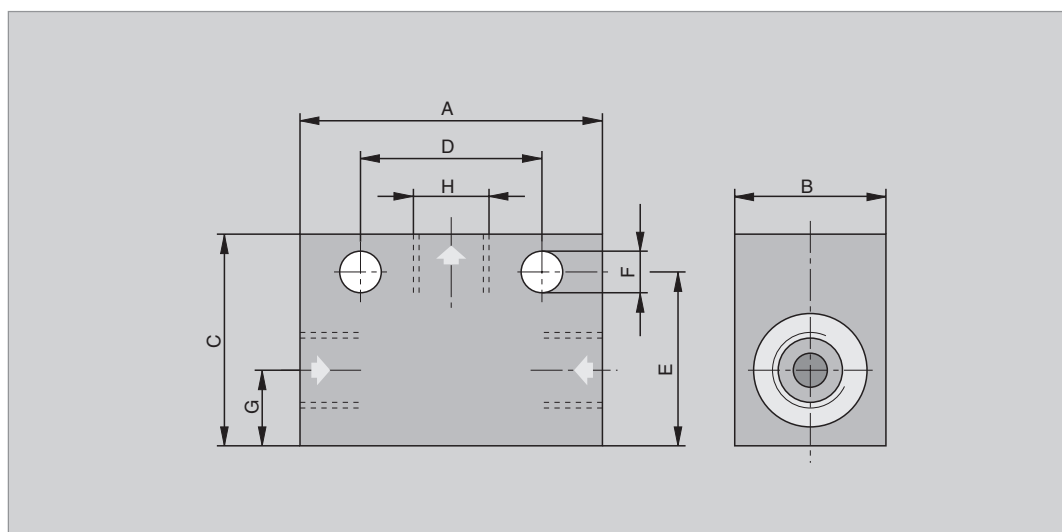
Characteristics according to VDI 3293 Pressures quoted as gauge pressure

Characteristics	Symbol	Unit	Description
General Features			
Type			Poppet valve
Mounting			2 through-bolts M5
Tube connection			Thread
Port size			G1/8 G1/4
Weight (mass)		kg	0.05 0.08
Installation			In any position
Ambient temperature range	ϑ_{\min} ϑ_{\max}	°C	-20 +80
Medium temperature range	ϑ_{\min} ϑ_{\max}	°C	0 +80
Medium			Filtered compressed air
Lubrication			With or without oil mist lubrication
Pneumatic Characteristics			
Nominal pressure	p_n	bar	6
Operating pressure range	p_{\min} p_{\max}	bar	0.5 10
Nominal flow rate	Q_N	l/min	385 635

OR Valves (Shuttle Valves) G1/8, G1/4



Dimensions

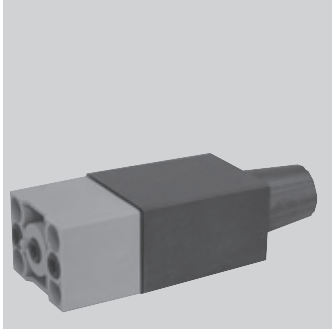


Dimension Table and Order Instructions

Order Instructions		A	B	C	D	E	F	G	H
Type	Order No.								
OR8-1/8	PA10206	40	20	28	24	23	5.5	10	G1/8
OR8-1/4	PA12516	45	20	35	24	27	5.5	10	G1/4

Dimensions in mm

Timer



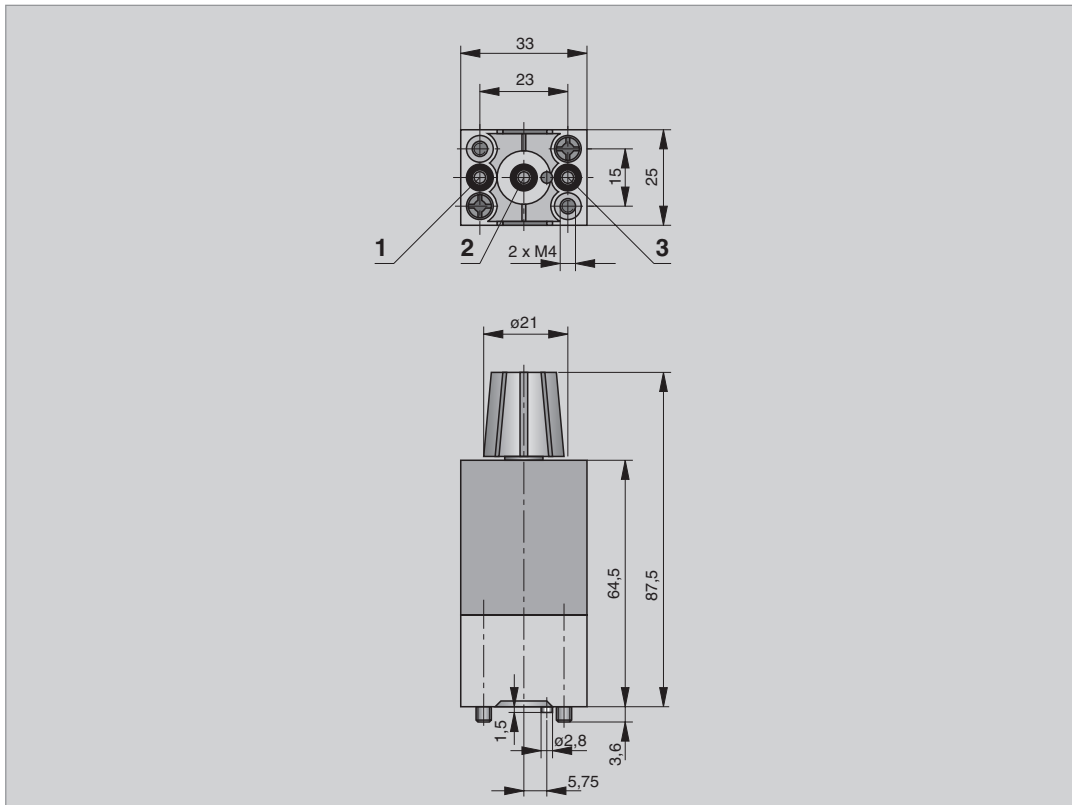
Supplied without base plate
– please order this separately

Characteristics

Pressures quoted as gauge pressure

Characteristics	Symbol	Unit	Description
General Features			
Mounting			On base plate
Tube connection			Swivelling plug-in connection
Port size		mm	For tube Ø 4/2.7
Installation			In any position
Ambient temperatures	ϑ_{\min} ϑ_{\max}	°C °C	-10 +60
Medium			Filtered and lubricated or filtered and unlubricated air
Pneumatic Characteristics			
Nominal pressure	p_n	bar	6
Operating pressure range	p_{\min}	bar	2
	p_{\max}	bar	7
Nominal flow rate	Q_N	m ³ /h	In direction 1-3: 12.2 In direction 3-1: 13.3
Time delay	t_{\max}	s	max. 40 (according to type)
Reset time			Not more than 200 ms

Dimensions



Order Instructions

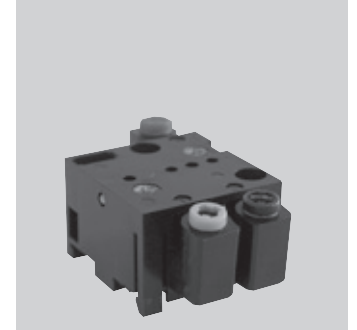
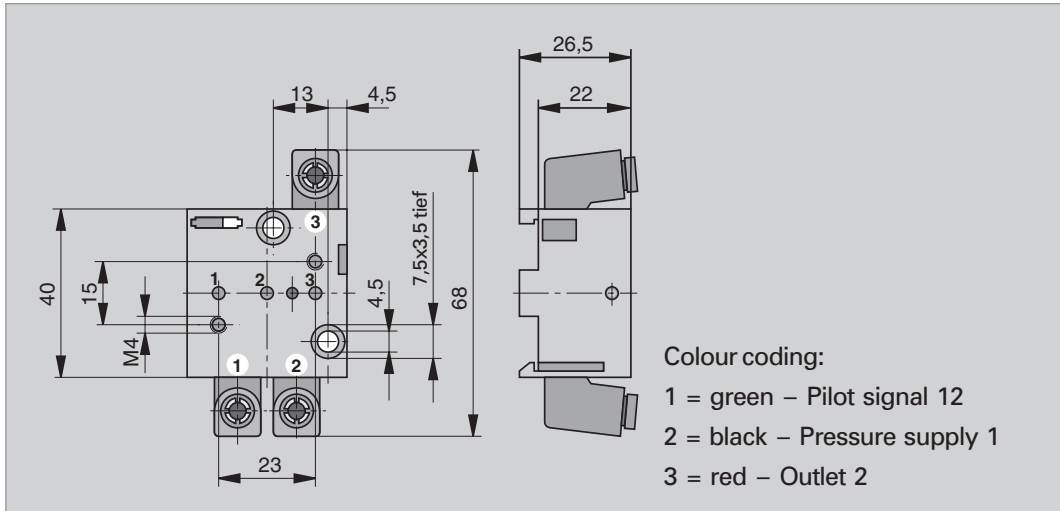
Version (Time Delay)	Function	Order Instructions	
		Type	Order No.
1.0 -10 sec.	NC (normally closed)	LTY-10/2	KY8103
5.0 -40 sec.	NC (normally closed)	LTY-10/3	KY8104
0.5 -6 sec.	NO (normally open)	LTN-10/2	KY8105
2.5 -25 sec.	NO (normally open)	LTN-10/3	KY8106

Characteristics of Base Plate

Characteristics	Comments
Mounting	On rail to DIN 46 277 (35 x 15 or 35 x 7.5); clamps on. On flat surface with 2 screws M4
Connections	Swivelling plug-in connection for tube \varnothing 4/2.7

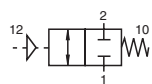
Base Plate for Timer

Dimensions of Base Plate



Order Instructions: BIC 3P10 KY9484

2/2 Way Screw-in Valves (Check Valves) G1/8 – G1/2



Actuation:
pneumatic

Characteristics according to VDI 3290 Pressures quoted as gauge pressure

Characteristics	Symbol	Unit	Description
General Features			
Type			Spool valve with spring return
Tube connection			Port 1: Internal thread to ISO 228 Port 2: External thread to ISO 228 Port 12: G1/8 internal, push-in. Ø 4
Port size			See dimension drawing
Weight (mass)		kg	See table
Installation			In any position – rings can be rotated 360° after the valve has been installed
Ambient temperature range	ϑ_{\min} ϑ_{\max}	°C °C	-10 +70
Medium temperature range	ϑ_{\min} ϑ_{\max}	°C °C	-10 +70
Medium			Filtered compressed air, neutral gases*
Lubrication			With or without oil mist lubrication ¹⁾
Material			Metal parts: nickel-plated brass or stainless steel Springs: stainless steel Seals: Buna N (NBR)
Pneumatic Characteristics			
Nominal pressure	p_n	bar	6
Operating pressure range	p_{\min}	bar	0
	p_{\max}	bar	10
Nominal flow rate	Q_N	l/min	See table
Actuation			
Pneumatic			Direct
Actuation pressure range	p_{st}	bar	See diagram

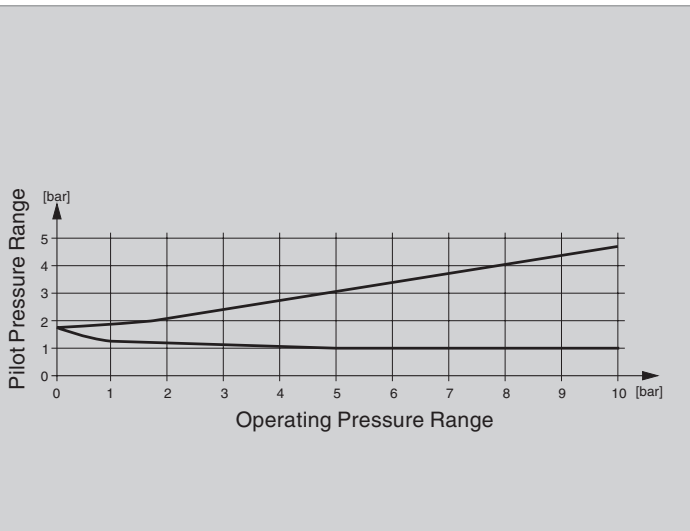
* Other media on request

¹⁾ we recommend the use of mineral oil VG 32 to ISO 3448

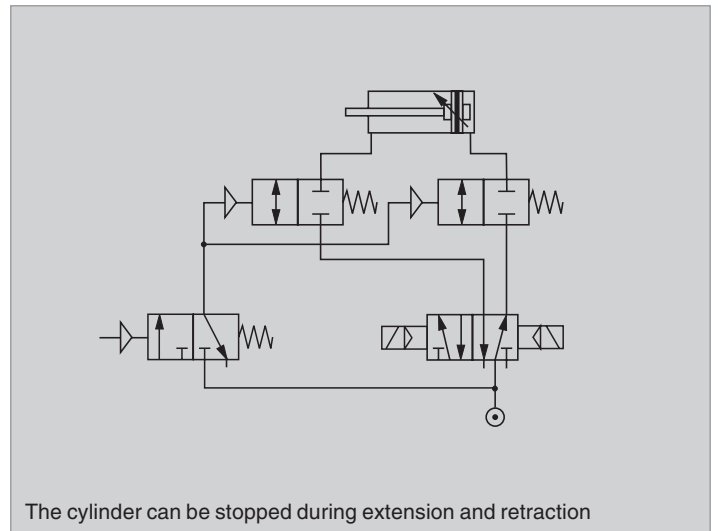
Nominal flow rate, tightening torque, opening pressure, weight (mass)

Port Size	DN [mm]	Q_N [l/min]	max. tightening [Nm]	Weight Mass [kg]
G1/8	4.0	300	3.0	0.068 – with thread 0.070 – fitting Ø 6
G1/4	5.6	700	7.0	0.104 – with thread 0.104 – fitting Ø 6 0.110 – fitting Ø 8
G3/8	7.7	1200	9.0	0.150 – with thread 0.145 – fitting Ø 8 0.155 – fitting Ø 10
G1/2	10.0	2100	15.0	0.210 – with thread 0.240 – fitting Ø 12

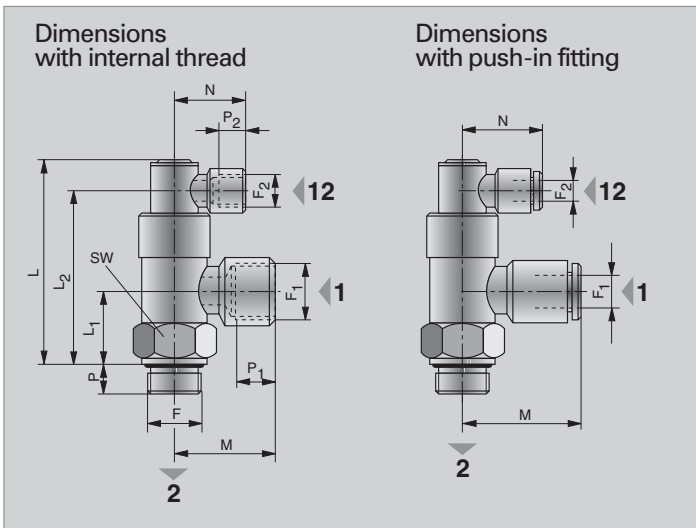
Pilot Pressure in Relation to Operating Pressure



Example



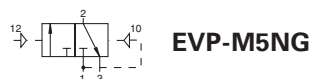
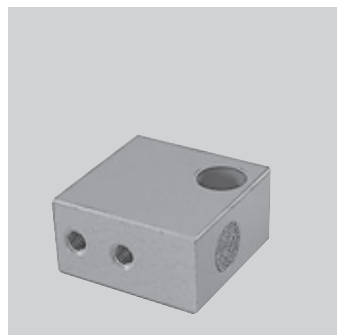
Dimensions



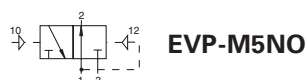
Dimension Table and Order Instructions

F	F ₁	F ₂	L	L ₁	L ₂	M	N	P	P ₁	P ₂	SW	Type	Order Instructions Order No.
G1/8	G1/8	G1/8	51.5	16	42	21	21	6	7	7	14	EVP-1/8	KL4062
G1/8	∅ 6	∅ 4	51.5	16	42	25	25	6	–	–	14	EVP-1/8	KL4063
G1/4	G1/4	G1/8	57.5	19.5	48	25	21	8	8	7	17	EVP-1/4	KL4064
G1/4	∅ 6	∅ 4	57.5	19.5	48	27.5	25	8	–	–	17	EVP-1/4	KL4065
G1/4	∅ 8	∅ 4	57.5	19.5	48	32	25	8	–	–	17	EVP-1/4	KL4066
G3/8	G3/8	G1/8	63	22.5	53.5	31	21	8	10	7	22	EVP-3/8	KL4067
G3/8	∅ 8	∅ 4	63	22.5	53.5	31.5	25	8	–	–	22	EVP-3/8	KL4068
G3/8	∅ 10	∅ 4	63	22.5	53.5	36	25	8	–	–	22	EVP-3/8	KL4069
G1/2	G1/2	G1/8	71.5	27	61.5	40	21	12	14	7	27	EVP-1/2	KL4070
G1/2	∅ 12	∅ 4	71.5	27	61.5	40.5	25	12	–	–	27	EVP-1/2	KL4071

3/2 Way Hollow Screw Valves M5 (G1/8)



EVP-M5NG



EVP-M5NO

Actuation: Pneumatic

Versions:
normally closed
normally open

3/2 Way hollow screw valve for direct assembly to the cylinder with a hollow screw. It is also possible to control multiple cylinders through port 2. The valve can also be used as an AND element.

Supplied:
1 valve without hollow screw

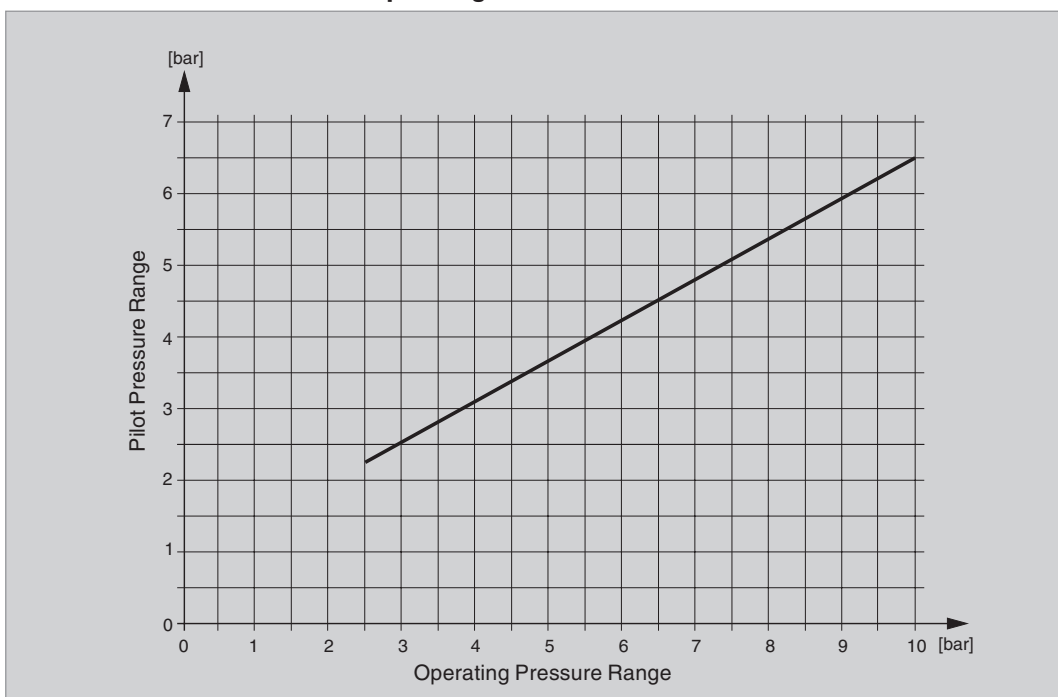
Characteristics according to VDI 3290 Pressures quoted as gauge pressure

Characteristics	Symbol	Unit	Description
General Features			
Type			Spool valve with air spring return
Tube connection			Thread ø 10 mm for hollow screw G1/8
Port size			M5 (G1/8)
Installation			With hollow screw G1/8
Weight (mass)		kg	0.050
Installation			In any position
Ambient temperature range	ϑ_{\min} ϑ_{\max}	°C	-10 +80
Medium temperature range	ϑ_{\min} ϑ_{\max}	°C	-10 +80
Medium			Filtered compressed air, neutral gases*
Lubrication			With or without oil mist lubrication ¹⁾
Material			Housing: anodised aluminium Internal parts: Ms 58 Seals: Buna N (NBR)
Pneumatic Characteristics			
Nominal Pressure	p_n	bar	6
Operating pressure range	p_{\min} p_{\max}	bar bar	2.5 10
Nominal flow rate	Q_N	l/min	120
Actuation			
Pneumatic			Direct
Actuation pressure range	p_{st}	bar	See diagram

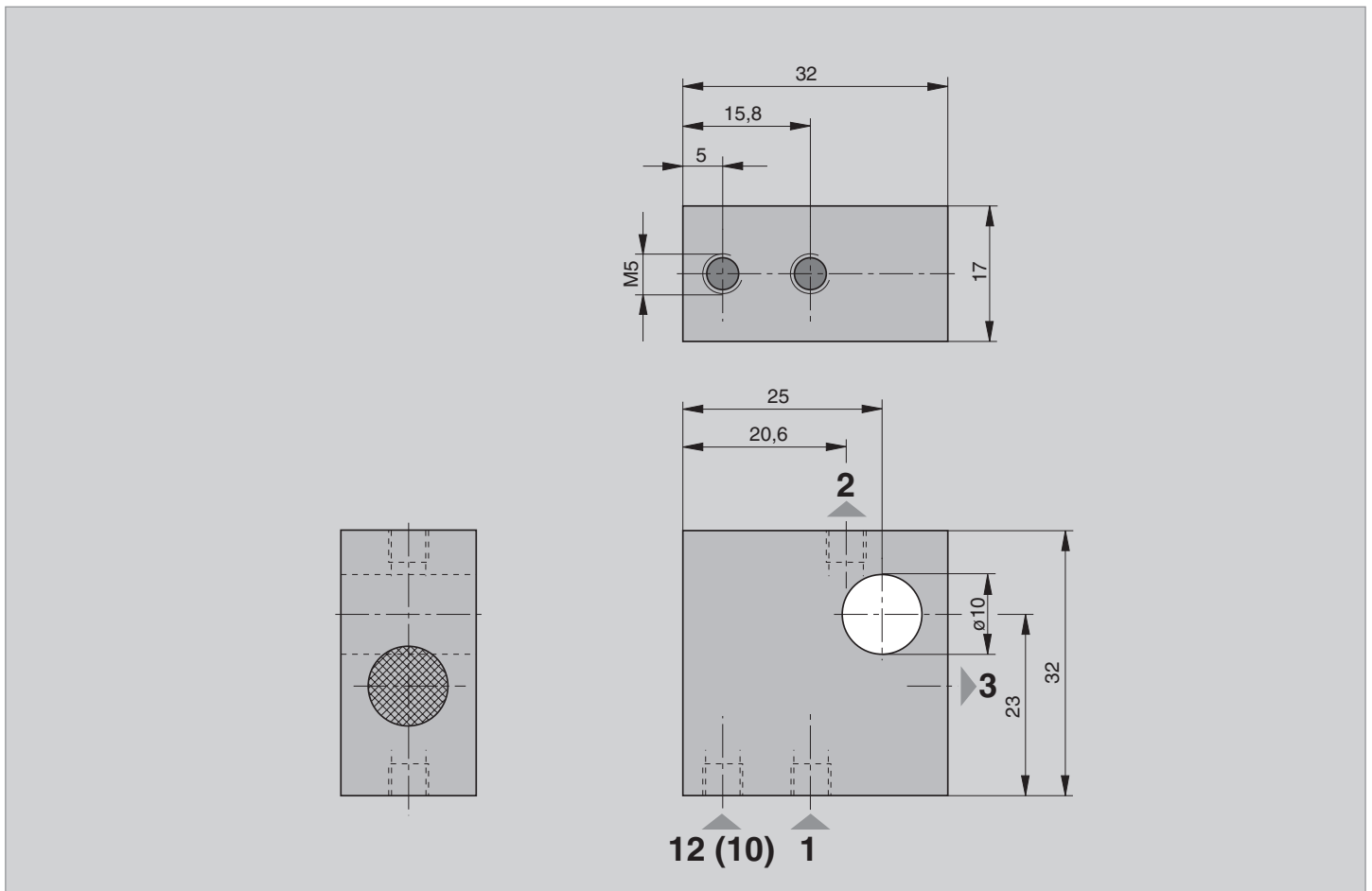
* Other media on request

¹⁾ We recommend the use of mineral oil type VG32 to ISO 3448

Pilot Pressure in Relation to Operating Pressure



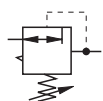
Dimensions



Order Instructions

Actuation	Return	Symbol	Type	Order Instructions Order No.
Pneumatic, permanent signal	Air spring return		EVP-M5NG	KL4090
	Air spring return		EVP-M5N0	KL4089

Miniature Screw-in Pressure Regulators G1/8, M5



Versions:

- Screw-in version
- for panel mounting
- Viton version*

* Note:
The Viton version can be used for temperatures up to 140°C.
Please consult us before using the valve in high temperatures, especially when using other media than compressed air.

Characteristics to VDI 3290

Pressures quoted as gauge pressures

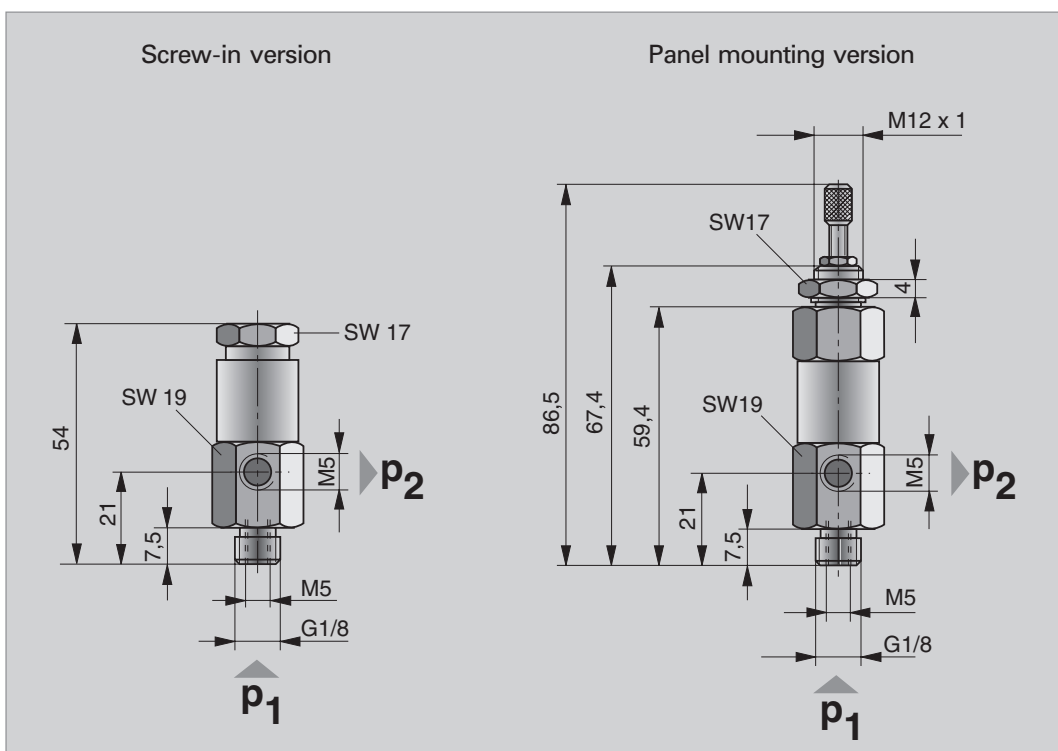
Characteristics	Symbol	Unit	Description
General Features			
Type			Pressure regulating valve, piston type with secondary pressure relief
Tube connection			Thread
Port size			Input: G1/8 and M5 Output: M5 Gauge: M5
Nominal bore		mm	2.2
Weight (mass)		kg	0.08 (0.11)
Installation			In any position
Ambient temperature range	ϑ_{\min} ϑ_{\max}	°C	-20 +60
Medium temperature range	ϑ_{\min} ϑ_{\max}	°C	-20 +80
Medium			Filtered compressed air, neutral gases*
Lubrication			With or without oil mist lubrication ¹⁾
Material			Metal parts: brass Ms 58 Springs: stainless and zinc-plated steel Seals: Buna N (NBR)
Pneumatic Characteristics			
Operating pressure range	p_{\min} p_{\max}	bar bar	0 12
Secondary pressure range	p_{\min} p_{\max}	bar bar	1 8
Flow rate	Q_N	l/min	100 **

* Other media on request

**at $p_1 = 10$ bar to $p_2 = 6$ bar, $\Delta p = 1$ bar

¹⁾ We recommend the use of mineral oil type VG32 to ISO 3448

Dimensions



Order Instructions

Version	Port Size	Seal	Type	Order Instructions Order No.
Screw-in version	G1/8, M5	Buna N	HMR-1/8	KL4072
Panel version	G1/8, M5	Buna N	HMRS-1/8	KL4074
Screw-in version	G1/8, M5	Viton	HMR-1/8-V	KL4073
Panel version	G1/8, M5	Viton	HMRS-1/8-V	KL4075

Relief Valves G1/8, G1/4



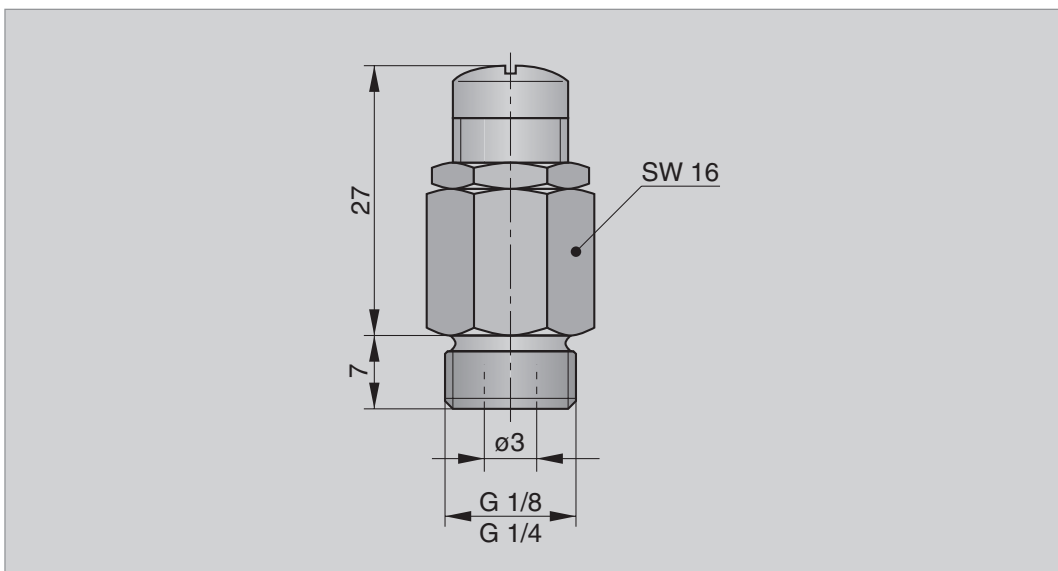
Adjustment:
1-4 bar
3-7 bar

Characteristics

Pressures quoted as gauge pressure

Characteristics	Symbol	Unit	Description	
General Features				
System			Spring-loaded poppet valve with adjustable opening pressure	
Type			USV-1/8	USV-1/4
Port size			G1/8	G1/4
Installation			In any position	
Temperature range	ϑ_{\min} ϑ_{\max}	°C	0 +90	
Medium			Compressed air	
Opening pressure		bar	1-4 or 3-7 (adjustable)	
Material			Brass	

Dimensions



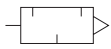
Order Instructions

Adjustment	Port Size	Order Instructions	
		Type	Order No.
1 – 4 bar	G1/8	USV-1/8 (1-4 bar)	KY 4093
3 – 7 bar	G1/8	USV-1/8 (3-7 bar)	KY 4065
1 – 4 bar	G1/4	USV-1/4 (1-4 bar)	KY 4094
3 – 7 bar	G1/4	USV-1/4 (3-7 bar)	KY 4066

- Exhaust silencers, sintered metal
- Exhaust silencers, plastic



Exhaust Silencers M5 – G1



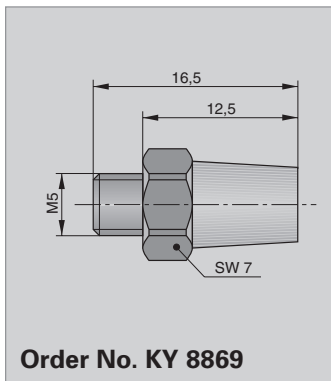
Exhaust silencers disperse the exhaust air, reduce exhaust noise and prevent the ingress of dirt into components

Characteristics (not for type 50030)

Pressures quoted as gauge pressures

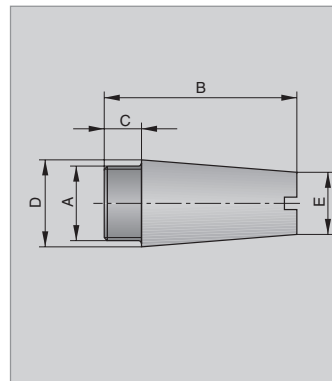
Characteristics	Symbol	Unit	Description					
General Features								
Type			Single-chamber principle					
Port size			G1/8	G1/4	G3/8	G1/2	G3/4	G1
Weight (mass)		kg	0.005	0.01	0.03	0.06	0.11	0.2
Ambient temperature range	ϑ_{\max}	°C	+250 (danger of icing in lower temperature range)					
Material			Sintered bronze (on M5, threaded part is bronze)					
Grain size		mm	0.3 to 0.6					
Pneumatic Characteristics								
Operating pressure range	p_{\min}	bar	0					
	p_{\max}	bar	16					

Dimensions Type: 50030
Port size M5

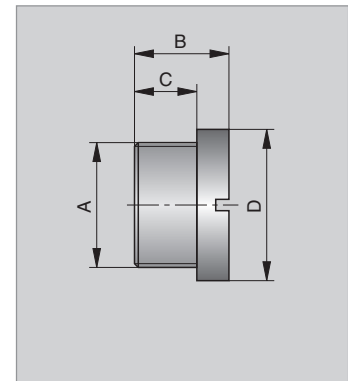


Order No. KY 8869

Dimensions Type: D1
Port size G1/8–G1



Dimensions Type: D1K
Port size G1/8–G3/8



Order Instructions

Order Instructions Type	Order Instructions Order No.	A	B	C	D	E
D1-06I	PD 20636	G1/8 i	22	8	Ø 15	Ø 12
D1-06	KY 2010	G1/8	21	6	Ø 11	Ø 8
D1K-06	KY 2260	G1/8	10	6	Ø 12	-
D1-08	KY 2011	G1/4	27	8	Ø 14	Ø 10
D1K-08	KW 0705	G1/4	12	8	Ø 15	-
D1-10	KY 2012	G3/8	38	8	Ø 18	Ø 15
D1K-10	KW 0706	G3/8	12	8	Ø 20	-
D1-15	KY 2013	G1/2	44	10	Ø 24	Ø 19
D1-20	KY 2014	G3/4	63	12	Ø 30	Ø 20
D1-25	KY 2015	G1	77	15	Ø 36	Ø 25

