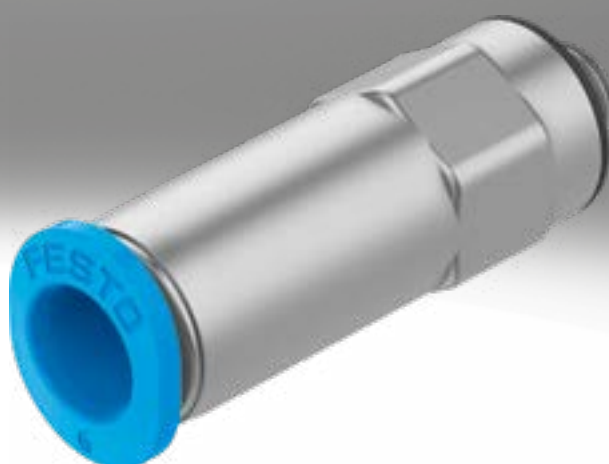








Push-in fittings QS, self-sealing/rotatable

FESTO



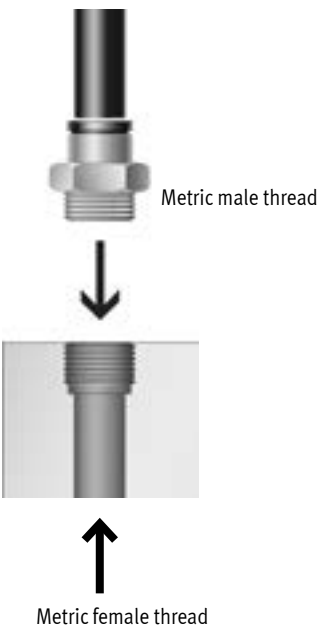
Key features

Application	Simply "plug and work"	Reliably connected	The captive seal
 <p>Choosing the right fitting is effortless. With a system that includes well over 1000 types of standard and function fittings, Festo offers a secure solution for every connection.</p>	 <p>The stainless steel retaining claw holds the tubing securely without damaging its surface. Vibration and pressure surges are absorbed. The tubing can be detached easily by pressing down the blue releasing ring. The tubing O.D. is specified on the releasing ring to help select the right fitting.</p>	 <p>A nitrile rubber sealing ring guarantees a perfect seal between standard OD tubing and the body of the fitting. The standard tubing combined with the Festo push-in connector is suitable for compressed air and vacuum.</p>	 <p>All brass parts of Festo's push-in fittings have nickel-plated surfaces and are thus highly resistant to corrosion. The tapered ISO R threads have a self-sealing PTFE coating, which allows the fitting to be re-used up to five times without the need for additional sealing components.</p>
Rotatable	Rotatable 360°, with ball bearing		
 <p>Alignment is possible after assembly.</p>	 <p>Permits rotary movement of up to 500 rpm during use.</p>		

Which fitting fits which thread?

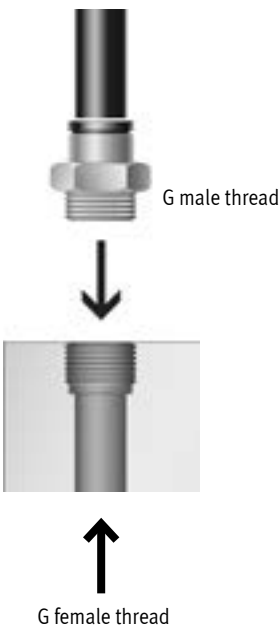
Metric thread

- Threads are comparable with G threads and are fitted as cylindrical metric thread
- Sealing is guaranteed as the O-ring sits in a groove that seals against the tube.



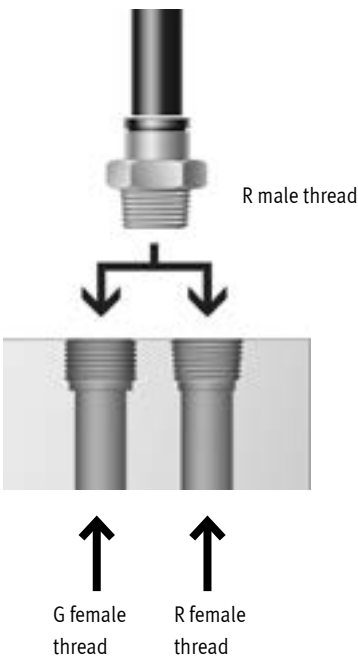
G thread to ISO 228-1

- Shorter thread
- Constant installation depth
- Replaceable sealing ring
- Sealing on front face
- Can be re-used a number of times thanks to replaceable sealing ring.





