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Push-In Fittings, NPT/ Inch For Plastic Tubes

General information

Rexroth
Bosch Group

Technical Data

Working pressure	0 to 290 psi	[Vacuum to 20 bar]
Temperature range	-40° to 176°F	[-20 °C to +80 °C]
Material	Connector body, threaded section Connector body, pipe section Gripping ring O-rings Pressure ring	Nickel plated brass Engineering- grade polymer Stainless steel Oil-resistant rubber Plastic



Application Area

Push-in fittings are mainly used for connecting plastic tubes to pneumatic systems for which they provide a quick, safe and compact fitting. They can also be used for temporary connections during tests and laboratory work.

Technical Information

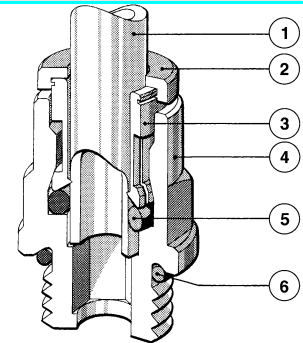
The connectors are of the push-in type which gives a quick fitting, safe connection and compact installation. Push-in fittings consist of a body, spring sleeve, O-ring and pressure ring. The plastic tube is gripped by the sharp edge of the spring sleeve, which is fitted in a conical chamber in the body.

The O-ring provides a seal between the body and plastic tube.

Elbows with a combination of threads and tube connections can be turned to the desired position for the tubing after being fitted in the connection port.

The push-in fittings for screwing into a connection port have an O-ring as a seal to the connecting surface.

1. Plastic tube
2. Pressure ring
3. Spring sleeve
4. Connector body
5. O-ring
6. O-ring



NOTE: Fittings must be ordered in multiples of 10 pieces.

Assembly Instructions

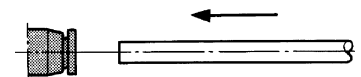
1. Cut the tube at right angles with a sharp knife or plastic tube cutter.

Check that the tube has a smooth surface and is otherwise undamaged in the area where the coupling is to be fitted. Remove any scale and blow the tube clean.

2. Push the tube carefully into the connector until resistance is felt. The resistance comes from the O-ring in the connector.

3. Push and turn the tube past the O-ring into the bottom of the connector.

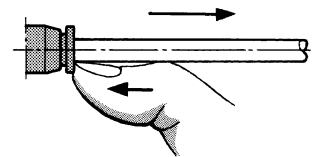
4. Pull the tube to make sure it is properly secured; this also strenghtens the safety grip.



Disconnection

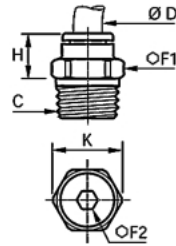
Press the spring sleeve against the body with your thumb or a screwdriver and, at the same time, pull out the tube.

Note: Push-in fittings are intended to be permanently connected but can be connected and disconnected a number of times without the grip deteriorating.



Push-In Fittings, NPT/ Inch For Plastic Tubes

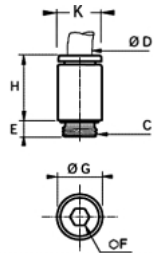
▲ Straight adapter - tube to male NPT



Tube O.D.	C - NPT	H	K	F1	F2	Part No.
1/8	1/16	.413	.433	10 mm	2 mm	255-001-811-1
1/8	1/8	.283	.472	11 mm	2 mm	255-001-818-1
1/8	1/4	.315	.590	14 mm	2 mm	255-001-814-1
5/32	1/8	.340	.470	11 mm	2.5 mm	255-005-318-1
5/32	1/4	.280	.590	14 mm	2.5 mm	255-005-314-1
3/16	1/8	.610	.510	7/16	1/8	255-003-118-1
3/16	1/4	.590	.650	9/16	5/32	255-003-114-1
1/4	1/8	.340	.470	11 mm	2.5 mm	255-001-418-1
1/4	1/4	.370	.590	14 mm	4 mm	255-001-414-1
1/4	3/8	.300	.770	18 mm	4 mm	255-001-438-1
5/16	1/8	.790	.550	13 mm	5 mm	255-005-118-1
5/16	1/4	.660	.590	14 mm	5 mm	255-005-114-1
5/16	3/8	.460	.770	18 mm	5 mm	255-005-138-1
3/8	1/8	.894	.689	16 mm	5/32	255-003-818-1
3/8	1/4	.807	.689	16 mm	9/32	255-003-814-1
3/8	3/8	.689	.767	18 mm	9/32	255-003-838-1
3/8	1/2	.610	.945	22 mm	9/32	255-003-812-1
1/2	1/4	1.00	1.01	7/8	1/4	255-001-214-1
1/2	3/8	1.00	1.01	7/8	5/16	255-001-238-1
1/2	1/2	1.00	1.01	7/8	3/8	255-001-212-1

NOTE: Fittings must be ordered in multiples of 10 pieces. Dimensions in inches unless otherwise noted.

▲ Straight adapter - tube to 10-32 UNF

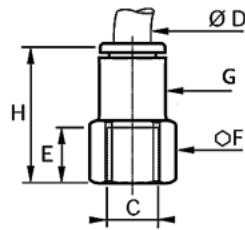


Tube O.D.	C - UNF	E	F	H	K	Wgt oz.	Part no.
1/8	10-32	0.13	2 mm	0.55	0.35	0.17	255-011-810-1
5/32	10-32	0.13	2 mm	0.45	0.55	0.18	255-015-310-1
1/4	10-32	0.13	2 mm	0.63	0.42	0.19	255-011-410-1

NOTE: Fittings must be ordered in multiples of 10 pieces. Dimensions in inches unless otherwise noted.

Push-In Fittings, NPT/ Inch For Plastic Tubes

▲ Straight adapter-tube to female NPT

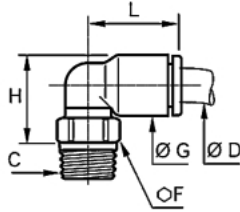


Tube OD	C - NPT	G	H	E	F	Part No.
1/8	1/8	.43	1.06	.37	9/16	255-111-818-1
1/8	1/4	.43	1.26	.55	11/16	255-111-814-1
5/32	1/8	.32	.89	.37	13 mm	255-115-318-1
5/32	1/4	.32	1.06	.55	16 mm	255-115-314-1
3/16	1/8	–	1.06	–	9/16	255-113-118-1
3/16	1/4	–	1.26	–	11/16	255-113-114-1
1/4	1/8	.42	.98	.37	13 mm	255-111-418-1
1/4	1/4	.42	1.16	.55	16 mm	255-111-414-1
5/16	1/8	.53	1.14	.37	13 mm	255-115-118-1
5/16	1/4	.53	1.32	.55	16 mm	255-115-114-1
3/8	1/8	.61	1.22	.37	16 mm	255-113-818-1
3/8	1/4	.61	1.40	.55	16 mm	255-113-814-1
3/8	3/8	.61	1.51	.65	22 mm	255-113-838-1

NOTE: Fittings must be ordered in multiples of 10 pieces. Dimensions in inches unless otherwise noted.