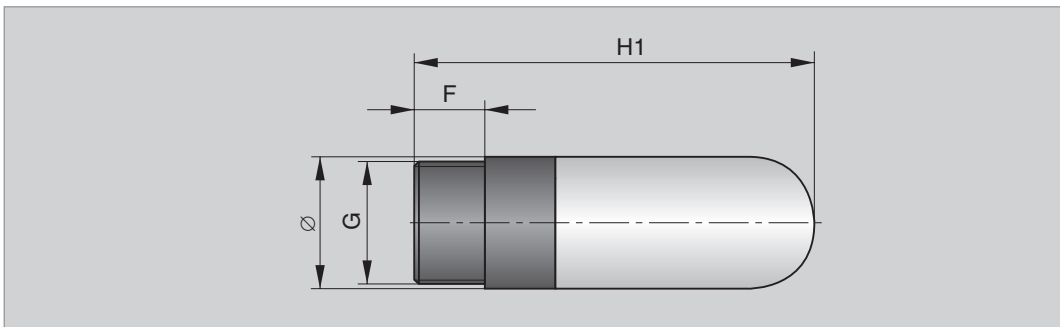
Exhaust Silencers, Plastic Series D1..K

Characteristics

Pressures quoted as gauge pressures

Characteristics	Symbol	Unit	Description
General Features			
Type			Single-chamber principle
Port size			G1/8 G1/4 G3/8 G1/2 G3/4 G1
Ambient temperature range	ϑ_{\max}	°C	-30 to +80
Material			Polyethylene
Grain size		mm	0.3 to 0.6
Medium			Highly resistant to most media, but not to chlorinated hydrocarbons (trichloroethylene, perchloroethylene or hydrogen tetrachlorides)
Pneumatic Characteristics			
Operating pressure range	p_{\min} p_{\max}	bar bar	0 8

Dimensions Type: D1...K Port size G1/8–G1



Exhaust Silencers M5 – G1



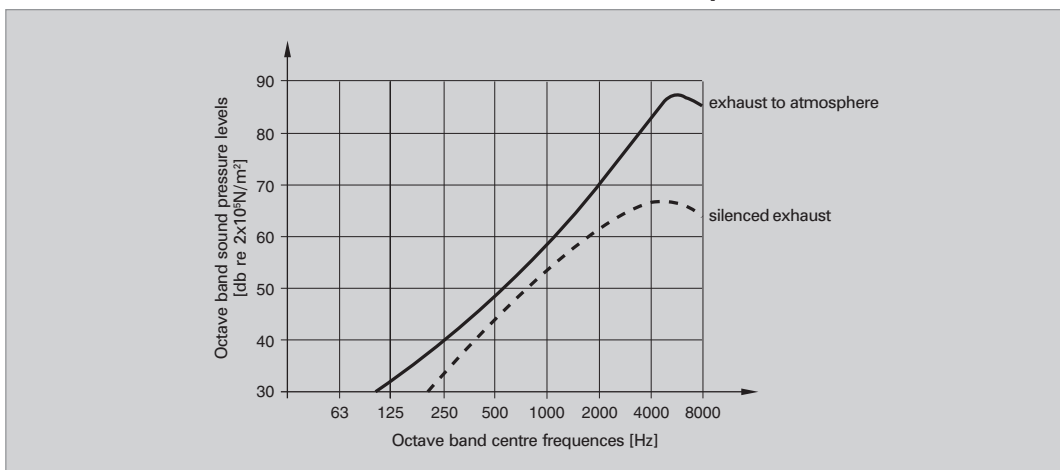
Exhaust silencers disperse the exhaust air, reduce exhaust noise and prevent the ingress of dirt into components

These exhaust silencers are recommended for use in environments where particle deposition might block the pores of sintered bronze silencers, e.g. in the cement and concrete industry

Order Instructions

Order Instructions Type	Order No.	G	Ø	F	H1
D1-M5K	KY8830	M5	6.7	3.4	20.4
D1-06K	KY8831	G1/8	12.7	6.7	34
D1-08K	KY8832	G1/4	15.5	8.2	42.5
D1-10K	KY8833	G3/8	18.4	12.1	67.5
D1-15K	KY8834	G1/2	23	14	78
D1-20K	KY8835	G3/4	38.9	14.9	131
D1-25K	KY8836	G1	49.4	20	160

Noise reduction for a G1/2 valve with exhaust silencer and $p = 6$ bar



Dimensions in mm

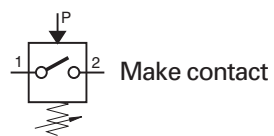
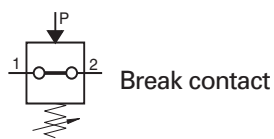


Pressure Switches

- Pressure switches, pneumatic
- Pressure switches, electronic



Pressure Switches Pneumatic G1/8, G1/4



Actuation: Pneumatic

Switching function:

- Make contact**
– closes the circuit when the set pressure is reached
- Break contact**
– interrupts the circuit when the set pressure is reached

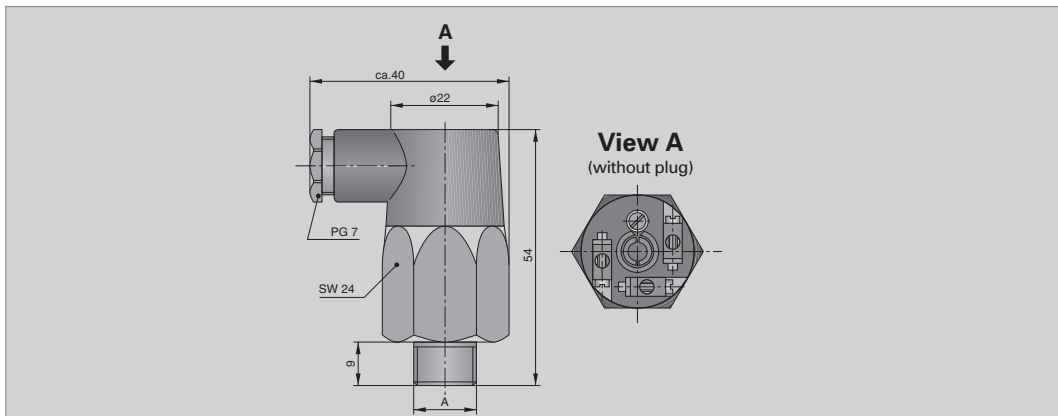
Characteristics

Pressures quoted as gauge pressures

Characteristics	Symbol	Unit	Description		
Type Break contact			801-...-01	801-...-1	801-...-10
Make contact			802-...-01	802-...-1	802-...-10
Setting range	$p_{\min/\max}$	bar	-0.1 to -0.95*	0.1-1	1-10
Safety pressure relief	p_{\max}	bar	50	100	100
Port size			G1/8 external, G1/4 external		
Weight (mass)		kg	0.09		
Material			Housing: galvanised steel, plastic Diaphragm: Buna N		
Medium and ambient temperature range	ϑ_{\min} ϑ_{\max}	°C °C	-20 +100		
Consistency		%	5-10**		
Switch back difference		%~	5**		
Voltage	U	V	max. 250		
Current	I	A	max. 2		
Electrical connection			Screw terminal, protective cap Pg7		
Electrical protection			IP65		
Switching frequency		s/min	200		

* for vacuum operation
** refers to increasing pressure

Dimensions



Order Instructions

Order Instructions Type	Order No.	Port Size A	Function	Setting range
801-1/8-01	KL3010	G1/8	Break contact	-0.1 to -0.95 (for vacuum operation)
801-1/4-01	KZ3791	G1/4		
802-1/8-01	KL3011	G1/8	Make contact	0.1-1
802-1/4-01	KZ3792	G1/4		
801-1/8-1	KL3012	G1/8	Break contact	1-10
801-1/4-1	KZ3793	G1/4		
802-1/8-1	KL3013	G1/8	Make contact	1-10
802-1/4-1	KZ3794	G1/4		
801-1/8-10	KL3014	G1/8	Break contact	1-10
801-1/4-10	KZ3795	G1/4		
802-1/8-10	KL3015	G1/8	Make contact	1-10
802-1/4-10	KZ3796	G1/4		

Pneumatic, Flat Pin Plug Series 803, 804

Characteristics

Pressures quoted as gauge pressures

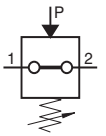
Characteristics	Symbol	Unit	Description	
Type Break contact			803-...-1	803-...-10
Make contact			804-...-1	804-...-10
Setting range	$p_{\min/\max}$	bar	-0.1-1	1-10
Safety pressure relief	p_{\max}	bar	100	100
Port size			G1/8 external, G1/4 external	
Weight (mass)		kg	0.09	
Material			Housing: galvanised steel, plastic Diaphragm: Buna N	
Medium and ambient temperature range	ϑ_{\min} ϑ_{\max}	°C °C	-20 +100	
Consistency		%	5-10*	
Switch back difference		%~	5*	
Voltage	U	V	max. 250	
Current	I	A	max. 2	
Electrical connection			Flat pin plug, protective cap Pg9	
Electrical protection			IP55	
Switching frequency		s/min	200	

*refers to increasing pressure

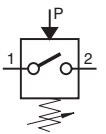
Pressure Switches Pneumatic G1/8, G1/4



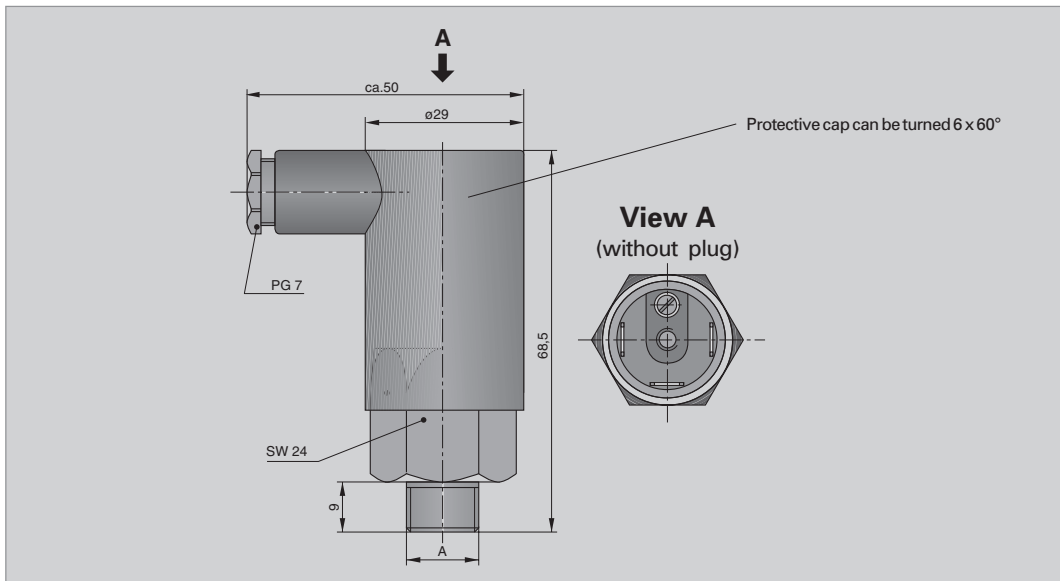
Break contact



Make contact



Dimensions



Actuation: Pneumatic

Switching function:

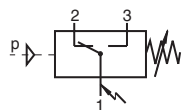
- Make contact**
– closes the circuit when the set pressure is reached
- Break contact**
– interrupts the circuit when the set pressure is reached

Order Instructions

Order Instructions		Port Size A	Function	Setting range
Type	Order No.			
803-1/8-1	KL3018	G1/8	Break contact	0.1-1
803-1/4-1	KL3094	G1/4		
804-1/8-1	KL3019	G1/8	Make contact	
804-1/4-1	KL3095	G1/4		
803-1/8-10	KL3016	G1/8	Break contact	1-10
803-1/4-10	KW0721	G1/4		
804-1/8-10	KL3017	G1/8	Make contact	
804-1/4-10	KW0722	G1/4		

Dimensions in mm

Pressure Switches Pneumatic G1/8, G1/4



Actuation: Pneumatic

Features

- suited for intrinsically safe operation
- especially compact design
- high switching frequency
- attractive design
- Shockproof up to 30 g

Pin 1 – 3:

rising pressure makes contact

Pin 1 – 2:

rising pressure breaks contact

Characteristics

Pressures quoted as gauge pressures

Characteristics	Symbol	Unit	Description
Type – thread version			G1/4-0I* G1/4-2I G1/4-8I G1/4-16I
Type – flange version			G1/4-0P* G1/4-2P G1/4-8P G1/4-16P
Setting range	$p_{\min/\max}$	bar	-1 to 0 0.2-2 0.5-8 1-16
Safety pressure relief	p_{\max}	bar	80 80 80 80
Port size			Type I: G1/4 internal, Type P: flange
Mounting			2 through-holes \varnothing 5.2
Installation			In any position
Weight (mass)		kg	0.275
Medium			Filtered compressed air (10 μ m), lubricated or unlubricated
Material			
Housing			Special aluminium die casting, powder-coated
Diaphragm, seals			Buna N
Medium and ambient temperature range	ϑ_{\min} ϑ_{\max}	$^{\circ}$ C $^{\circ}$ C	-10 +80
Consistency		%	\pm 2 in relation to end-of-range value
Switch back difference			See diagram
Hysteresis, vacuum version		%	<15
Vibration resistance		g	10 (10 ... 2000 Hz)
Shock resistance		g	30
Voltage	U	V	max. 250
Voltage type			AC and DC
Operating current and operating voltage for category of use			AC12 to VDE0660 4A at 250 VAC AC14 to VDE0660 1A at 250 VAC DC12 to VDE0660 3A at 28 VDC DC13 to VDE0660 1A at 28 VDC
CE marking			to EC Directive 73/23/EWG
Electrical connection			Connector to DIN 43650, Form A, ISO4400 oder M12x1 – 4-pin
Electrical protection		IP	65
Switching element			Pole-changing switch with catch spring as switching element, with self-cleaning contacts
Switching frequency		s/min	max. 200

* for vacuum operation

Selection and Mounting Notes

Range selection:

Selection is optimal when the switching points are in the middle of the switching range.

Electrical connection:

Wiring according to VDE regulations.

Tightening torque for plug:
0.7 \pm 0.1 Nm

Outdoor use only with sufficient protection against critical environmental conditions

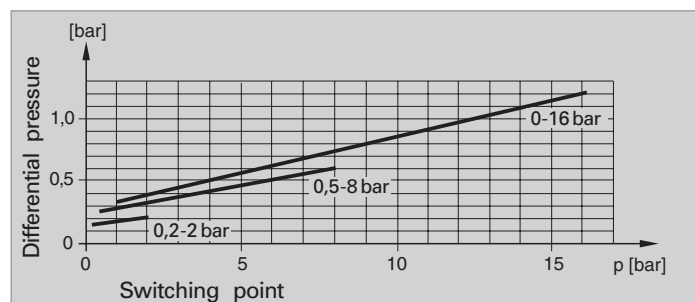
(e.g. aggressive atmosphere, salty environments, high temperature changes).

Scope of delivery

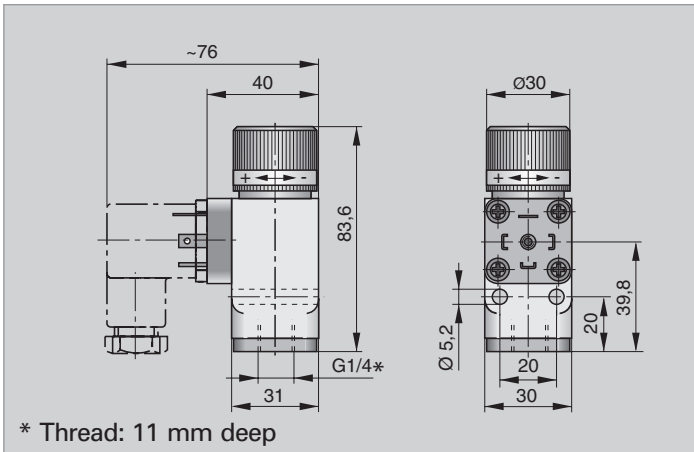
The flange version (surface roughness of flange surface 12 μ m) is supplied with an O-ring 5 x 1.5mm and 2 screws 5 x 35 DIN 912. Minimum thread length to be used: 4 mm.

Max. diameter of the pressure opening 3 mm.

Switch back difference

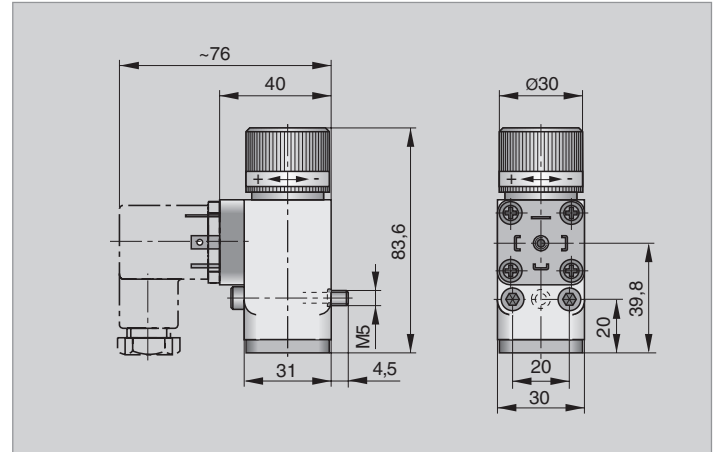


Dimensions
(Version with internal thread and plug to DIN 43650)

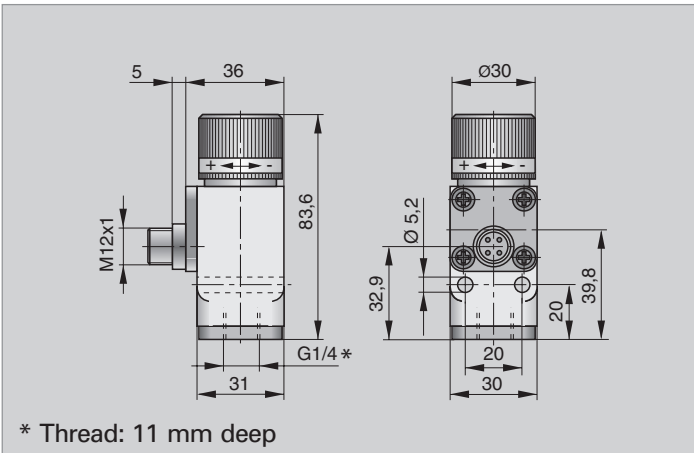


* Thread: 11 mm deep

Dimensions
(Flange version with plug to DIN 43650)

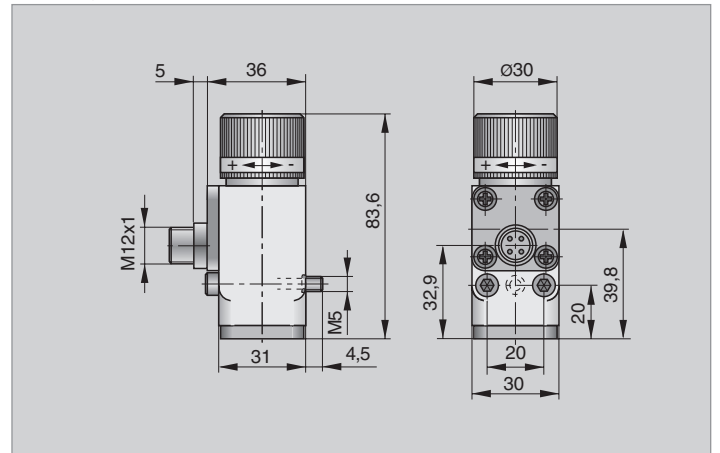


Dimensions
(Version with internal thread and connector M12x1)



* Thread: 11 mm deep

Dimensions
(Flange Version with connector M12x1)



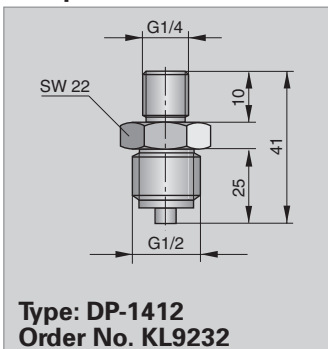
Order Instructions

Setting range [bar]	Order Instructions	
	Type	Order No.
-1 to 0	G1/4-0I-DIN	KL3200
-1 to 0	G1/4-0I-M12	KL3208
0.2 to 2	G1/4-2I-DIN	KL3201
0.2 to 2	G1/4-2I-M12	KL3209
0.5 to 8	G1/4-8I-DIN	KL3202
0.5 to 8	G1/4-8I-M12	KL3210
1.0 to 16	G1/4-16I-DIN	KL3203
1.0 to 16	G1/4-16I-M12	KL3211

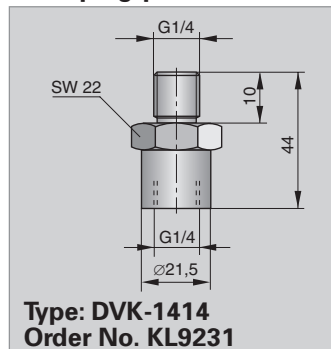
Order Instructions

Setting range [bar]	Order Instructions	
	Type	Order No.
-1 to 0	G1/4-0P-DIN	KL3204
-1 to 0	G1/4-0P-M12	KL3212
0.2 to 2	G1/4-2P-DIN	KL3205
0.2 to 2	G1/4-2P-M12	KL3213
0.5 to 8	G1/4-8P-DIN	KL3206
0.5 to 8	G1/4-8P-M12	KL3214
1.0 to 16	G1/4-16P-DIN	KL3207
1.0 to 16	G1/4-16P-M12	KL3215

Pressure connection adapter

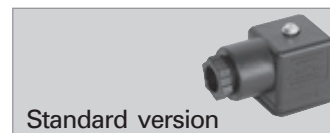


Damping prechamber



Plugs to DIN 43650, Form A, ISO 4400

Description	Order Instructions	
	Type	Order No.
Standard version	GSD-30DS	KL3349
Version with LEDs 24V	GSD-30DSL24V	KL3350
Version with LEDs 230V	GSD-30DSL230V	KL3351



Dimensions in mm

Pressure Switches Electronic



Actuation: electrical

Magic Pressure Control

The magic pressure control is an electronic pressure control, monitoring and regulating device. Basically, it consists of a pressure connection with a pressure sensor and integrated control electronics.

Applications

- Pneumatic control systems
- Pressing technology
- Welding technology
- Packing machines and filling systems
- Test systems
- Clamping systems
- Plastic blow-moulding machinery
- Robotics and handling industry

Features

- independent of switch back point of set value
- Switching point can be set without compressed air (independent of location)
- LED display
- Switching time < 5 ms
- long service life
- easy handling
- display of system pressure
- adjustable hysteresis
- adjustable switching window (Window Mode)
- Shockproof up to 25 g

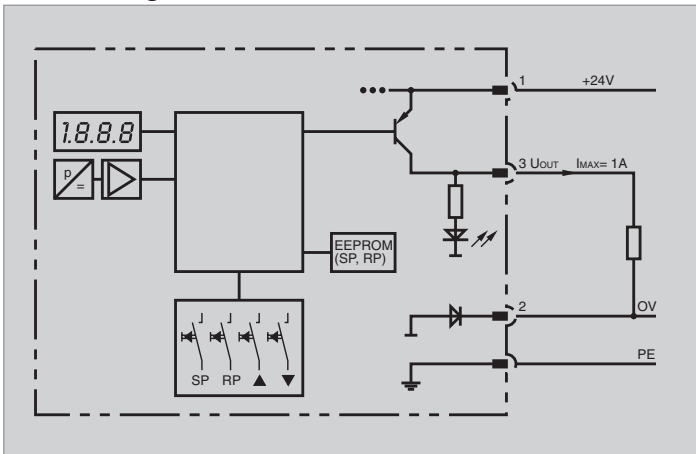
Characteristics

Pressures quoted as gauge pressure

Characteristic	Symbol	Unit	Description	
Type			MPC-V*	MPC
Setting range	$p_{\min/\max}$	bar	-1 to 1	0 to 10
Switching point		%	0-100 of maximum. value, adjustable	
Switch-back point		%	0-100 of maximum value, adjustable	
Safety pressure relief	p_{\max}	bar	10	30
Mounting			By flange (see dimensions drawing)	
Display			3 1/2 digit	
Linearity		%	< 0.2 ± 1 digit	
Installation			In any position	
Shockproof up to		g	25	
Weight (mass)		kg	0.01	0.05
Medium			Filtered compressed air	
Material				
Housing		Zinc die-casting		
Diaphragm		Buna N		
Ambient temperature range	ϑ_{\min} ϑ_{\max}	°C	-10	+60
Medium temperature range	ϑ_{\min} ϑ_{\max}	°C	-10	+60
Temperature variation of the zero point		%	0.4 of end value / 10 K	
Temperature variation of the set range		%	0.2 of end value / 10 K	
Voltage	U	V	18 to 32 V reverse pole-proof	
Voltage type			Direct current	
Allowable residual ripple		%	10 (within 18-32 V)	
Power consumption		mA	< 50 (excluding load current)	
Switching type			Open collector, potentially bound switching to U_b , suitable for inductive loads	
Output voltage			Supply voltage – 1.5 V	
Switching current	I_{\max}	A	1 (short circuit-proof)	
Switching time		ms	< 5	
Service life			100 million switching operations	
Switching logic			Signal when pressure rises, if SP > RP Signal when pressure falls, if SP < RP	
EM emission			To EN 50081. part 1	
EM resistance			To EN 50082. part 2	
Electrical connection			Plug to DIN 43650	
Electrical protection		IP	65 (with plug to DIN 43650)	

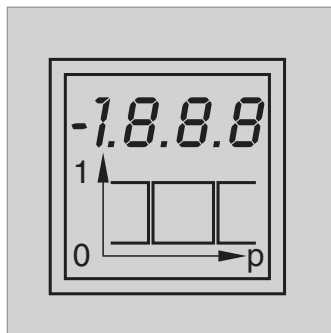
* for vacuum operation

Circuit Diagram

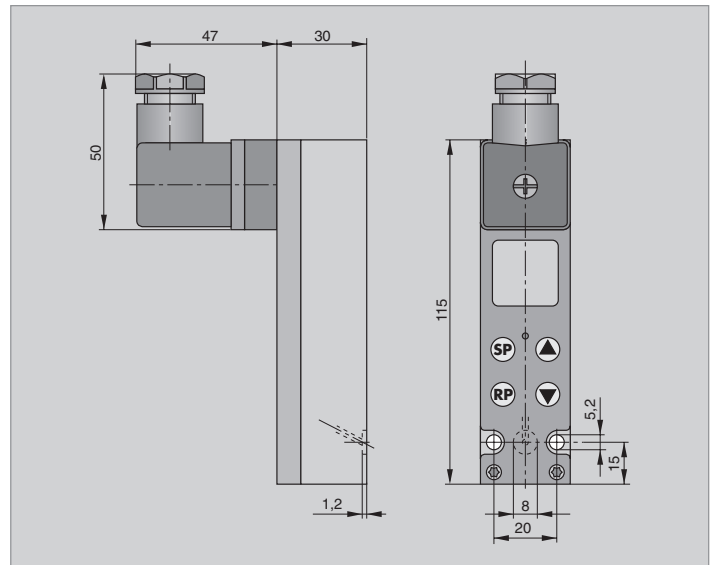


Display test

Each time the power is switched on, the display is tested for 2 - 3 seconds. During this test all elements of the display are shown, and the following appears:



Dimensions



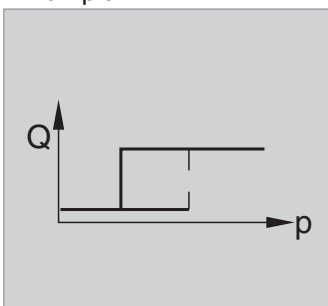
Order Instructions

Setting Range [bar]	Order Instructions	
	Type	Order No.
-1 to 1	MPC-V	KL3003
0 to 10	MPC	KL3002

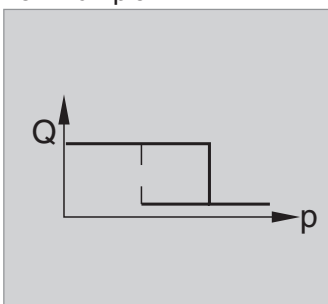
Adjusting the switching points and switching pressure differences

Setting the switching points

Example 1



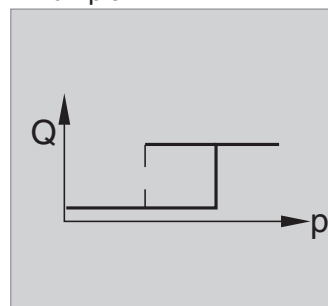
or Example 2



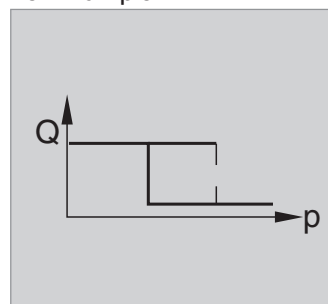
Press button (SP) and keep it pressed down. The display will show the current switching pressure and the dotted line will blink as long as the button remains pressed. Using the arrow keys, you can adjust the switching point up or down. Keeping the arrow keys pressed down longer will increase the adjustment speed. When the arrow key is released the switching pressure stops. When the button (SP) is released, the set value is stored and active. The current pressure value is displayed and the dotted line stops blinking.

Setting the switch-back point

Example 1



or Example 2



Press button (RP) and keep it pressed down. The display shows the current switch-back pressure and the dotted line will blink as long as the button remains pressed down.

Adjust the pressure with the arrow keys as described earlier.

When adjusting the settings, it can happen that the hysteresis diagram changes its mode. This occurs when the set switch-off pressure is higher than the switch-on pressure. Once both points are set correctly, the hysteresis diagram reverts to its correct mode.

You can switch between SP and RP until the settings are correct.

Adjusting the switching points and switching pressure differences

Setting access protection

Coding:
The pressure switch is protected from unauthorised access with a four-digit code.
To access the code setting mode, press buttons SP and RP simultaneously during the display test. Release SP and RP after the display test has been completed. The display will now blink »Cod«.
The code consists of four digits, each digit consisting of a combination of 1 to 4 keys. Each of the four positions can now be set. Once a position has been set, the display will show » – «.
If the display shows » – – – – « the code has been set. It can be stored by pressing SP.
The switching and switch-back points can then only be adjusted by entering the code.

When access protection is enabled, the switching and switch-back points can still be displayed by pressing the buttons, but when an attempt to change the settings is made, the display will show »Code«, and the code must be entered. When the code is correct, the switching and switch-back points can be adjusted.

Removing access protection

To remove the code, press SP and ↑ simultaneously during the display test. Release the buttons SP and ↑ after the display test has been completed. The display will show »Code«. Now enter the the current code and the display will show »CLC«. The pressure switch is then no longer protected from unauthorised access.

Setting a damping time factor

A damping time factor can be set to avoid the evaluation of each and every single change in pressure. By adjusting the damping time factor, pressure changes are only processed if they last longer than the set time. To set the damping time, press SP during the display test.
Release the SP button after the display test has been completed. The display now shows the damping time in milliseconds (e.g. t01).
Using the arrow keys (↑,↓), the damping time can be changed to 03, 06, 12 or 24 ms. Store the desired setting by pressing SP.

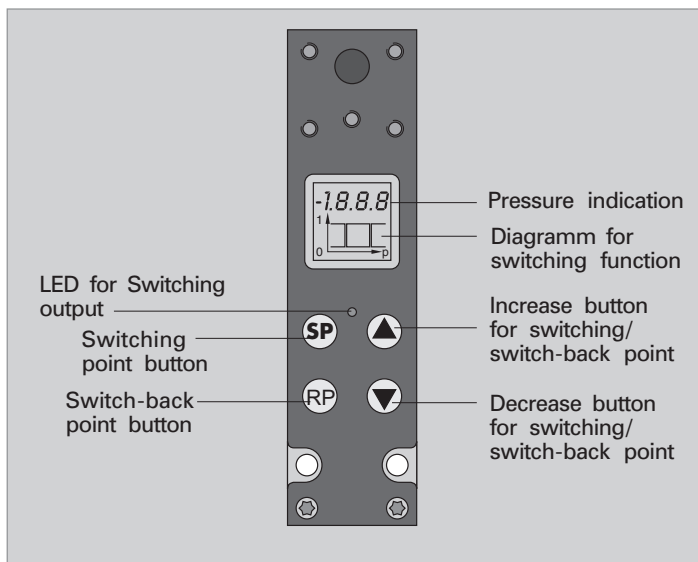
Adjusting the pressure switch to ambient pressure = 0.

Press RP during the display test, and release it after the test has been completed. The display will indicate »OFS«. Using the arrow keys (↑,↓), the pressure indicator can be set to 0 and the setting can be stored with SP.

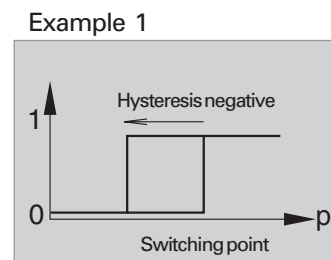
Hysteresis operation

If a fixed hysteresis is desired instead of the switch-back point, it can be set to your specifications. Press SP and ↓ simultaneously during the display test, and release them once the test has completed. The display will now show the operation mode. Use the arrow keys ↑,↓ to change the mode until the display shows HYS. Store the operation mode by pressing SP. Pressing SP will now allow you to display the set switching point and change it with the arrow keys ↑,↓. Pressing RP will now allow you to display the hysteresis and change it with the arrow keys ↑,↓.

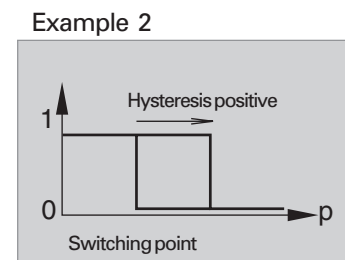
Position of the Control Elements



Negative hysteresis means:
Signal at rising pressure
(Example 1)



Positive hysteresis means:
Signal at falling pressure
(Example 2)



If the switching point is changed, the switch-back point will be adjusted automatically by the value of the set hysteresis.