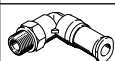



R thread to EN 10226-1 and ISO 7/1

- Self-sealing thread
- Sealing via coated threads
- No additional sealing surface required
- Smaller installation dimensions since there is no need for an offset for the sealing surface
- Can be reused up to 5 times.



Product range overview

Design type	Design	Type	Connection D1				Connection D2		→ Page
			M thread	R thread	G thread	Tubing O.D.	Tubing O.D.		
Straight shape	Push-in fitting, self-sealing – male thread with external hex								
		QSK	M5	–	–	–	4, 6	6	
			–	R1/8	G1/8	–	4, 6, 8		
			–	R1/4	G1/4	–	6, 8, 10		
			–	R3/8	G3/8	–	8, 10 12		
			–	R1/2	G1/2	–	12		
	Push-in connector, self-sealing								
		QSK	–	–	–	4	–	7	
			–	–	–	6	–		
			–	–	–	8	–		
			–	–	–	10	–		
			–	–	–	12	–		
	Push-in bulkhead connector								
		QSSK	–	–	–	4	–	8	
			–	–	–	6	–		
			–	–	–	8	–		
			–	–	–	10	–		
			–	–	–	12	–		
	Push-in fitting, rotatable through 360°, with ball bearing – male thread with external hex								
		QSR	M5	–	–	–	4, 6	11	
			–	R1/8	G1/8	–	4, 6, 8		
			–	R1/4	G1/4	–	6, 8		
			–	R3/8	G3/8	–	8, 10 12		
			–	R1/2	G1/2	–	12		
L-shape	Push-in L-fitting, self-sealing, rotatable – external thread with external hexagon								
		QSKL	M5	–	–	–	4, 6	9	
			–	R1/8	G1/8	–	4, 6, 8		
			–	R1/4	G1/4	–	6, 8, 10		
			–	R3/8	G3/8	–	8, 10 12		
			–	R1/2	G1/2	–	12		
	Push-in L-fitting, rotatable through 360°, with ball bearing – male thread with external hex								
		QSRL	M5	–	–	–	4, 6	13	
			–	R1/8	G1/8	–	4, 6, 8		
			–	R1/4	G1/4	–	6, 8		
			–	R3/8	G3/8	–	8, 10 12		
			–	R1/2	G1/2	–	12		

Technical data

General technical data		
	Push-in fitting, self-sealing QSK	Push-in fitting, rotatable QSR
Size	Standard	
Design	Push-pull principle	
Mounting position	Any	
Type of seal on screwed trunnion	Sealing ring (metric thread, G thread) Coating (R thread)	
Nominal tightening torque [Nm]	1.33 ±20% for connecting thread M5	
	7 ±20% for connecting thread G1/8	
	9 ±20% for connecting thread G1/4	
	15.5 ±20% for connecting thread G3/8	
	26 ±20% for connecting thread G1/2	
Max. rotational speed [rpm]	–	500 at tubing O.D. 4 mm
	–	500 at tubing O.D. 6 mm
	–	400 at tubing O.D. 8 mm
	–	300 at tubing O.D. 10 mm
	–	250 at tubing O.D. 12 mm with R thread
	–	200 at tubing O.D. 12 mm with G thread
Max. radial torque [Nm]	–	0.006 at tubing O.D. 4 mm
	–	0.012 at tubing O.D. 6 mm
	–	0.015 at tubing O.D. 8 mm
	–	0.020 at tubing O.D. 10 mm
	–	0.025 at tubing O.D. 12 mm
Type of approved tubing	PAN, PAN-MF, PAN-R, PAN-VO, PEN, PFAN, PLN, PTFEN, PUN, PUN-CM, PUN-DUO, PUN-H, PUN-H-DUO, PUN-S, PUN-S-DUO, PUN-VO	–

Operating and environmental conditions		
Type	Push-in fitting, self-sealing QSK	Push-in fitting, rotatable QSR
Operating pressure for entire temperature range [bar]	–0.95 ... +6	
Temperature-dependent operating pressure [bar]	–0.95 ... +14 → graph	
Operating medium	Compressed air to ISO 8573-1:2010 [7:--:-]	
	Water as per manufacturer's declaration ²⁾ (push-in bulkhead connector QSSK only)	–
Note on the operating/pilot medium	Lubricated operation possible	
Ambient temperature [°C]	–10 ... +80	0 ... +60
Corrosion resistance class CRC ¹⁾	1	
Maritime classification	See certificate ²⁾	