Push-In Fittings, NPT/ Inch For Plastic Tubes

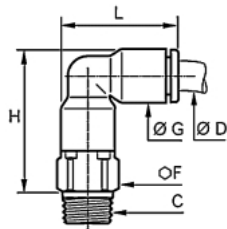
▲ Elbow adapter, type LVT, low



Tube O.D. [in]	Thread C [NPT/ UNF]	G	H	L	F	Part No.
1/8	10-32	.335	.524	.571	8 mm	255-041-810-1
1/8	1/16	.335	.531	.571	10 mm	255-041-811-1
1/8	1/8	.335	.531	.571	11 mm	255-041-818-1
1/8	1/4	.335	.551	.571	14 mm	255-041-814-1
5/32	10-32	.330	.530	.550	8 mm	255-045-310-1
5/32	1/8	.330	.530	.550	11 mm	255-045-318-1
5/32	1/4	.330	.550	.550	14 mm	255-045-314-1
3/16	1/8	.430	.670	.850	11 mm	255-043-118-1
1/4	10-32	.430	.630	.710	11 mm	255-041-410-1
1/4	1/8	.430	.670	.710	11 mm	255-041-418-1
1/4	1/4	.430	.630	.710	14 mm	255-041-414-1
1/4	3/8	.430	.650	.710	18 mm	255-041-438-1
5/16	1/8	.530	.750	.910	11 mm	255-045-118-1
5/16	1/4	.530	.710	.910	14 mm	255-045-114-1
5/16	3/8	.530	.730	.910	18 mm	255-045-138-1
3/8	1/8	.630	.910	1.08	15 mm	255-043-818-1
3/8	1/4	.630	.910	1.08	15 mm	255-043-814-1
3/8	3/8	.630	.870	1.08	18 mm	255-043-838-1
3/8	1/2	.630	.910	1.08	22 mm	255-043-812-1
1/2	1/4	.950	1.73	1.20	7/8	255-041-214-1
1/2	3/8	.950	1.73	1.20	7/8	255-041-238-1
1/2	1/2	.950	1.77	1.20	7/8	255-041-212-1

NOTE: Fittings must be ordered in multiples of 10 pieces. Dimensions in inches unless otherwise noted.

▲ Elbow, extended male - Tube to male NPT

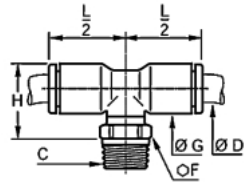


Tube O.D.	C	G	H	L	F	Part No.
5/32	1/8	.33	.91	.75	11 mm	255-055-318-1
5/32	1/4	.33	.93	.75	14 mm	255-055-314-1
1/4	1/8	.43	1.12	.93	11 mm	255-051-418-1
1/4	1/4	.43	1.08	.93	14 mm	255-051-414-1
5/16	1/8	.53	1.32	1.16	13 mm	255-055-118-1
5/16	1/4	.53	1.28	1.16	14 mm	255-055-114-1
3/8	1/4	.63	1.41	1.33	17 mm	255-053-814-1
3/8	3/8	.63	1.45	1.33	18 mm	255-053-838-1

NOTE: Fittings must be ordered in multiples of 10 pieces. Dimensions in inches unless otherwise noted.

Push-In Fittings, NPT/ Inch For Plastic Tubes

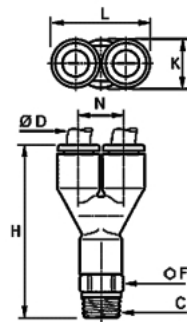
▲ Tee, Male Branch - Tube to male NPT to Tube



Tube OD	C - NPT	F	ØG	H	L	Part Number
1/8	10-32	.31	.33	.61	1.14	255-061-810-1
1/8	1/16	.39	.33	.61	1.14	255-061-811-1
1/8	1/8	.43	.33	.61	1.14	255-061-818-1
5/32	10-32	.31	.33	.71	1.1	255-065-310-1
5/32	1/8	.43	.33	.61	1.1	255-065-318-1
5/32	1/4	.55	.33	.63	1.1	255-065-314-1
3/16	1/8	.43	.43	.67	1.7	255-063-118-1
1/4	1/8	.43	.43	.67	1.42	255-061-418-1
1/4	1/4	.55	.43	.63	1.42	255-061-414-1
1/4	3/8	.71	.43	.65	1.42	255-061-438-1
5/16	1/8	.43	.53	.87	1.81	255-065-118-1
5/16	1/4	.55	.53	.83	1.82	255-065-114-1
5/16	3/8	.71	.53	.83	1.82	255-065-138-1
3/8	1/8	.59	.63	.99	2.08	255-063-818-1
3/8	1/4	.59	.63	.99	2.08	255-063-814-1
3/8	3/8	.71	.63	.95	2.08	255-063-838-1
3/8	1/2	.87	.63	.98	2.08	255-063-812-1
1/2	1/4	.79	.87	1.22	2.76	255-061-214-1
1/2	3/8	.79	.87	1.22	2.76	255-061-238-1
1/2	1/2	.94	.87	1.12	2.76	255-061-212-1

NOTE: Fittings must be ordered in multiples of 10 pieces. Dimensions in inches unless otherwise noted.

▲ Male Run Tee, NPT-tube

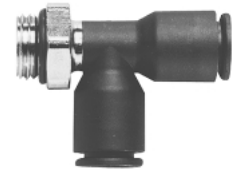
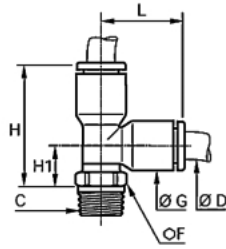


Tube O.D.	C - NPT	K	H	L	F	N	Part No.
5/32	1/8	.334	1.28	.688	11 mm	.354	255-025-318-1
5/32	1/4	.334	1.30	.688	14 mm	.354	255-025-314-1
1/4	1/8	.433	1.575	2.09	11 mm	.669	255-021-418-1
1/4	1/4	.433	1.575	2.09	14 mm	.669	255-021-414-1

NOTE: Fittings must be ordered in multiples of 10 pieces. Dimensions in inches unless otherwise noted.

Push-In Fittings, NPT/ Inch For Plastic Tubes

▲ "Y"-male, tube to male NPT/UNF

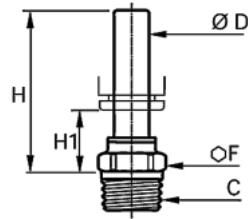


Tube O.D.	C NPT/UNF	G	H1	H	L	F	Part Number
1/8	10-32	.42	.72	1.44	.73	7/16	255-031-810-1
1/8	1/16	.42	.75	1.48	.73	7/16	255-031-811-1
1/8	1/8	.42	.75	1.48	.73	7/16	255-031-818-1
5/32	10-32	.33	.45	1.02	.51	8 mm	255-035-310-1
5/32	1/8	.33	.53	.93	.57	11 mm	255-035-318-1
5/32	1/4	.33	.37	.94	.57	14 mm	255-035-314-1
3/16	1/8	.43	.45	1.31	.85	11 mm	255-033-118-1
1/4	1/8	.43	.45	1.16	.71	11 mm	255-031-418-1
1/4	1/4	.43	.41	1.12	.71	14 mm	255-031-414-1
1/4	3/8	.43	.43	1.14	.71	18 mm	255-031-438-1
5/16	1/8	.53	.49	1.38	.91	11 mm	255-035-118-1
5/16	1/4	.53	.45	1.34	.91	14 mm	255-035-114-1
5/16	3/8	.53	.47	1.36	.91	18 mm	255-035-138-1
3/8	1/8	.63	.60	1.63	1.04	15 mm	255-033-818-1
3/8	1/4	.63	.60	1.63	1.04	15 mm	255-033-814-1
3/8	3/8	.63	.55	1.60	1.04	18 mm	255-033-838-1
3/8	1/2	.63	.59	1.63	1.04	22 mm	255-033-812-1
1/2	1/4	.95	1.26	2.46	1.20	7/8	255-031-214-1
1/2	3/8	.95	1.26	2.46	1.20	7/8	255-031-238-1
1/2	1/2	.95	1.30	2.46	1.20	7/8	255-031-212-1

NOTE: Fittings must be ordered in multiples of 10 pieces. Dimensions in inches unless otherwise noted.