Display of hardware errors / malfunctions

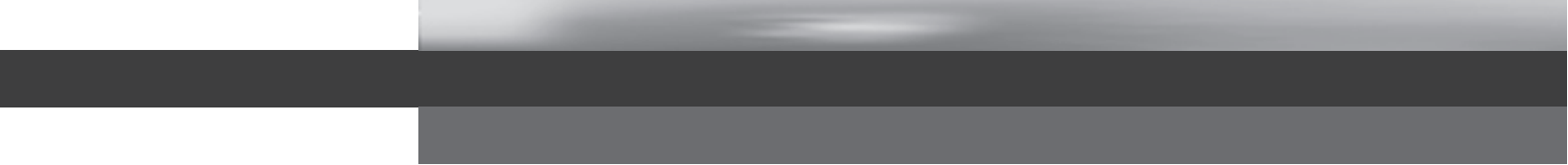
Message	Meaning	Possible causes / Solutions
O.Er	output error	Output error: capacity switch malfunction, feedback to processor interrupted. Repair required.
E.Er	E ² PROM error	E ² PROM error: component defective or connection to processor malfunctioning. Repair required.
I.Er	init. error	Initialisation data check-sum error. Solution: enter any SETUP-function and exit with "SP". As the error was caused by a data error, all SETUP settings should be checked and if necessary corrected.
C.Er	cali. error	Calibration data check-sum error. New calibration required.
SC.L	short circuit low	Short circuit output to mass. Check wiring. The power supply for the connected load may be too weak. (voltage collapse especially with loads with a high initial power consumption or capacity)
UFL	underflow	The current pressure is below the measuring range. Increase the pressure until it is within range.
OFL	overflow	The current pressure is above the measuring range. Reduce the pressure until it is within range.

Display of hardware errors / malfunctions (can be switched off)

SC.H	short circuit high	Short circuit output to power supply. Check wiring, if the switching wire of the user (e.g. electrical control circuit, PLC, etc) is kept on a potential of > 3V, or if multiple pressure switches are used in parallel, this function should be switched off (press ↓ during display test, then SP).
U.Lo	voltage low	Operating voltage too low ($V_{cc} < 15\text{ V}$). Check power supply, load may be too high (switch off ↑ during display test, then SP)

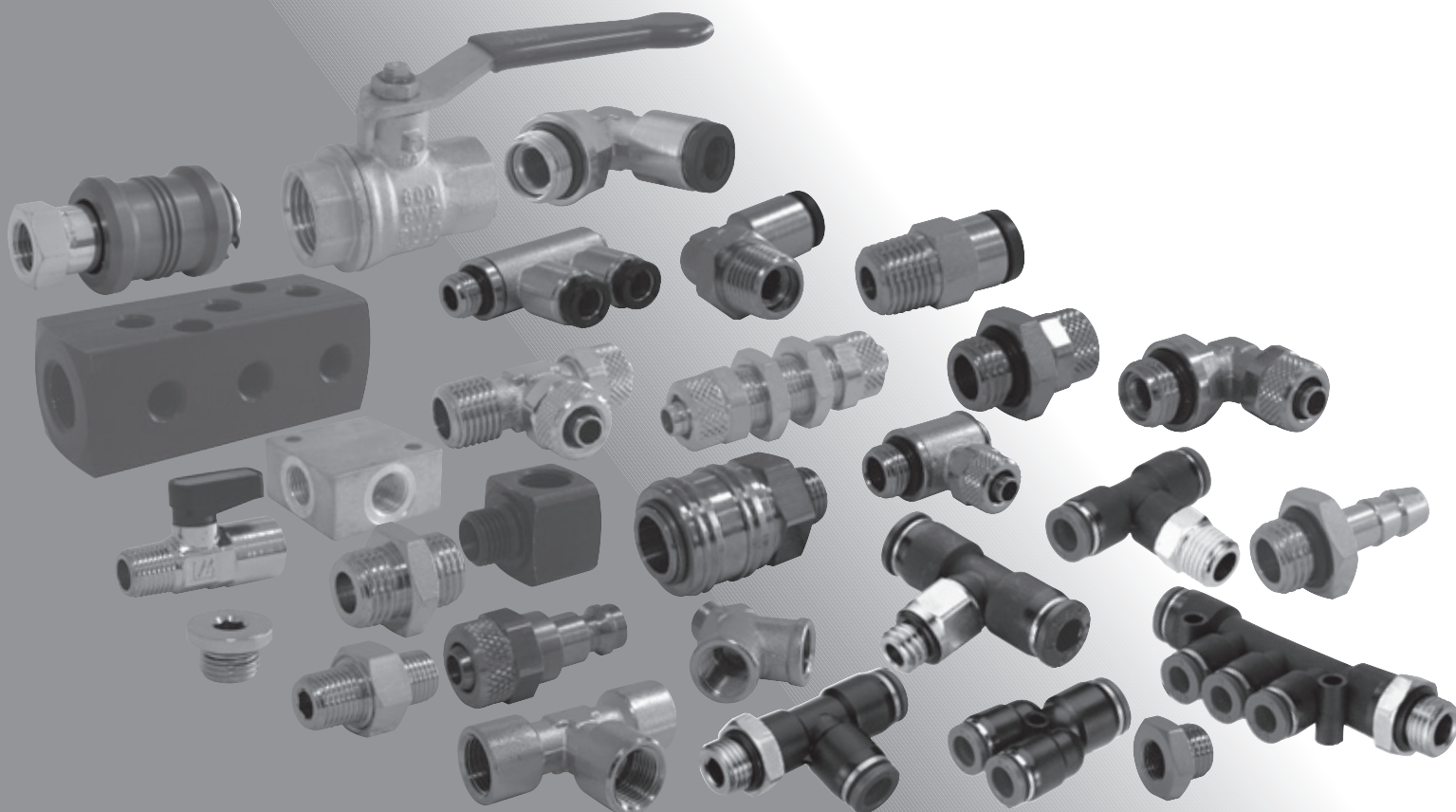
Messages during initialisation of SETUP functions

Cod	code	Request for entering code, or code programming.
CLC	clear code	Delete current code.
txx		Set damping time factor. xx = Delay of switching output. xx = (03, 06, 12, 24) in ms
OFS	offset	Request for Offset calibration with ↑ or ↓ button.
SC.H	short circuit high	Short circuit monitoring activated.
U.LO	voltage low	Voltage monitoring activated.
OFF	off	Short circuit / voltage monitoring off.
Std	Standard mode	Standard mode active
HYS	Hysteresis mode	Hysteresis mode active
FEn	Window mode	Window mode active



Fittings, Tubing and Accessories

- Metal push-in fittings
- Plastic push-in fittings
- Miniature plastic push-in fittings
- Compression fittings
- Banjo bolts
- Standard fittings for general installation work
- Sealing rings and tapes
- Tube/ hose fittings
- Tubing
- Tubing accessories
- Air line accessories (see below)
- Quick release couplings, self-sealing
- 3/2 way slide valves
- Manifolds with integrated ball valves
- Ball valves
- Blow guns



Fittings, Tubing and Accessories

Overview

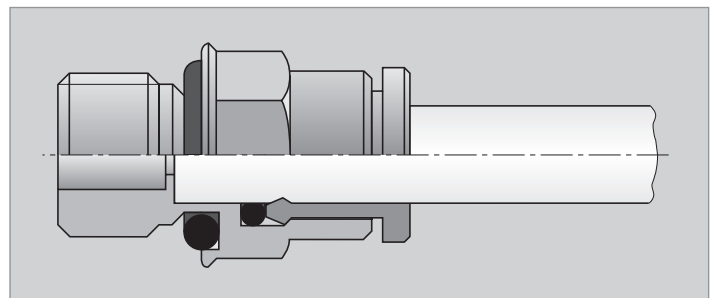
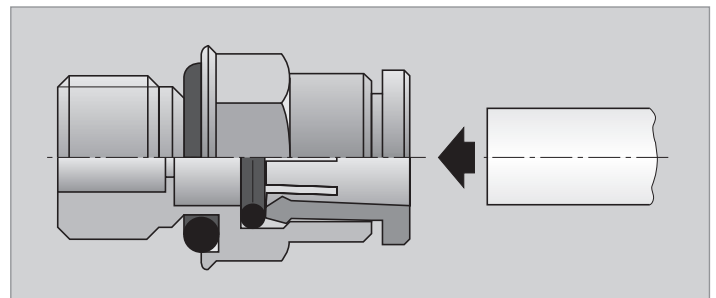
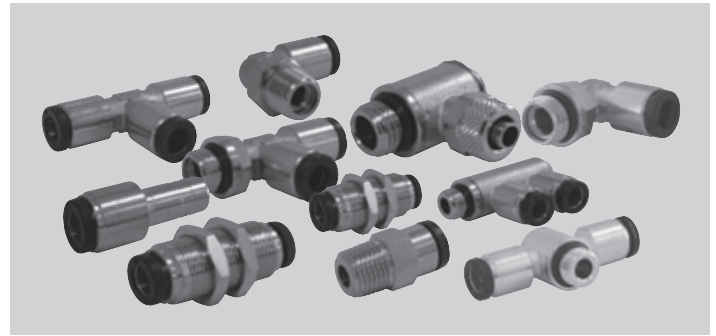
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Metal Push-in Fittings

Connection System for Fast Assembly / Dismantling without Tools

- Metal fittings (nickel-plated brass)
- Tubing clamped on outside diameter by precision collet
- Tubing sealed on outside diameter by O-rings
- Integrated O-rings (on types with parallel thread) for reliable thread sealing (e.g. on bevelled or uneven surfaces) and easier handling (no additional seal rings required)
- Connecting the tubing: simply push the tube into the collet up to the stop
- Disconnecting the tubing: push the release ring back and pull the tube out



Technical Data

Connecting thread*	M5, G1/8, G1/4, G3/8, G1/2 (parallel and taper)
Tubing outside diameter *	Ø4, Ø5, Ø6, Ø8, Ø10, Ø12, Ø14
Material	Body: nickel-plated brass; O-rings: NBR
Operating pressure range	0 to 18 bar
Temperature range	-10°C to +80°C (other temperature ranges on request)
Medium	Compressed air (other media on request)

* depending on version

Tubing Recommendations¹⁾

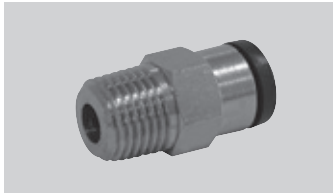
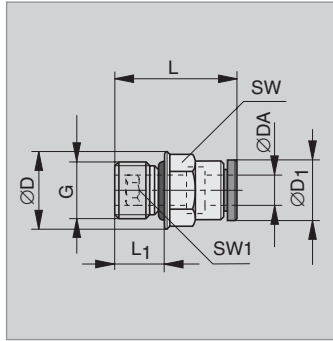
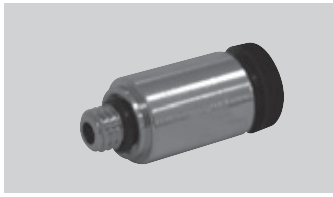
Tubing type	Calibrated tubing, surface hardness min. 65 Shore
Tubing outside diameter*	Ø4, Ø5, Ø6, Ø8, Ø10, Ø12, Ø14
Tubing tolerances (outside diameter)	Ø4, Ø5: +0.05, -0.07 Ø6 to Ø14: +0.05, -0.1
Tubing material	PA 12 or similar

¹⁾ see our range of tubing (Type PS-..) in Section on Tubing and Hoses, pages 107–109

Fittings, Tubing and Accessories

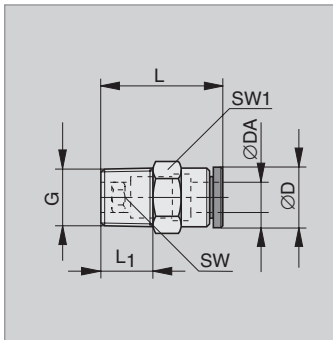
Metal Push-in Fittings

Straight Adaptor, male parallel thread with O-ring



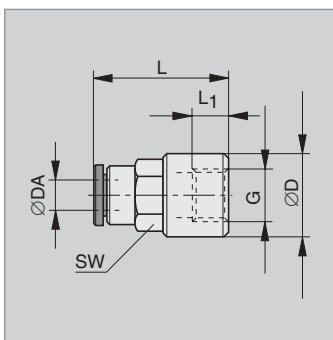
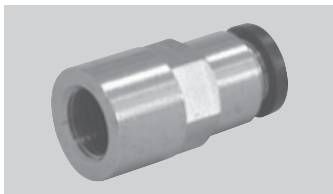
Order Type	Instructions Order No.	Tube ØDA *	G	SW	SW1	ØD	ØD ₁	L	L ₁
GS-54Msv	KW 0006	4	M5	-	2.5	9.9	10	23	4
GS-184Msv	KW 0007	4	G1/8	11	3.0	15	10	22	6
GS-144Msv	KW 0861	4	G1/4	12	3.0	18	10	22	8
GS-55Msv	KW 0008	5	M5	-	2.5	11	11.5	23	4
GS-185Msv	KW 0009	5	G1/8	11	3.0	15	11.5	23	6
GS-145Msv	KW 0010	5	G1/4	12	3.0	18	11.5	24	8
GS-56Msv	KW 0011	6	M5	-	2.5	13	12.5	25	4
GS-186Msv	KW 0012	6	G1/8	13	4.0	15	12.5	28	6
GS-146Msv	KW 0013	6	G1/4	13	4.0	18	12.5	27	8
GS-188Msv	KW 0014	8	G1/8	14	5.0	15.9	14	30	6
GS-148Msv	KW 0015	8	G1/4	15	6.0	18	14	28.5	8
GS-388Msv	KW 0016	8	G3/8	15	6.0	21	14	28.5	9
GS-1410Msv	KW 0017	10	G1/4	17	7.0	20	16.5	34.5	8
GS-3810Msv	KW 0018	10	G3/8	17	8.0	21	16.5	31.5	9
GS-1412Msv	KW 0019	12	G1/4	19	7.0	22	19	36	6
GS-3812Msv	KW 0020	12	G3/8	19	10.0	22	19	37.5	9
GS-1210Msv	KW 0982	10	G1/2	17	8	26	16.5	32	11
GS-1212Msv	KW 0021	12	G1/2	21	10.0	26	19	35	11
GS-1214Msv	KW 0022	14	G1/2	23	12.0	26	21.5	40.5	11

Straight Adaptor, male taper thread



Order Type	Instructions Order No.	Tube ØDA *	G	SW	SW1	ØD	L	L ₁
GSK-184Msv	KW 0001	4	R1/8	2.5	10	10	21	7.5
GSK-186Msv	KW 0002	6	R1/8	2.5	12	11.5	24	7.5
GSK-146Msv	KW 0003	6	R1/4	4	14	11.5	26	11
GSK-188Msv	KW 0004	8	R1/8	5	14	14.5	28	7.5
GSK-148Msv	KW 0005	8	R1/4	6	14	14.5	28	11
GSK-388Msv	KW 0862	8	R3/8	6	17	14.5	28	11
GSK-1410Msv	KW 0863	10	R1/4	7	17	16.5	30	11
GSK-3810Msv	KW 0864	10	R3/8	7	17	16.5	30.5	11
GSK-3812Msv	KW 0865	12	R3/8	7	19	19	33	11

Pressure Gauge Adaptor

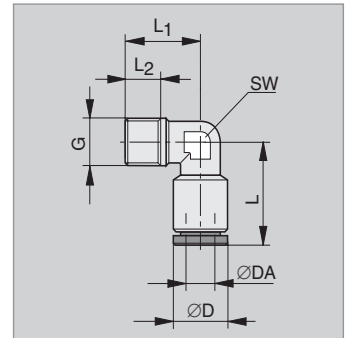
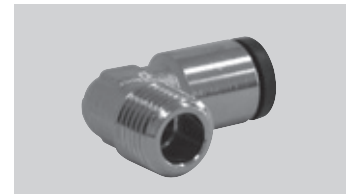


Order Type	Instructions Order No.	Tube ØDA *	G	SW	ØD	L	L ₁
MS-184Msv	KW 0030	4	G1/8	11	14	28.5	7
MS-185Msv	KW 0031	5	G1/8	11	14	28.5	7
MS-186Msv	KW 0032	6	G1/8	13	15	30.5	7
MS-146Msv	KW 0033	6	G1/4	13	17	33	8
MS-188Msv	KW 0034	8	G1/8	14	17	31.5	7
MS-148Msv	KW 0035	8	G1/4	14	17	34	8
MS-1410Msv	KW 0036	10	G1/4	17	20	36	8

* = Tube ØOD

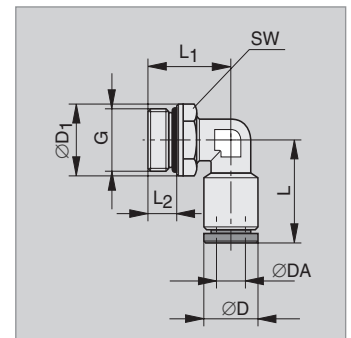
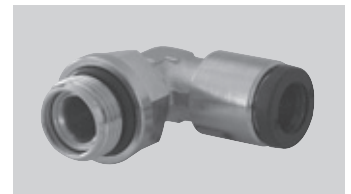
Elbow Adaptor, male taper thread

Order Type	Instructions Order No.	Tube ØDA *	G	SW	ØD	L	L ₁	L ₂
LSK-184Msv	KW 0037	4	R1/8	10	10	22.5	16	6
LSK-186Msv	KW 0038	6	R1/8	10	12.5	24.5	16	6
LSK-146Msv	KW 0039	6	R1/4	10	12.5	24.5	18.5	9.5
LSK-188Msv	KW 0040	8	R1/8	12	14	27.5	17	6
LSK-148Msv	KW 0041	8	R1/4	12	14	27.5	20	10
LSK-388Msv	KW 0042	8	R3/8	14	14	29	22.5	10
LSK-1410Msv	KW 0043	10	R1/4	14	16.5	31.5	22	8.5



Elbow Adaptor, swivelling, male parallel thread with O-ring

Order Type	Instructions Order No.	Tube ØDA *	G	SW	ØD	ØD ₁	L	L ₁	L ₂
LDS-54Msv	KW 0049	4	M5	8	10	9	22.5	19	4
LDS-184Msv	KW 0050	4	G1/8	13	10	15	22.5	21	6
LDS-55Msv	KW 0051	5	M5	8	11.5	9	23	19	4
LDS-185Msv	KW 0052	5	G1/8	13	11.5	15	23	21	6
LDS-145Msv	KW 0053	5	G1/4	16	11.5	18	23	25	8
LDS-56Msv	KW 0872	6	M5	9	12.5	9	24.5	17.5	4
LDS-186Msv	KW 0054	6	G1/8	13	12.5	15	24.5	21	6
LDS-146Msv	KW 0055	6	G1/4	16	12.5	18	26	25	8
LDS-188Msv	KW 0056	8	G1/8	13	14	15	27.5	22.5	6
LDS-148Msv	KW 0057	8	G1/4	16	14	18	27.5	25	8
LDS-388Msv	KW 0058	8	G3/8	19	14	22	29.5	30.5	9
LDS-1410Msv	KW 0059	10	G1/4	16	16.5	18	31.5	27	8
LDS-3810Msv	KW 0060	10	G3/8	19	16.5	22	31.5	30.5	9
LDS-1210Msv	KW 0983	10	G1/2	22	16.5	26	31.5	30	11
LDS-1412Msv	KW 0061	12	G1/4	16	19	18	34.5	28	8
LDS-3812Msv	KW 0062	12	G3/8	22	19	22	34.5	31.5	9
LDS-1212Msv	KW 0873	12	G1/2	22	21.5	26	37.5	35	11
LDS-1214Msv	KW 0835	14	G1/2	22	21.5	26	37.5	34.5	11

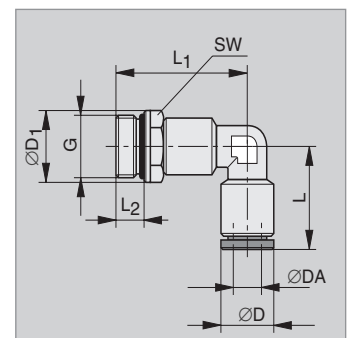
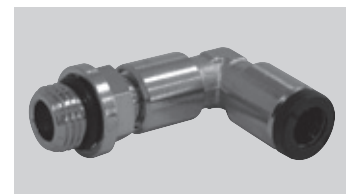


For frequent swivelling, see Type ESS on page 62

Extended Elbow Adaptor, swivelling, male parallel thread with O-ring

Order Type	Instructions Order No.	Tube ØDA *	G	SW	ØD	ØD ₁	L	L ₁	L ₂
LDSL1-186Msv	KW 0756	6	G1/8	13	12.5	15	24.5	38	6
LDSL1-146Msv	KW 0757	6	G1/4	14	12.5	18	24.5	41	8
LDSL1-188Msv	KW 0754	8	G1/8	13	14	15	27.5	41	6
LDSL1-148Msv	KW 0755	8	G1/4	14	14	18	27.5	44	8

* = Tube ØOD

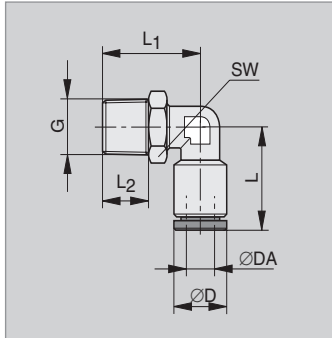
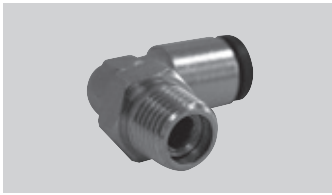


Dimensions in mm

Fittings, Tubing and Accessories

Metal Push-in Fittings

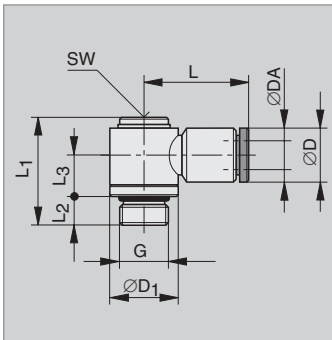
Elbow Adaptor, swivelling, male taper thread



Order Type	Instructions Order No.	Tube ØDA *	G	SW	ØD	L	L ₁	L ₂
LDSK-184Msv	KW 0044	4	R1/8	12	10	22	22.5	7.5
LDSK-186Msv	KW 0045	6	R1/8	12	11.5	23.5	22.5	7.5
LDSK-146Msv	KW 0046	6	R1/4	16	11.5	23.5	24.5	11
LDSK-188Msv	KW 0047	8	R1/8	12	14.5	26.5	24	7.5
LDSK-148Msv	KW 0048	8	R1/4	16	14.5	26.5	26.5	11
LDSK-388Msv	KW 0867	8	R3/8	19	14.5	29	30	11.5
LDSK-1410Msv	KW 0868	10	R1/4	16	16.5	31.5	28	11
LDSK-3810Msv	KW 0869	10	R3/8	19	16.5	31.5	30	11.5
LDSK-3812Msv	KW 0870	12	R3/8	19	19	34.5	31	11.5

For frequent swivelling, see Type ESS below

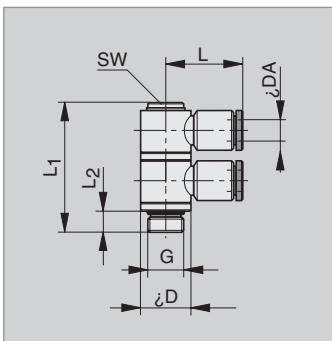
Banjo Elbow Adaptor, male parallel thread with O-ring



Order Type	Instructions Order No.	Tube ØDA *	G	SW	ØD	ØD ₁	L	L ₁	L ₂	L ₃
ESS-54Msv	KW 0148	4	M5	2	10	10	22.5	17	4	6.5
ESS-184Msv	KW 0149	4	G1/8	5	10	15	23.5	27	6	10.5
ESS-55Msv	KW 0150	5	M5	2	11.5	10	23.5	17	4	6.5
ESS-185Msv	KW 0151	5	G1/8	5	11.5	15	24.5	27	6	10.5
ESS-186Msv	KW 0152	6	G1/8	5	12.5	15	26.5	27	6	10.5
ESS-146Msv	KW 0153	6	G1/4	6	12.5	18	28.5	31.5	8	11.5
ESS-188Msv	KW 0154	8	G1/8	5	14	15	30	27	6	10.5
ESS-148Msv	KW 0155	8	G1/4	6	14	18	32	31.5	8	11.5
ESS-1410Msv	KW 0156	10	G1/4	6	16.5	18	35	31.5	8	11.5

Application: for frequent swivelling

Double Banjo Elbow Adaptor, male parallel thread with O-ring



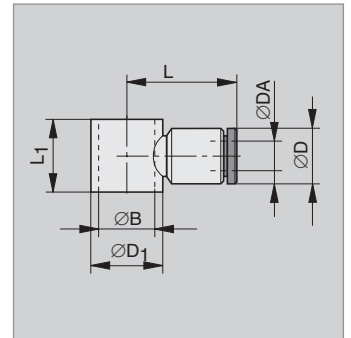
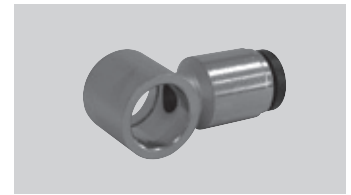
Order Type	Instructions Order No.	Tube ØDA *	G	SW	ØD	L	L ₁	L ₂
ZSS-184Msv	KW 0887	4	G1/8	5	14	25	42	6
ZSS-186Msv	KW 0888	6	G1/8	5	14	25	42	6
ZSS-146Msv	KW 0889	6	G1/4	6	18	27.5	49	8
ZSS-188Msv	KW 0890	8	G1/8	5	14	30	42	6
ZSS-148Msv	KW 0891	8	G1/4	6	18	32	49	8
ZSS-1410Msv	KW 0892	10	G1/4	6	18	34	49	8

Application: for frequent swivelling

* = Tube ØOD

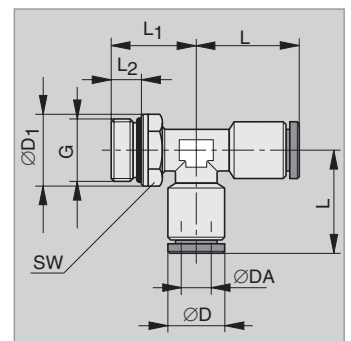
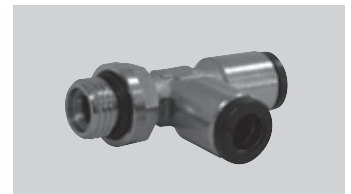
Banjo Elbow Body, for banjo bolt*

Order Type	Instructions Order No.	Tube \varnothing DA **	\varnothing B	\varnothing D	\varnothing D ₁	L	L ₁
RES-54Msv	KW 0126	4	5.2 (M5)	11.5	9.5	23.5	9
RES-184Msv	KW 0127	4	9.9 (G1/8)	11.5	14	25	15
RES-55Msv	KW 0128	5	5.2 (M5)	12	9.5	24	9
RES-185Msv	KW 0129	5	9.9 (G1/8)	12	14	24	15
RES-186Msv	KW 0130	6	9.9 (G1/8)	13.5	14	25	15
RES-146Msv	KW 0131	6	13.3 (G1/4)	13.5	18	27.5	17
RES-188Msv	KW 0132	8	9.9 (G1/8)	15.5	14	30	15
RES-148Msv	KW 0133	8	13.3 (G1/4)	15.5	18	32	17
RES-388Msv	KW 0881	8	16.3 (G3/8)	15.5	21	32	20
RES-1410Msv	KW 0134	10	13.3 (G1/4)	18	18	34	17
RES-3810Msv	KW 0135	10	16.8 (G3/8)	18	21	36	20
RES-1412Msv	KW 0882	12	13.3 (G1/4)	20	18	36	17
RES-3812Msv	KW 0136	12	16.8 (G3/8)	20	21	39	20
RES-1212Msv	KW 0883	12	21.5 (G1/2)	20	26	40.5	24



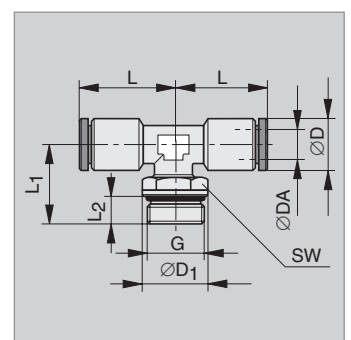
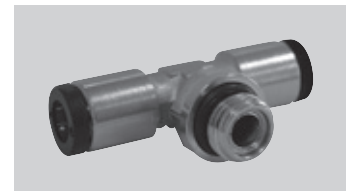
Run Tee Adaptor, swivelling, male parallel thread with O-ring

Order Type	Instructions Order No.	Tube \varnothing DA **	G	SW	\varnothing D	\varnothing D ₁	L	L ₁	L ₂
WDS-184Msv	KW 0080	4	G1/8	13	10	15	22.5	21	6
WDS-185Msv	KW 0081	5	G1/8	13	11.5	15	23	21	6
WDS-186Msv	KW 0082	6	G1/8	13	12.5	15	24.5	21	6
WDS-146Msv	KW 0083	6	G1/4	16	12.5	18	26	25	8
WDS-188Msv	KW 0084	8	G1/8	13	14	15	27.5	22.5	6
WDS-148Msv	KW 0085	8	G1/4	16	14	18	27.5	25	8
WDS-1410Msv	KW 0086	10	G1/4	16	16.5	18	31.5	27	8
WDS-3810Msv	KW 0087	10	G3/8	19	16.5	22	31.5	30.5	9
WDS-3812Msv	KW 0088	12	G3/8	19	19	22	34.5	31.5	9
WDS-1212Msv	KW 0877	12	G1/2	22	19	26	34.5	32.5	11



Branch Tee Adaptor, swivelling, male parallel thread with O-ring

Order Type	Instructions Order No.	Tube \varnothing DA **	G	SW	\varnothing D	\varnothing D ₁	L	L ₁	L ₂
TDS-184Msv	KW 0070	4	G1/8	13	10	15	22.5	21	6
TDS-185Msv	KW 0071	5	G1/8	13	11.5	15	23	21	6
TDS-186Msv	KW 0072	6	G1/8	13	12.5	15	24.5	21	6
TDS-146Msv	KW 0073	6	G1/4	16	12.5	18	26	25	8
TDS-188Msv	KW 0074	8	G1/8	13	14	15	27.5	22.5	6
TDS-148Msv	KW 0075	8	G1/4	16	14	18	27.5	25	8
TDS-388Msv	KW 0076	8	G3/8	19	14	22	29.5	30.5	9
TDS-1410Msv	KW 0077	10	G1/4	16	16.5	18	31.5	27	8
TDS-3810Msv	KW 0078	10	G3/8	19	16.5	22	31.5	30.5	9
TDS-3812Msv	KW 0079	12	G3/8	19	19	22	34.5	31.5	9
TDS-1212Msv	KW 0875	12	G1/2	22	19	26	34.5	32.5	11
TDS-1214Msv	KW 0876	14	G1/2	22	21.5	26	37.5	34.5	11



For frequent swivelling, see Type TSS on page 64

* For banjo bolts see pages 90–92

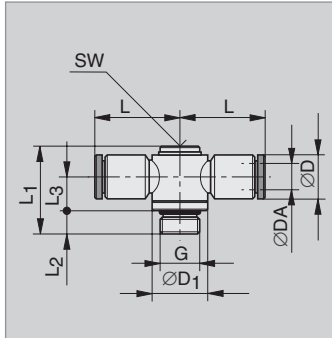
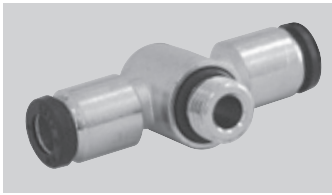
** = Tube \varnothing OD

Dimensions in mm

Fittings, Tubing and Accessories

Metal Push-in Fittings

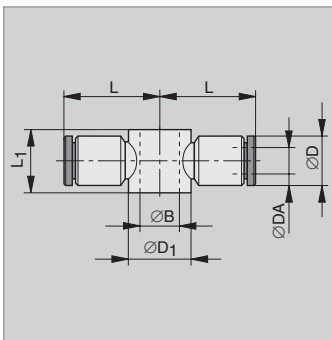
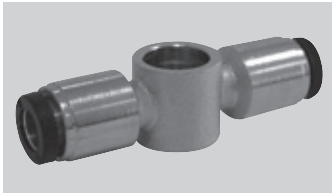
Banjo Tee Adaptor, male parallel thread with O-ring



Order Instructions Type	Order No.	Tube ØDA **	D	SW	ØD	ØD ₁	L	L ₁	L ₂	L ₃
TSS-54Msv	KW 0157	4	M5	2	10	10	22.5	17	4	6.5
TSS-184Msv	KW 0158	4	G1/8	5	10	15	23.5	27	6	10.5
TSS-55Msv	KW 0159	5	M5	2	11.5	10	24	17	4	6.5
TSS-185Msv	KW 0160	5	G1/8	5	11.5	15	24.5	27	6	10.5
TSS-186Msv	KW 0161	6	G1/8	5	12.5	15	26.5	27	6	10.5
TSS-146Msv	KW 0162	6	G1/4	6	12.5	18	28.5	31.5	8	11.5
TSS-188Msv	KW 0163	8	G1/8	5	14	15	30	27	6	10.5
TSS-148Msv	KW 0164	8	G1/4	6	14	18	32	31.5	8	11.5
TSS-1410Msv	KW 0165	10	G1/4	6	16.5	18	35	31.5	8	11.5

Application: for frequent swivelling

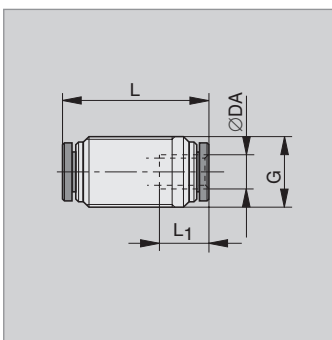
Banjo Tee Body, for banjo bolt*



Order Instructions Type	Order No.	Tube ØDA **	ØB	ØD	ØD ₁	L	L ₁
RDS-54Msv	KW 0137	4	5.2 (M5)	10	10	20	9
RDS-184Msv	KW 0138	4	9.9 (G1/8)	10	14	24	15
RDS-55Msv	KW 0139	5	5.2 (M5)	12	10	21.5	9
RDS-185Msv	KW 0140	5	9.9 (G1/8)	11.5	14	24	15
RDS-186Msv	KW 0141	6	9.9 (G1/8)	12.5	14	24.5	15
RDS-146Msv	KW 0142	6	13.3 (G1/4)	12.5	18	27.5	17
RDS-188Msv	KW 0143	8	9.9 (G1/8)	14	14	30	15
RDS-148Msv	KW 0144	8	13.3 (G1/4)	14	18	32	17
RDS-388Msv	KW 0884	8	16.8 (G3/8)	14	21	31.5	20
RDS-1410Msv	KW 0145	10	13.3 (G1/4)	16.5	18	34	17
RDS-3810Msv	KW 0146	10	16.8 (G3/8)	16.5	21	36	20
RDS-1412Msv	KW 0885	12	13.3 (G1/4)	19	18	36	17
RDS-3812Msv	KW 0147	12	16.8 (G3/8)	19	21	39	20
RDS-1212Msv	KW 0886	12	21.5 (G1/2)	19	26	40.5	24