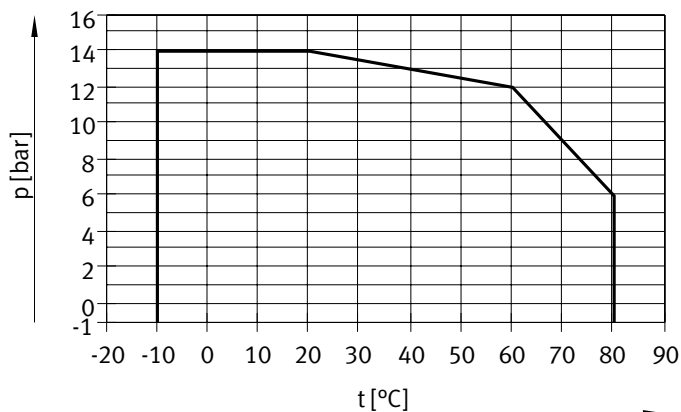
1) Corrosion resistance class CRC 1 to Festo standard FN 940070

Low corrosion stress. Dry indoor application or transport and storage protection. Also applies to parts behind covers, in the non-visible interior area, and parts which are covered in the application (e.g. drive trunnions).

2) Additional information: www.festo.com/sp → Certificates

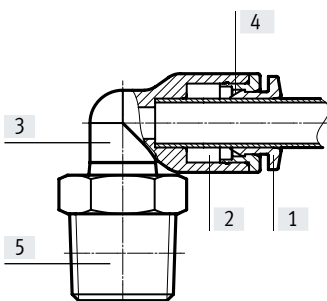
Technical data

Operating pressure p as a function of temperature t



Materials

Sectional view



		Push-in fitting, self-sealing QSK	Push-in fitting, rotatable QSR
[1]	Releasing ring	POM (colour: blue)	
[2]	Tubing seal	NBR	
[3]	Housing	PBT, nickel-plated brass	
[4]	Tube clamping segment	High-alloy stainless steel	
[5]	Threaded coupling	Nickel-plated brass	Chrome-plated brass
Note on materials		RoHS-compliant	

Possible push-in fitting/tubing combinations

Thread	Tubing O.D. [mm]				
	4	6	8	10	12
M5	++	+	–	–	–
R1/8	+	++	+	+	–
R1/4	+	+	++	+	+
R3/8	–	+	+	++	+
R1/2	–	–	–	+	++
G1/8	+	++	+	–	–
G1/4	–	+	++	+	+
G3/8	–	–	+	++	+
G1/2	–	–	–	–	++

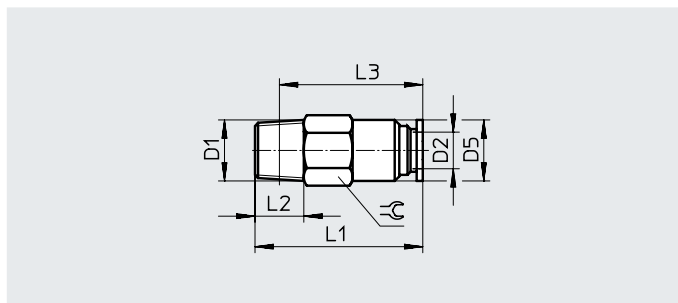
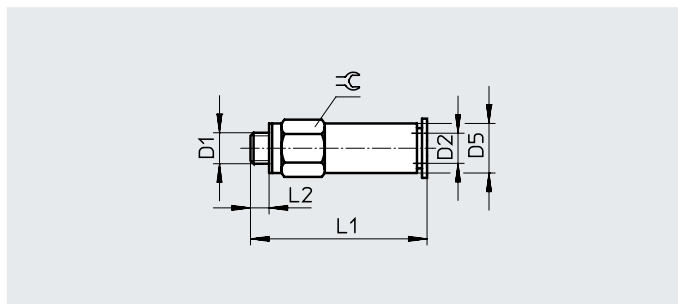
+ Possible thread/tubing O.D. combinations

++ Optimum thread/tubing O.D. combinations (with regard to flow)