Push-In Fittings, NPT/ Inch For Plastic Tubes

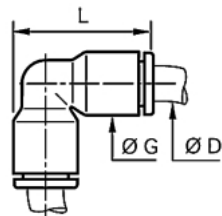
▲ Stand pipe, Male - NPT/UNF



Tube O.D.	C NPT/UNF	H1	H	F	Part Number
5/32	10-32	.14	1.24	8 mm	255-105-310-1
5/32	1/8	.57	1.02	11 mm	255-095-318-1
5/32	1/4	.59	1.04	14 mm	255-095-314-1
1/4	1/8	.61	1.18	11 mm	255-091-418-1
1/4	1/4	.57	1.12	14 mm	255-091-414-1
5/16	1/8	.43	1.16	11 mm	255-095-118-1
5/16	1/4	.39	1.12	14 mm	255-095-114-1
3/8	1/8	.65	1.75	15 mm	255-093-818-1
3/8	1/4	.67	1.42	15 mm	255-093-814-1
3/8	3/8	.61	1.42	18 mm	255-093-838-1
1/2	3/8	.37	1.22	11/16	255-091-238-1
1/2	1/2	.39	1.26	7/8	255-091-212-1

NOTE: Fittings must be ordered in multiples of 10 pieces. Dimensions in inches unless otherwise noted.

▲ Elbow union - Tube to tube

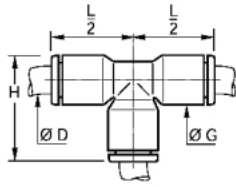


Tube O.D.	G	L	Part Number
1/8	.42	.93	255-151-800-1
5/32	.33	.75	255-155-300-1
3/16	.43	1.07	255-153-100-1
1/4	.43	.93	255-151-400-1
5/16	.53	1.16	255-455-100-1
3/8	.63	1.33	255-153-800-1
1/2	.95	1.67	255-151-200-1

NOTE: Fittings must be ordered in multiples of 10 pieces. Dimensions in inches unless otherwise noted.

Push-In Fittings, NPT/ Inch For Plastic Tubes

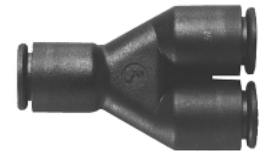
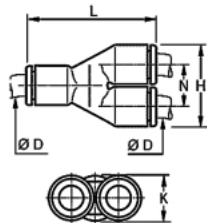
▲ Tee - Tube to Tube



Tube O.D.	G	H	L/2	Part Number
1/8	.42	.93	.73	255-161-800-1
5/32	.33	.75	.57	255-165-300-1
3/16	.43	1.07	.85	255-163-100-1
1/4	.43	.93	.73	255-161-400-1
5/16	.53	1.16	.91	255-165-100-1
3/8	.63	1.33	1.015	255-163-800-1
1/2	.95	1.67	1.20	255-161-200-1

NOTE: Fittings must be ordered in multiples of 10 pieces. Dimensions in inches unless otherwise noted.

▲ "Y" - Tube to tube

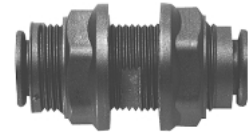
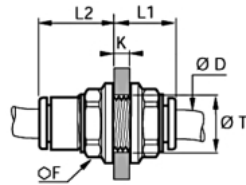


Tube O.D	H	K	L	N	Part Number
1/8	0.69	0.33	1.12	.35	255-171-800-1
5/32	0.69	0.34	1.12	.35	255-175-300-1
1/4	0.87	0.43	1.42	.45	255-171-400-1
5/16	1.10	0.53	1.77	.57	255-175-100-1
3/8	1.30	0.63	2.09	.67	255-173-800-1

NOTE: Fittings must be ordered in multiples of 10 pieces. Dimensions in inches unless otherwise noted.

Push-In Fittings, NPT/ Inch For Plastic Tubes

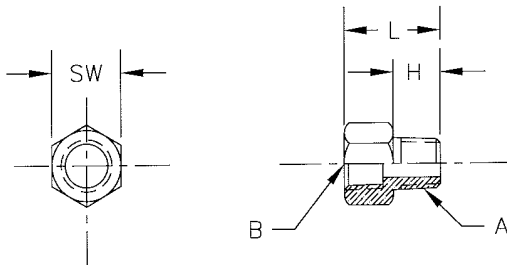
▲ Bulkhead Union



Tube O.D	Clearance Hole T	F	K	L1	L2	Part Number
5/32"	0.41	0.51	0.22	0.59	0.39	255-245-300-1
5/16"	0.61	0.71	0.57	0.98	0.53	255-245-100-1
1/8"	0.41	0.51	0.22	0.37	0.61	255-241-800-1
1/4"	0.53	0.63	0.35	0.37	0.81	255-241-400-1
1/4" - 5/32"	0.49	0.59	0.34	0.37	0.79	255-241-453-1
3/8"	0.73	0.87	0.57	0.51	1.18	255-243-800-1

NOTE: Fittings must be ordered in multiples of 10 pieces. Dimensions in inches unless otherwise noted.

◆ Male-Female Adapter, ISO G (BSPP) to Inch



Part No.	A Male Thread	B Female Thread	H	L	SW
P -046074-00000	1/8 BSPP male	1/8" NPT female	0.24	0.67	0.55
P -048362-00000	1/4 BSPP male	1/4" NPT female	0.32	0.91	0.67
P -048333-00000	3/8 BSPP male	3/8" NPT female	0.35	0.96	0.87
P -046075-00000	1/2 BSPP male	1/2" NPT female	0.39	1.16	1.06
P -048946-00000	1/8" NPT male	1/8 BSPP female	0.37	0.77	0.55
P -048946-00002	1/4" NPT male	1/4 BSPP female	0.51	1.06	0.67
P -048946-00003	3/8" NPT male	3/8 BSPP female	0.51	1.08	0.75
P -048946-00005	1/2" NPT male	1/2 BSPP female	0.85	1.44	1.06

NOTE: Fittings must be ordered in multiples of 10 pieces.

Push-In Fittings M 5–G 1/2, 4–14 mm dia. For Plastic Tubes

Technical Data

Working pressure	Vacuum to 20 bar	
Temperature range	–20 °C to +80 °C	
Material	Connector body, threaded section	Nickel plated brass
	Connector body, pipe section	PA 6.6
	Gripping teeth	Stainless steel
	O-rings	Oil-resistant rubber
	Pressure ring	Plastic



Application Area

Push-in fittings are mainly used for connecting plastic tubes to pneumatic systems for which they provide a quick, safe and compact fitting. They can also be used for temporary connections during tests and laboratory work.

Technical Information

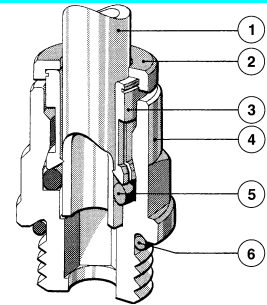
The connectors are of the push-in type which gives a quick fitting, safe connection and compact installation. Push-in fittings consist of a body, spring sleeve, O-ring and pressure ring. The plastic tube is gripped by the sharp edge of the spring sleeve, which is fitted in a conical chamber in the body.

The O-ring provides a seal between the body and plastic tube.

Elbow connector type LVT and T-connector types LTT and LLT can be turned to the desired position for the tubing after being fitted in the connection port.

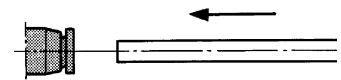
The push-in fittings for screwing into a connection port have an O-ring as a seal to the connecting surface.

1. Plastic tube
2. Pressure ring
3. Spring sleeve
4. Connector body
5. O-ring
6. O-ring



Assembly Instructions

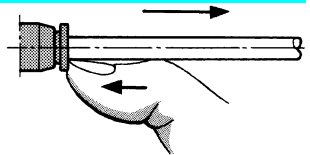
1. Cut the tube at right angles with a sharp knife or plastic tube cutter. Check that the tube has a smooth surface and is otherwise undamaged in the area where the coupling is to be fitted. Remove any scale and blow the tube clean.
2. Push the tube carefully into the connector until resistance is felt. The resistance comes from the O-ring in the connector.
3. Push and turn the tube past the O-ring into the bottom of the connector.
4. Pull the tube to make sure it is properly secured; this also strenghtens the safety grip.