* For banjo bolts see pages 90-92

Straight Connector, threaded

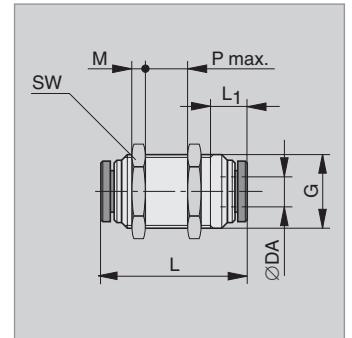
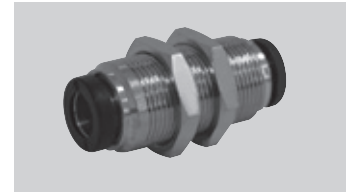


Order Instructions Type	Order No.	Tube ØDA **	G	L	L ₁
GVS-4Msv	KW 0023	4	M13x1	32	9.5
GVS-5Msv	KW 0024	5	M14x1	32	10
GVS-6Msv	KW 0025	6	M15x1	32	9.5
GVS-8Msv	KW 0026	8	M17x1	39	9.5
GVS-10Msv	KW 0027	10	M20x1	42.5	10
GVS-12Msv	KW 0028	12	M22x1	49.5	11
GVS-14Msv	KW 0029	14	M24x1	53	13.5

** = Tube ØOD

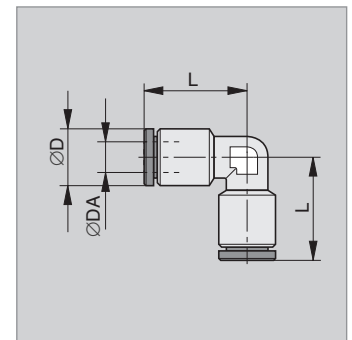
Straight Bulkhead Connector

Order Instructions Type	Order No.	Tube ØDA *	G	SW	L	L ₁	M	P _{max}
SOS-4Msv	KW 0101	4	M13x1	16	32	9.5	4	8
SOS-5Msv	KW 0102	5	M14x1	17	32	10	4	8
SOS-6Msv	KW 0103	6	M15x1	17	32	9.5	4	8
SOS-8Msv	KW 0104	8	M17x1	19	39	9.5	4	16
SOS-10Msv	KW 0105	10	M20x1	24	42.5	10	5	17
SOS-12Msv	KW 0106	12	M22x1	25	49.5	11.5	5	23
SOS-14Msv	KW 0107	14	M24x1	27	53	13.5	6	24



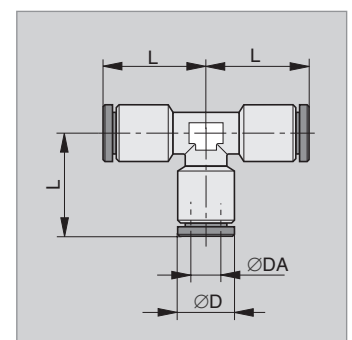
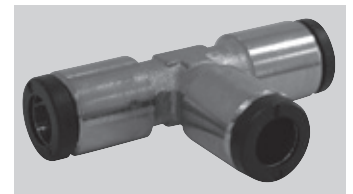
Equal Elbow Connector

Order Instructions Type	Order No..	Tube ØDA *	ØD	L
WS-4Msv	KW 0063	4	10	22.5
WS-5Msv	KW 0064	5	11.5	23
WS-6Msv	KW 0065	6	12.5	24.5
WS-8Msv	KW 0066	8	14	27.5
WS-10Msv	KW 0067	10	16.5	31.5
WS-12Msv	KW 0068	12	19	34.5
WS-14Msv	KW 0069	14	21.5	37.5



Equal Tee Connector

Order Instructions Type	Order No.	Tube ØDA *	ØD	L
TVS-4Msv	KW 0089	4	10	22.5
TVS-5Msv	KW 0090	5	11.5	23
TVS-6Msv	KW 0091	6	12.5	24.5
TVS-8Msv	KW 0092	8	14	27.5
TVS-10Msv	KW 0093	10	16.5	31.5
TVS-12Msv	KW 0094	12	19	34.5
TVS-14Msv	KW 0095	14	21.5	37.5

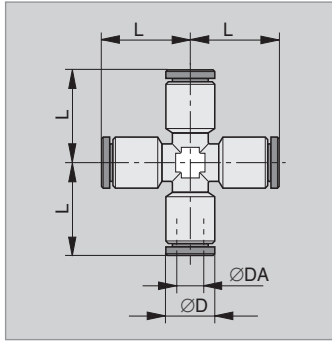
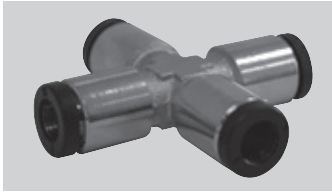


* = Tube ØOD

Fittings, Tubing and Accessories

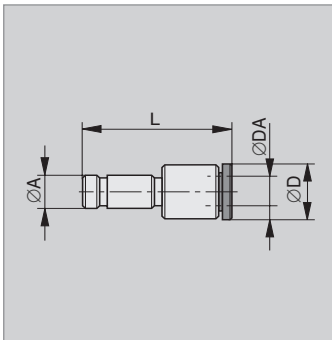
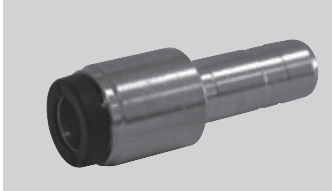
Metal Push-in Fittings

4-Way Cross Connector



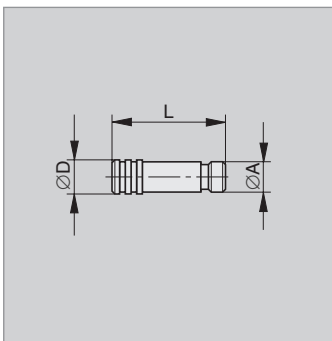
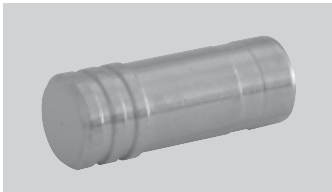
Order Type	Instructions Order No.	Tube ØDA *	ØD	L
KVS-4Msv	KW 0096	4	10	22.5
KVS-5Msv	KW 0097	5	11.5	23
KVS-6Msv	KW 0098	6	12.5	24.5
KVS-8Msv	KW 0099	8	14	27.5
KVS-10Msv	KW 0100	10	16.5	31.5

Reducing Straight Stem Connector



Order Type	Instructions Order No.	Tube ØDA *	Stem Ø A	ØD	L
R-54Msv	KW 0108	4	5	11	34
R-64Msv	KW 0109	4	6	11	34.5
R-84Msv	KW 0110	4	8	11	35.5
R-65Msv	KW 0111	5	6	12	35
R-85Msv	KW 0112	5	8	12	35.5
R-86Msv	KW 0113	6	8	13	37.5
R-106Msv	KW 0114	6	10	13	37.5
R-126Msv	KW 0115	6	12	13	38
R-108Msv	KW 0116	8	10	15	43
R-128Msv	KW 0117	8	12	15	39.5
R-148Msv	KW 0834	8	14	15	41
R-1210Msv	KW 0118	10	12	18	46

Blanking Plug

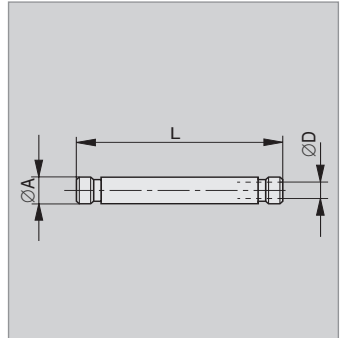
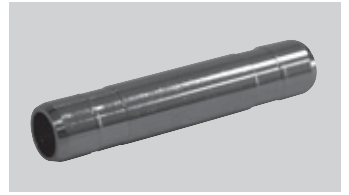


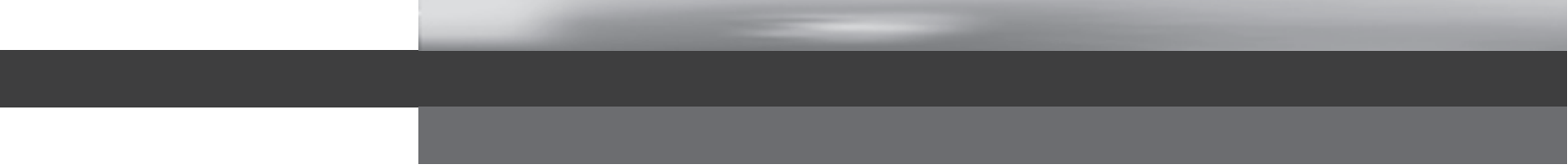
Order Type	Instructions Order No.	ØA	ØD	L
VST-4Msv	KW 0119	4	5	27
VST-5Msv	KW 0120	5	6	27
VST-6Msv	KW 0121	6	7	29
VST-8Msv	KW 0122	8	9	34
VST-10Msv	KW 0123	10	11	36
VST-12Msv	KW 0124	12	13	37
VST-14Msv	KW 0125	14	15	38

* = Tube ØOD

Straight Stem Connector

Order Instructions		$\varnothing A$	$\varnothing D$ (NW)	L
Type	Order No.			
VR-4	KW 0854	4	2	32.5
VR-5	KW 0855	5	3	33
VR-6	KW 0856	6	4	33
VR-8	KW 0857	8	6	35
VR-10	KW 0858	10	8	39
VR-12	KW 0859	12	10	44
VR-14	KW 0860	14	12	67



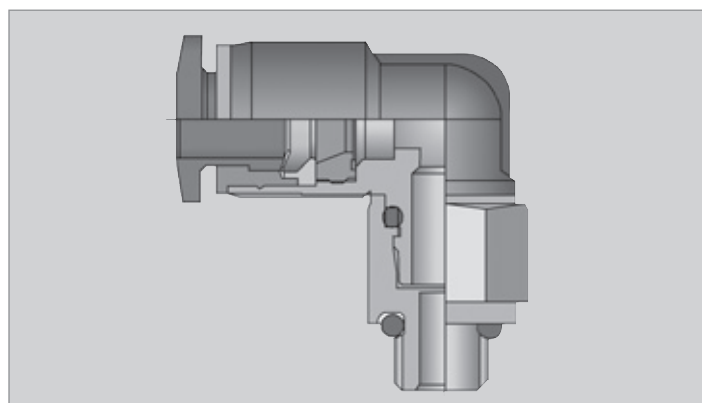
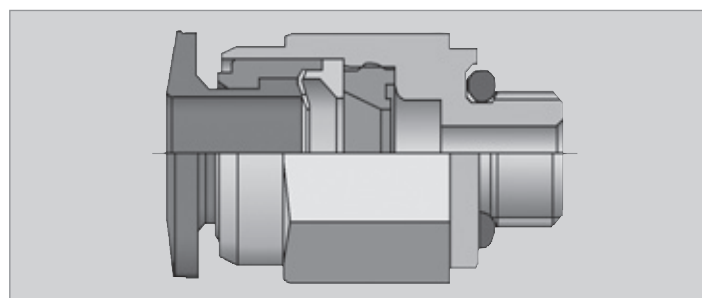


Fittings, Tubing and Accessories

Plastic Push-in Fittings

Connection System for Fast Assembly / Dismantling without Tools

- Cost reductions through fast assembly and dismantling
- No passage area reduction relative to the diameter of the plastic tubing
- Suitable for gases, liquids and vacuum
- High reliability through profile seal
- O- ring seal on thread
- Stainless steel collet
- Suitable for plastic tubing and copper, steel and stainless steel piping
- Nickel-plated brass for optimum surface protection



Technical Data

Connecting thread*	M3, M5, M6, G1/8, G1/4, G3/8, G1/2 (parallel and taper)
Tubing outside diameter*	Ø3, Ø4, Ø6, Ø8, Ø10, Ø12, Ø16
Material	Body and sleeve: brass/POM Release ring: POM Collet: stainless steel O-ring: NBR
Operating pressure range	0 to 10 bar (and vacuum)
Temperature range	0°C to +60°C (other temperature ranges on request)
Medium	Compressed air, gases, vacuum - check the chemical resistance of the materials

* depending on type

Tubing Recommendations¹⁾

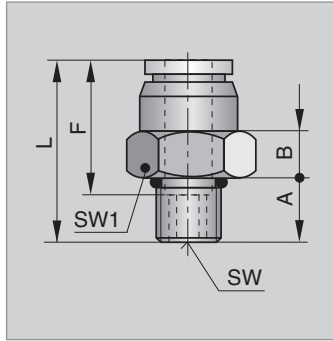
Tubing type	Calibrated tubing, surface hardness min. 65 Shore
Tubing outside diameter*	Ø3, Ø4, Ø6, Ø8, Ø10, Ø12, Ø16
Tubing material	PU, PA, PE or similar

¹⁾ see our range of tubing (Type PS-..) in Section on Tubing and Hoses, pages 107–109

Fittings, Tubing and Accessories

Plastic Push-in Fittings

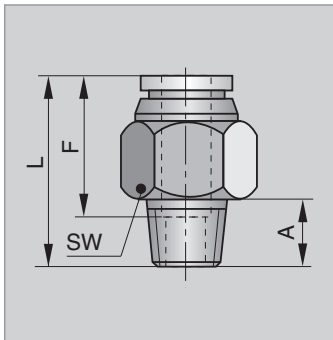
Straight Adaptor, male parallel thread with O-ring



Order Type	Instructions Order No.	Tube ØOD	Port Size	L	A	F	B	SW	SW1
GS-54Msv	KT0100	4	M5	21.9	4.6	15.9	-	-	10
GS-184Msv	KT0101	4	G1/8	21.5	6	15.9	7	3	13
GS-144Msv	KT0102	4	G1/4	23.5	8	15.9	8	3	15
GS-56Msv	KT0103	6	M5	23.6	4.6	16.5	-	-	12
GS-186Msv	KT0104	6	G1/8	22.5	6	16.5	7	4	13
GS-146Msv	KT0105	6	G1/4	24.5	8	16.5	8	5	15
GS-386Msv	KT0106	6	G3/8	25.5	8	16.5	7	5	17
GS-188Msv	KT0107	8	G1/8	26.7	6	17.7	9	5	15
GS-148Msv	KT0108	8	G1/4	26.7	8	17.7	8	6	15
GS-388Msv	KT0109	8	G3/8	25.0	8	17.7	8	6	17
GS-128Msv	KT0110	8	G1/2	26.0	9	17.7	8	6	21
GS-1410Msv	KT0111	10	G1/4	30.0	8	18.6	9	8	17
GS-3810Msv	KT0112	10	G3/8	27.0	8	18.6	8	8	17
GS-1210Msv	KT0113	10	G1/2	28.3	9	18.6	8	8	21
GS-1412Msv	KT0114	12	G1/4	32.2	8	20.9	9	8	19
GS-3812Msv	KT0115	12	G3/8	31.6	8	20.9	8	8	19
GS-1212Msv	KT0116	12	G1/2	31.6	9	20.9	8	8	21
GS-3816Msv	KT0117	16	G3/8	36.2	8	24.7	16	10	24
GS-1216Msv	KT0118	16	G1/2	36.2	9	24.7	15	10	24

Material: nickel-plated brass

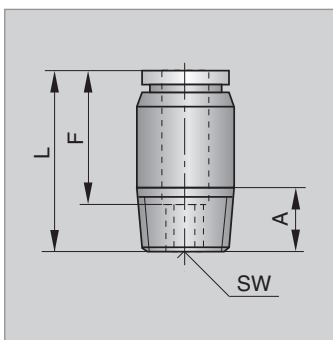
Straight Adaptor, teflon-coated male taper thread, external hexagon



Order Type	Instructions Order No.	Tube ØOD	Port Size	L	A	F	SW
GSK-184Msv	KT0119	4	R1/8	21.8	8	15.9	10
GSK-186Msv	KT0120	6	R1/8	21.6	8	16.5	12
GSK-146Msv	KT0121	6	R1/4	21.6	10	16.5	14
GSK-188Msv	KT0122	8	R1/8	28.2	8	17.7	14
GSK-148Msv	KT0123	8	R1/4	26.0	10	17.7	14
GSK-388Msv	KT0124	8	R3/8	23.7	11	17.7	17
GSK-1410Msv	KT0125	10	R1/4	31.2	10	18.6	14
GSK-3810Msv	KT0126	10	R3/8	25.3	11	18.6	17
GSK-1210Msv	KT0127	10	R1/2	30.3	14	18.6	22
GSK-1412Msv	KT0128	12	R1/4	33.7	10	20.9	14
GSK-3812Msv	KT0129	12	R3/8	30.6	11	20.9	17
GSK-1212Msv	KT0130	12	R1/2	30.4	14	20.9	22

Material: nickel-plated brass

Straight Adaptor, teflon-coated male taper thread, hexagon socket



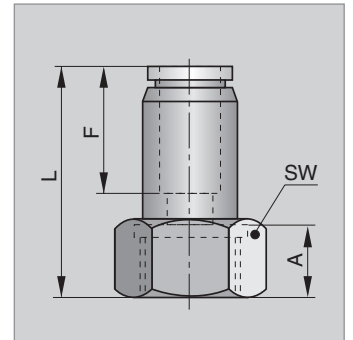
Order Type	Instructions Order No.	Tube ØOD	Port Size	L	A	F	SW
GSKR-54Msv	KT0131	4	M5	21.8	4.6	15.9	2
GSKR-184Msv	KT0132	4	R1/8	20.4	8.0	15.9	3
GSKR-56Msv	KT0133	6	M5	22.6	4.6	16.5	2
GSKR-186Msv	KT0134	6	R1/8	21.8	8.0	16.5	4
GSKR-146Msv	KT0135	6	R1/4	22.5	10.0	16.5	4
GSKR-188Msv	KT0136	8	R1/8	27.0	8.0	17.7	4
GSKR-148Msv	KT0137	8	R1/4	25.0	10.0	17.7	6
GSKR-388Msv	KT0138	8	R3/8	25.0	11.0	17.7	6
GSKR-1410Msv	KT0139	10	R1/4	26.6	10.0	18.6	6
GSKR-3810Msv	KT0140	10	R3/8	26.6	11.0	18.6	6
GSKR-1210Msv	KT0141	10	R1/2	26.6	14.0	18.6	6
GSKR-3812Msv	KT0142	12	R3/8	32.4	11.0	20.9	8
GSKR-1212Msv	KT0143	12	R1/2	32.4	14.0	20.9	8

Material: nickel-plated-brass

Straight Adaptor, female parallel thread

Order Type	Instructions Order No.	Tube ØOD	Port Size	L	A	F	SW
GMS-184Msv	KT0144	4	G1/8	26.8	10	15.9	14
GMS-186Msv	KT0145	6	G1/8	28.3	10	16.5	14
GMS-146Msv	KT0146	6	G1/4	30.0	11	16.5	17
GMS-188Msv	KT0147	8	G1/8	29.1	10	17.7	14
GMS-148Msv	KT0148	8	G1/4	31.2	11	17.7	17
GMS-388Msv	KT0149	8	G3/8	32.5	12	17.7	22
GMS-1410Msv	KT0150	10	G1/4	32.7	11	18.6	17
GMS-3810Msv	KT0151	10	G3/8	33.3	12	18.6	22
GMS-3812Msv	KT0152	12	G3/8	37.1	12	20.9	22
GMS-1212Msv	KT0153	12	G1/2	39.2	14	20.9	24

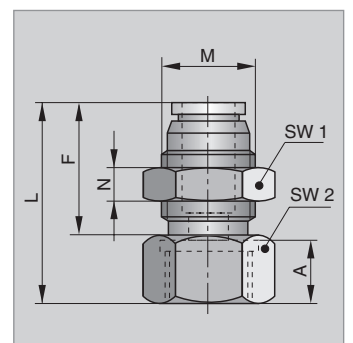
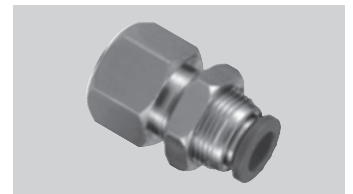
Material: nickel-plated brass



Straight Bulkhead Adaptor, female parallel thread

Order Type	Instructions Order No.	Tube ØOD	Port Size	L	N	M	A	F	SW1	SW2
SOS-184Msv	KT0154	4	G1/8	27.0	5	M12 x 1	9	16.8	14	14
SOS-186Msv	KT0155	6	G1/8	29.1	5	M14 x 1	9	17.6	17	17
SOS-146Msv	KT0156	6	G1/4	31.2	5	M14 x 1	11	17.6	17	17
SOS-188Msv	KT0157	8	G1/8	32.3	5	M16 x 1	9	18.7	19	19
SOS-148Msv	KT0158	8	G1/4	31.1	5	M16 x 1	11	18.7	19	19
SOS-388Msv	KT0159	8	G3/8	32.9	5	M16 x 1	12	18.7	19	22
SOS-1410Msv	KT0160	10	G1/4	34.0	5	M20 x 1	11	19.6	24	24
SOS-3810Msv	KT0161	10	G3/8	33.9	5	M20 x 1	12	19.6	24	24
SOS-3812Msv	KT0162	12	G3/8	38.7	5	M22 x 1	12	21.9	26	24
SOS-1212Msv	KT0163	12	G1/2	40.6	5	M22 x 1	14	21.9	26	24

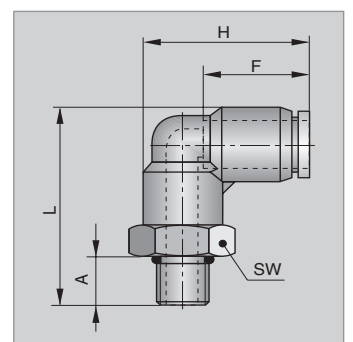
Material: nickel-plated brass



Elbow Adaptor, swivelling, male parallel thread with O-ring

Order Type	Instructions Order No.	Tube ØOD	Port Size	L	H	A	F	SW
LDS-54KU	KT0164	4	M5	27.3	23.8	4.6	16.8	10
LDS-184KU	KT0165	4	G1/8	27.4	23.8	6	16.8	14
LDS-144KU	KT0166	4	G1/4	29.4	23.8	8	16.8	17
LDS-56KU	KT0167	6	M5	30.3	26.5	4.5	17.6	12
LDS-186KU	KT0168	6	G1/8	30.6	26.5	6	17.6	14
LDS-146KU	KT0169	6	G1/4	32.6	26.5	8	17.6	17
LDS-386KU	KT0170	6	G3/8	33.6	26.5	9	17.6	20
LDS-188KU	KT0171	8	G1/8	32.9	29.7	6	18.7	14
LDS-148KU	KT0172	8	G1/4	34.9	29.7	8	18.7	17
LDS-388KU	KT0173	8	G3/8	35.9	29.7	9	18.7	20
LDS-1410KU	KT0174	10	G1/4	37.4	32.1	8	19.6	17
LDS-3810KU	KT0175	10	G3/8	38.4	32.1	9	19.6	20
LDS-1210KU	KT0176	10	G1/2	39.4	32.1	10	19.6	24
LDS-1412KU	KT0177	12	G1/4	41.4	36.9	8	21.9	19
LDSD-3812KU	KT0178	12	G3/8	42.4	36.9	9	21.9	20
LDS-1212KU	KT0179	12	G1/2	43.4	36.9	10	21.9	24
LDS-3816KU	KT0180	16	G3/8	53.8	44.2	9	23.9	24
LDS-1216KU	KT0181	16	G1/2	54.8	44.2	10	23.9	24

Material: nickel-plated brass

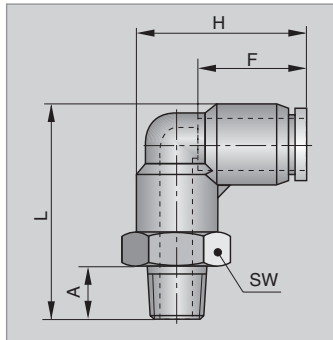


Dimensions in mm

Fittings, Tubing and Accessories

Plastic Push-in Fittings

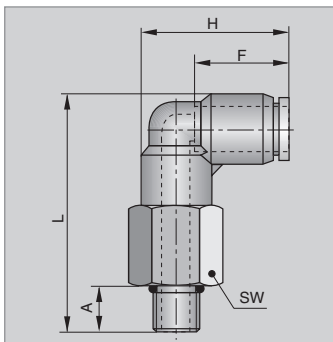
Elbow Adaptor, swivelling, teflon-coated male taper thread



Order Type	Instructions Order No.	Tube ØOD	Port Size	L	H	A	F	SW
LDSK-184KU	KT0182	4	R1/8	29.8	23.8	8	16.8	10
LDSK-186KU	KT0183	6	R1/8	32.8	26.5	8	17.6	12
LDSK-146KU	KT0184	6	R1/4	35.8	26.5	10	17.6	14
LDSK-188KU	KT0185	8	R1/8	35.2	29.7	8	18.7	14
LDSK-148KU	KT0186	8	R1/4	38.2	29.7	10	18.7	14
LDSK-388KU	KT0187	8	R3/8	39.2	29.7	11	18.7	17
LDSK-1410KU	KT0188	10	R1/4	40.3	32.1	10	19.6	17
LDSK-3810KU	KT0189	10	R3/8	41.3	32.1	11	19.6	17
LDSK-1210KU	KT0190	10	R1/2	44.3	32.1	14	19.6	22
LDSK-1412KU	KT0191	12	R1/4	44.7	36.9	10	21.9	19
LDSK-3812KU	KT0192	12	R3/8	45.7	36.9	11	21.9	19
LDSK-1212KU	KT0193	12	R1/2	48.7	36.9	14	21.9	22

Material: nickel-plated brass

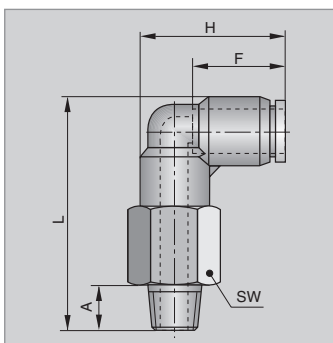
Extended Elbow Adaptor, swivelling, male parallel thread with O-ring



Order Type	Instructions Order No.	Tube ØOD	Port Size	L	H	A	F	SW
LDSL-54KU	KT0194	4	M5	38.8	23.8	4.6	16.8	10
LDSL-184KU	KT0195	4	G1/8	39.4	23.8	6	16.8	14
LDSL-144KU	KT0196	4	G1/4	41.4	23.8	8	16.8	17
LDSL-56KU	KT0197	6	M5	44.3	26.5	4.6	17.6	12
LDSL-186KU	KT0198	6	G1/8	45.6	26.5	6	17.6	14
LDSL-146KU	KT0199	6	G1/4	47.6	26.5	8	17.6	17
LDSL-386KU	KT0200	6	G3/8	48.6	26.5	9	17.6	20
LDSL-188KU	KT0201	8	G1/8	50.9	29.7	6	18.7	14
LDSL-148KU	KT0202	8	G1/4	52.9	29.7	8	18.7	17
LDSL-388KU	KT0203	8	G3/8	53.9	29.7	9	18.7	20
LDSL-1410KU	KT0204	10	G1/4	57.4	32.1	8	19.6	17
LDSL-3810KU	KT0205	10	G3/8	58.4	32.1	9	19.6	20
LDSL-1210KU	KT0206	10	G1/2	59.4	32.1	10	19.6	24
LDSL-1412KU	KT0207	12	G1/4	66.4	36.9	8	21.9	19
LDSL-3812KU	KT0208	12	G3/8	67.4	36.9	9	21.9	20
LDSL-1212KU	KT0209	12	G1/2	68.4	36.9	10.0	21.0	24

Material: nickel-plated brass

Extended Elbow Adaptor, swivelling, teflon-coated male taper thread



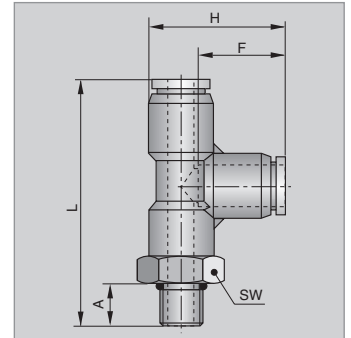
Order Type	Instructions Order No.	Tube ØOD	Port Size	L	H	A	F	SW
LDSLK-184KU	KT0210	4	R1/8	40.8	23.8	8	16.8	10
LDSLK-186KU	KT0211	6	R1/8	46.3	26.5	8	17.6	12
LDSLK-146KU	KT0212	6	R1/4	48.3	26.5	10	17.6	14
LDSLK-188KU	KT0213	8	R1/8	51.2	29.7	8	18.7	14
LDSLK-148KU	KT0214	8	R1/4	53.2	29.7	10	18.7	14
LDSLK-388KU	KT0215	8	R3/8	54.2	29.7	11	18.7	17
LDSLK-1410KU	KT0216	10	R1/4	50.5	32.1	10	19.6	14
LDSLK-3810KU	KT0217	10	R3/8	51.5	32.1	11	19.6	17
LDSLK-1210KU	KT0218	10	R1/2	54.5	32.1	14	19.6	22
LDSLK-1412KU	KT0219	12	R1/4	66.2	36.9	10	21.9	19
LDSLK-3812KU	KT0220	12	R3/8	67.2	36.9	11	21.9	19
LDSLK-1212KU	KT0221	12	R1/2	70.2	36.9	14	21.9	22

Material: nickel-plated brass

Run Tee Adaptor, swivelling, male parallel thread with O-ring

Order Type	Instructions Order No.	Tube ØOD	Port Size	L	H	A	F	SW
WDS-54KU	KT0222	4	M5	42.3	25.1	4.6	16.8	10
WDS-184KU	KT0223	4	G1/8	42.8	25.1	6	16.8	14
WDS-56KU	KT0224	6	M5	46.1	28.1	4.6	17.6	10
WDS-186KU	KT0225	6	G1/8	46.9	28.1	6	17.6	14
WDS-146KU	KT0226	6	G1/4	48.9	28.1	8	17.6	17
WDS-188KU	KT0227	8	G1/8	50.1	30.9	6	18.7	14
WDS-148KU	KT0228	8	G1/4	52.1	30.9	8	18.7	17
WDS-388KU	KT0229	8	G3/8	53.1	30.9	9	18.7	20
WDS-1410KU	KT0230	10	G1/4	55.9	34.6	8	19.6	17
WDS-3810KU	KT0231	10	G3/8	56.8	34.6	9	19.6	20
WDS-1210KU	KT0232	10	G1/2	57.8	34.6	10	19.6	24
WDS-3812KU	KT0233	12	G3/8	63.2	40.3	9	21.9	20
WDS-1212KU	KT0234	12	G1/2	64.2	40.3	10	21.9	24

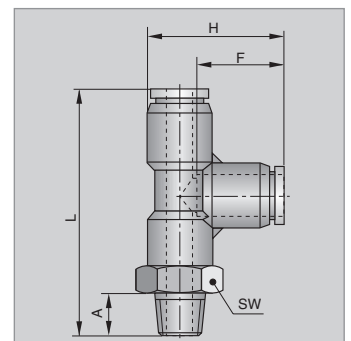
Material: nickel-plated brass



Run Tee Adaptor, swivelling, teflon-coated male taper thread

Order Type	Instructions Order No.	Tube ØOD	Port Size	L	H	A	F	SW
WDSK-184KU	KT0235	4	R1/8	45.3	25.1	8	16.8	10
WDSK-186KU	KT0236	6	R1/8	48.6	28.1	8	17.6	12
WDSK-146KU	KT0237	6	R1/4	51.2	28.1	10	17.6	14
WDSK-188KU	KT0238	8	R1/8	52.2	30.9	8	18.7	12
WDSK-148KU	KT0239	8	R1/4	55.2	30.9	10	18.7	14
WDSK-388KU	KT0240	8	R3/8	56.2	30.9	11	18.7	17
WDSK-1410KU	KT0241	10	R1/4	58.6	34.6	10	19.6	14
WDSK-3810KU	KT0242	10	R3/8	59.6	34.6	11	19.6	17
WDSK-1210KU	KT0243	10	R1/2	62.6	34.6	14	19.6	22
WDSK-3812KU	KT0244	12	R3/8	65.8	40.3	11	21.9	17
WDSK-1212KU	KT0245	12	R1/2	68.8	40.3	14	21.9	22

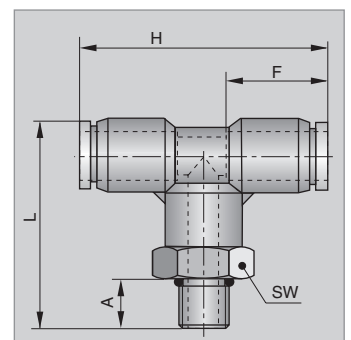
Material: nickel-plated brass



Branch Tee Adaptor, swivelling, male parallel thread with O-ring

Order Type	Instructions Order No.	Tube ØOD	Port Size	L	H	A	F	SW
TDS-54KU	KT0246	4	M5	27.3	37.6	4.6	16.8	10
TDS-184KU	KT0247	4	G1/8	27.8	37.6	6	16.8	14
TDS-56KU	KT0248	6	M5	30.3	41.0	4.6	17.6	12
TDS-186KU	KT0249	6	G1/8	30.8	41.0	6	17.6	14
TDS-146KU	KT0250	6	G1/4	32.8	41.0	8	17.6	17
TDS-188KU	KT0251	8	G1/8	33.3	44.4	6	18.7	14
TDS-148KU	KT0252	8	G1/4	35.3	44.4	8	18.7	17
TDS-388KU	KT0253	8	G3/8	36.3	44.4	9	18.7	20
TDS-1410KU	KT0254	10	G1/4	37.3	47.2	8	19.6	17
TDS-3810KU	KT0255	10	G3/8	38.3	47.2	9	19.6	20
TDS-1210KU	KT0256	10	G1/2	39.3	47.2	10	19.6	24
TDS-1412KU	KT0257	12	G1/4	41.7	54.8	8	21.9	19
TDS-3812KU	KT0258	12	G3/8	42.7	54.8	9	21.9	20
TDS-1212KU	KT0259	12	G1/2	43.7	54.8	10	21.9	24
TDS-3816KU	KT0478	16	G3/8	53.6	64.5	9	24.2	24
TDS-1216KU	KT0479	16	G1/2	53.6	64.6	10	24.0	24

Material: nickel-plated brass

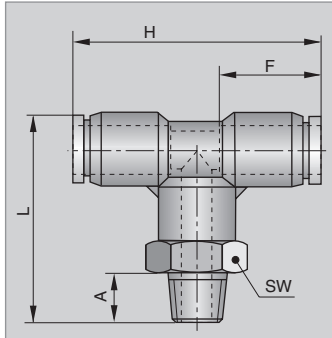


Dimensions in mm

Fittings, Tubing and Accessories

Plastic Push-in Fittings

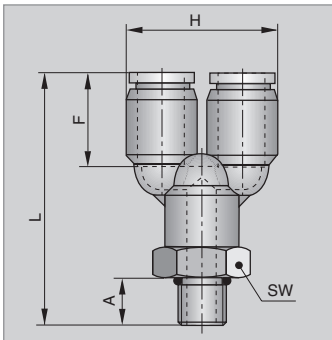
Branch Tee Adaptor, swivelling, teflon-coated male taper thread