Technical data

Push-in fitting, self-sealing QSK

Male thread with external hex



Dimensions and ordering data

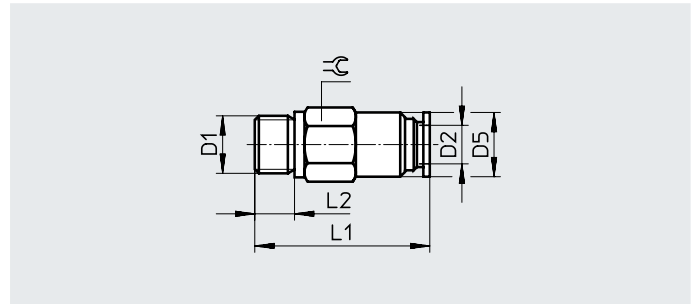
Pneumatic connection		Nominal size	D5 ø	L1	L2	L3	≅	Tubing insertion depth [mm]	Weight/piece [g]	Part No.	Type	PU ¹⁾
Male thread	For tubing O.D.											
D1	D2 [mm]	[mm]										
Metric thread with sealing ring												
M5	4	1.4	8	29.5	3.5	–	8	12.7	7.1	153291	QSK-M5-4	1
	6	1.7	10	32.5	3.5	–	10	13.7	12	153292	QSK-M5-6	1
R thread												
R1/8	4	1.6	9	25	8	20	10	12.5	9.5	153419	QSK-1/8-4	1
	6	3	10	27.5	8	23	10	13.5	9.5	153420	QSK-1/8-6	1
	8	3.4	14	36	8	32	14	18.5	22.5	153422	QSK-1/8-8	1
R1/4	6	3	12	27.5	11	21	14	13.5	21	153421	QSK-1/4-6	1
	8	4.3	14	36	11	30	14	18.5	22.5	153423	QSK-1/4-8	1
	10	4.8	17	38.5	11	32.5	17	21	32	153425	QSK-1/4-10	1
R3/8	8	4.5	15	36	12	29.5	17	18.5	39	153424	QSK-3/8-8	1
	10	5.6	17	40	12	33.5	17	21	35	153426	QSK-3/8-10	1
	12	6.1	21	46	12	39.5	21	23.5	63.5	153427	QSK-3/8-12	1
R1/2	12	6.4	21	46	15	38	21	23.5	65.5	153428	QSK-1/2-12	1

1) Packaging unit

Technical data

Push-in fitting, self-sealing QSK

Male thread with external hex

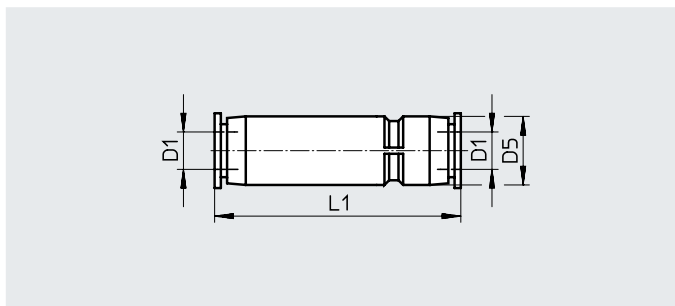


Dimensions and ordering data		Nominal size	D5 Ø	L1	L2	≡	Tubing insertion depth [mm]	Weight/ piece [g]	Part No.	Type	PU ¹⁾
Pneumatic connection	For tubing O.D.										
Male thread	D2 [mm]	[mm]									
D1											
G thread with sealing ring											
G1/8	4	1.6	8.8	23.5	5.1	13	12.1	14	186294	QSK-G1/8-4	1
	6	3	10	26.2	5.1	13	13.4	14	186295	QSK-G1/8-6	1
	8	3.4	14	34.7	5.1	14	22.3	23	186297	QSK-G1/8-8	1
G1/4	6	3	12	25.6	5.6	17	13.4	26	186296	QSK-G1/4-6	1
	8	4.3	14	34.5	5.6	17	18.3	30	186298	QSK-G1/4-8	1
	10	4.8	17	36.8	5.6	17	24.7	33	186300	QSK-G1/4-10	1
G3/8	8	4.5	15	34.5	6.6	19	18.3	43	186299	QSK-G3/8-8	1
	10	5.6	17	38.3	6.6	19	20.7	41	186301	QSK-G3/8-10	1
	12	6.1	20.8	43.3	6.6	21	29.1	63	186302	QSK-G3/8-12	1
G1/2	12	6.4	20.8	44.9	7.6	24	23.1	78	186303	QSK-G1/2-12	1