Disconnection

Press the spring sleeve against the body with your thumb or a screwdriver and, at the same time, pull out the tube.

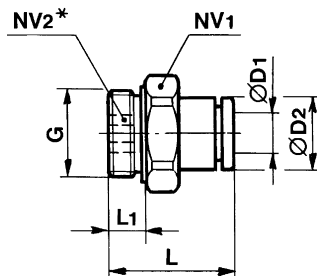
Note: Push-in fittings are intended to be permanently connected but can be connected and disconnected a number of times without the grip deteriorating.



Push-In Fittings M 5–G 1/2, 4–14 mm dia. For Plastic Tubes

Rexroth
Bosch Group

▲ Straight adapter, type LAN

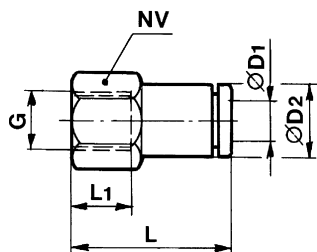


* Internal hexagon.

Tube \varnothing D [mm]	Thread G	\varnothing D2 [mm]	L	L1	NV1	NV2*	Code no.
4	M 5	8,5	17,5	3,5	8	2,5	212-100-405-0
4	M 7	8,5	17,5	4,5	10	2,5	212-100-407-0
4	G 1/8	8,5	16,5	5	13	3	212-100-418-0
4	G 1/4	8,5	16	5,5	16	3	212-100-414-0
6	M 5	10,5	19,5	3,5	10	2,5	212-100-605-0
6	M 7	10,5	18	4,5	10	3	212-100-607-0
6	G 1/8	10,5	18	5	13	4	212-100-618-0
6	G 1/4	10,5	18	5,5	16	4	212-100-614-0
8	G 1/8	13,5	26	4,5	13	5	212-100-818-0
8	G 1/4	13,5	25	5,5	16	6	212-100-814-0
8	G 3/8	13,5	23,5	5,5	20	6	212-100-838-0
10	G 1/4	16	28,5	5,5	16	7	212-101-014-0
10	G 3/8	16	23	5,5	20	8	212-101-038-0
10	G 1/2	16	26	7,5	24	8	212-101-012-0
12	G 1/4	19	33	5,5	16	7	212-101-214-0
12	G 3/8	19	32,5	5,5	20	9	212-101-238-0
12	G 1/2	19	29,5	7	24	10	212-101-212-0
14	G 3/8	21	38	5,5	22	9	212-101-438-0
14	G 1/2	21	36	7	24	10	212-101-412-0

Note: Fittings must be ordered in multiples of 10 pieces. Dimensions in mm.

▲ Straight adapter, inner thread, type LANK

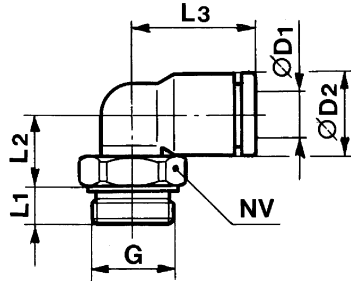


Tube \varnothing D (mm)	Thread G	D2 (mm)	L	L1	NV	Code no.
4	M 5	8,5	19,5	6,5	8	212-190-405-0
4	G 1/8	8,5	22,5	9,5	13	212-190-418-0
6	G 1/8	10,5	24,5	9,5	13	212-190-618-0
6	G 1/4	10,5	28,5	13,5	16	212-190-614-0
8	G 1/8	13,5	29	9,5	13	212-190-818-0
8	G 1/4	13,5	33	13,5	16	212-190-814-0
10	G 3/8	16	36	14	19	212-190-038-0
12	G 3/8	19	40	14	19	212-190-238-0
12	G 1/2	19	45,5	19,5	24	212-191-212-0

Note: Fittings must be ordered in multiples of 10 pieces. Dimensions in mm.

Push-In Fittings M 5–G 1/2, 4–14 mm dia. For Plastic Tubes

▲ Elbow adapter, type LVT, low



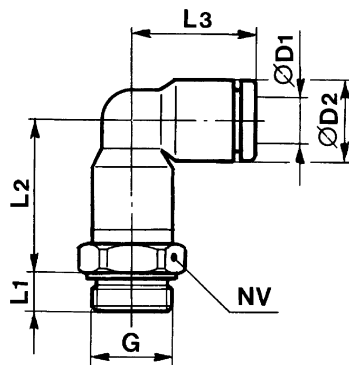
Tube \varnothing D1 [mm]	Thread G	\varnothing D2 [mm]	L1	L2	L3	NV	Code no.
4	M 5	8,5	3,5	9,3	14	8	212-200-405-0
4	M 7	8,5	4,5	9,3	14	10	212-200-407-0
4	G 1/8	8,5	5	8,8	14	13	212-200-418-0
4	G 1/4	8,5	5,5	8,8	14	16	212-200-414-0
6	M 7	10,5	4,5	10,3	16	10	212-200-607-0
6	G 1/8	10,5	5	9,8	16	13	212-200-618-0
6	G 1/4	10,5	5,5	9,8	16	16	212-200-614-0
8	G 1/8	13,5	4,5	14,8	23	13	212-200-818-0
8	G 1/4	13,5	5,5	11,8	23	16	212-200-814-0
8	G 3/8	13,5	5,5	11,8	23	20	212-200-838-0
10	G 1/4	16	5,5	15,5	26,5	16	212-201-014-0
10	G 3/8	16	5,5	14	26,5	20	212-201-038-0
10	G 1/2	16	7,5	14	26,5	24	212-201-012-0
12	G 1/4	19	5,5	15,5	31	16	212-201-214-0
12	G 3/8	19	5,5	15,5	31	20	212-201-238-0
12	G 1/2	19	7	15,5	31	24	212-201-212-0
14	G 3/8	22	5,5	23	36	20	212-201-438-0
14	G 1/2	22	7	19	36	24	212-201-412-0

Note: Fittings must be ordered in multiples of 10 pieces. Dimensions in mm.

Push-In Fittings M 5–G 1/2, 4–14 mm dia. For Plastic Tubes

Rexroth
Bosch Group

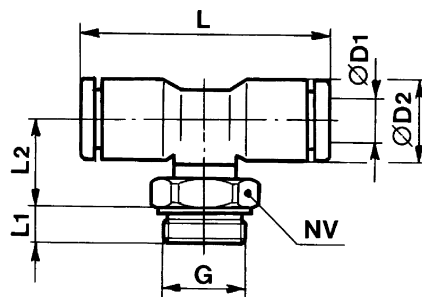
▲ Elbow adapter type LVTH, high



Tube \varnothing D1 [mm]	Thread G	\varnothing D2 [mm]	L1	L2	L3	NV	Code no.
4	M 5	8,5	3,5	18,8	14	8	212-210-405-0
4	M 7	8,5	5	18,3	14	10	212-210-407-0
4	G 1/8	8,5	5	18,3	14	13	212-210-418-0
4	G 1/4	8,5	5,5	18,3	14	16	212-210-414-0
6	M 7	10,5	5	21,8	16	10	212-210-607-0
6	G 1/8	10,5	5	21,8	16	13	212-210-618-0
6	G 1/4	10,5	5,5	21,8	16	16	212-210-614-0
8	G 1/8	13,5	4,5	29,3	23	13	212-210-818-0
8	G 1/4	13,5	5,5	26,3	23	16	212-210-814-0
8	G 3/8	13,5	5,5	26,3	23	20	212-210-838-0
10	G 1/4	16	5,5	32,5	26,5	16	212-211-014-0
10	G 3/8	16	5,5	32,5	26,5	20	212-211-038-0

Note: Fittings must be ordered in multiples of 10 pieces. Dimensions in mm.