Order Type	Instructions Order No.	Tube ØOD	Port Size	L	H	A	F	SW
TDSK-184KU	KT0260	4	R1/8	29.8	37.6	8	16.8	10
TDSK-186KU	KT0261	6	R1/8	32.8	41.0	8	17.6	12
TDSK-146KU	KT0262	6	R1/4	35.8	41.0	10	17.6	14
TDSK-188KU	KT0263	8	R1/8	35.3	44.4	8	18.7	12
TDSK-148KU	KT0264	8	R1/4	38.3	44.4	10	18.7	14
TDSK-388KU	KT0265	8	R3/8	39.3	44.4	11	18.7	17
TDSK-1410KU	KT0266	10	R1/4	41.6	50.6	10	19.6	14
TDSK-3810KU	KT0267	10	R3/8	42.9	50.6	11	19.6	17
TDSK-1210KU	KT0268	10	R1/2	45.5	50.6	14	19.6	22
TDSK-1412KU	KT0269	12	R1/4	44.7	54.8	10	21.9	14
TDSK-3812KU	KT0270	12	R3/8	45.7	54.8	11	21.9	17
TDSK-1212KU	KT0271	12	R1/2	48.7	54.8	14	21.9	22

Material: plastic, nickel-plated brass

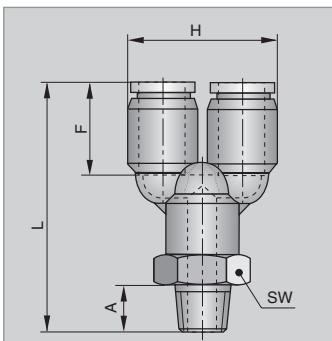
Parallel Y Adaptor, swivelling, male parallel thread with O-ring



Order Type	Instructions Order No.	Tube ØOD	Port Size	L	H	A	F	SW
YDS-54KU	KT0272	4	M5	34.8	21	4.6	16.8	10
YDS-184KU	KT0273	4	G1/8	41.0	21	6	16.8	14
YDS-56KU	KT0274	6	M5	41.6	25	4.6	17.6	12
YDS-186KU	KT0275	6	G1/8	42.4	25	6	17.6	14
YDS-146KU	KT0276	6	G1/4	44.4	25	8	17.6	17
YDS-188KU	KT0277	8	G1/8	43.7	29	6	18.7	14
YDS-148KU	KT0278	8	G1/4	45.7	29	8	18.7	17
YDS-388KU	KT0279	8	G3/8	46.7	29	9	18.7	20
YDS-1410KU	KT0280	10	G1/4	51.3	35	8	19.6	17
YDS-3810KU	KT0281	10	G3/8	52.3	35	9	19.6	20
YDS-1210KU	KT0282	10	G1/2	53.3	35	10	19.6	24
YDS-3812KU	KT0283	12	G3/8	55.8	41	9	21.9	20
YDS-1212KU	KT0284	12	G1/2	56.8	41	10	21.9	24

Material: plastic, nickel-plated brass

Parallel Y Adaptor, swivelling, teflon-coated male taper thread



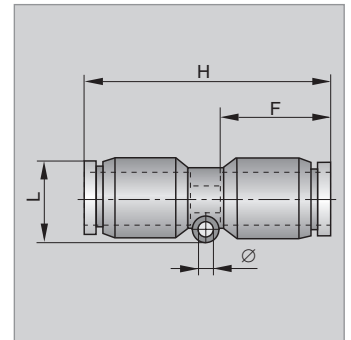
Order Type	Instructions Order No.	Tube ØOD	Port Size	L	H	A	F	SW
YDSK-184KU	KT0285	4	R1/8	41.3	21	8	16.8	10
YDSK-186KU	KT0286	6	R1/8	44.1	25	8	17.6	12
YDSK-146KU	KT0287	6	R1/4	47.1	25	10	17.6	14
YDSK-188KU	KT0288	8	R1/8	45.5	29	8	18.7	12
YDSK-148KU	KT0289	8	R1/4	48.5	29	10	18.7	14
YDSK-388KU	KT0290	8	R3/8	48.5	29	11	18.7	17
YDSK-1410KU	KT0291	10	R1/4	54.2	35	10	19.6	14
YDSK-3810KU	KT0292	10	R3/8	56.5	35	11	19.6	17
YDSK-1210KU	KT0293	10	R1/2	58.2	35	14	19.6	22
YDSK-3812KU	KT0294	12	R3/8	58.3	41	11	21.9	17
YDSK-1212KU	KT0295	12	R1/2	62.0	41	14	21.9	22

Material: plastic, nickel-plated brass

Straight Connector

Order Instructions Type	Order No.	Tube ØOD	H	L	Ø	F
GVS-4KU	KT0296	4	34.6	12.8	3.3	16.3
GVS-6KU	KT0297	6	36.8	14.8	3.3	17.6
GVS-8KU	KT0298	8	39.4	17.8	4.3	18.7
GVS-10KU	KT0299	10	43.2	20.0	4.3	19.6
GVS-12KU	KT0300	12	47.8	23.3	4.3	21.9
GVS-16KU	KT0301	16	51.1	25.8	-	24.0

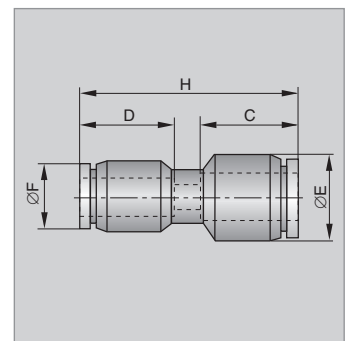
Material: plastic



Reducing Straight Connector

Order Instructions Type	Order No.	Tube ØOD-A	Tube ØOD-B	H	C	D	ØE	ØF
GVSR-64KU	KT0302	6	4	36.6	17.6	16.8	12.5	10.5
GVSR-86KU	KT0303	8	6	37.6	18.7	17.6	14.5	12.5
GVSR-108KU	KT0304	10	8	41.0	19.6	18.7	17.5	14.5
GVSR-1210KU	KT0305	12	10	44.0	21.9	19.6	20.5	17.5
GVSR-1612KU	KT0306	16	12	49.2	24.2	22.9	25.7	20.7

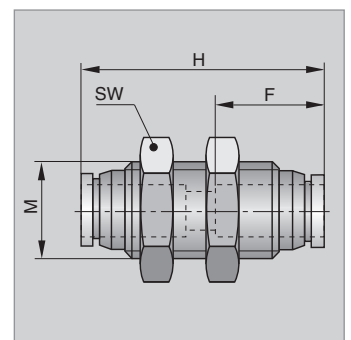
Material: plastic



Straight Bulkhead Connector

Order Instructions Type	Order No.	Tube ØOD	H	F	M	SW
SOV-4Msv	KT0307	4	35.1	16.3	M12 x 1	14
SOV-6Msv	KT0308	6	39.4	17.6	M14 x 1	17
SOV-8Msv	KT0309	8	41.8	18.7	M16 x 1	19
SOV-10Msv	KT0310	10	44.0	19.6	M20 x 1	24
SOV-12Msv	KT0311	12	48.8	21.9	M22 x 1	26

Material: nickel-plated brass

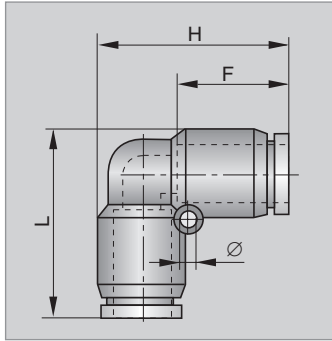


Dimensions in mm

Fittings, Tubing and Accessories

Plastic Push-in Fittings

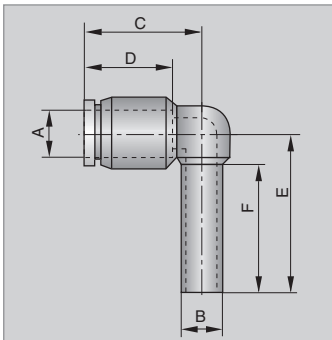
Equal Elbow Connector



Order Instructions		Tube ØOD	H	L	Ø	F
Type	Order No.					
WVS-4KU	KT0312	4	23.9	23.9	3.3	16.8
WVS-6KU	KT0313	6	27.0	27.0	3.3	17.6
WVS-8KU	KT0314	8	31.1	31.1	4.3	18.7
WVS-10KU	KT0315	10	34.1	34.1	4.3	19.6
WVS-12KU	KT0480	12	39.1	39.1	4.3	21.9
WVS-16KU	KT0481	16	46.8	46.8	5.3	24.2

Material: plastic

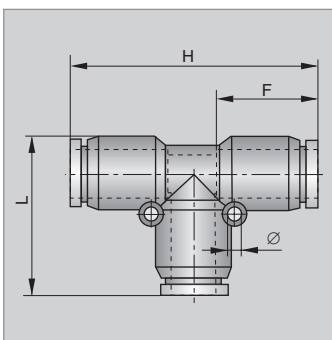
Stem Elbow Connector



Order Instructions		A	B	C	D	E	F
Type	Order No.						
WVSN-44KU	KT0482	4	4	18.8	16.8	28.4	22
WVSN-66KU	KT0316	6	6	20.3	17.4	31.4	24
WVSN-88KU	KT0317	8	8	23.0	19.0	34.3	26
WVSN-1010KU	KT0318	10	10	24.2	19.7	37.9	28
WVSN-1212KU	KT0319	12	12	28.0	22.1	41.4	30
WVSN-1616KU	KT0320	16	16	32.0	24.0	48.5	35

Material: plastic

Equal Tee Connector



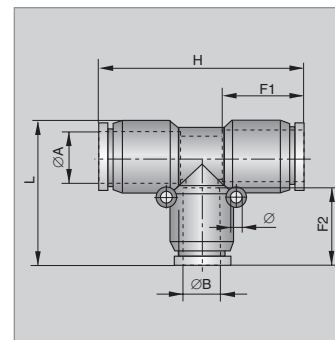
Order Instructions		Tube ØOD	H	L	Ø	F
Type	Order No.					
TVS-4KU	KT0321	4	36.6	24.2	3.3	16.3
TVS-6KU	KT0322	6	41.8	27.5	3.3	17.6
TVS-8KU	KT0323	8	44.9	30.7	4.3	18.7
TVS-10KU	KT0324	10	48.2	34.1	4.3	19.6
TVS-12KU	KT0325	12	56.8	39.9	4.3	21.9
TVS-16KU	KT0326	16	68.2	47.2	4.3	24.0

Material: plastic

Reducing Tee Connector

Order Type	Instructions Order No.	Tube ØOD-A	Tube ØOD-B	H	L	Ø	F1	F2
TVSR-108KU	KT0468	10	8	49.2	33.5	4.3	19.6	18.7
TVSR-1210KU	KT0469	12	10	56.0	37.6	4.3	21.9	19.6
TVSR-1610KU	KT0470	16	10	60.8	43.1	4.3	24.0	19.6
TVSR-1612KU	KT0471	16	12	63.7	45.5	4.3	24.0	21.9

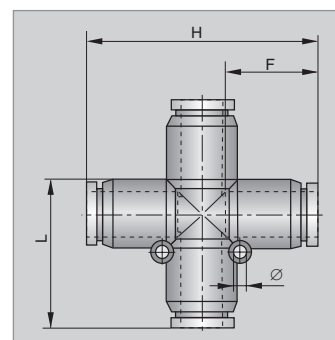
Material: plastic



4-Way Cross Connector

Order Type	Instructions Order No.	Tube ØOD	H	L	Ø	F
KVS-4KU	KT0483	4	36.6	37.9	3.3	16.8
KVS-6KU	KT0327	6	41.8	42.5	4.3	17.6
KVS-8KU	KT0328	8	44.9	46.8	4.3	18.7
KVS-10KU	KT0329	10	48.2	50.5	4.3	19.6
KVS-12KU	KT0330	12	54.8	57.2	4.3	21.9

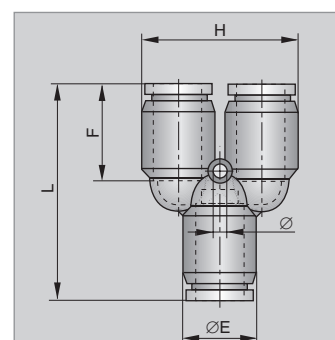
Material: plastic



Parallel Y Connector

Order Type	Instructions Order No.	Tube ØOD	H	L	Ø	F	ØE
YVS-4KU	KT0331	4	21	37.1	3.3	16.3	10.5
YVS-6KU	KT0332	6	25	39.9	3.3	17.6	12.5
YVS-8KU	KT0333	8	29	43.4	4.3	18.7	14.5
YVS-10KU	KT0334	10	35	45.5	4.3	19.6	17.5
YVS-12KU	KT0335	12	41	54.8	4.3	21.9	20.5

Material: plastic



Dimensions in mm

Fittings, Tubing and Accessories

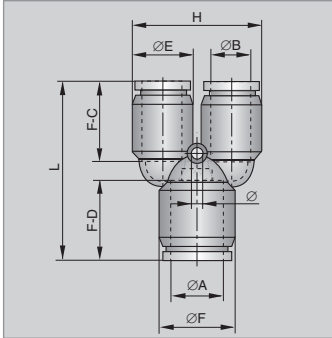
Plastic Push-in Fittings

Reducing Parallel Y Connector



Order Instructions		Tube	Tube	L	H	F-C	F-D	ØE	ØF	Ø
Type	Order No.	ØOD-A	ØOD-B							
YVS-64KU	KT0336	6	4	37.9	21	17.6	16.3	12.5	10.5	3.3
YVS-86KU	KT0337	8	6	41.3	25	18.7	17.6	14.5	12.5	4.3
YVS-108KU	KT0338	10	8	43.3	29	19.6	18.7	17.5	14.5	4.3
YVS-1210KU	KT0339	12	10	46.5	35	21.9	19.6	20.5	17.5	4.3

Material: plastic

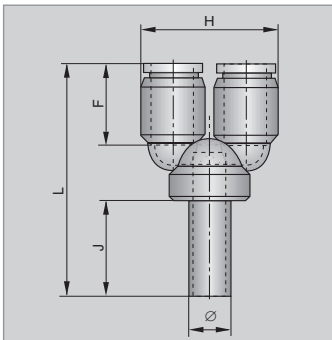


Parallel Y Stem Connector



Order Instructions		Tube	Stem	J	H	L	F
Type	Order No.	ØOD	Ø				
YVSN-44KU	KT0340	4	4	22	49.5	21	16.8
YVSN-66KU	KT0341	6	6	24	54.7	25	17.6
YVSN-88KU	KT0342	8	8	26	59.8	29	18.7
YVSN-1010KU	KT0343	10	10	28	66.1	35	19.6
YVSN-1212KU	KT0344	12	12	30	71.6	41	21.9

Material: plastic

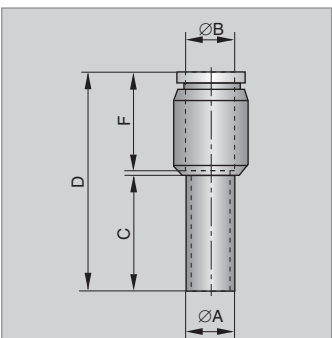


Reducing Straight Stem Connector



Order Instructions		A	B	C	D	F
Type	Order No.					
R-64KU	KT0345	6	4	21.7	41.0	12.8
R-84KU	KT0346	8	4	22.7	42.0	12.8
R-86KU	KT0347	8	6	23.7	44.3	13.4
R-106KU	KT0348	10	6	28.7	47.3	13.4
R-108KU	KT0349	10	8	27.7	49.7	14.2
R-128KU	KT0350	12	8	30.7	52.5	14.2
R-1210KU	KT0351	12	10	31.2	56.5	14.9

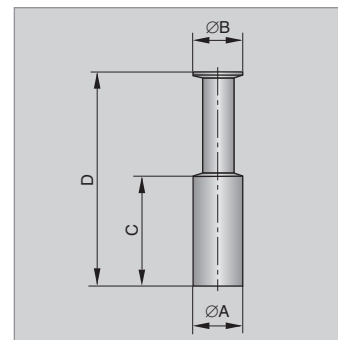
Material: plastic



Blanking Plug, black

Order Instructions Type	Order No.	A	B	C	D
VST-4KU	KT0352	4	4	17.7	30
VST-6KU	KT0353	6	6	19.4	34
VST-8KU	KT0354	8	8	21.2	38
VST-10KU	KT0355	10	10	23.8	42
VST-12KU	KT0356	12	12	29.5	46

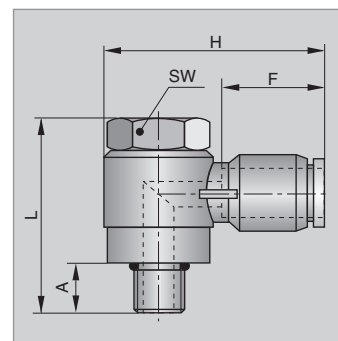
Material: plastic



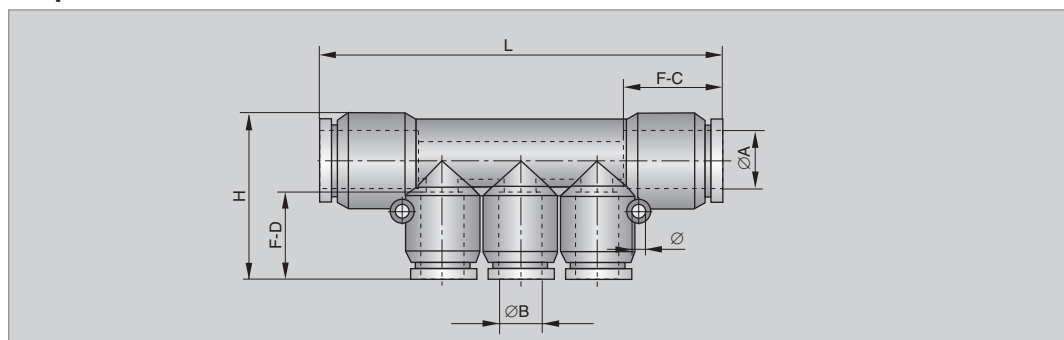
Banjo Elbow Adaptor, male parallel thread with O-ring

Order Instructions Type	Order No.	Tube ØOD	Port Size	L	H	A	F	SW
ESS-54KU	KT0357	4	M5	22.1	26.6	4.6	16.8	8
ESS-184KU	KT0358	4	G1/8	23.5	32.4	4.5	16.3	8
ESS-56KU	KT0359	6	M5	22.1	27.2	4.6	17.6	8
ESS-186KU	KT0360	6	G1/8	23.5	33.5	4.5	17.6	8
ESS-146KU	KT0361	6	G1/4	28.0	37.3	6.0	17.6	12
ESS-188KU	KT0362	8	G1/8	23.5	34.2	4.5	18.7	8
ESS-148KU	KT0363	8	G1/4	28.0	38.3	6.0	18.7	12
ESS-388KU	KT0364	8	G3/8	32.5	41.8	6.0	18.7	14
ESS-3810KU	KT0365	10	G3/8	32.5	42.5	6.0	19.6	14
ESS-1210KU	KT0366	10	G1/2	34.0	48.6	7.5	19.6	19
ESS-3812KU	KT0367	12	G3/8	32.5	44.8	6.0	21.9	14
ESS-1212KU	KT0368	12	G1/2	34.0	50.3	7.5	21.9	19

Material: plastic, nickel plated brass



Triple Tee Connector



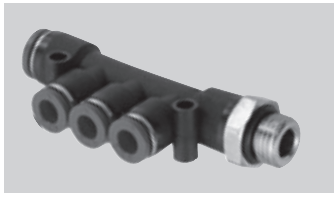
Order Instructions Type	Order No.	Tube ØOD-A	Tube ØOD-B	Ø	H	L	F-C	F-D
VVS-64KU	KT0369	6	4	3.3	24.2	63.7	17.6	16.3
VVS-84KU	KT0370	8	4	4.3	28.5	65.7	18.7	16.3
VVS-86KU	KT0371	8	6	4.3	34.0	71.7	18.7	17.6
VVS-106KU	KT0372	10	6	4.3	32.0	78.1	19.6	17.6
VVS-108KU	KT0373	10	8	4.3	34.5	83.4	19.6	18.7

Material: plastic

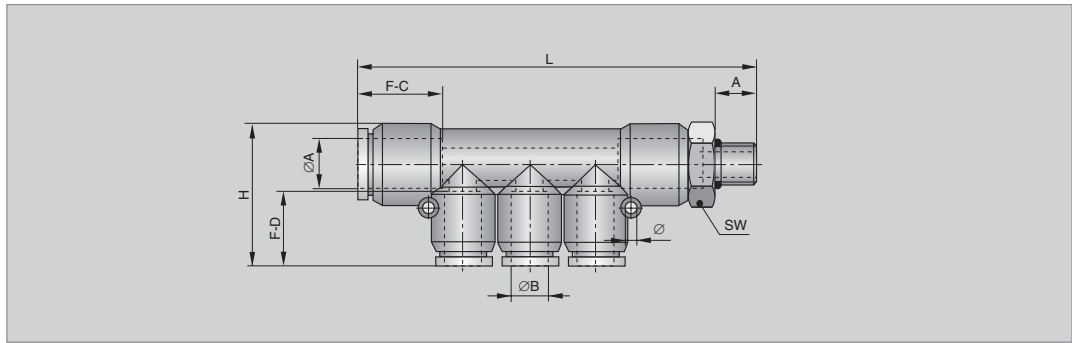
Dimensions in mm

Fittings, Tubing and Accessories

Plastic Push-in Fittings



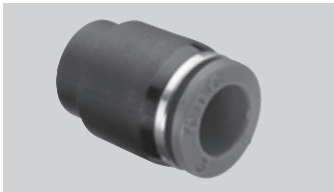
Triple Run Tee Adaptor, swivelling, male parallel thread with O-ring



Order Instructions		Tube	Tube	Port	Ø	H	L	F-C	F-D	A	SW
Type	Order No.	ØOD-A	ØOD-B	Size							
VDS-18-64KU	KT0374	6	4	G1/8	3.3	24.2	71.1	17.6	16.3	6	14
VDS-14-84KU	KT0375	8	4	G1/4	4.3	28.5	74.9	18.7	16.3	8	17
VDS-14-86KU	KT0376	8	6	G1/4	4.3	34.0	80.0	18.7	17.6	8	17
VDS-38-108KU	KT0377	10	8	G3/8	4.3	34.5	92.3	19.6	18.7	8	20

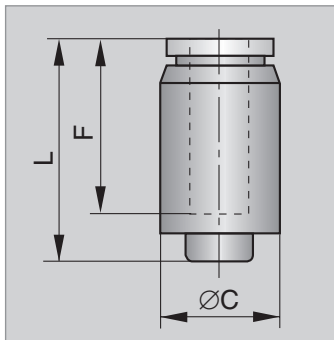
Material: plastic, nickel-plated brass

End Cap



Order Instructions		Tube	C	L	F
Type	Order No.	ØOD			
VK-4KU	KT0472	4	10.5	18.0	16.8
VK-6KU	KT0473	6	12.5	19.0	17.6
VK-8KU	KT0474	8	14.5	21.0	18.7
VK-10KU	KT0475	10	17.5	23.0	19.6
VK-12KU	KT0476	12	19.5	25.0	21.9
VK-16KU	KT0477	16	25.5	27.5	24.0

Material: plastic

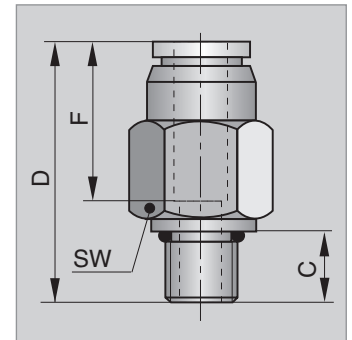


Miniature Plastic Push-in Fittings

Straight Adaptor, male parallel thread with O-ring

Order Type	Instructions Order No.	Tube ØOD	Port Size	C	D	F	SW
GSM-33Msv	KT0378	3	M3	4.0	17.1	11.1	7
GSM-53Msv	KT0379	3	M5	4.6	17.7	11.1	8
GSM-63Msv	KT0380	3	M6	5.1	18.2	11.1	8
GSM-34Msv	KT0381	4	M3	4.0	17.7	11.6	8
GSM-54Msv	KT0382	4	M5	4.6	18.2	11.6	8
GSM-64Msv	KT0383	4	M6	5.1	18.8	11.6	8
GSM-184Msv	KT0384	4	G1/8	6.0	18.0	11.6	12
GSM-56Msv	KT0385	6	M5	4.6	19.4	12.8	10
GSM-66Msv	KT0386	6	M6	5.1	19.9	12.8	10
GSM-186Msv	KT0387	6	G1/8	6.0	18.6	12.8	12

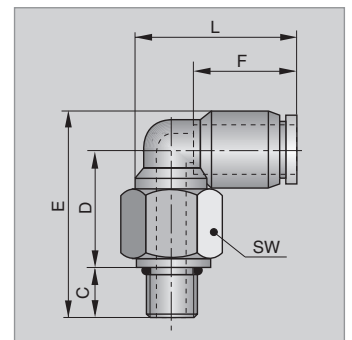
Material: nickel-plated brass



Elbow Adaptor, swivelling, male parallel thread with O-ring

Order Type	Instructions Order No.	Tube ØOD	Port Size	C	D	E	L	F	SW
LDSM-33KU	KT0388	3	M3	3	13.0	19.8	17.2	11.1	8
LDSM-53KU	KT0389	3	M5	3.6	13.0	20.4	17.2	11.1	8
LDSM-63KU	KT0390	3	M6	4.1	13.0	20.9	17.2	11.1	8
LDSM-34KU	KT0391	4	M3	3	13.0	20.3	18.2	11.6	8
LDSM-54KU	KT0392	4	M5	3.6	13.0	20.9	18.2	11.6	8
LDSM-64KU	KT0393	4	M6	4.1	13.0	21.4	18.2	11.6	8
LDSM-184KU	KT0394	4	G1/8	6	12.2	21.2	21.5	11.6	14
LDSM-56KU	KT0395	6	M5	3.6	13.0	21.9	19.4	12.8	8
LDSM-66KU	KT0396	6	M6	4.1	13.0	22.4	19.4	12.8	8
LDSM-186KU	KT0397	6	G1/8	6	12.2	22.6	23.2	12.8	14

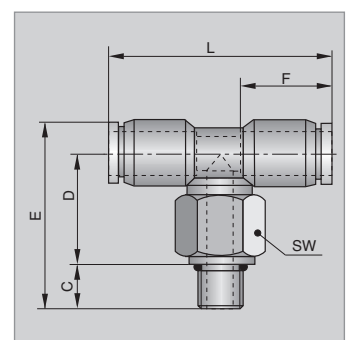
Material: plastic, nickel-plated brass



Elbow Adaptor, swivelling, male parallel thread with O-ring

Order Type	Instructions Order No.	Tube ØOD	Port Size	C	D	E	L	F	SW
TDSM-33KU	KT0398	3	M3	3.0	13.0	19.8	26.6	11.1	8
TDSM-53KU	KT0399	3	M5	3.6	13.0	20.4	26.6	11.1	8
TDSM-63KU	KT0400	3	M6	4.1	13.0	20.9	26.6	11.1	8
TDSM-34KU	KT0401	4	M3	3.0	13.0	20.3	28.6	11.6	8
TDSM-54KU	KT0402	4	M5	3.6	13.0	20.9	28.6	11.6	8
TDSM-64KU	KT0403	4	M6	4.1	13.0	21.4	28.6	11.6	8
TDSM-184KU	KT0404	4	G1/8	6.0	12.2	21.4	28.6	11.6	14
TDSM-56KU	KT0405	6	M5	3.6	13.0	21.9	31.0	12.8	8
TDSM-66KU	KT0406	6	M6	4.1	13.0	22.4	31.0	12.8	8
TDSM-186KU	KT0407	6	G1/8	6.0	12.2	22.2	31.0	12.8	14

Material: plastic, nickel-plated brass



Dimensions in mm

Fittings, Tubing and Accessories

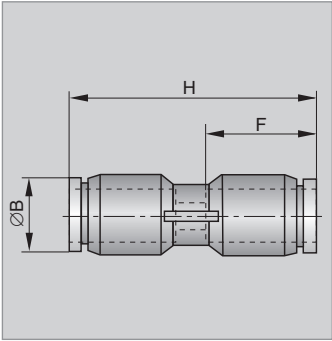
Miniature Plastic Push-in Fittings

Straight Connector



Order Instructions Type	Order No.	Tube ØOD	B	F	H
GVSM-3KU	KT0408	3	7.6	11.1	23.2
GVSM-4KU	KT0409	4	8.5	11.6	26.1
GVSM-6KU	KT0410	6	10.7	12.8	26.6

Material: plastic

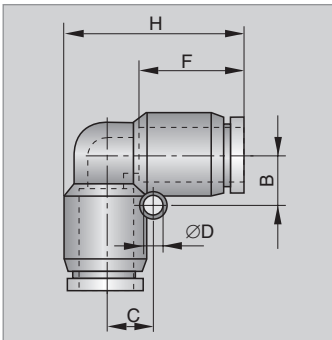


Equal Elbow Connector



Order Instructions Type	Order No.	Tube ØOD	B	C	D	F	H
WVSM-3KU	KT0411	3	5.4	5.4	3.2	11.1	17.1
WVSM-4KU	KT0412	4	5.8	5.8	3.2	11.6	18.5
WVSM-6KU	KT0413	6	6.9	6.9	3.2	12.8	21.8

Material: plastic

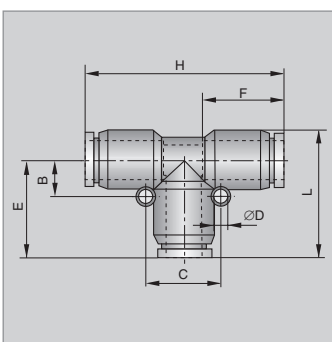


Equal Tee Connector



Order Instructions Type	Order No.	Tube ØOD	D	C	B	E	L	F	H
TVSM-3KU	KT0414	3	3,2	10,7	3,4	13,3	17,1	11,1	26,6
TVSM-4KU	KT0415	4	3,2	11,6	5,8	14,3	18,5	11,6	28,6
TVSM-6KU	KT0416	6	3,2	13,8	6,9	16,5	21,8	12,8	33,0

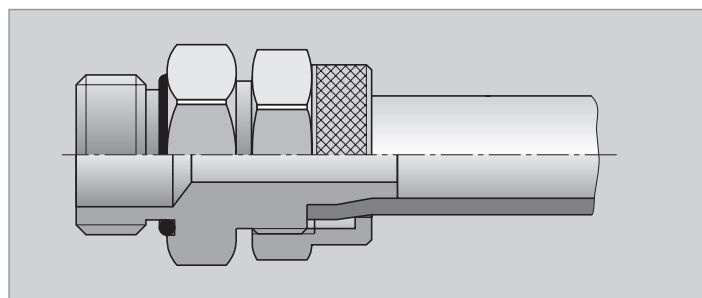
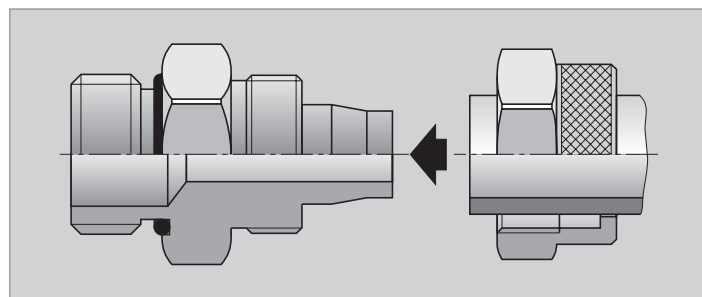
Material: plastic



Compression Fittings

Proven Connection System with Guide Cone and Compression Nut

- Nickel-plated brass for optimum surface protection
- Tube clamped on its outside diameter by compression nut
- Tube sealed on its inner diameter by cone
- Thread sealed by integrated O-ring (no seal rings required)



Technical Data

Connecting thread*	M5, G1/8, G1/4, G3/8, G1/2 (parallel and taper)
Tubing outside/inside diameter *	4/2, 5/3, 6/4, 8/6, 10/8, 12/10, 15/12,5
Material**	Body/nut: nickel-plated brass; O-rings: NBR
Operating pressure range	0 to 18 bar (suitable for low vacuum)
Temperature range	-25°C to +80°C (other temperature ranges on request)
Medium	Compressed air (other media on request)

* depending on type

**exceptions on some types are specified

Tubing Recommendations¹⁾

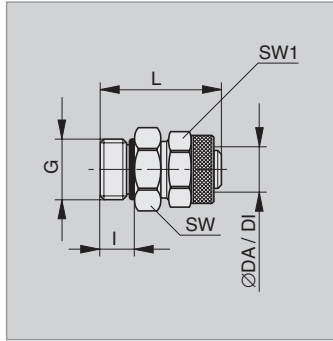
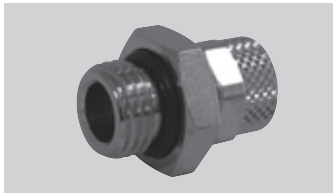
Tubing type	Compressed air tubing
Tubing tolerances	Usual tolerances
Tubing material	PE, PA, PU, PVC (glassfibre-reinforced) depending on application

¹⁾ see our range of tubing in Section on Tubing and Hoses, pages 107–109

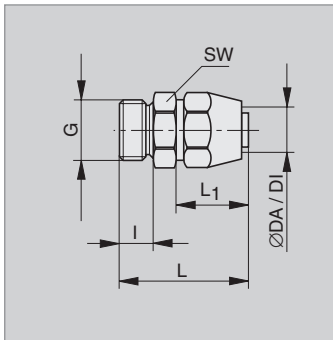
Fittings, Tubing and Accessories

Compression Fittings

Straight Adaptor, male parallel thread with O-ring



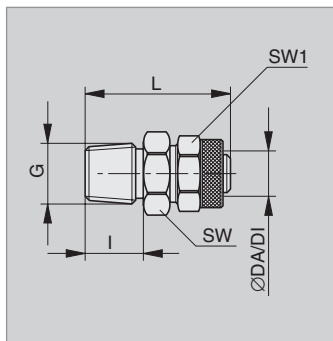
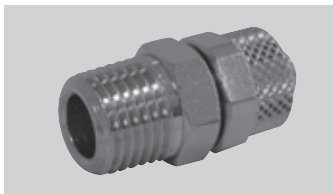
Order Type	Instructions Order No.	Nominal width	Tube ØDA/DI *	G	SW	SW1	I	L
G-54Msv	KW 0178	1.5	4/2	M5	8	9	4	22
G-55Msv	KW 0181	2	5/3	M5	8	8	4	22
G-185Msv	KW 0182	2	5/3	G1/8	14	8	6	23
G-56Msv	KW 0183	2.5	6/4	M5	9	9	4	22
G-186Msv	KW 0184	3	6/4	G1/8	15	12	6	25
G-146Msv	KW 0185	3	6/4	G1/4	18	12	8	27
G-188Msv	KW 0186	5	8/6	G1/8	15	14	6	25
G-148Msv	KW 0187	5	8/6	G1/4	18	14	8	27
G-388Msv	KW 0188	5	8/6	G3/8	21	14	9	29
G-1410Msv	KW 0189	6.8	10/8	G1/4	18	16	8	29
G-3810Msv	KW 0190	6.8	10/8	G3/8	21	16	9	31
G-1210Msv	KW 0191	6.8	10/8	G1/2	26	16	11	33
G-3812Msv	KW 0192	8.5	12/10	G3/8	21	19	9.0	33
G-1212Msv	KW 0193	8.5	12/10	G1/2	26	19	11	35
G-1215Msv	KW 0194	11	15/12.5	G1/2	26	22	11	35.5