1) Packaging unit

Technical data

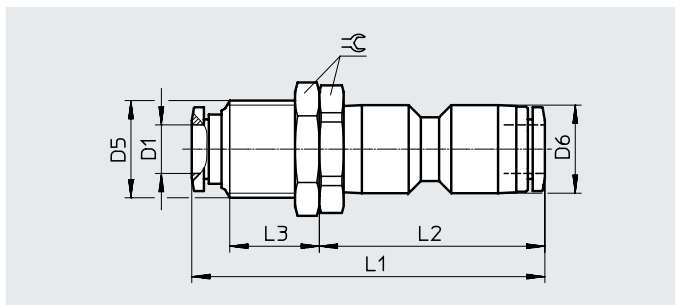
Push-in connector, self-sealing QSK



Dimensions and ordering data								
Pneumatic connection	Nominal size	D5	L1	Tubing insertion depth	Weight/ piece	Part No.	Type	PU ¹⁾
For tubing O.D. D1 [mm]	[mm]	ø		[mm]	[g]			
4	1.6	8.5	36	11.5	3.5	153439	QSK-4	1
6	3	11	39.5	12	6	153440	QSK-6	1
8	4.4	14.5	54.5	18.5	16	153441	QSK-8	1
10	5.3	17.5	60.5	20.5	26	153442	QSK-10	1
12	6.2	21	70.5	23.5	40.5	153443	QSK-12	1

1) Packaging unit

Push-in bulkhead connector QSSK



Dimensions and ordering data												
Pneumatic connection	Nominal size	D5 ø	D6 ø	L1	L2	L3	≡	Tubing insertion depth	Weight/ piece	Part No.	Type	PU ¹⁾
For tubing O.D. D1 [mm]	[mm]							[mm]	[g]			
4	1.5	M10x1	10	43.1	29.6	10	12	12.7	14	130637	QSSK-4	1
6	3	M12x1	12.5	47.6	34.2	9.9	14	13.7	20	130638	QSSK-6	1
8	4.3	M16x1	14.5	58.1	37.1	14.7	19	18.3	38	130639	QSSK-8	1
10	5.4	M20x1	17.5	64.5	41.4	16.2	24	20.7	68	130640	QSSK-10	1
12	6.3	M22x1	21	75.5	48.6	20.7	27	23.1	98	130641	QSSK-12	1

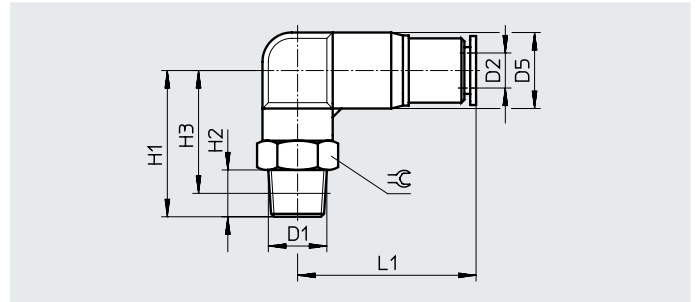
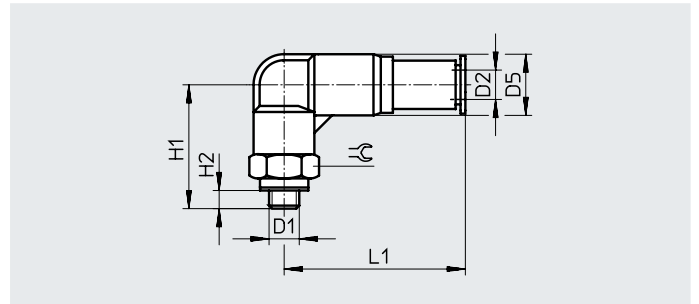
1) Packaging unit