▲ T-adapter, type LTT



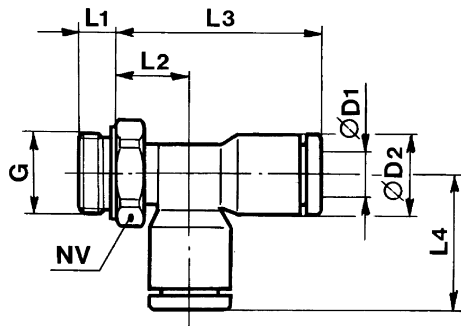
Tube \varnothing D1 [mm]	Thread G	\varnothing D2 [mm]	L	L1	L2	NV	Code no.
4	M 5	8,5	28	35	11,3	8	212-220-405-0
4	G 1/8	8,5	28	5	10,7	13	212-220-418-0
4	G 1/4	8,5	28	5,5	10,7	16	212-220-414-0
6	G 1/8	10,5	32	5	11,8	13	212-220-618-0
6	G 1/4	10,0	32	5,5	11,8	1	212-220-614-0
8	G 1/8	13,5	46	4,5	17,8	13	212-220-818-0
8	G 1/4	13,5	46	5,5	14,8	16	212-220-814-0
8	G 3/8	13,5	46	5,5	14,8	20	212-220-838-0
10	G 1/4	16	53	5,5	18	16	212-221-014-0
10	G 3/8	16	53	5,5	16	20	212-221-038-0
10	G 1/2	16	53	7,5	16	24	212-221-012-0
12	G 3/8	19	64	5,5	17,5	20	212-221-238-0
12	G 1/2	19	64	7	17,5	24	212-221-212-0
14	G 3/8	22	72	5,5	23	20	212-221-438-0
14	G 1/2	22	72	7	19	24	212-221-412-0

Note: Fittings must be ordered in multiples of 10 pieces. Dimensions in mm.

Push-In Fittings M 5–G 1/2, 4–14 mm dia. For Plastic Tubes

Rexroth
Bosch Group

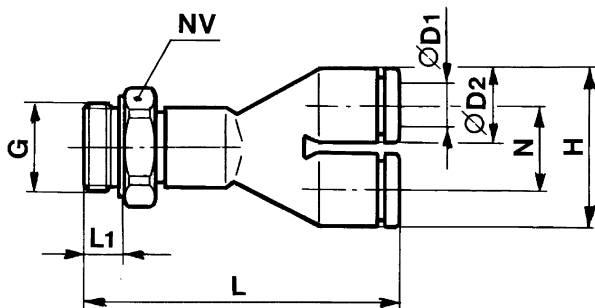
▲ L-adapter, type LLT



Tube Ø D1 [mm]	Thread G	Ø D2 [mm]	L1	L2	L3	L4	NV	Code no.
4	M 5	8,5	3,5	9	23,5	14,5	8	212-230-405-0
4	G 1/8	8,5	5	8,5	23	14,5	13	212-230-418-0
6	G 1/8	10,5	5	10	27	17,5	13	212-230-618-0
6	G 1/4	10,5	5,5	10	27	17,5	16	212-230-614-0
8	G 1/4	13,5	5,5	12	34,5	23	1	212-230-814-0
8	G 3/8	13,5	5,5	12	34,5	23	20	212-230-838-0
10	G 3/8	16	5,5	14	40,5	26,5	20	212-231-038-0
10	G 1/2	16	7,5	14	40,5	26,5	24	212-231-012-0
12	G 3/8	19	5,5	15,5	46,5	31	20	212-231-238-0
12	G 1/2	19	7	15,5	46,5	31	24	212-231-212-0

Note: Fittings must be ordered in multiples of 10 pieces. Dimensions in mm.

▲ Y-adapter, type LAY

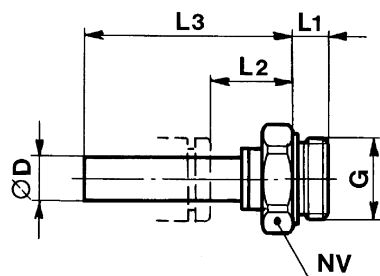


Tube Ø D1 [mm]	Thread G	Ø D2 [mm]	H	L	L1	N	NV	Code no.
4	M 5	8,5	17,5	32,5	3,5	9	8	212-240-405-0
4	G 1/8	8,5	17,5	32	5	9	13	212-240-418-0
4	G 1/4	8,5	17,5	32	5,5	9	16	212-240-414-0
6	G 1/8	10,5	21,5	39	5	11	13	212-240-618-0
6	G 1/4	10,5	21,5	39	5,5	11	16	212-240-614-0
8	G 1/8	13,5	28	54	5	14,5	13	212-240-818-0
8	G 1/4	13,5	28	55	5,5	14,5	16	212-240-814-0
10	G 1/4	16	33	63,5	6,5	17	16	212-241-014-0
10	G 3/8	16	33	63,5	6	17	19	212-241-038-0
10	G 1/2	16	33	65	7	17	24	212-241-012-0
12	G 3/8	19	39	68	6	20	19	212-241-238-0
12	G 1/2	19	39	70	7,5	20	24	212-241-212-0

Note: Fittings must be ordered in multiples of 10 pieces. Dimensions in mm.

Push-In Fittings M 5–G 1/2, 4–14 mm dia. For Plastic Tubes

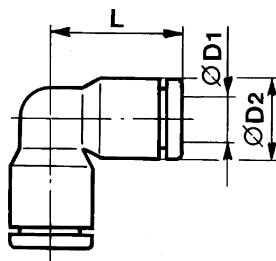
▲ Stem adapter, type LAS



Tube Ø D [mm]	Thread G	L1	L2	L3	NV	Code no.
4	M 5	3,5	14	25,5	8	212-160-405-0
4	G 1/8	5	13,5	25	13	212-160-418-0
6	G 1/8	5	13,5	27	13	212-160-618-0
6	G 1/4	5,5	13,5	27,5	16	212-160-614-0
8	G 1/4	5,5	10,5	29	16	212-160-814-0
8	G 3/8	5,5	10,5	29	20	212-160-838-0
10	G 3/8	5,5	15,5	36	20	212-161-038-0
10	G 1/2	7,5	15,5	34	24	212-161-012-0
12	G 1/2	7	12	36,5	24	212-161-212-0

Note: Fittings must be ordered in multiples of 10 pieces. Dimensions in mm.

▲ Elbow connector, type LVK

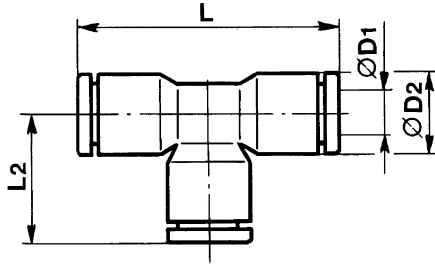


Tube Ø D1 [mm]	Ø D2 [mm]	L	Code no.
4	8,5	14,8	212-120-400-0
6	10,5	17,3	212-120-600-0
8	13,5	22,8	212-120-800-0
10	16	36,5	212-121-000-0
12	19	31	212-121-200-0
14	22	25,5	212-121-400-0

Note: Fittings must be ordered in multiples of 10 pieces. Dimensions in mm.