Straight Adaptor for metal-braided tubing, male parallel thread with O-ring

Order Type	Instructions Order No.	Nominal width	Tube ØDA/DI *	G	SW	I	L ₁	L ₂
G-146M	KX 5517	5.2	9/6	G1/4	17	9	35	20.5
G-149M	KX 5518	7.5	12/9	G1/4	22	9	38	23
G-386M	KX 5519	5.2	9/6	G3/8	19	9	35	20.5
G-389M	KX 5520	7.5	12/9	G3/8	22	9	38	23
G-126M	KX 5521	5.2	9/6	G1/2	24	11	37.5	20.5
G-129M	KX 5522	7.5	12/9	G1/2	24	11	40	23

Material: aluminum, black-anodized



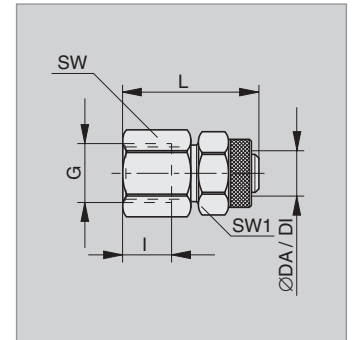
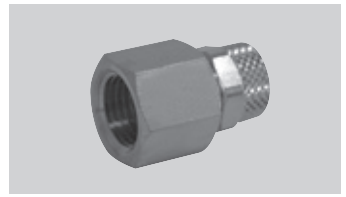
Straight Adaptor, male taper thread

Order Type	Instructions Order No.	NW	Tube ØDA/DI *	G	SW	SW1	I	L
GK-185Msv	KW 0166	2.0	5/3	R1/8	12	8	8	24.5
GK-186Msv	KW 0167	3.0	6/4	R1/8	12	12	8	26.5
GK-146Msv	KW 0168	3.0	6/4	R1/4	14	12	11	30
GK-188Msv	KW 0169	5.0	8/6	R1/8	12	14	8	26
GK-148Msv	KW 0170	5.0	8/6	R1/4	14	14	11	30
GK-388Msv	KW 0171	5.0	8/6	R3/8	17	14	11.5	31
GK-1810Msv	KW 0838	6.8	10/8	R1/8	14	16	8	28.5
GK-1410Msv	KW 0172	6.8	10/8	R1/4	14	16	11	32
GK-3810Msv	KW 0173	6.8	10/8	R3/8	17	16	11.5	33
GK-1210Msv	KW 0174	6.8	10/8	R1/2	22	16	14	36
GK-3812Msv	KW 0175	8.5	12/10	R3/8	17	19	11.5	35
GK-1212Msv	KW 0176	8.5	12/10	R1/2	22	19	14	38
GK-1215Msv	KW 0177	10.5	15/12.5	R1/2	22	22	14	39.5

* = Tube ØOD/ID

Pressure Gauge Adaptor

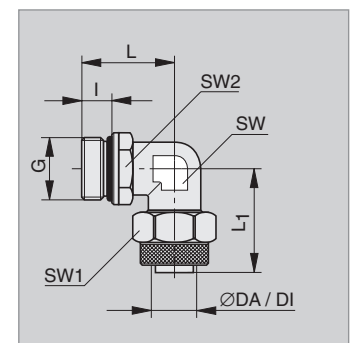
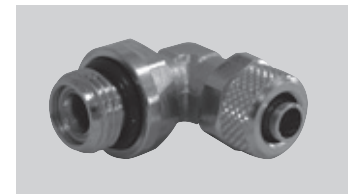
Order Type	Instructions Order No.	Nominal width	Tube ØDA/DI *	G	SW	SW1	I	L
MV-186Msv	KW 0195	3	6/4	G1/8	14	12	7	26
MV-146Msv	KW 0196	3	6/4	G1/4	17	12	8	28
MV-188Msv	KW 0197	5	8/6	G1/8	14	14	7	26
MV-148Msv	KW 0198	5	8/6	G1/4	17	14	8	28
MV-388Msv	KW 0199	5	8/6	G3/8	20	14	10.3	32
MV-1410Msv	KW 0200	6.8	10/8	G1/4	17	16	8	30
MV-3810Msv	KW 0201	6.8	10/8	G3/8	20	16	10.3	34
MV-1210Msv	KW 0202	6.8	10/8	G1/2	24	16	11.4	37.5



Elbow Adaptor, swivelling, male parallel thread with O-ring

Order Type	Instructions Order No.	NW	Tube ØDA/DI*	G	SW	SW1	SW2	I	L	L ₁
LD-186Msv	KW 0964	3	6/4	G1/8	10	12	13	6	21	20.5
LD-146Msv	KW 0965	3	6/4	G1/4	10	12	16	8	22.5	21.6
LD-188Msv	KW 0966	6	8/6	G1/8	10	14	13	6	21	21
LD-148Msv	KW 0967	6	8/6	G1/4	12	14	16	8	24	22
LD-1410Msv	KW 0968	6.8	10/8	G1/4	12	16	16	8	24	24

For frequent swivelling, see Type ES-..

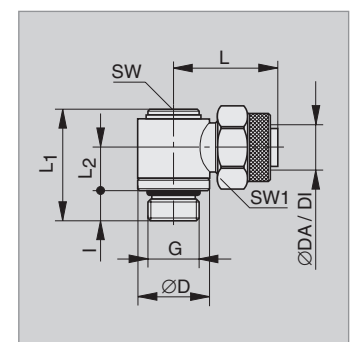


Banjo Elbow Adaptor, male parallel thread with O-ring

Order Type	Instructions Order No.	NW	Tube ØDA/DI*	G	SW	SW1	ØD	I	L	L ₁	L ₂
ES-54Msv	KW 0323	1.5	4/2	M5	2	9	9.9	4	20	16.8	6.5
ES-185Msv	KW 0325	2	5/3	G1/8	5	8	15	6	17	27	10.5
ES-56Msv	KW 0326	3	6/4	M5	2	9	9.9	4	20.5	16.8	6.5
ES-186Msv	KW 0327	3	6/4	G1/8	5	12	15	6	24	27	10.5
ES-146Msv	KW 0328	3	6/4	G1/4	6	12	18	8	26.5	31.5	11.5
ES-188Msv	KW 0329	5	8/6	G1/8	5	14	15	6	24	27	10.5
ES-148Msv	KW 0330	5	8/6	G1/4	6	14	18	8	26	31.5	11.5
ES-388Msv	KW 0331	5	8/6	G3/8	6	14	21	9	28	36	13.5
ES-1410Msv	KW 0332	6.8	10/8	G1/4	6	16	18	8	28	31.5	11.5
ES-3810Msv	KW 0333	6.8	10/8	G3/8	6	16	21	9	29	36	13.5
ES-1210Msv	KW 0334	6.8	10/8	G1/2	10	16	26	11	30.5	32	15.5
ES-3812Msv	KW 0335	8.5	12/10	G3/8	6	19	21	9	31.5	36	13.5
ES-1212Msv	KW 0336	8.5	12/10	G1/2	10	19	26	11	33	42	15.5
ES-1215Msv	KW 0829	11	15/12.5	G1/2	10	22	26	11	35	42	15.5

Application: for frequent swivelling

* = Tube ØOD/ID



Dimensions in mm

Fittings, Tubing and Accessories

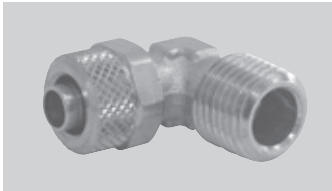
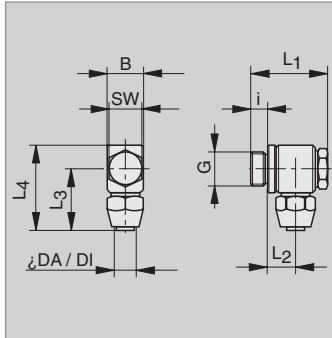
Compression Fittings

Banjo Elbow Adaptor for metal-braided tubing, male parallel thread with O-ring



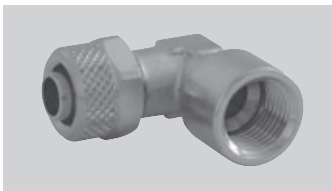
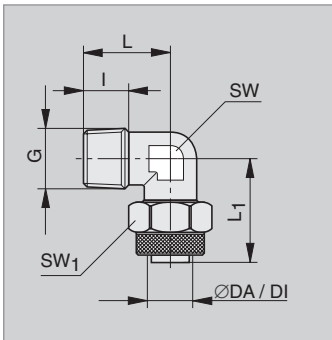
Order Type	Instructions Order No.	NW	Tube ØDA/DI *	G	B	I	L ₁	L ₂	L ₃	L ₄	SW
ES-146M	KX 5540	5.2	9/6	G1/4	20	6.5	37	14.5	30	39.5	17
ES-149M	KX 5541	6.5	12/9	G1/4	20	6.5	40	16	32.5	42	17
ES-389M	KX 5542	7	12/9	G3/8	24	6.5	41	16	35	47	22

Material: aluminum, black-anodized



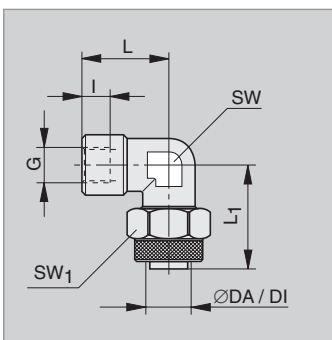
Elbow Adaptor, male taper thread

Order Type	Instructions Order No.	NW	Tube ØDA/DI *	G	SW	SW1	I	L	L ₁
WE-185Msv	KW 0215	2	5/3	R1/8	8	8	8	17	21.5
WE-186Msv	KW 0216	3	6/4	R1/8	9	12	8	17	22
WE-146Msv	KW 0217	3	6/4	R1/4	9	12	11	20	22
WE-188Msv	KW 0218	5	8/6	R1/8	12	14	8	17	22
WE-148Msv	KW 0219	5	8/6	R1/4	12	14	11	20	22
WE-388Msv	KW 0220	5	8/6	R3/8	12	14	11.5	22	22.5
WE-1810Msv	KW 0874	6.8	10/8	R1/8	11	16	8	20.5	25.5
WE-1410Msv	KW 0221	6.8	10/8	R1/4	12	16	11	22	24.5
WE-3810Msv	KW 0222	6.8	10/8	R3/8	12	16	11.5	22	24.5
WE-1210Msv	KW 0223	6.8	10/8	R1/2	17	16	14	26	27.5
WE-3812Msv	KW 0224	8.5	12/10	R3/8	17	19	11.5	24.5	31
WE-1212Msv	KW 0225	8.5	12/10	R1/2	17	19	14	26	31
WE-1215Msv	KW 0226	11	15/12.5	R1/2	17	22	14	28	34



Elbow Adaptor, female parallel thread

Order Type	Instructions Order No.	NW	Tube ØDA/DI *	G	SW	SW1	I	L	L ₁
WI-185Msv	KW 0963	2	5/3	G1/8	8	8	7	21.5	22
WI-186Msv	KW 0227	3	6/4	G1/8	9	12	7	20	22
WI-146Msv	KW 0228	3	6/4	G1/4	11	12	8	23	25.5
WI-188Msv	KW 0229	5	8/6	G1/8	10	14	7	21	22.5
WI-148Msv	KW 0230	5	8/6	G1/4	12	14	8	22.5	22
WI-1410Msv	KW 0231	6.8	10/8	G1/4	11	16	8	23	25.5

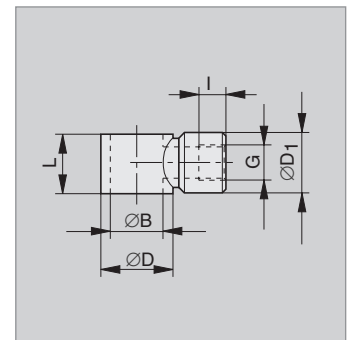
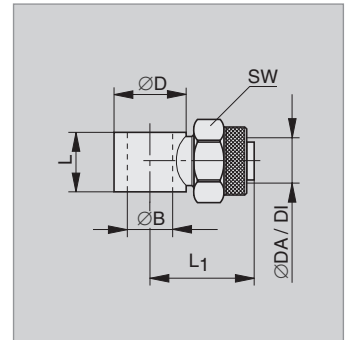
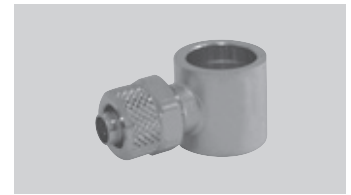


* = Tube ØOD/ID

Banjo Elbow Body, for banjo bolt*

Order Type	Instructions Order No.	NW	Tube ØDA/DI **	ØB for banjo bolt	SW	ØD	L	L ₁
RE-54Msv	KW 0270	1.5	4/2	M5	9	9.5	9	19
RE-55Msv	KW 0274	2	5/3	M5	8	9.5	9	20.5
RE-185Msv	KW 0275	2	5/3	G1/8	8	14	15	24
RE-56Msv	KW 0276	3	6/4	M5	9	9.5	9	20.5
RE-186Msv	KW 0277	3	6/4	G1/8	12	14	15	24
RE-146Msv	KW 0278	3	6/4	G1/4	12	18	17	26
RE-188Msv	KW 0279	5	8/6	G1/8	14	14	15	24
RE-148Msv	KW 0280	5	8/6	G1/4	14	18	17	26
RE-388Msv	KW 0281	5	8/6	G3/8	14	21	20	28
RE-1410Msv	KW 0282	6.8	10/8	G1/4	16	18	17	28
RE-3810Msv	KW 0283	6.8	10/8	G3/8	16	21	20	28
RE-1210Msv	KW 0284	6.8	10/8	G1/2	16	26	24	30.5
RE-3812Msv	KW 0285	8.5	12/10	G3/8	19	21	20	31.5
RE-1212Msv	KW 0286	8.5	12/10	G1/2	19	26	24	33
RE-1215Msv	KW 0287	11	15/12.5	G1/2	22	26	24	35

* for banjo bolts see pages 90–92



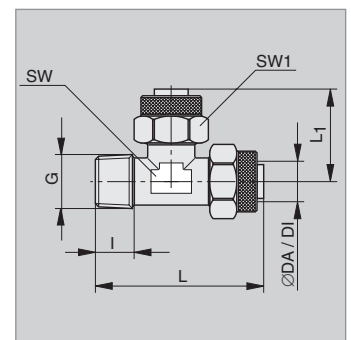
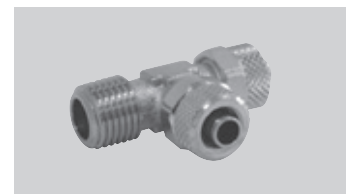
Banjo Elbow Body, female parallel thread, for banjo bolt*

Order Type	Instructions Order No.	NW	ØB for banjo bolt	G	ØD	ØD ₁	I	L
REI-1818Msv	KW 0346	3	G1/8	G1/8	14	13.3	7	15
REI-1414Msv	KW 0347	5	G1/4	G1/4	18	16.7	8	17
REI-3838Msv	KW 0348	8.5	G3/8	G3/8	21	20.2	10.3	20

* for banjo bolts see pages 90-92

Run Tee Adaptor, male taper thread

Order Type	Instructions Order No.	NW	Tube ØDA/DI**	F	SW	SW1	I	L	L ₁
LE-185Msv	KW 0250	2	5/3	R1/8	12	8	8	38.5	21.5
LE-186Msv	KW 0251	3	6/4	R1/8	12	9	8	39	22
LE-146Msv	KW 0252	3	6/4	R1/4	12	9	11	42	22
LE-188Msv	KW 0253	5	8/6	R1/8	12	14	8	39	22
LE-148Msv	KW 0254	5	8/6	R1/4	12	14	11	42	22
LE-388Msv	KW 0255	5	8/6	R3/8	12	14	11.5	44.5	22.5
LE-1410Msv	KW 0256	6.8	10/8	R1/4	12	16	11	46.5	24.5
LE-3810Msv	KW 0257	6.8	10/8	R3/8	12	16	11.5	46.5	24.5
LE-1210Msv	KW 0258	6.8	10/8	R1/2	17	16	14	53.5	27.5
LE-3812Msv	KW 0259	8.5	12/10	R3/8	17	19	11.5	55	31
LE-1212Msv	KW 0260	8.5	12/10	R1/2	17	19	14	57	31

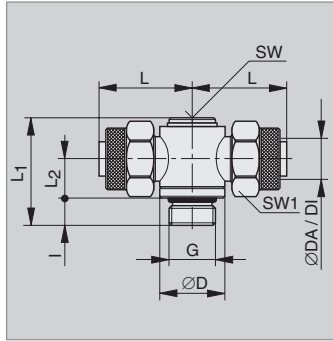
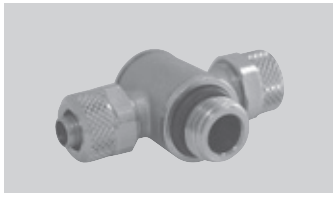


** = Tube ØOD/ID

Dimensions in mm

Fittings, Tubing and Accessories

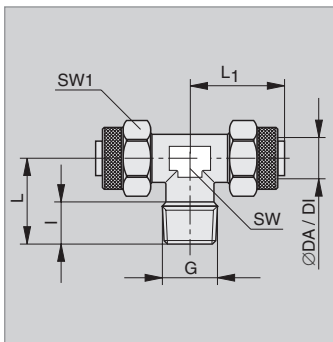
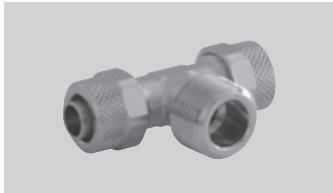
Compression Fittings



Order Instructions Type	Order No.	NW	Tube ØDA/DI**	G	SW	SW1	ØD	I	L	L ₁	L ₂
TS-186Msv	KW 0337	2	6/4	G1/8	5	12	15	6	24	27	10.5
TS-146Msv	KW 0338	3	6/4	G1/4	6	12	18	8	26	31.5	11.5
TS-188Msv	KW 0339	3	8/6	G1/8	5	14	15	6	24	27	10.5
TS-148Msv	KW 0340	5	8/6	G1/4	6	14	18	8	26	31.5	11.5
TS-388Msv	KW 0341	5	8/6	G3/8	6	14	21	9	28	36	13.5
TS-1410Msv	KW 0342	5	10/8	G1/4	6	16	18	8	27.5	31.5	11.5
TS-3810Msv	KW 0343	6.8	10/8	G3/8	6	16	21	9	29	36	13.5
TS-1210Msv	KW 0344	6.8	10/8	G1/2	10	16	26	11	30.5	42	15.5
TS-3812Msv	KW 0345	6.8	12/10	G3/8	6	19	21	9	31.5	36	13.5
TS-1212Msv	KW 0830	8.5	12/10	G1/2	10	19	26	11	33	42	19.5

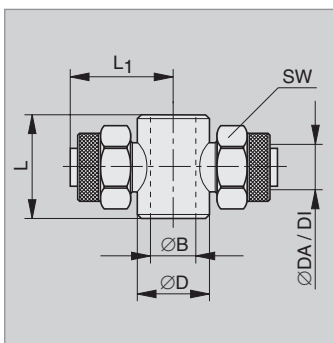
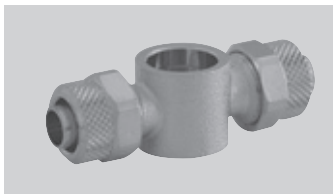
Application: for frequent swivelling

Branch Tee Adaptor, male taper thread



Order Instructions Type	Order No.	NW	Tube ØDA/DI **	G	SW	SW1	I	L	L ₁
TE-185Msv	KW 0238	2	5/3	R1/8	8	8	8	17	21.5
TE-186Msv	KW 0239	3	6/4	R1/8	12	9	8	17	22
TE-146Msv	KW 0240	3	6/4	R1/4	12	9	11	20	22
TE-188Msv	KW 0241	5	8/6	R1/8	12	14	8	17	22
TE-148Msv	KW 0242	5	8/6	R1/4	12	14	11	20	22
TE-388Msv	KW 0243	5	8/6	R3/8	12	14	11.5	22	22.5
TE-1410Msv	KW 0244	6.8	10/8	R1/4	12	16	11	22	24.5
TE-3810Msv	KW 0245	6.8	10/8	R3/8	12	16	11.5	22	24.5
TE-1210Msv	KW 0246	6.8	10/8	R1/2	17	16	14	26	27.5
TE-3812Msv	KW 0247	8.5	12/10	R3/8	17	19	11.5	24	31
TE-1212Msv	KW 0248	8.5	12/10	R1/2	17	19	14	26	31
TE-1215Msv	KW 0249	11	15/12.5	R1/2	17	22	14	28	34

Banjo Tee Body, for banjo bolt*



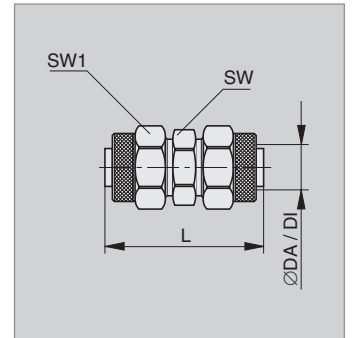
Order Instructions Type	Order No.	NW	Tube ØDA/DI**	ØB for banjo bolt	SW	ØD	L	L ₁
RD-185Msv	KW 0288	2	5/3	G1/8	8	14	15	24
RD-186Msv	KW 0289	3	6/4	G1/8	12	14	15	24
RD-146Msv	KW 0290	3	6/4	G1/4	12	18	17	26
RD-188Msv	KW 0291	5	8/6	G1/8	14	14	15	24
RD-148Msv	KW 0292	5	8/6	G1/4	14	18	17	26
RD-388Msv	KW 0293	5	8/6	G3/8	14	21	20	28
RD-1410Msv	KW 0294	6.8	10/8	G1/4	16	18	17	28
RD-3810Msv	KW 0295	6.8	10/8	G3/8	16	21	20	28
RD-1210Msv	KW 0296	6.8	10/8	G1/2	16	26	24	30.5
RD-1212Msv	KW 0297	8.5	12/10	G1/2	19	26	24	33

* for banjo bolts see pages 90–92

** = Tube ØOD/ID

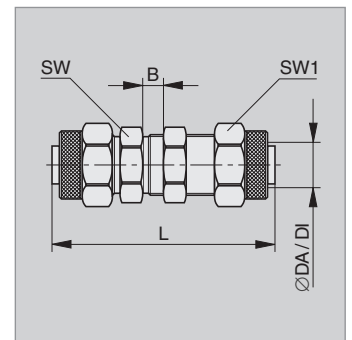
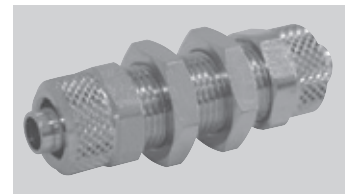
Straight Connector

Order Type	Instructions Order No.	NW	Tube ØDA/DI *	SW	SW1	L
GV-5Msv	KW 0203	2	5/3	8	8	28.5
GV-6Msv	KW 0204	3	6/4	12	12	33
GV-8Msv	KW 0205	5	8/6	12	14	33
GV-10Msv	KW 0206	6.8	10/8	14	16	37
GV-12Msv	KW 0207	8.5	12/10	17	19	42
GV-15Msv	KW 0208	11	15/12.5	22	22	45



Straight Bulkhead Connector

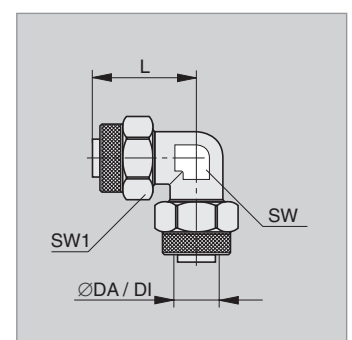
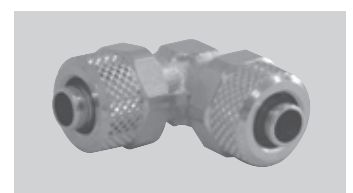
Order Type	Instructions Order No.	NW	Tube ØDA/DI*	SW	SW1	L	B
SV-53Msv	KW 0209	2	5/3	8	8	40	9
SV-64Msv	KW 0210	3	6/4	14	12	47	11
SV-86Msv	KW 0211	5	8/6	16	14	48	13
SV-108Msv	KW 0212	6.8	10/8	17	16	49	10.5
SV-1210Msv	KW 0213	8.5	12/10	19	19	53	10
SV-1512Msv	KW 0214	11	15/12.5	24	22	53	10



Equal Elbow Connector

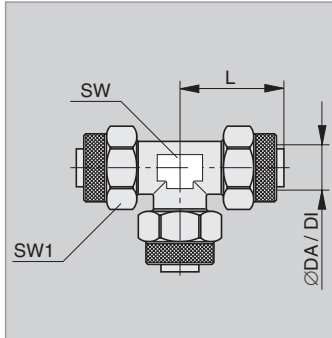
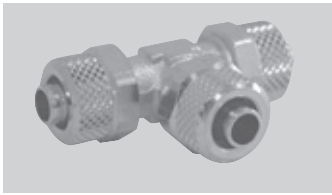
Order Type	Instructions Order No.	NW	Tube ØDA/DI *	SW	SW1	L
W-5Msv	KW 0232	2	5/3	8	8	21
W-6Msv	KW 0233	3	6/4	9	12	22
W-8Msv	KW 0234	5	8/6	12	14	22
W-10Msv	KW 0235	6.8	10/8	12	16	24.5
W-12Msv	KW 0236	8.5	12/10	17	19	31
W-15Msv	KW 0237	11	15/12.5	17	22	34

* = Tube ØOD/ID



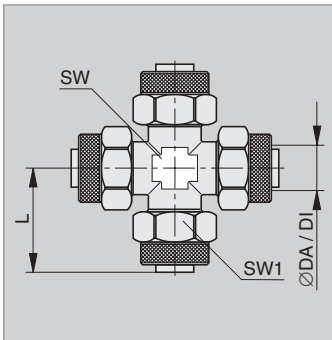
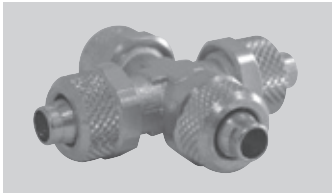
Dimensions in mm

Equal Tee Connector



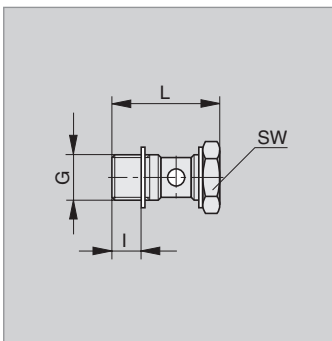
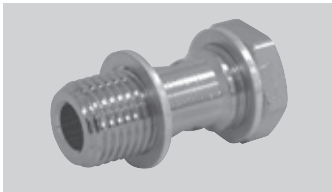
Order Type	Instructions Order No.	NW	Tube ØDA/DI **	SW	SW1	L
TV-5Msv	KW 0261	2	5/3	8	8	21
TV-6Msv	KW 0262	3	6/4	9	12	22
TV-8Msv	KW 0263	5	8/6	12	14	22
TV-10Msv	KW 0264	6.8	10/8	12	16	24.5
TV-12Msv	KW 0265	8.5	12/10	17	19	31
TV-15Msv	KW 0266	11	15/12.5	17	22	34

4-Way Cross Connector



Order Type	Instructions Order No.	NW	Tube ØDA/DI **	SW	SW1	L
KV-6Msv	KW 0267	3	6/4	9	12	21
KV-8Msv	KW 0268	5	8/6	12	14	22.5
KV-10Msv	KW 0269	6.8	10/8	12	16	26.5

Single Banjo Bolt, male parallel thread, for banjo bodies*



Order Type	Instructions Order No.	NW	G	SW	I	L
H-15Msv	KW 0298	2	M5	8	6	18
H-118Msv	KW 0299	3	G1/8	14	9	28
H-114Msv	KW 0300	5	G1/4	17	11	33
H-138Msv	KW 0301	6.8	G3/8	20	12	37
H-112Msv	KW 0302	8.5	G1/2	27	13	42

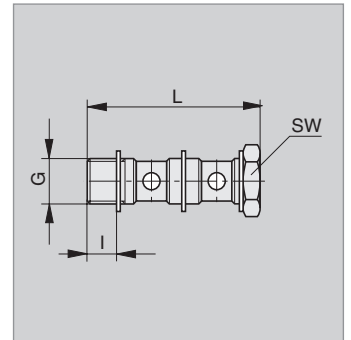
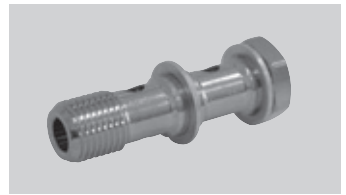
* for banjo elbow and tee bodies see pages 63, 64, 87, 88

** = Tube ØOD/ID

Double Banjo Bolt , male parallel thread, for banjo bodies*

Order Type	Instructions Order No.	NW	G	SW	I	L
H-218Msv	KW 0307	3	G1/8	14	9	44.5
H-214Msv	KW 0308	5	G1/4	17	11	51.5
H-238Msv	KW 0309	6.8	G3/8	20	12	58.5
H-212Msv	KW 0310	8.5	G1/2	27	13	67.5

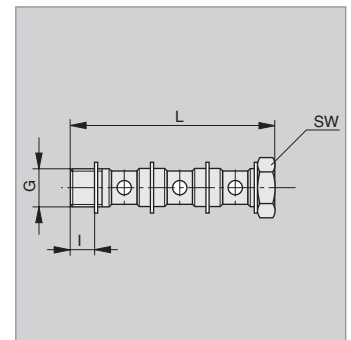
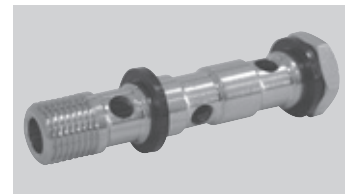
* for banjo elbow and tee bodies see pages 63, 64, 87, 88



Triple Banjo Bolt, male parallel thread, for banjo bodies*

Order Type	Instructions Order No.	NW	G	SW	I	L
H-318Msv	KW 0972	3	G1/8	14	9	61
H-314Msv	KW 0973	5	G1/4	17	11	70

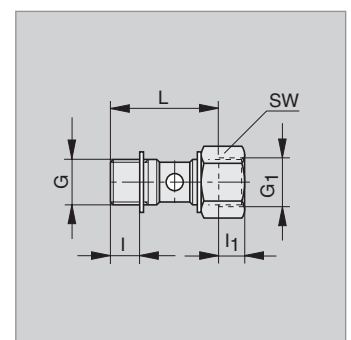
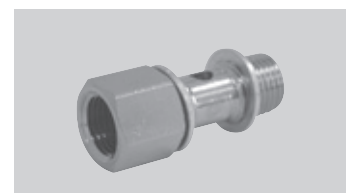
* for banjo elbow and tee bodies see pages 63, 64, 87, 88

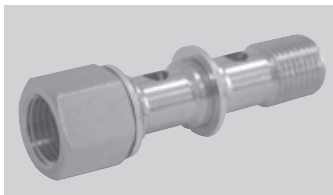


Single Hollow Bolt with Internal Thread – for L-Banjo's*

Order Type	Instructions Order No.	NW	G	G ₁	SW	I	I ₁	L
HI-118Msv	KW 0303	3	G1/8	G1/8	14	9	7	36.5
HI-114Msv	KW 0304	5	G1/4	G1/4	17	11	8	42
HI-138Msv	KW 0305	6.8	G3/8	G3/8	20	12	10.3	49.5
HI-112Msv	KW 0306	8.5	G1/2	G1/2	27	13	11.4	55

* for banjo elbow and tee bodies see pages 63, 64, 87, 88

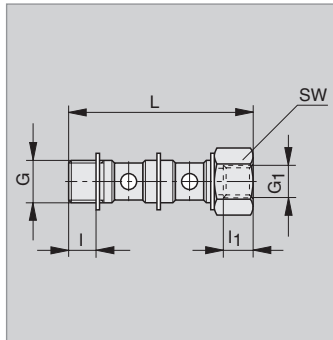




Double Banjo Bolt, female parallel thread, for banjo bodies*

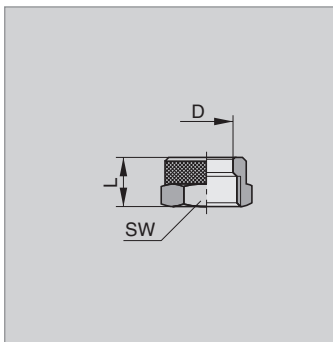
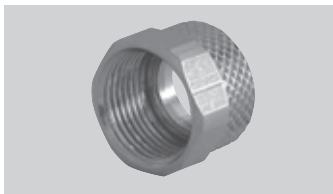
Order Type	Instructions Order No.	NW	G	G ₁	SW	I	I ₁	L
HI-218Msv	KW 0311	3	G1/8	G1/8	14	9	7	53
HI-214Msv	KW 0312	5	G1/4	G1/4	17	11	8	60.5
HI-238Msv	KW 0313	6.8	G3/8	G3/8	20	12	10.3	71
HI-212Msv	KW 0314	8.5	G1/2	G1/2	27	13	11.4	80.5

* for banjo elbow and tee bodies see pages 63, 64, 87, 88



Compression Nut for Compression Fittings

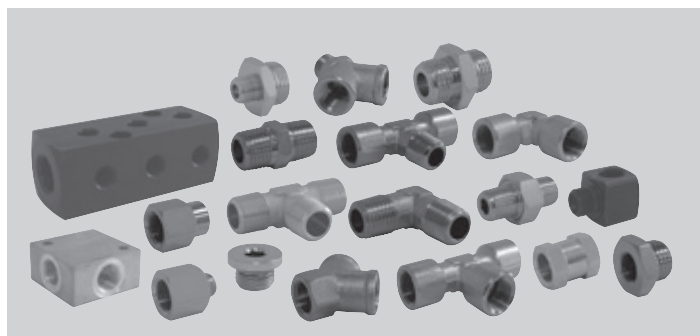
Order Type	Instructions Order No.	For Compression Fittings with Port Size	Tube ØOD/ID	L	SW1
UM-4Msv	KW 0710	M5	4/2	9	9
UM-5Msv	KW 0711	M5. G1/8	5/3	8	8
UM-6/1Msv	KW 0712	M5	6/4	9	9
UM-6/2Msv	KW 0713	G1/8. G1/4	6/4	11	12
UM-8Msv	KW 0714	G1/8. G1/4. G3/8	8/6	11	14
UM-10Msv	KW 0715	G1/4. G3/8. G1/2	10/8	12	16
UM-12Msv	KW 0716	G3/8. G1/2	12/10	12	19
UM-15Msv	KW 0717	G1/2	15/12.5	13	22



Standard Fittings

Fittings for General Installation Work (rigid connections, junctions, couplings, etc.)