Technical data

Push-in L-fitting, self-sealing QSKL

Rotatable

Male thread with external hex



Dimensions and ordering data

Pneumatic connection		Nominal size	D5 ø	H1	H2	H3	L1	≅	Tubing insertion depth [mm]	Weight/ piece [g]	Part No.	Type	PU ¹⁾
Male thread	For tubing O.D.												
D1	D2 [mm]	[mm]											
Metric thread with sealing ring													
M5	4	1.4	10	20.8	3.5	–	30.3	10	12.7	13	153294	QSKL-M5-4	1
	6	1.7	12.5	22.5	3.5	–	30.4	12	13.7	20	153295	QSKL-M5-6	1
R thread													
R1/8	4	1.5	10	23.5	8	19.5	30.5	10	12.5	17	153429	QSKL-1/8-4	1
	6	3	12.5	25	8	21	30.5	12	13.5	22	153430	QSKL-1/8-6	1
	8	4.2	14.5	28	8	24	43	14	18.5	34	153432	QSKL-1/8-8	1
R1/4	6	3.2	12.5	28	11	22	30.5	14	13.5	29.5	153431	QSKL-1/4-6	1
	8	4.1	14.5	31	11	25	43	14	18.5	40	153433	QSKL-1/4-8	1
	10	5.2	17.5	36	11	30	49.5	17	21	58.5	153435	QSKL-1/4-10	1
R3/8	8	4.3	14.5	33	12	26.5	43	17	18.5	53	153434	QSKL-3/8-8	1
	10	5.3	17.5	37	12	30.5	49.5	17	21	67	153436	QSKL-3/8-10	1
	12	6.2	21	39	12	32.5	57.5	21	22.9	92.5	153437	QSKL-3/8-12	1
R1/2	12	6.2	21	42	15	34	57.5	21	22.9	107	153438	QSKL-1/2-12	1

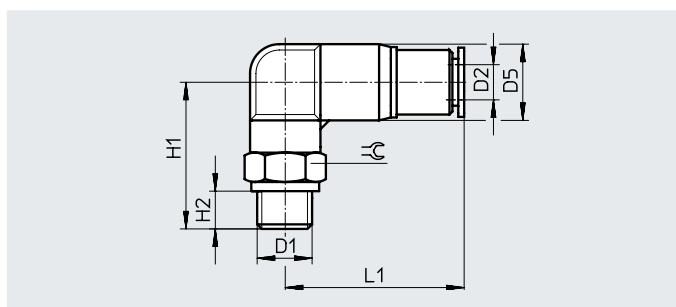
1) Packaging unit


Technical data

Push-in L-fitting, self-sealing QSKL

Rotatable

Male thread with external hex



Dimensions and ordering data												
Pneumatic connection		Nominal size	D5 ø	H1	H2	L1		Tubing insertion depth [mm]	Weight/ piece [g]	Part No.	Type	PU ¹⁾
Male thread	For tubing O.D.											
D1	D2 [mm]	[mm]										
G thread with sealing ring												
G1/8	4	1.5	10	23.3	5.1	30.3	13	12.7	19	186304	QSKL-G1/8-4	1
	6	2.9	12.5	24	5.1	30.4	13	13.7	22	186305	QSKL-G1/8-6	1
	8	4.2	14.5	27	5.1	43	14	18.3	34	186307	QSKL-G1/8-8	1
G1/4	6	3.2	12.5	25.5	5.6	30.4	17	13.7	31	186306	QSKL-G1/4-6	1
	8	4.1	14.5	28.5	5.6	43	17	18.3	43	186308	QSKL-G1/4-8	1
	10	5.2	17.5	32.5	5.6	49.3	17	20.7	57	186310	QSKL-G1/4-10	1
G3/8	8	4.3	14.5	30	6.6	43	19	18.3	56	186309	QSKL-G3/8-8	1
	10	5.3	17.5	34	6.6	49.3	19	20.7	66	186311	QSKL-G3/8-10	1
	12	6.2	21	36	6.6	57.1	21	22.9	86	186312	QSKL-G3/8-12	1
G1/2	12	6.2	21	39	7.6	57.1	24	22.9	112	186313	QSKL-G1/2-12	1