Push-In Fittings M 5–G 1/2, 4–14 mm dia. For Plastic Tubes

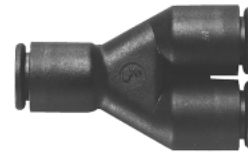
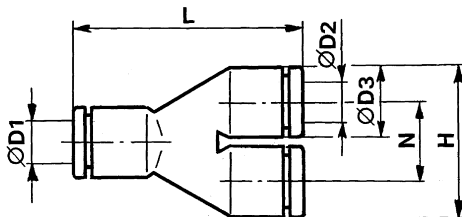
▲ T-connector, type LTK



Tube Ø D1 [mm]	Ø D2 [mm]	L	L2	Code no.
4	8,5	29	14,8	212-110-400-0
6	10,5	35	17,3	212-110-600-0
8	13,5	46	22,8	212-110-800-0
10	16	53	36,5	212-111-000-0
12	19	62	31	212-111-200-0
14	22	67	25,5	212-111-400-0

Note: Fittings must be ordered in multiples of 10 pieces. Dimensions in mm.

▲ Y-connector, type LYK

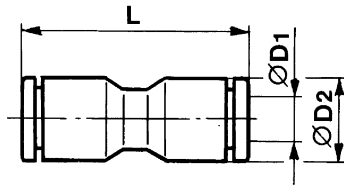


Tube Ø D1 [mm]	Ø D2 [mm]	Ø D3 [mm]	H	L	N	Code no.
4	4	8,5	17,5	28,5	9	212-180-400-0
6	4	8,5	17,5	33	9	212-180-604-0
6	6	10,5	21,5	35	11	212-180-600-0
8	6	10,5	22,5	41	11,5	212-180-806-0
8	8	13,5	28	45	14,5	212-180-800-0
10	8	13,5	16	47	14,5	212-181-008-0
10	10	16	33	53	17	212-181-000-0
6	4 x 4	8,5	22	35,5	11	893-127-500-2
12	12	19	39	57	17	212-181-200-0

Note: Fittings must be ordered in multiples of 10 pieces. Dimensions in mm.

Push-In Fittings M 5–G 1/2, 4–14 mm dia. For Plastic Tubes

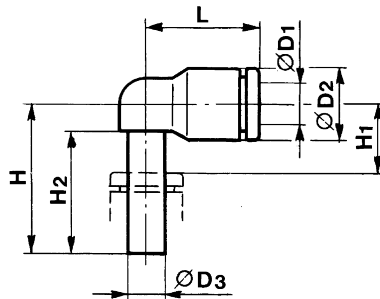
▲ **Straight connector, type LSK**



Tube Ø D1 [mm]	Ø D2 [mm]	L	Code no.
4	8,5	25	212-150-400-0
6	10,5	28,5	212-150-600-0
8	13,5	38	212-150-800-0
10	16	42	212-151-000-0
12	19	50,5	212-151-200-0
14	22	58	212-151-400-0

Note: Fittings must be ordered in multiples of 10 pieces. Dimensions in mm.

▲ **Stem elbow connector, type LVS**

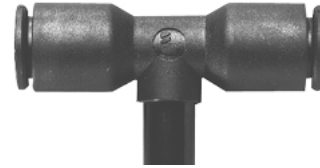
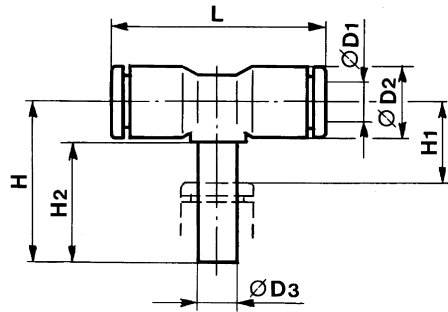


Tube Ø D1 [mm]	Tube Ø D3 [mm]	Ø D2 [mm]	H	H1	H2	L	Code no.
4	4	8,5	18,8	6	15,5	14	212-130-404-0
4	6	10,5	21,5	7	17	16	212-130-406-0
6	6	10,5	21,5	7	17	16	212-130-606-0
6	8	13,5	26,8	8	21,5	23	212-130-608-0
8	8	1,5	26,8	8	21,5	23	212-130-808-0
10	10	16	31	9,5	24,5	23,5	212-131-010-0

Note: Fittings must be ordered in multiples of 10 pieces. Dimensions in mm.

Push-In Fittings M 5–G 1/2, 4–14 mm dia. For Plastic Tubes

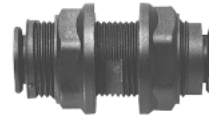
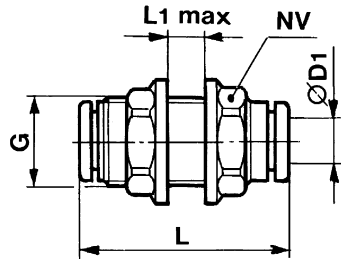
▲ Stem T-connector, type LTS



Tube \varnothing D1 [mm]	Tube \varnothing D3 [mm]	\varnothing D2 [mm]	H	H1	H2	L	Code no.
6	6	10,5	24,5	11	20,5	32	212-270-600-0
8	8	13,5	29,3	11	21,5	46	212-270-800-0

Note: Fittings must be ordered in multiples of 10 pieces. Dimensions in mm.

▲ Bulkhead connector, type LSG

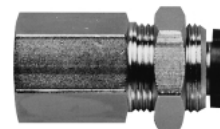
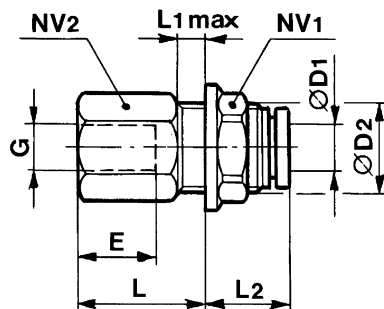


Tube \varnothing D1 [mm]	Clearance hole G min.	L	L1 max.	NV	Code no.
4	10,5	25	5,5	13	212-140-400-0
6	12,5	28,5	8,5	15	212-140-600-0
8	15,5	38,5	14,5	18	212-140-800-0
10	18,5	43	14,5	22	212-141-000-0
12	22,5	51	18,5	26	212-141-200-0
14	25,5	58	20,5	29	212-141-400-0

Note: Fittings must be ordered in multiples of 10 pieces. Dimensions in mm.

Push-In Fittings M 5–G 1/2, 4–14 mm dia. For Plastic Tubes

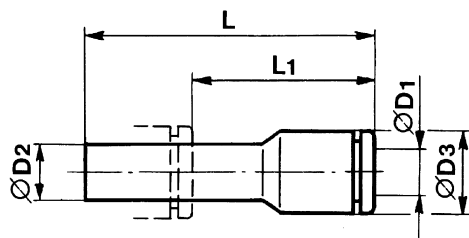
▲ Bulkhead adapter, with internal thread, type LSGG



Tube \varnothing D1 [mm]	Thread G	\varnothing D2 min [mm]	E	L	L1 max.	L2	NV1	NV2	Code no.
4	1/8	10,5	9,5	18,5	7	10,5	13	13	212-260-418-0
6	1/8	12,5	9,5	18,5	8	10,5	15	15	212-260-618-0
6	1/4	12,5	13,5	21,5	7	14,5	13	17	212-260-614-0
8	1/4	15,5	13,5	22,5	8	14,5	18	17	212-260-814-0
10	3/8	18,5	14	24,5	8,5	14,5	22	22	212-261-038-0
12	1/2	22,5	19,5	30	8,5	18,5	26	26	212-261-212-0

Note: Fittings must be ordered in multiples of 10 pieces. Dimensions in mm.