- Nickel-plated brass for optimum surface protection



Technical Data

Connecting thread*	M5, G1/8, G1/4, G3/8, G1/2 (parallel and taper)
Tubing outside/inside diameter*	4/2, 5/3, 6/4, 8/6, 10/8, 12/10, 15/12,5
Material**	Nickel-plated brass; O-rings: NBR
Operating pressure range	0 to 18 bar (suitable for low vacuum)
Temperature range	-25°C to +80°C (other temperature ranges on request)
Medium	Compressed air (other media on request)

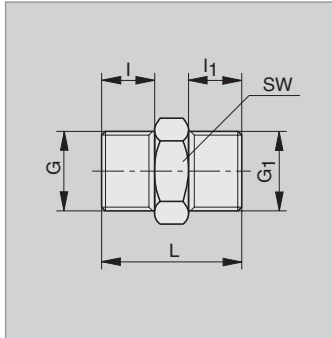
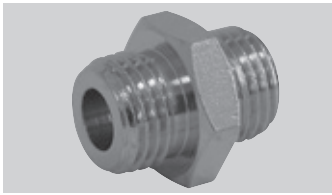
* depending on type

** exceptions on some types are specified

Fittings, Tubing and Accessories

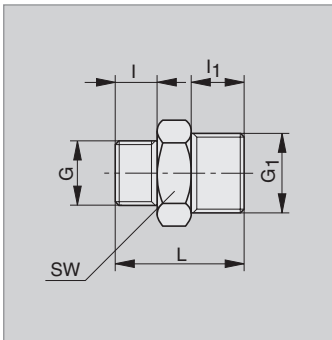
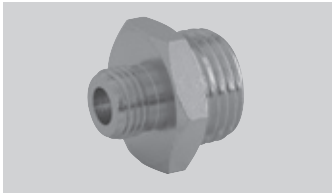
Standard Fittings

Double Nipple Connector, male parallel thread



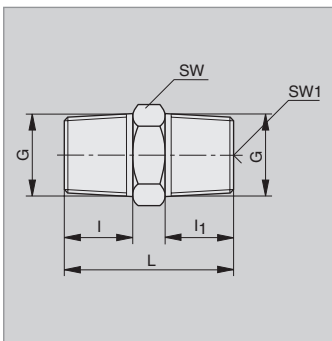
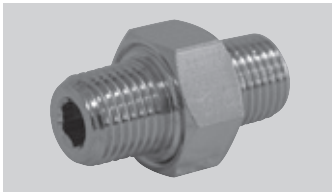
Order Type	Instructions Order No.	G	G ₁	SW	I	I ₁	L
DZ-5050Msv	KW 0895	M5	M5	8	4	4	11.5
DZ-1818Msv	KW 0373	G1/8	G1/8	14	6	6	17
DZ-1414Msv	KW 0374	G1/4	G1/4	17	8	8	21
DZ-3838Msv	KW 0375	G3/8	G3/8	20	9	9	24
DZ-1212Msv	KW 0376	G1/2	G1/2	25	10	10	26.5
DZ-3434Msv	KW 0377	G3/4	G3/4	30	11	11	28
DZ-1010Msv	KW 0896	G1	G1	36	12	12	31

Reducing Nipple Adaptor, male parallel thread



Order Type	Instructions Order No.	G	G ₁	SW	I	I ₁	L
DZ-1805Msv	KW 0897	M5	G1/8	8	4	4	11.5
DZ-1814Msv	KW 0378	G1/8	G1/4	17	6	8	19
DZ-1838Msv	KW 0379	G1/8	G3/8	20	6	9	20
DZ-1438Msv	KW 0380	G1/4	G3/8	20	8	9	22
DZ-1412Msv	KW 0381	G1/4	G1/2	25	8	10	24
DZ-3812Msv	KW 0382	G3/8	G1/2	25	9	10	25.5
DZ-1234Msv	KW 0383	G1/2	G3/4	30	10	11	27
DZ-3410Msv	KW 0898	G3/4	G1	36	11	12	30

Double Nipple Connector, male taper thread (3 separable parts)

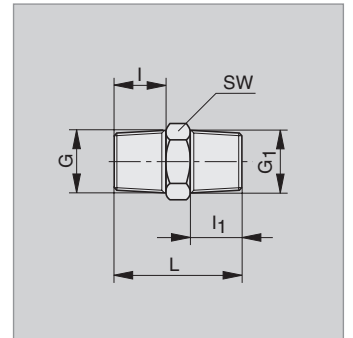
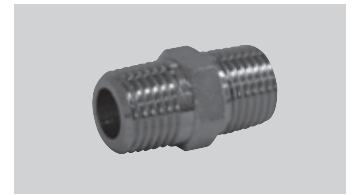


Order Type	Instructions Order No.	G	SW	SW	I	I ₁	L
DT-1818	KY 6364	R1/8	15	5	9	9	27
DT-1414	KY 6365	R1/4	19	6	12	12	34
DT-3838	KY 6366	R3/8	22	8	13	13	36
DT-1212	KY 6367	R1/2	27	12	16	16	44
DT-3434	KY 6368	R3/4	36	14	18	18	52
DT-1010	KY 6369	R1	46	19	18	22	65

Material: brass uncoated

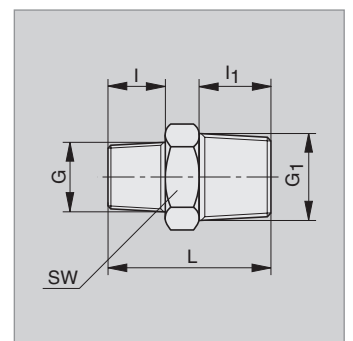
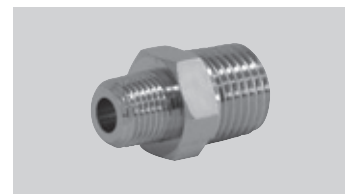
Double Nipple Connector, male taper thread

Order Type	Instructions Order No.	G	G ₁	SW	l	l ₁	L
DK-1818Msv	KW 0368	R1/8	R1/8	12	8	8	21
DK-1414Msv	KW 0369	R1/4	R1/4	14	11	11	27
DK-3838Msv	KW 0370	R3/8	R3/8	17	11.5	11	29
DK-1212Msv	KW 0371	R1/2	R1/2	22	14	14	35
DK-3434Msv	KW 0372	R3/4	R3/4	27	16.5	16.5	40
DK-1010Msv	KW 0894	R1	R1	34	16.5	16.5	41



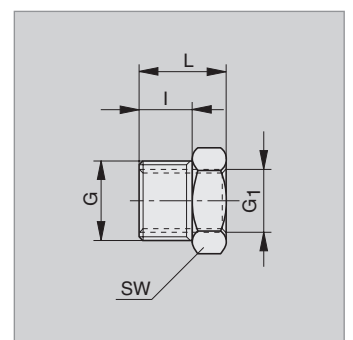
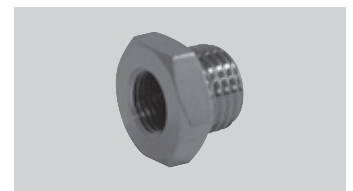
Reducing Nipple Adaptor, male taper thread

Order Type	Instructions Order No.	G	G ₁	SW	l	l ₁	L
DK-1814Msv	KW 0362	R1/8	R1/4	14	8	11	24
DK-1838Msv	KW 0363	R1/8	R3/8	17	8	11.5	25
DK-1438Msv	KW 0364	R1/4	R3/8	17	11	11.5	28
DK-1412Msv	KW 0365	R1/4	R1/2	22	11	14	32
DK-3812Msv	KW 0366	R3/8	R1/2	22	11.5	14	32.5
DK-1234Msv	KW 0367	R1/2	R3/4	27	14	17	37.5
DK-1034Msv	KW 0893	R3/4	R1	34	14	17	37.5



Reducing Nipple Adaptor, male / female parallel thread

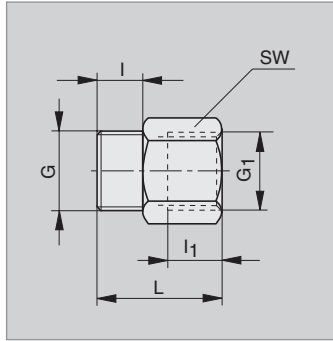
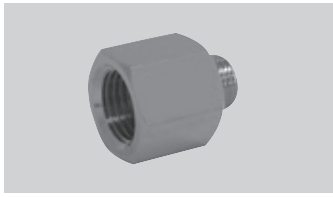
Order Type	Instructions Order No.	G	G ₁	SW	l	L
RNZ-185Msv	KW 0899	G1/8	M5	14	6	10
RNZ-1418Msv	KW 0411	G1/4	G1/8	17	8	13
RNZ-3818Msv	KW 0412	G3/8	G1/8	20	9	14
RNZ-3814Msv	KW 0413	G3/8	G1/4	20	9	14
RNZ-1214Msv	KW 0414	G1/2	G1/4	25	10	15.5
RNZ-1238Msv	KW 0415	G1/2	G3/8	25	10	15.5
RNZ-3412Msv	KW 0753	G3/4	G1/2	30	11	17
RNZ-1034Msv	KW 0900	G1	G3/4	36	12	19



Dimensions in mm

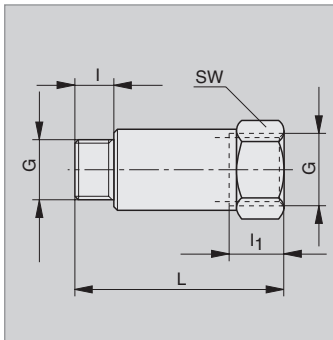
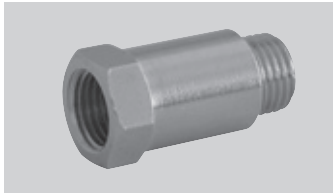
Fittings, Tubing and Accessories

Standard Fittings



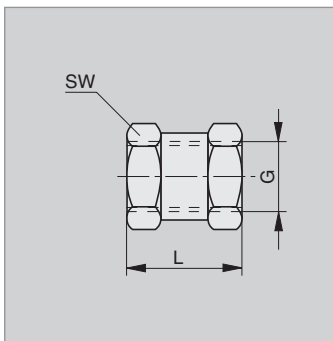
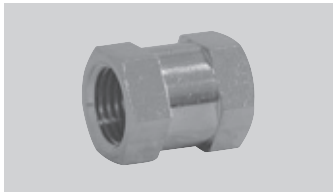
Order Instructions		G	G ₁	SW	l	l ₁	L
Type	Order No.						
RMZ-1805Msv	KW 0391	M5	G1/8	12	4	7	16
RMZ-1818Msv	KW 0392	G1/8	G1/8	14	6	7	18
RMZ-1814Msv	KW 0393	G1/8	G1/4	17	8	8	20
RMZ-1414Msv	KW 0394	G1/4	G1/4	17	8	8	21.5
RMZ-1438Msv	KW 0395	G1/4	G3/8	22	9	10.3	24
RMZ-3838Msv	KW 0396	G3/8	G3/8	22	9	10.3	25
RMZ-3812Msv	KW 0397	G3/8	G1/2	24	11	11.4	28
RMZ-1212Msv	KW 0398	G1/2	G1/2	25	11	11.4	28

Extended Sleeve Adaptor, male / female parallel thread



Order Instructions		G	SW	l	l ₁	L
Type	Order No.					
RMZL1-18Msv	KW 0399	G1/8	14	6	8	22
RMZL2-18Msv	KW 0400	G1/8	14	6	8	42
RMZL1-14Msv	KW 0401	G1/4	17	8	9	35
RMZL2-14Msv	KW 0402	G1/4	17	8	9	51
RMZL3-18Msv	KW 0403	G1/8	14	6	8	100
RMZL3-14Msv	KW 0404	G1/4	17	8	9	100

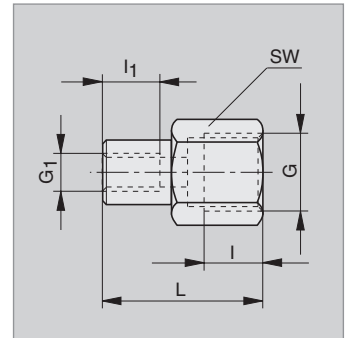
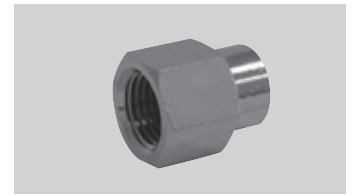
Sleeve Connector, female parallel thread



Order Instructions		G	SW	L
Type	Order No.			
MU-50Msv	KW 0984	M5	8	11
MU-18Msv	KW 0416	G1/8	14	15.0
MU-14Msv	KW 0417	G1/4	17	22.0
MU-38Msv	KW 0418	G3/8	22	24.0
MU-12Msv	KW 0419	G1/2	27	30.0

Reducing Sleeve Adaptor, female parallel thread

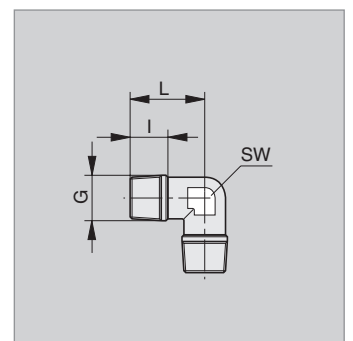
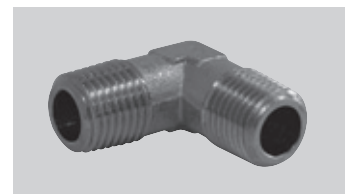
Order Type	Instructions Order No.	G	G ₁	SW	l	l ₁	L
RMZJ-1814Msv	KW 0420	G1/4	G1/8	17	8	8	20
RMZJ-1838Msv	KW 0421	G3/8	G1/8	22	10.3	7	22
RMZJ-1438Msv	KW 0422	G3/8	G1/4	22	10.3	9	24
RMZJ-1412Msv	KW 0423	G1/2	G1/4	24	11.4	9	27
RMZJ-3812Msv	KW 0424	G1/2	G3/8	24	11.4	11	28



Equal Elbow Connector, male taper thread

Order Type	Instructions Order No.	G	SW	l	L
WEA-18Msv	KW 0471	R1/8	9	8.0	16.5
WEA-14Msv	KW 0472	R1/4	14	10.5	24.5
WEA-38Msv	KW 0473	R3/8	17	11.5	26.5
WEA-12Msv	KW 0752	R1/2	21	14.0	31.5

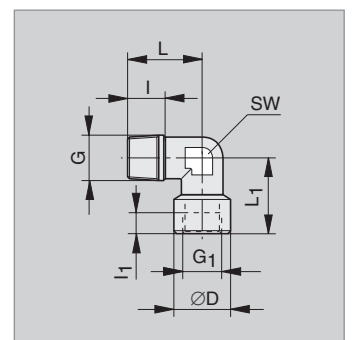
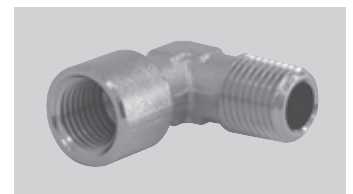
Version R3/4 and R1 on request



Elbow Adaptor, male taper / female parallel thread

Order Type	Instructions Order No.	G	G ₁	SW	ØD	l	l ₁	L	L ₁
WEI-18Msv	KW 0467	R1/8	G1/8	9	13.5	8	7	16.5	19.5
WEI-14Msv	KW 0468	R1/4	G1/4	14	17	10.5	8	24.5	27
WEI-38Msv	KW 0469	R3/8	G3/8	17	15	11.5	10.3	27.5	31.5
WEI-12Msv	KW 0470	R1/2	G1/2	19	20	14	11.4	32	36.5

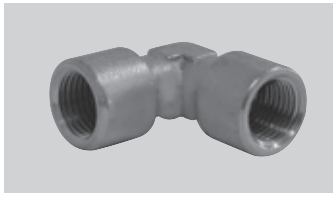
Version R3/4 and R1 on request



Dimensions in mm

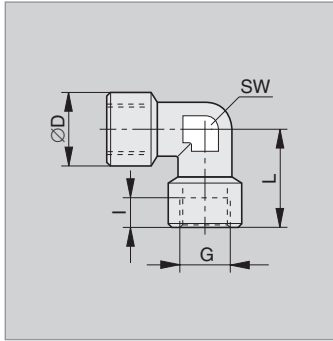
Fittings, Tubing and Accessories

Standard Fittings



Order Instructions Type	Order No.	G	SW	ØD	I	L
WII-18Msv	KW 0460	G1/8	9	13.5	7	19.5
WII-14Msv	KW 0461	G1/4	14	17	8	27
WII-38Msv	KW 0462	G3/8	17	20.5	10.3	31.5
WII-12Msv	KW 0463	G1/2	19	25.5	11.4	36.5

Taper Thread version R3/4 and R1 on request

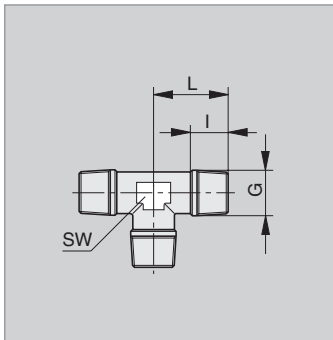


Equal Tee Connector, male taper thread

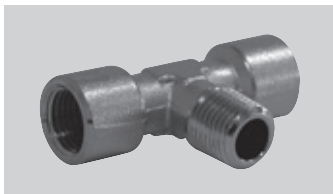


Order Instructions Type	Order No.	G	SW	I	L
TEC-18Msv	KW 0490	R1/8	9	8	16.5
TEC-14Msv	KW 0491	R1/4	14	11	24.5
TEC-38Msv	KW 0492	R3/8	17	11.5	26.5
TEC-12Msv	KW 0493	R1/2	21	14	31.5

Taper Thread version R3/4 and R1 on request

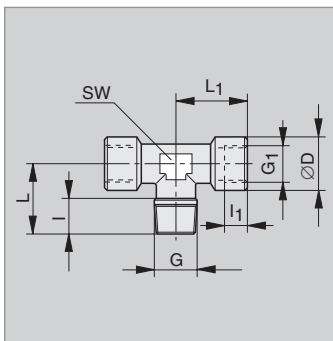


Branch Tee Adaptor, male taper / female parallel thread



Order Instructions Type	Order No.	G	G ₁	SW	ØD	I	I ₁	L	L ₁
TEA-18Msv	KW 0482	R1/8	G1/8	9	13.5	8	7	16.5	19.5
TEA-14Msv	KW 0483	R1/4	G1/4	14	17	11	8	24.5	27
TEA-38Msv	KW 0484	R3/8	G3/8	17	21.5	11.5	10.3	27.5	31.5
TEA-12Msv	KW 0485	R1/2	G1/2	19	25.5	14	11.4	32	36.5

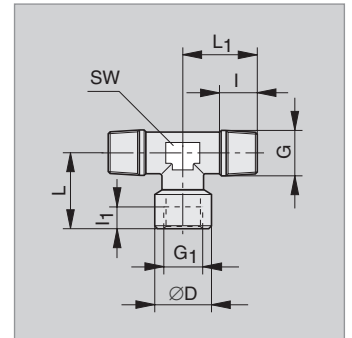
Taper Thread version R3/4 and R1 on request



Branch Tee Adaptor, male taper / female parallel thread

Order Type	Instructions Order No.	G	G ₁	SW	ØD	I	I ₁	L	L ₁
TEB-18Msv	KW 0486	R1/8	G1/8	10	13	8	8	21	19
TEB-14Msv	KW 0487	R1/4	G1/4	14	17	11	8	27	24.5
TEB-38Msv	KW 0488	R3/8	G3/8	17	21	11.5	11.5	28	26.5
TEB-12Msv	KW 0489	R1/2	G1/2	21	25	14	14	35	31.5

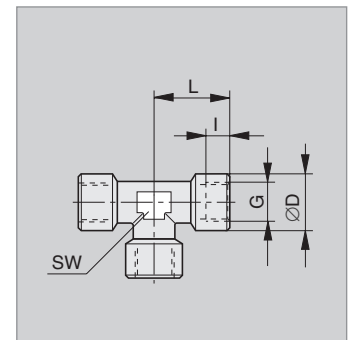
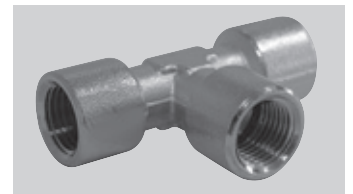
Taper Thread version R3/4 and R1 on request



Equal Tee Connector, female parallel thread

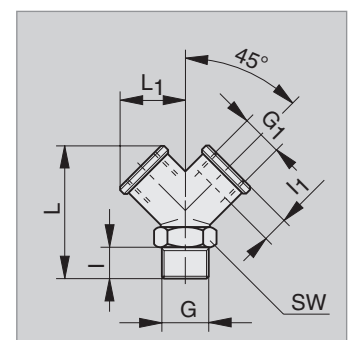
Order Type	Instructions Order No.	G	SW	ØD	I	L
TI-18Msv	KW 0478	G1/8	9	13.5	7	19.5
TI-14Msv	KW 0479	G1/4	14	17	8	27
TI-38Msv	KW 0480	G3/8	17	21.5	10.3	31.5
TI-12Msv	KW 0481	G1/2	19	25.5	11.4	36.5
TI-34Msv	KW 0773	G3/4	31	33	11.4	30.3

Version G1 on request



Y Adaptor, male / female parallel thread

Order Type	Instructions Order No.	G	G ₁	SW	I	I ₁	L	L ₁
YAI-18Msv	KW 0505	G1/8	G1/8	13	8	8	32	14.5
YAI-14Msv	KW 0506	G1/4	G1/4	17	11	11	32	18
YAI-38Msv	KW 0507	G3/8	G3/8	20	11.5	11.5	42	20.5
YAI-12Msv	KW 0991	G1/2	G1/2	25	14	14	53	26.5

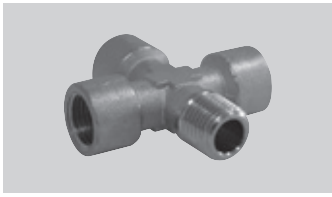


Dimensions in mm

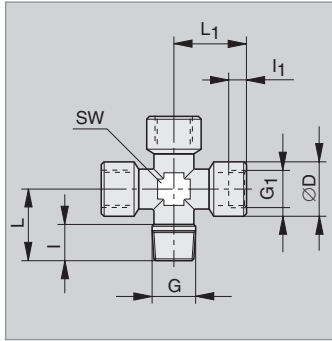
Fittings, Tubing and Accessories

Standard Fittings

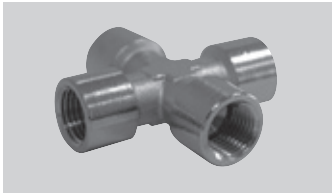
4-Way Cross Adaptor, male taper / female parallel thread



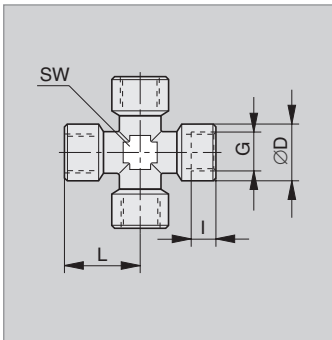
Order Instructions Type	Order No.	G	G ₁	SW	∅D	l	l ₁	L	L ₁
TEF-18Msv	KW 0502	R1/8	G1/8	12	13.5	8	7	19	20
TEF-14Msv	KW 0503	R1/4	G1/4	14	17.5	11	8	25	27
TEF-38Msv	KW 0504	R3/8	G3/8	17	20.5	11.5	10.3	26.5	28
TEF-12Msv	KW 0988	R1/2	G1/2	21	25.5	15	14	33.5	35



4-Way Cross Connector, female parallel thread



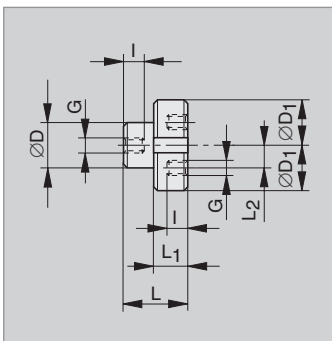
Order Instructions Type	Order No.	G	SW	∅D	l	L
KEI-18Msv	KW 0464	G1/8	12	13.5	7	20
KEI-14Msv	KW 0465	G1/4	14	17.5	8	27
KEI-38Msv	KW 0466	G3/8	17	21.5	10.3	31.5
KEI-12Msv	KW 0987	G1/2	21	25	11.4	35



Equal Y Connector, female parallel thread

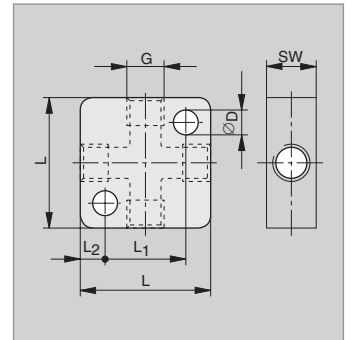
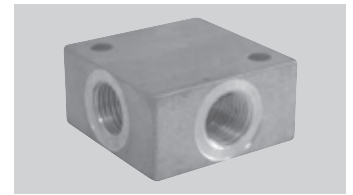


Order Instructions Type	Order No.	G	∅D	∅D ₁	l	L	L ₁	L ₂
YI-5Msv	KW 0508	M5	11	11	5	19.5	7	5.5
YI-18Msv	KW 0509	G1/8	15	15.75	7	18	12	8.25
YI-14Msv	KW 0510	G1/4	18	18.25	8	20	13	9.25



4-Way Manifold

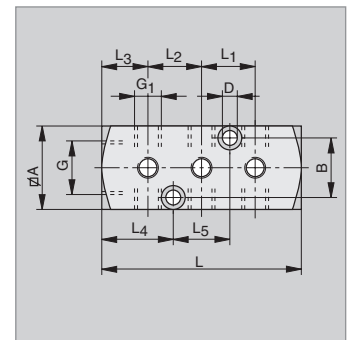
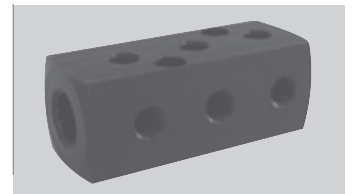
Order Type	Instructions Order No.	G	SW	ØD	L	L ₁	L ₂
VB-05	KY 6691	M5	8	-	14	-	-
VB-18ALN	KW 0474	G1/8	16	4.5	25	17	4
VB-14ALN	KW 0475	G1/4	20	5.5	40	26	7
VB-38ALN	KW 0476	G3/8	26	5.5	50	34	8
VB-12ALN	KW 0477	G1/2	32	5.5	50	34	8



9-Way Manifold

Order Type	Instructions Order No.	G	G ₁ (9x)	A	B	D	L	L ₁	L ₂	L ₃	L ₄	L ₅
VL-185ALS	KY 6540	G1/8	M5	20	12	4.5	50	15	15	12	18	18
VL-3818ALS	KY 6541	G3/8	G1/8	30	19.5	5.5	80	24	24	20	30	28
VL-1214ALS	KY 6542	G1/2	G1/4	36	24	6.5	100	30	30	23	36	34

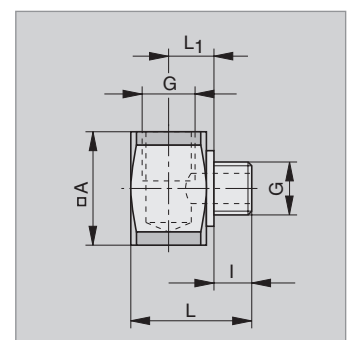
Material: aluminium, black -anodized



Elbow Adaptor Block, male / female parallel thread

Order Type	Instructions Order No.	G	A	I	L	L ₁
WE-05	KY 6370	M5	10	4.5	14	5
WE-18	KY 6371	G1/8	15	6.5	23	9
WE-14	KY 6372	G1/4	22	9	29	11
WE-38	KY 6373	G3/8	27	9	32	12
WE-12	KY 6374	G1/2	36	11	40.5	16

Material: aluminium, black -anodized

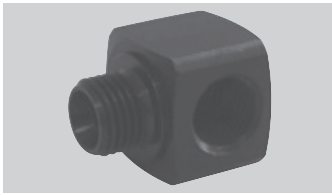


Dimensions in mm

Fittings, Tubing and Accessories

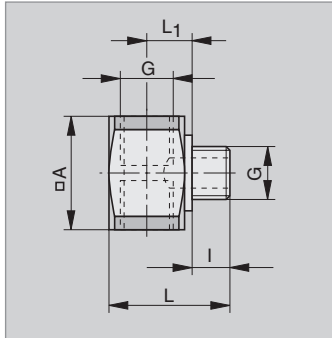
Standard Fittings

Tee Adaptor Block, male / female parallel thread



Order Type	Instructions Order No.	G	A	l	L	L ₁
TE-05	KY 6375	M5	10	4.5	14	5
TE-18	KY 6376	G1/8	15	6.5	23	9
TE-14	KY 6377	G1/4	22	9	29	11
TE-38	KY 6378	G3/8	27	9	32	12.5
TE-12	KY 6379	G1/2	36	11	40.5	16

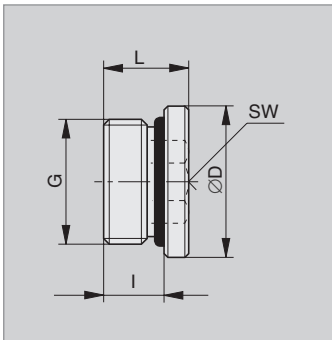
Material: aluminium, black-anodized



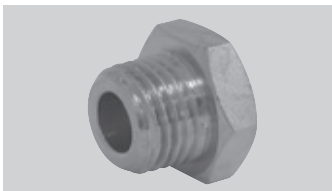
Screw Plug, male parallel thread, hexagon socket and O-ring



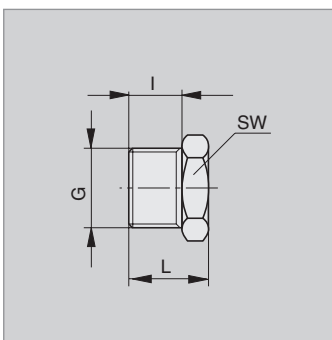
Order Type	Instructions Order No.	G	SW	ØD	l	L
VS-5Msv	KW 0425	M5	2.5	8	4	6.5
VS-18Msv	KW 0426	G1/8	3	15	7	9.5
VS-14Msv	KW 0427	G1/4	6	18	8	11
VS-38Msv	KW 0428	G3/8	8	21	9	12.5
VS-12Msv	KW 0429	G1/2	10	26	11	14.5



Screw Plug, male parallel thread

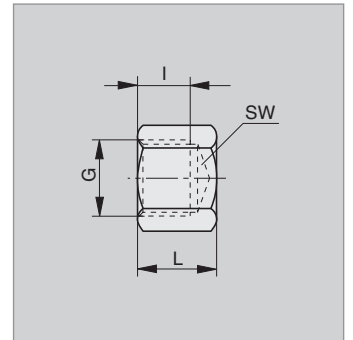
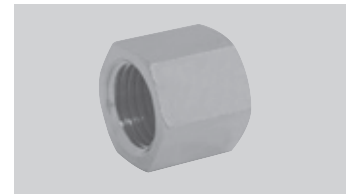


Order Type	Instructions Order No.	G	SW	l	L
VS-5Msv	KW 0985	M5	8	3.5	6.5
VS-18Msv	KW 0430	G1/8	14	6	11
VS-14Msv	KW 0431	G1/4	17	8	13
VS-38Msv	KW 0432	G3/8	19	9	14
VS-12Msv	KW 0433	G1/2	24	10	15
VS-34Msv	KW 0434	G3/4	30	9	14
VS-10Msv	KW 0986	G1	36	11	18



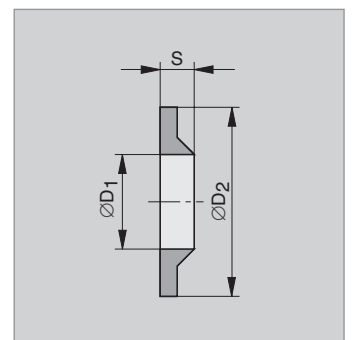
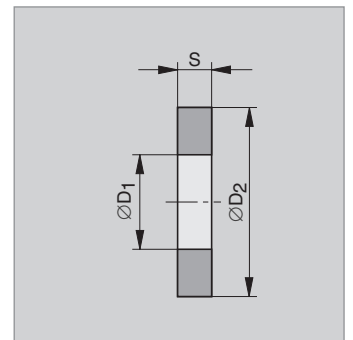
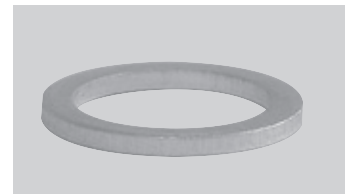
Cap Nut, female parallel thread

Order Type	Instructions Order No.	G	SW	l	L
UM-18Msv	KW 0435	G1/8	14	7.0	12.0
UM-14Msv	KW 0436	G1/4	17	8.0	14.0
UM-38Msv	KW 0437	G3/8	20	10.3	16.0
UM-12Msv	KW 0438	G1/2	24	11.4	19.0



Sealing Rings

Order Type	Instructions Order No.	for Port Size	ØD ₁	ØD ₂	s	Material
Aluminium Sealing Rings						
DI-5AL	KZ 7669	M5	5	7.5	1	Aluminium
DI-18AL	KW 0349	G1/8	10	14	1.5	Aluminium
DI-14AL	KW 0350	G1/4	13.2	18	1.5	Aluminium
DI-38AL	KW 0351	G3/8	17	21	1.5	Aluminium
DI-12AL	KW 0352	G1/2	21	26	1.5	Aluminium
DI-34AL	KZ 7865	G3/4	26.5	31	2	Aluminium
DI-10AL	KZ 7866	G1	33.5	39	1.0	Aluminium
Plastic Sealing Rings						
DI-5KU	KW 0582	M5	5	7.5	1	PVC, hard
DI-18KU	KW 0354	G1/8	10	14	1.5	PVC, hard
DI-14KU	KW 0355	G1/4	13.2	18	1.5	PVC, hard
DI-38KU	KW 0356	G3/8	17	21	1.5	PVC, hard
DI-12KU	KW 0357	G1/2	21	26	1.5	PVC, hard
Copper Sealing Rings						
DI-5CU	KW 0583	M5	5	7.5	1	Copper
DI-18CU	KW 0584	G1/8	10	14	1.5	Copper
DI-14CU	KW 0585	G1/4	13.5	18	1.5	Copper
DI-38CU	KW 0586	G3/8	17	21	1.5	Copper
DI-12CU	KW 0587	G1/2	21	26	1.5	Copper



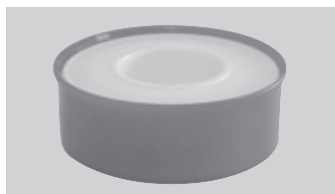
Pressure Gauge Sealing Ring

Order Type	Instructions Order No.	for Port Size	ØD ₁	ØD ₂	s	Material
MD-18	KZ 7430	G1/8	9.4	15	4.2	Plastic
MD-14	KZ 7431	G1/4	12.8	18.6	4.5	Plastic