1) Packaging unit

Technical data

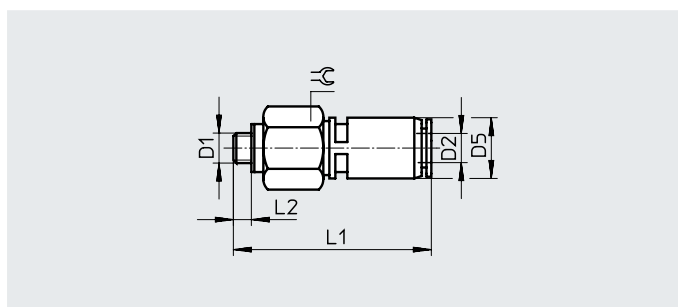
Push-in fitting, rotatable QSR

Rotatable 360°, with ball bearing

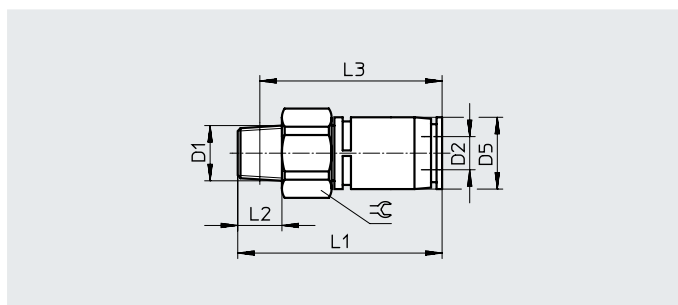
Male thread with external hex



M thread



R thread



Dimensions and ordering data

Pneumatic connection		Nominal size [mm]	D5 Ø	L1	L2	L3	⌀	Weight/ piece [g]	Part No.	Type	PU ¹⁾
Male thread	For tubing O.D. D2 [mm]										
D1	D2 [mm]										
Metric thread with sealing ring											
M5	4	1.6	10	33.1	3.5	–	12	13	153526	QSR-M5-4	1
	6	1.6	12.5	36.7	3.5	–	14	19	153527	QSR-M5-6	1
R thread											
R1/8	4	2.1	10	34.1	8	30.1	12	14	153401	QSR-1/8-4	1
	6	3.4	12.5	36.9	8	32.9	14	18	153402	QSR-1/8-6	1
	8	5	14.5	45.3	8	41.3	17	34	153404	QSR-1/8-8	1
R1/4	6	3.4	12.5	38.9	11	32.8	14	23	153403	QSR-1/4-6	1
	8	5	14.5	44.3	11	38.3	17	32	153405	QSR-1/4-8	1
R3/8	8	5	14.5	44.3	12	38	17	39	153406	QSR-3/8-8	1
	10	6.7	18	55.8	12	49.5	22	61	153407	QSR-3/8-10	1
	12	8	21	63.2	12	56.9	24	82	153408	QSR-3/8-12	1
R1/2	12	8	21	63.2	15	55	24	89	153409	QSR-1/2-12	1

1) Packaging unit

Technical data

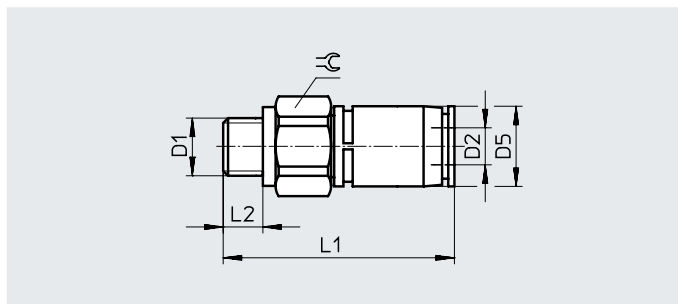
Push-in fitting, rotatable QSR

Rotatable 360°, with ball bearing

Male thread with external hex



G thread



Dimensions and ordering data

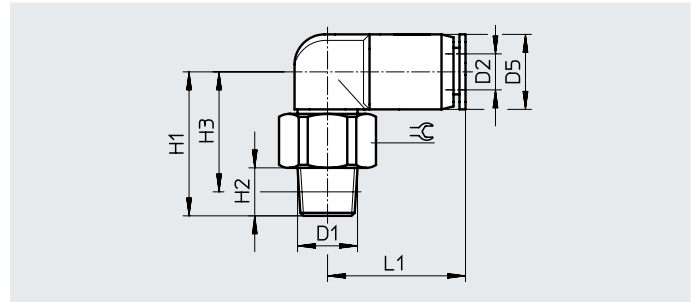
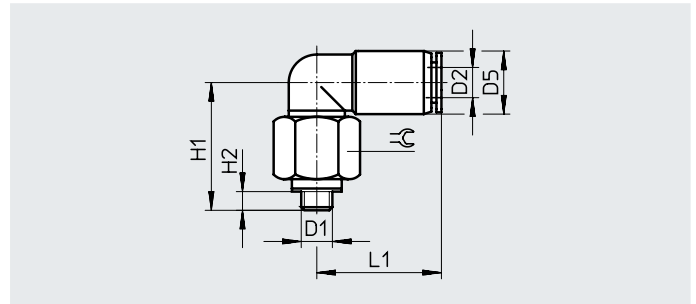
Pneumatic connection		Nominal size	D5 ø	L1	L2	⌀	Weight/ piece	Part No.	Type	PU ¹⁾
Male thread	For tubing O.D.									
D1	D2 [mm]	[mm]					[g]			
G thread with sealing ring										
G1/8	4	2.1	10	33.1	5.1	13	15	186276	QSR-G1/8-4	1
	6	3.4	12.5	35.9	5.1	14	17	186277	QSR-G1/8-6	1
	8	5	14.5	44.3	5.1	17	34	186279	QSR-G1/8-8	1
G1/4	6	3.4	12.5	35.4	5.6	17	24	186278	QSR-G1/4-6	1
	8	5	14.5	40.8	5.6	17	30	186280	QSR-G1/4-8	1
G3/8	8	5	14.5	41.3	6.6	19	40	186281	QSR-G3/8-8	1
	10	6.7	18	53.8	6.6	22	59	186282	QSR-G3/8-10	1
	12	8	21	60.2	6.6	23.8	78	186283	QSR-G3/8-12	1
G1/2	12	8	21	58.2	7.6	23.8	79	186284	QSR-G1/2-12	1