▲ Reducer connector, type LRED

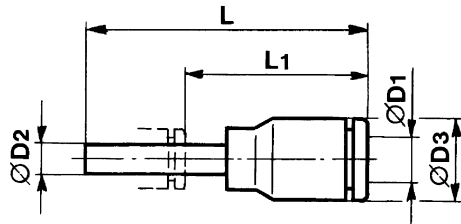


Tube \varnothing D1 [mm]	Tube \varnothing D2 [mm]	\varnothing D3 [mm]	L	L1	Code no.
4	6	8,5	37,5	23,5	212-170-604-0
4	8	8,5	37,5	19	212-170-804-0
4	10	10,5	38	18	212-171-004-0
6	8	10,5	37,5	20	212-170-806-0
6	10	10,5	38	17,5	212-171-006-0
6	12	13,5	48	23	212-171-206-0
8	10	13,5	49	28,5	212-171-008-0
8	12	13,5	49	24,5	212-171-208-0
8	14	16	52	26	212-171-408-0
10	12	16	51	26,5	212-171-210-0
10	14	16	51	27	212-171-410-0
12	14	19	55,5	30	212-171-412-0

Note: Fittings must be ordered in multiples of 10 pieces. Dimensions in mm.

Push-In Fittings M 5–G 1/2, 4–14 mm dia. For Plastic Tubes

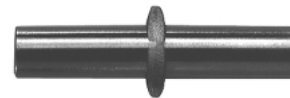
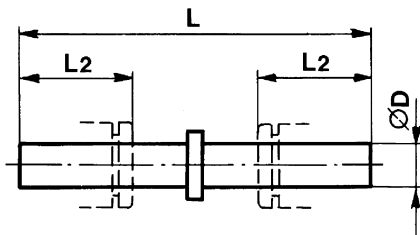
▲ Inserter connector, type LINC



Tube Ø D1 [mm]	Tube Ø D2 [mm]	Ø D3 [mm]	L	L1	Code no.
6	4	10,5	35	23	212-300-406-0

Note: Fittings must be ordered in multiples of 10 pieces. Dimensions in mm.

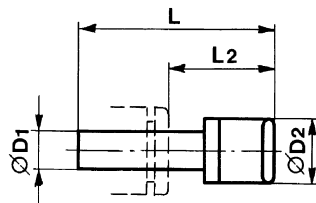
▲ Male connector, type LS



Tube Ø D [mm]	L	L2	Code no.
4	34,5	12	212-310-400-0
6	38,5	14	212-310-600-0
8	41	18,5	212-310-800-0
10	51,5	20,5	212-311-000-0
12	60	24,5	212-311-200-0
14	69,5	25,5	212-311-400-0

Note: Fittings must be ordered in multiples of 10 pieces. Dimensions in mm.

▲ Plug, type LB



Tube Ø D1 [mm]	Ø D2 [mm]	L	L2	Code no.
4	4	30	15,5	212-320-400-0
6	8	33	16,5	212-320-600-0
8	10	35	17,5	212-320-800-0
10	12	42	21	212-321-000-0
12	14	45	22	212-321-200-0
14	16	49	23,5	212-321-400-0

Note: Fittings must be ordered in multiples of 10 pieces. Dimensions in mm.

Stainless Steel Fittings, Inch

Inch Series, 5/32 to 1/2 inch

Rexroth
Bosch Group

Technical Data - Stainless Steel Push-in Fittings

Sizes		5/32" to 1/2" NPT
Max. pressure	psi	290
	bar	20
Temp. range	F	-4 to 248°
	C	-20 to 120°
Materials		
	body	stainless steel 316L
	O-rings	Fluoroelastomer FKM (FPM)
	collar	stainless steel

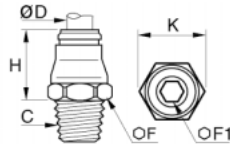


Applications

Made from stainless steel, useful in handling aggressive fluids such as acids, alcohols, and hydrocarbons, and in exposed environments.

Note: All dimensions are given in inches unless otherwise indicated.

Male Connector-Tube to NPT



Dimensions						
ØD	C	F	F1	H	K	Wgt. (oz.)
5/32	NPT1/8	0.43	0.12	0.57	0.47	0.28
5/16	NPT1/8	0.59	0.20	0.75	0.65	0.60
5/16	NPT1/4	0.59	0.24	0.71	0.65	0.63
3/16	NPT1/8	0.39	0.12	0.61	0.43	0.35
3/16	NPT1/4	0.55	0.12	0.61	0.59	0.56
1/4	NPT1/8	0.51	0.16	0.75	0.55	0.42
1/4	NPT1/4	0.55	0.16	0.69	0.59	0.60
3/8	NPT1/4	0.75	0.24	0.98	0.83	1.06
3/8	NPT3/8	0.75	0.28	0.94	0.83	1.13
1/2	NPT1/4	0.87	0.28	1.02	0.94	1.27
1/2	NPT3/8	0.87	0.31	0.98	0.94	1.34
1/2	NPT1/2	0.87	0.39	0.98	0.94	1.66

Part numbers			
Tube size	Thread	Pack size	Part number
5/32	NPT1/8	2	182-339-280-0
5/16	NPT1/8	2	182-339-280-1
5/16	NPT1/4	2	182-339-280-2
3/16	NPT1/8	2	182-339-280-3
3/16	NPT1/4	2	182-339-280-4
1/4	NPT1/8	2	182-339-280-5
1/4	NPT1/4	2	182-339-280-6
3/8	NPT1/4	2	182-339-280-7
3/8	NPT3/8	2	182-339-280-8
1/2	NPT1/4	2	182-339-280-9
1/2	NPT3/8	2	182-339-281-0
1/2	NPT1/2	2	182-339-281-1

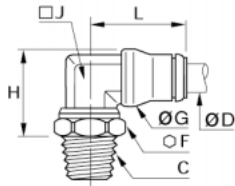
Note: Order in multiples of two per part number, due to package size. Dimensions in inches unless otherwise noted.

Stainless Steel Fittings, Inch

Inch Series, 5/32 to 1/2 inch

Rexroth
Bosch Group

▲ Compact Male Elbow-Tube to NPT



Dimensions							
ØD	C	F	ØG	H	J	L	Wgt. (oz.)
5/32	NPT1/8	0.51	0.39	0.69	0.28	0.75	0.53
5/16	NPT1/8	0.51	0.59	0.98	0.43	0.94	1.02
5/16	NPT1/4	0.55	0.59	0.94	0.43	0.94	1.13
3/16	NPT1/8	0.39	0.39	0.81	0.28	0.77	0.56
3/16	NPT1/4	0.55	0.39	0.81	0.28	0.77	0.78
1/4	NPT1/8	0.51	0.47	0.85	0.35	0.91	0.71
1/4	NPT1/4	0.55	0.47	0.85	0.35	0.91	0.92
3/8	NPT1/4	0.67	0.69	1.12	0.51	1.20	1.83
3/8	NPT3/8	0.75	0.69	1.12	0.51	1.20	1.94
1/2	NPT1/4	0.87	0.79	1.34	0.59	1.30	2.57
1/2	NPT3/8	0.87	0.79	1.34	0.59	1.30	2.47
1/2	NPT1/2	0.87	0.79	1.34	0.59	1.30	2.68

Part numbers			
Tube	Thread	Pack	Part number
5/32	NPT1/8	2	182-339-282-0
5/16	NPT1/4	2	182-339-282-1
5/32	NPT1/8	2	182-339-282-2
3/16	NPT1/4	2	182-339-282-3
1/4	NPT1/8	2	182-339-282-4
1/4	NPT1/4	2	182-339-282-5
3/8	NPT1/4	2	182-339-282-6
3/8	NPT3/8	2	182-339-282-7
1/2	NPT1/4	2	182-339-282-8
1/2	NPT3/8	2	182-339-282-9
1/2	NPT1/2	2	182-339-283-0

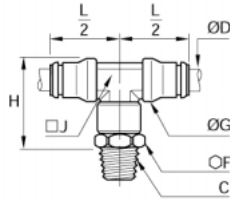
Note: Order in multiples of two per part number, due to package size. Dimensions in inches unless otherwise noted.