Dimensions in mm

Fittings, Tubing and Accessories

Standard Fittings



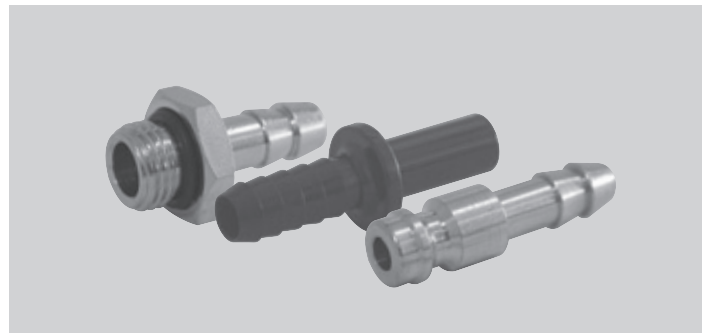
Thread Sealing Tape

Order Type	Instructions Order No.	Thickness	Length
GD-128	KY 9426	0.08 mm	12 m

Fittings for Tubing and Hoses in Special Applications

Sealing: by hose clip

- Metal types: nickel-plated brass with male parallel thread and integrated O-ring for thread sealing
- Plastic types in combination with plastic push-in fittings (see Section on Push-in Fittings)
- Metal types (nickel-plated brass) in combination with quick-release couplings (see Section on Miscellaneous Accessories)



Technical Data

Connecting thread	G1/8, G1/4, G3/8, G1/2, G3/4 (parallel)
Tubing/ hose outside diameter (recommended sizes)	Ø4, Ø6, Ø8, Ø9, Ø11, Ø13, Ø19
Material	Body: nickel-plated brass; O-ring: NBR
Operating pressure range	0 to 18 bar
Medium	Compressed air (other media on request)

Tubing/ Hose Recommendations¹⁾

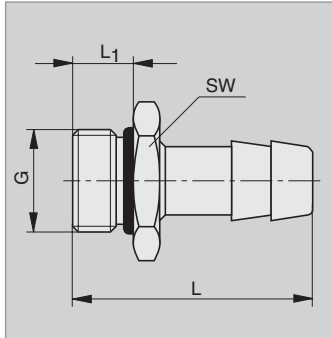
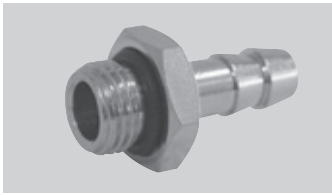
Tubing/ hose type	Depending on application
Tubing/ hose material	PVC (polyester-braided or glassfibre-reinforced) PU

¹⁾ see Section on Tubing and Hoses, pages 107–109

Fittings, Tubing and Accessories

Tube/ Hose Fittings

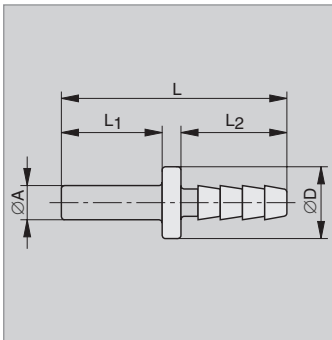
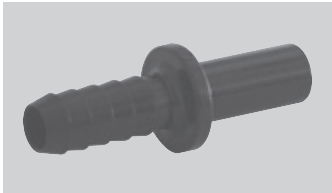
Tube/ Hose Adaptor, male parallel thread with O-ring



Order Instructions Type	Order No.	Tube/ Hose ØID	Thread G	L	L ₁	SW
STO-184Msv	KW 0974	4	G1/8	31	6	15
STO-186Msv	KW 0439	6	G1/8	31	6	15
STO-146Msv	KW 0440	6	G1/4	33	8	18
STO-188Msv	KW 0442	8	G1/8	31	6	15
STO-148Msv	KW 0443	8	G1/4	33	8	18
STO-388Msv	KW 0444	8	G3/8	34	9	21
STO-149Msv	KW 0975	9	G1/4	33	8	18
STO-389Msv	KW 0976	9	G3/8	34	9	21
STO-1211Msv	KW 0447 ¹⁾	11	G1/2	36	11	26
STO-3813Msv	KW 0977	13	G3/8	39	9	21
STO-1213Msv	KW 0978	13	G1/2	41	11	26
STO-3413Msv	KW 0979	13	G3/4	45	14	32
STO-3419Msv	KW 0980	19	G3/4	48	14	32

Material: nickel-plated brass ¹⁾ type to be discontinued

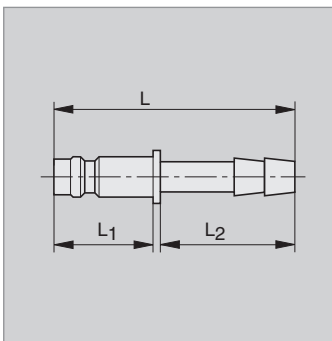
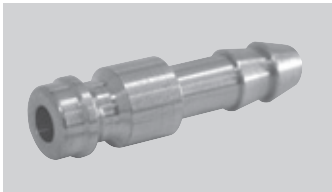
Tube/ Hose Stem Adaptor*



Order Instructions Type	Order No.	NW	Tube/ Hose ØOD/ID	Stem ØA	ØD	L	L ₁	L ₂
SST-84P	KX 5326	2.8	6/4	6	13.0	41.8	18.0	20.8
SST-86P	KX 5327	3.5	8/6	8	14.8	43.1	19.3	20.8
SST-108P	KX 5328	6.7	10/8	10	17.8	46.1	22.2	20.8

Material: plastic * see also page 115

Quick Release Coupling Plug, hose barb*



Order Instructions Type	Order No.	NW	Tube/ Hose ØID	L	L ₁	L ₂
ST-32	KX 5657	2.7	3	24	10	13
ST-42	KX 5658	2.7	4	24	10	13
ST-45	KY 6452	5	4	32	14	17
ST-65	KY 6453	5	6	32	14	17
ST-47	KY 6454	7.8	4	48	20	25
ST-67	KY 5053	7.8	6	48	20	25
ST-97	KY 6455	7.8	9	48	20	25
ST-137	KY 6456	7.8	13	48	20	25
ST-1310	KY 6197	10	13	48	21.5	25

Material: nickel-plated brass (ST-1310: nickel-plated steel)

* see also page 115

Tubing and Tubing Accessories

Quality Tubing for a Wide Range of Applications

– to match the Fittings programme

Tubing Accessories

Hose clips

Tube holder racks

Tube cutters ...

– see pages 110, 111



Technical Data (Type STO)

Material	Polyethylene, polyurethane, nylon, PVC (polyester-braided), PVC (glassfibre-reinforced), rubber (metal-braided)
Operating pressure range	See specific data
Temperature range	See specific data
Bending radii	See specific data

Tubing Recommendations¹⁾

Characteristics and resistance*	<p>Polyethylene tubing (HOERBIGER Type PE-): Low cost tubing for general use (not suitable for push-in fittings), lightweight, impact resistant and generally resistant to acids, alkalis and salt solutions. Tubing runs should be straight (danger of cracking).</p>
	<p>Polyurethane tubing (HOERBIGER Type PU-): Good recovery properties (low deformation), high tear resistance, very good cold flexibility, resistant to most lubricating oils, resistant to ageing with oxygen and ozone, especially flexible.</p>
	<p>Nylon (HOERBIGER Type PS-): Flexible tubing (calibrated) for use with push-in fittings, high impact and notched bar impact resistance, lightweight and easy to install, resistant to hydraulic oils and fuels.</p>
	<p>PVC tubing (HOERBIGER Type DH- , polyester-braided): Flexible, resistant to weathering and ageing, generally resistant to diluted acids, alkalis, greases and various oils, resistant to abrasion.</p>
	<p>PVC tubing (HOERBIGER Type DVOH- , glassfibre-reinforced): Especially flexible, lightweight tubing with high pressure resistance, generally resistant to diluted acids, alkalis, greases and various oils, especially suitable for pneumatic-hydraulic systems.</p>
	<p>Rubber tubing (HOERBIGER Type PBM-., metal-braided): Oil-resistant rubber tubing with metal braiding for protection (e.g. for welding systems).</p>

* These are general notes: for special applications, the suitability of the tubing should always be carefully checked.

Fittings, Tubing and Accessories

Tubing

Polyethylene Tubing

Type	Order Instructions – Colors			Tube ØOD/ID	Permissible Pressure (bar)		Min. Bending Radius (mm)	Length/ Roll
	Transparent	Blue	Black		20°C	50°C (t _{max})		
PE-42	M857-5149	M857-5443	M857-5381	4/2	20	12	20	50 m
PE-53	M857-5299	M857-5059	M857-5152	5/3	15	9	25	50 m
PE-64	M857-5183	M857-5064	M857-5066	6/4	13	8	30	50 m
PE-86	M857-5184	M857-5070	M857-5298	8/6	8	5	40	50 m
PE-108	M857-5185	M857-5073	M857-5365	10/8	6	4	60	50 m

Size Ø OD/ID 12/10 available on request

Polyurethane Tubing

Type	Order Instructions – Colors			Tube ØOD/ID	Permissible Pressure (bar)		Min. Bending Radius (mm)	Length/ Roll
	Transparent	Blue	Black		20°C	50°C (t _{max})		
PU-42	KW 0995	KW 0996	KW 0997	4/2	8	5,5	13	50 m
PU-53	M814-5255	M814-5059	M814-5152	5/3	8	5,5	14	50 m
PU-64	M814-5062	M814-5064	M814-5066	6/4	8	5,5	20	50 m
PU-86	M814-5175	M814-5070	M814-5298	8/6	8	5,5	36	50 m
PU-108	M814-5173	M814-5073	M814-5368	10/8	8	5,5	48	50 m

Nylon Tubing for Push-in Fittings

Type	Order Instructions – Color			Tube ØOD/ID	Permissible Pressure (bar)		Min. Bending Radius (mm)	Length/ Roll
	Transparent	Blue	Black		20°C	90°C*(t _{max})		
PS-427	M812-5322	M812-5454	M812-5408	4/2.7	45	9	30	50 m
PS-53	M812-5366	M812-5455	M812-5457	5/3	34	7	25	50 m
PS-64	M812-5323	M812-5386	M812-5458	6/4	27	5.5	30	50 m
PS-86	M812-5324	M812-5389	M812-5459	8/6	19	4	40	50 m
PS-108	M812-5332	M812-5412	M812-5460	10/8	15	3	60	50 m
PS-1210	M812-5333	M812-5456	M812-5461	12/10	12	2.5	85	50 m
PS-1411	KW 0906	KW 0907	KW 0908	14/11	16	3.2	80	50 m

* at +50°C the permissible pressure is 3 times the value at +90°C

Polyester-braided PVC Tubing

Type	Order Instructions – Color		Tube ØOD/ID	Permissible Pressure (bar)		Min. Bending Radius (mm)	Length/ Roll
	Transparent	Blue		20°C	60°C (t _{max})		
DH-126N		M870-5307	12/6	18	10	Ca. 10 x tube inside diameter	50 m
DH-148N		M870-5304	14/8	16	8		50 m
DH-159N		M870-5305	15/9	14	7		50 m
DH-1610N ¹⁾		M870-5261 ¹⁾	16/10	12	6		50 m
DH-1912N		M870-5306	19/12	12	6		50 m
DH-2013N		M870-5262	20/13	12	6		50 m
DH-2719N		KW 0962	27/19	10	5		50 m

¹⁾ type to be discontinued

Glassfibre-reinforced PVC Tubing

Type	Order Instructions – Color		Tube ØOD/ID	Permissible Pressure (bar)		Min. Bending Radius (mm)	Length/ Roll
	Blue	Black		20°C	60°C (t _{max})		
DVOH-64B	M870-5303		6.2/4	40	28	50	50 m
DVOH-86B	M870-5302		8.2/6	40	28	60	50 m
DVOH-108B	M870-5300		10.2/8	35	24	65	50 m
DVOH-1512B	M870-5301		15/12.5	28	20	80	50 m

Glassfibre-reinforced PVC Tubing

Type	Order Instructions – Color		Tube ØOD/ID	Permissible Pressure (bar)		Min. Bending Radius (mm)	Length/ Roll
		Blue		20°C	60° (t _{max})		
DVOH-64B		M870-5303	6.2/4	40	28	50	50 m
DVOH-86B		M870-5302	8.2/6	40	28	60	50 m
DVOH-108B		M870-5300	10.2/8	35	24	65	50 m
DVOH-1512B		M870-5301	15/12.5	28	20	80	50 m

Metal-braided Rubber Tubing

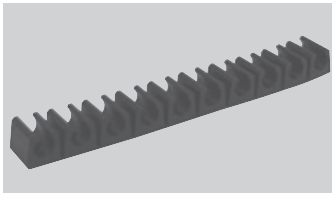
Type	Order Instructions – Color		Tube ØOD/ID	Permissible Pressure (bar) 20°C	Minimum Bending Radius (mm)	Length/ Roll
		Silver				
PBM-96S		M850-5437	9/6	12	30	50 m
PBM-129S		M850-5438	12/9	12	45	50 m

Nylon Spiral Tubing (with or without connectors G1/8, G1/4)

Type	Order Instructions – Color			Tube ØOD/ID	Perm. Pressure (bar) 20°C	Working Length	Spiral Ø Inside
	Order No.	Version	Colour				
PAS-64N	KW 0719	without connectors	Transparent	6/4	12	5 m	60
PAS-86N	KW 0720	without connectors	Transparent	8/6	12	5 m	60
PAS-64B	KY 0050	with connectors G1/8	Blue	6/4	12	5 m	60
PAS-86B	KY 0048	with connectors G1/4	Blue	8/6	12	5 m	60
PAS-108B	KY 0051	with connectors G1/4	Blue	10/8	12	5 m	60

Fittings, Tubing and Accessories

Tubing Accessories

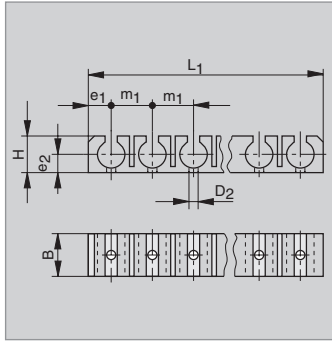


Tube Holder Rack (10-fold)

Order Type	Instructions Order No.	Tube ØOD	B	H	L ₁	D ₂	e ₁	e ₂	m ₁
KL-53*	KX 5614	5	13.5	9	96	2.5	4.3	6	9.7
KL-64	KX 5615	6	13.5	9	105	3	5.2	5.5	10.5
KL-86	KX 5616	8	15.5	12	135	3	6.8	7.5	13.5
KL-108	KZ 4953	10	18	15	119.2	2.8	8.6	10	20.4

* also for tube ØOD = 4

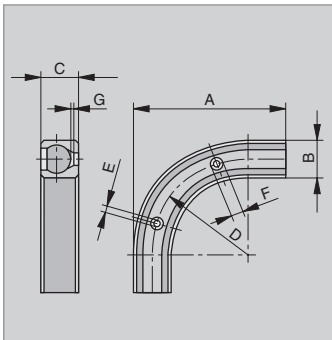
Material: Nylon PA 6



Elbow Tube Holder

Order Type	Instructions Order No.	Tube ØOD	A	B	C	D	E	F	G
HB-8P	KX 5329	8	37	13	10	22	3.2	6.6	1.7
HB-10P	KX 5330	10	47	15	12	30	3.2	6.6	1.7

Material: POM



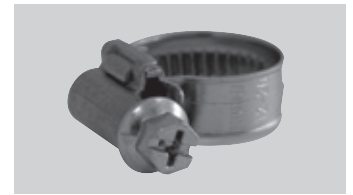
Tube Bundling Spiral

Order Type	Instructions Order No.	Number of Tubes	Tube ØOD/ID
SBS	KX 5613	20	5/3
		15	6/4
		8	8/6
		5	10/8

Hose Clip

Order Instructions		Tubing Range
Type	Order No.	
SCH-812	KX 5622	8-12 mm
SCH-1016	KX 5623	10-16 mm
SCH-1220	KX 5624	12-20 mm
SCH-1625	KX 5399	16-25 mm
SCH-2032	KX 0934	20-32 mm
SCH-2540	KY 6901	25-40 mm

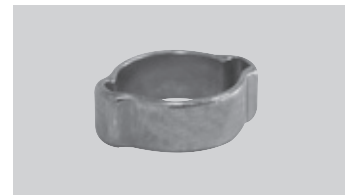
Material: zinc-plated steel



O-Clip

Order Instructions		Tubing Range
Type	Order No.	
SCHK-911	KX 5617	9-11 mm
SCHK-1113	KX 5618	11-13 mm
SCHK-1315	KX 5619	13-15 mm
SCHK-1417	KX 5620	14-17 mm
SCHK-1820	KX 5621	18-20 mm

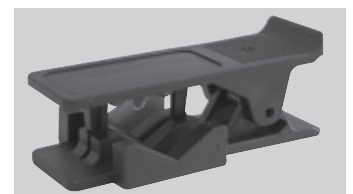
Material: zinc-plated steel



Tube Cutter

Order Instructions	
Type	Order No.
PSA-1	KY 6813

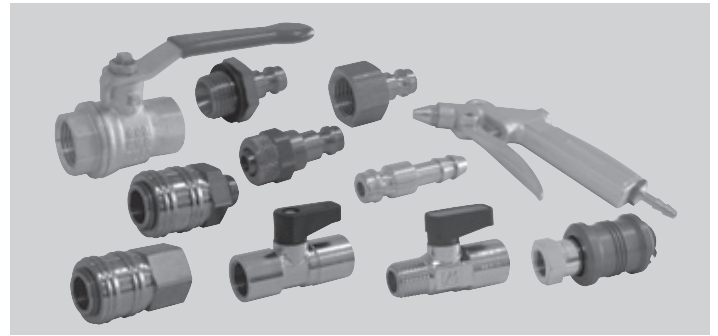
Material: plastic/steel



Accessories

Air Line Accessories

- Quick release couplings, self-sealing
- 3/2 way slide valves
- Manifolds with integrated ball valves
- Ball valves
- Blow guns



Technical Data

3/2 Way Slide Valves*	Versions	NW 2.7; NW 5; NW 7.8; NW 10
	Material	Brass (NW 10 nipple: nickel-plated steel)
	Operating pressure range	0 to 35 bar
	Temperature range	-20°C to +100°C
Quick release couplings, self-sealing	Medium	Compressed air (other media on request)
	Versions	G1/8, G1/4, G3/8, G1/2
	Material	Body: brass; sleeve: aluminium
Ball valves*	Versions	G1/4, G3/8, G1/2, G3/4, G1 (with or without venting)
	Material	Nickel-plated brass
Blow guns*	Versions	For NW 6 and NW 9 tubing
	Material	Aluminium

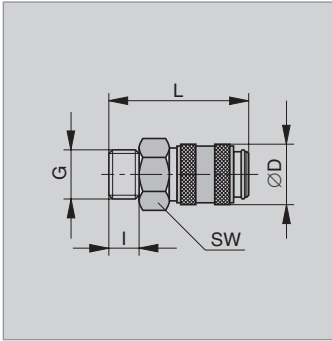
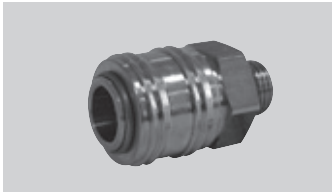
*suitable for the usual pressure and temperature ranges for pneumatic systems (0°C to 80°C, 0 to 16 bar).

Other pressure and temperature ranges on request

Fittings, Tubing and Accessories

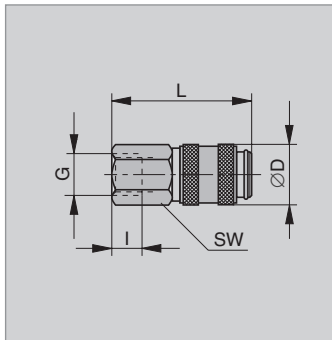
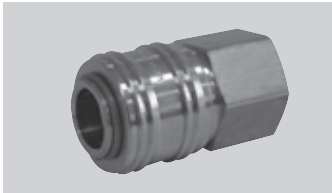
Accessories

Quick Release Coupling Body, self-sealing, male parallel thread



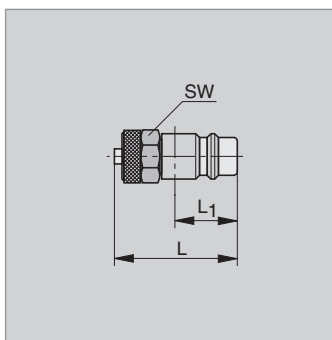
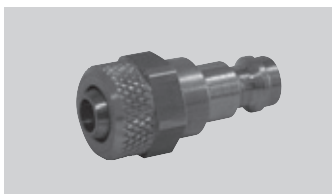
Order Type	Instructions Order No.	NW	G	ØD	I	L	SW
KA-525	KX 5640	2.7	M5	10	5	26	9
KA-185	KY 1006	5	G1/8	16	7	36	14
KA-145	KY 1007	5	G1/4	16	9	38	17
KA-187	KY 1008	7.2	G1/8	27	9	43	22
KA-147	KY 1009	7.2	G1/4	27	9	43	22
KA-387	KY 1010	7.2	G3/8	27	9	43	22
KA-127	KY 1011	7.2	G1/2	27	12	46	22
KA-3410	KX 6198	10	G3/4	28	17	65	27

Quick Release Coupling Body, self-sealing, female parallel thread



Order Type	Instructions Order No.	NW	G	ØD	I	L	SW
KI-525	KX 5647	2.7	M5	10	5	26	9
KI-185	KY 1012	5	G1/8	16	9	36	14
KI-145	KY 1013	5	G1/4	16	9	38	17
KI-187	KY 1014	7.8	G1/8	25	8	45	22
KI-147	KY 1015	7.8	G1/4	27	9	43	22
KI-387	KY 1016	7.8	G3/8	27	9	43	22
KI-127	KY 1017	7.8	G1/2	27	12	46	24
KI-3410	KX 6199	10	G3/4	28	16	61	32

Quick Release Coupling Plug, compression fitting

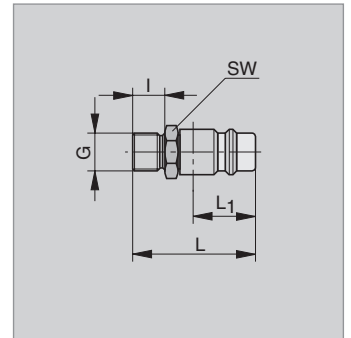
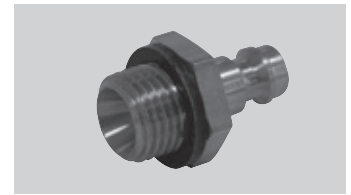


Order Type	Instructions Order No.	NW	Tube ØOD/ID	L	L ₁	SW
SV-532	KX 5654	2.7	5/3	25	10	7
SV-642	KX 5655	2.7	6/4	25	10	8
SV-645	KY 6447	5	6/4	32	14	12
SV-865	KY 6448	5	8/6	32	14	12
SV-647	KY 6449	7.8	6/4	34	20	14
SV-867	KY 6450	7.8	8/6	34	20	14
SV-1087	KY 6451	7.8	10/8	42	20	14

Quick Release Coupling Plug, male parallel thread

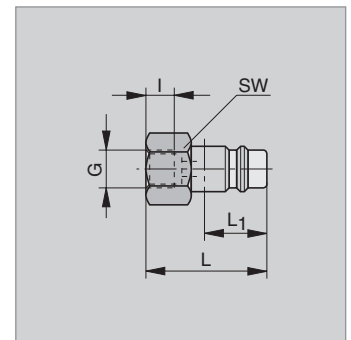
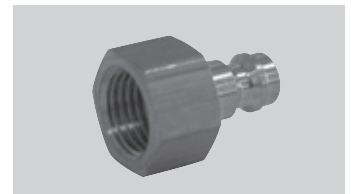
Order Type	Instructions Order No.	NW	G	I	L	L ₁	SW
SA-525	KX 5659	2.7	M5	5	18	10.5	7
SA-185	KY 6457	5	G1/8	7	25	14	14
SA-145	KY 6458	5	G1/4	9	28	14	17
SA-187	KY 6459	7.8	G1/8	6.5	31	20	14
SA-147	KY 6460	7.8	G1/4	9	33	20	17
SA-387	KY 6461	7.8	G3/8	9	33	20	19
SA-127	KY 6462	7.8	G1/2	12	38	20	22
SA-340	KX 6200	10	G3/4	19	46	21.5	27

Material: nickel-plated brass (SA-340: nickel-plated steel)



Quick Release Coupling Plug, female parallel thread

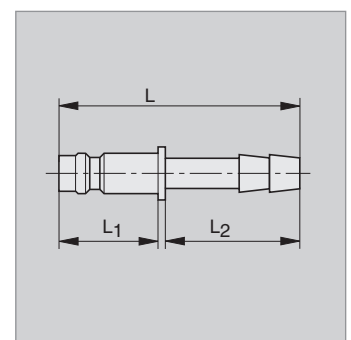
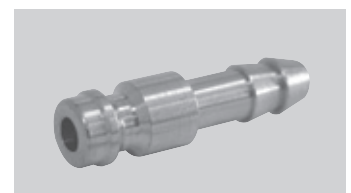
Order Type	Instructions Order No.	NW	G	I	L	L ₁	SW
SI-525	KX 5636	2.7	M5	5	17	10	7
SI-185	KY 6463	5	G1/8	8	25	14	14
SI-145	KY 6464	5	G1/4	9	26	14	17
SI-187	KY 6465	7.8	G1/8	8	30	18	14
SI-147	KY 6466	7.8	G1/4	18	33	18	17
SI-387	KY 6467	7.8	G3/8	10	33	18	19
SI-127	KY 6468	7.8	G1/2	12	36	18	22



Quick Release Coupling Plug, hose barb

Order Type	Instructions Order No.	NW	Tube ØID	L ₁	L ₂	L ₃
ST-32	KX 5657	2.7	3	24	10	13
ST-42	KX 5658	2.7	4	24	10	13
ST-45	KY 6452	5	4	32	14	17
ST-65	KY 6453	5	6	32	14	17
ST-47	KY 6454	7.8	4	48	20	25
ST-67	KY 5053	7.8	6	48	20	25
ST-97	KY 6455	7.8	9	48	20	25
ST-137	KY 6456	7.8	13	48	20	25
ST-1310	KX 6197	10	13	48	21.5	25

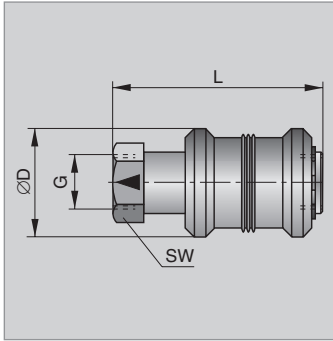
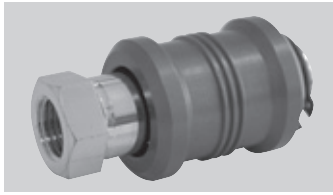
Material: Messing nickel-plated (ST-1310 Steel nickel-plated)



Fittings, Tubing and Accessories

Accessories

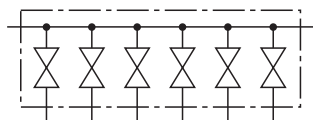
3/2 Way Slide Valves



Order Instructions		NW	G	ØD	L	SW
Type	Order No.					
HS-05	KC4303		M5	30	10	10
HS-18	KC4304	6	G1/8	25	48	14
HS-14	KC4305	8	G1/4	30	58	19
HS-38	KC4306	10	G3/8	35	68	22
HS-12	KC4307	15	G1/2	40	80	27

Manifold with integrated Ball Valves

Series VL



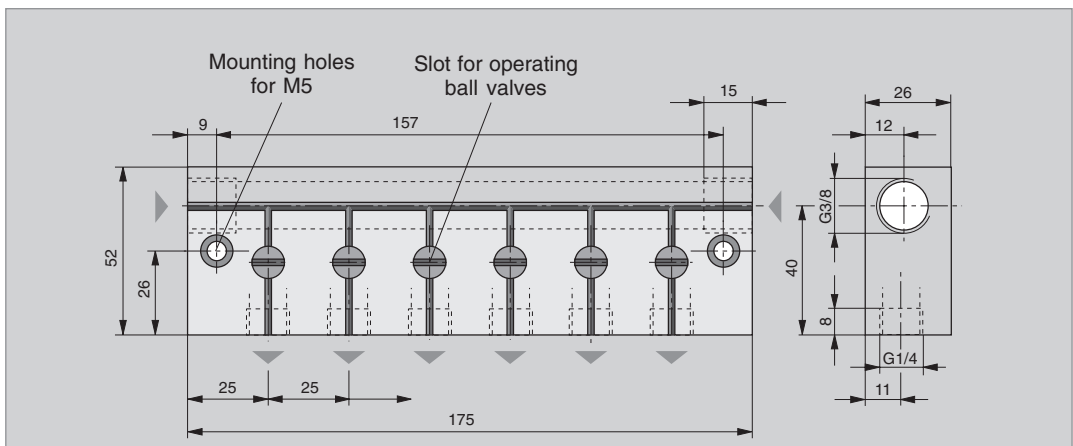
This manifold (with integrated ball valves) allows individual sections of a machine to be shut off. The slot indicates the position of the ball valves.

Characteristics to VDI 3293

Pressures quoted as gauge pressure

Characteristics	Symbol	Unit	Description
General features			
Series			Manifold with integrated ball valves
Type			VL-3/8
Port size			Input 2 x G3/8, Output 6 x G1/4
Nominal bore	NW (DN)	mm	8
Mounting			2 screws M5
Material			Housing – anodized aluminium Ball/spindle – chrome-plated brass Ms 58 Ball seal – Teflon (PTFE) O-rings – Buna N (NBR)
Temperature range		°C	-10 to +100
Operating pressure range	$p_{max.}$	bar	10
Actuation			Screwdriver (size 4 – 6 mm)
Actuation angle			90°
Weight (mass)		kg	0.65

Dimensions

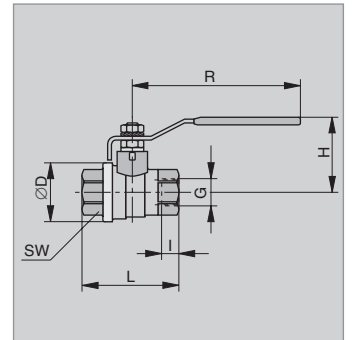
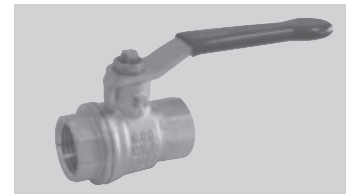


Order Instruction: Type VL3/8

Order No. KL4088

Ball Valves without venting

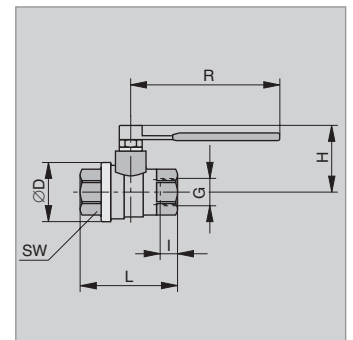
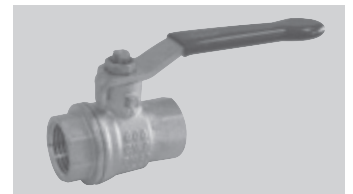
Order Type	Instructions Order No.	NW	G	ØD	L	I	H	R	SW
KH-14	KZ 4451	6	G1/4	28	51	12.5	42	100	22
KH-38	KZ 4452	10	G3/8	28	51	11.5	42	100	22
KH-12	KZ 4453	15	G1/2	34	61	15.5	45	100	27
KH-34	KZ 4454	20	G3/4	44	74	18	53	120	32
KH-10	KZ 4455	25	G1	52	91	21	57	120	41



Ball Valves with venting

Order Type	Instructions Order No.	NW	G	ØD	L	I	H	R	SW
KHE-14	KZ 4660	6	G1/4	28	51	11	44	98	22
KHE-38	KZ 4701	10	G3/8	28	51	11.5	44	98	22
KHE-12	KZ 4683	15	G1/2	34	60	15	52	98	27
KHE-34	KZ 4702	20	G3/4	43	72	16.5	59	122	32
KHE-10	KZ 4703	25	G1	52	84	19	63	122	41

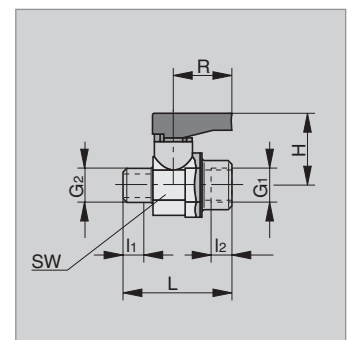
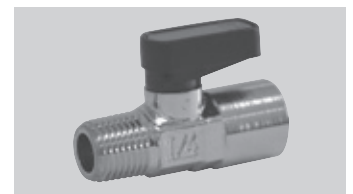
Lockable version on request



Ball Valves without venting

Order Type	Instructions Order No.	NW	G ₁	G ₂	L	I ₁	I ₂	H	R	SW
KHM-18AI	KW 0709	5.5	G1/8	G1/8	34	7	7	21	19	14
KHM-14AI	KW 0708	5.5	G1/4	G1/4	35	8	7	21	19	14

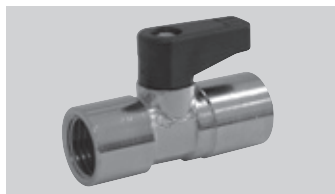
Other sizes on request



Dimensions in mm

Fittings, Tubing and Accessories

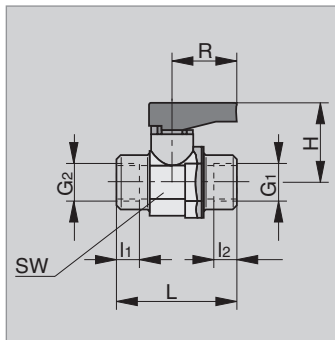
Accessories



Ball Valves without venting

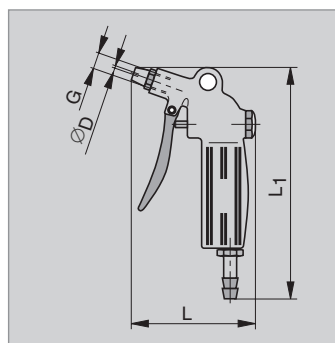
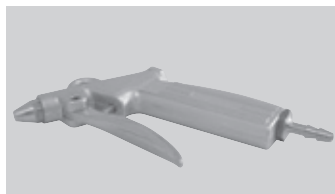
Order Instructions Type	Order No.	NW	G ₁	G ₂	L	I ₁	I ₂	H	R	SW
KHM-18I	KW 0707	5.5	G1/8	G1/8	35	7	7	21	19	14
KHM-14I	KW 0702	5.5	G1/4	G1/4	37	8	8	21	19	14

Other sizes on request



Spray Guns with Nipples

Order Instructions Type	Order No.	NW	G	L	L ₁	ØD
BP-6	KY 8915	6	M12 x 1.25	92	140	1.5
BP-9	KY 8916	9	M12 x 1.25	92	140	1.5



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