1) Packaging unit

Technical data

Push-in L-fitting, rotatable QSRL

Rotatable 360°, with ball bearing
Male thread with external hex



Dimensions and ordering data

Pneumatic connection		Nominal size	D5 Ø	H1	H2	H3	L1	≡	Weight/ piece [g]	Part No.	Type	PU ¹⁾
Male thread	For tubing O.D.											
D1	D2 [mm]	[mm]										
Metric thread with sealing ring												
M5	4	1.4	10	21	3.5	–	19.7	12	13	153529	QSRL-M5-4	1
	6	1.6	12.5	23.8	3.5	–	22.8	14	20	153530	QSRL-M5-6	1
R thread												
R1/8	4	1.8	10	23	8	18	20	12	15	153410	QSRL-1/8-4	1
	6	3.1	12.5	24	8	20	23	14	19	153411	QSRL-1/8-6	1
	8	4.6	14.5	31.5	8	27.5	26	17	33	153413	QSRL-1/8-8	1
R1/4	6	3.1	12.5	26	11	20	23	14	23	153412	QSRL-1/4-6	1
	8	4.6	14.5	30.5	11	24.5	26	17	32	153414	QSRL-1/4-8	1
R3/8	8	4.6	14.5	30.5	12	24	26	17	39	153415	QSRL-3/8-8	1
	10	6.2	17.5	36	12	29.5	30	22	56	153416	QSRL-3/8-10	1
	12	7.4	21	41.5	12	35	33	24	84	153417	QSRL-3/8-12	1
R1/2	12	7.4	21	41.5	15	33.5	33	24	90	153418	QSRL-1/2-12	1

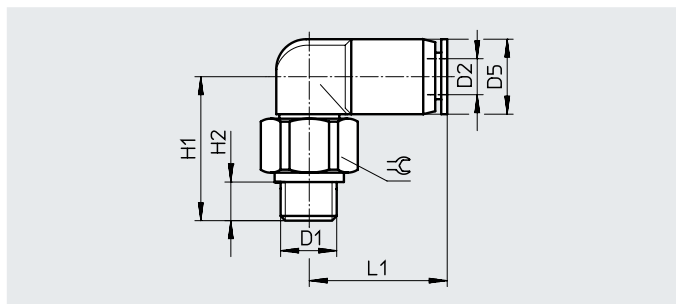
1) Packaging unit

Technical data

Push-in L-fitting, rotatable QSRL

Rotatable 360°, with ball bearing

Male thread with external hex



Dimensions and ordering data											
Pneumatic connection		Nominal size	D5 Ø	H1	H2	L1	≡	Weight/ piece	Part No.	Type	PU ¹⁾
Male thread	For tubing O.D.										
D1	D2 [mm]	[mm]						[g]			
G thread with sealing ring											
G1/8	4	1.9	10	21	5.1	19.7	13	15	186285	QSRL-G1/8-4	1
	6	3.1	12.5	23	5.1	22.8	14	18	186286	QSRL-G1/8-6	1
	8	4.6	14.5	30.5	5.1	25.7	17	35	186288	QSRL-G1/8-8	1
G1/4	6	3.1	12.5	22.5	5.6	22.8	17	25	186287	QSRL-G1/4-6	1
	8	4.6	14.5	27	5.6	25.7	17	31	186289	QSRL-G1/4-8	1
G3/8	8	4.6	14.5	27.5	6.6	25.7	19	41	186290	QSRL-G3/8-8	1
	10	6.2	17.5	33.3	6.6	29.5	22	59	186291	QSRL-G3/8-10	1
	12	7.4	21	38.5	6.6	32.7	24	81	186292	QSRL-G3/8-12	1
G1/2	12	7.4	21	36.5	7.6	32.7	24	81	186293	QSRL-G1/2-12	1

1) Packaging unit