Stainless Steel Fittings, Inch

Inch Series, 5/32 to 1/2 inch

Rexroth
Bosch Group

▲ Male Branch Tee-Tube to NPT

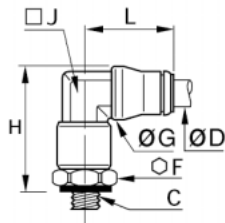


Dimensions							
ØD	C	F	ØG	H	J	L	Wgt. (oz)
5/32	NPT1/8	0.43	0.39	0.87	0.28	1.54	0.74
5/16	NPT1/8	0.55	0.59	1.34	0.43	1.89	1.48
5/16	NPT1/4	0.55	0.59	1.34	0.43	1.89	1.66

Part numbers			
Tube	Thread	Pack	Part number
5/32	NPT1/8	2	182-339-284-0
5/16	NPT1/8	2	182-339-284-1
5/16	NPT1/4	2	182-339-284-2

Note: Order in multiples of two per part number, due to package size. Dimensions in inches unless otherwise noted.

▲ Male Elbow-Tube to 10-32



Dimensions							
ØD	C	F	ØG	H	J	L	Wgt. (oz)
5/32	10-32	0.39	0.39	0.98	0.28	0.77	0.71

Part numbers			
Tube	Thread	Pack	Part number
5/32	10-32	2	182-339-286-0

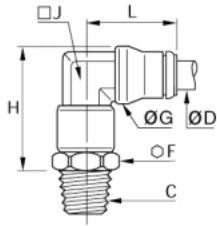
Note: Order in multiples of two per part number, due to package size. Dimensions in inches unless otherwise noted.

Stainless Steel Fittings, Inch

Inch Series, 5/32 to 1/2 inch

Rexroth
Bosch Group

▲ Male Elbow-Tube to NPT

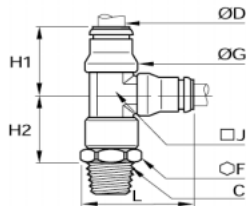


Dimensions							
ØD	C	F	ØG	H	J	L	Wgt. (oz)
5/32	NPT1/8	0.43	0.39	1.00	0.28	0.73	0.56
5/16	NPT1/8	0.55	0.59	1.34	0.43	0.94	1.16
5/16	NPT1/4	0.55	0.59	1.34	0.43	0.94	1.38

Part numbers			
Tube	Thread	Pack	Part number
5/32	NPT1/8	2	182-339-288-0
5/16	NPT1/8	2	182-339-288-1
5/16	NPT1/4	2	182-339-288-2

Note: Order in multiples of two per part number, due to package size. Dimensions in inches unless otherwise noted.

▲ Male Run Tee-Tube to NPT



Dimensions								
ØD	C	F	ØG	H1	H2	J	L	Wgt. (oz)
5/32	NPT1/8	0.43	0.39	0.75	0.83	0.28	0.98	0.71
5/16	NPT1/8	0.55	0.59	0.94	1.04	0.43	1.20	1.76
5/16	NPT1/4	0.55	0.59	0.94	1.04	0.43	1.20	1.90

Part numbers			
Tube	Thread	Pack	Part number
5/32	NPT1/8	2	182-339-290-0
5/16	NPT1/8	2	182-339-290-1
5/16	NPT1/4	2	182-339-290-2

Note: Order in multiples of two per part number, due to package size. Dimensions in inches unless otherwise noted.

Stainless Steel Fittings, Metric

M 5-G 1/2, 4–14 mm dia.

Technical Data - Stainless Steel Push-in Fittings

Sizes		M 5-G 1/2, 4-14 mm dia.
Max. pressure	psi	290
	bar	20
Temp. range	F	-4 to 248°
	C	-20 to 120°
Materials	body	stainless steel 316L
	O-rings	Fluoroelastomer FKM (FPM)
	collar	stainless steel

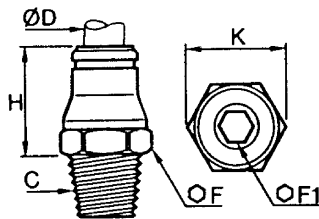


Applications

Made from stainless steel, useful in handling aggressive fluids such as acids, alcohols, and hydrocarbons, and in exposed environments.

Note: All dimensions are given in inches unless otherwise indicated.

Straight adapter, type APAN



* Internal hexagon.

Tube Ø D [mm]	Thread C	F	F1	H	K	Weight [kg]	Code number
4	M 5	10	2,5	17	11	0,006	254-400-405-0
4	BSP 1/8	10	3	14,5	11	0,008	254-400-418-0
4	BSP 1/4	14	3	14,5	15	0,014	254-400-414-0
6	BSP 1/8	13	4	18	14	0,012	254-400-618-0
6	BSP 1/4	14	4	16,5	15	0,016	254-400-614-0
8	BSP 1/8	15	4	19	16,5	0,016	254-400-818-0
8	BSP 1/4	15	6	18	16,5	0,018	254-400-814-0
8	BSP 3/8	17	6	18,5	18,5	0,026	254-400-838-0
10	BSP 1/4	19	6	24	21	0,030	254-401-014-0
10	BSP 3/8	19	7	22,5	21	0,032	254-401-038-0
12	BSP 1/4	22	7	25	24	0,038	254-401-214-0
12	BSP 3/8	22	8	24	24	0,042	254-401-238-0
12	BSP 1/2	22	10	23	24	0,048	254-401-212-0

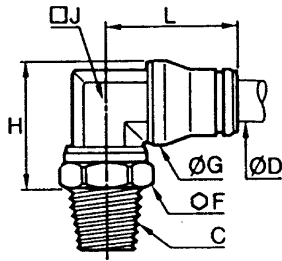
Materials: Stainless steel BS 316 S / Viton. Order in multiples of one. Dimensions in mm.

Stainless Steel Fittings, Metric

M 5–G 1/2, 4–14 mm dia.

Rexroth
Bosch Group

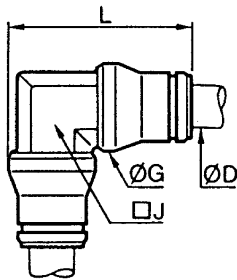
▲ Elbow adapter, type APVT



Tube \varnothing D [mm]	Thread C	F	G	H	J	L	Weight [kg]	Code no.
4	BSP 1/8	13	10	18	7	17	0,014	254-410-418-0
4	BSP 1/4	17	10	19,5	7	16,5	0,026	254-410-414-0
6	BSP 1/8	13	12	21,5	9	20,5	0,020	254-410-618-0
6	BSP 1/4	14	12	21,5	9	20,5	0,028	254-410-614-0
8	BSP 1/8	14	15	24	11	22	0,028	254-410-818-0
8	BSP 1/4	14	15	24	11	22	0,034	254-410-814-0
10	BSP 1/4	17	17,5	28,5	13	27,5	0,046	254-411-014-0
10	BSP 3/8	19	17,5	28,5	13	27,5	0,054	254-411-038-0
12	BSP 1/4	22	20	33,5	15	30	0,070	254-411-214-0
12	BSP 3/8	22	20	33,5	15	30	0,060	254-411-238-0
12	BSP 1/2	22	20	33,5	15	33	0,082	254-411-212-0

Materials: Stainless steel BS 316 S / Viton. Order in multiples of one. Dimensions in mm.

▲ Elbow connector, type APVK



Tube \varnothing D [mm]	G	J	L	Weight [kg]	Code no.
4	10	7	21,5	0,010	254-420-400-0
6	12	9	26,5	0,016	254-420-600-0
8	15	11	29,5	0,026	254-420-800-0
10	17,5	13	36,5	0,042	254-421-000-0
12	20	15	40	0,052	254-421-200-0

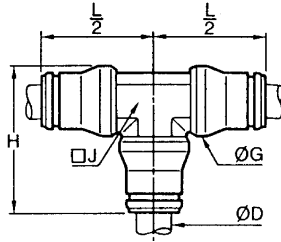
Materials: Stainless steel BS 316 S / Viton. Order in multiples of one. Dimensions in mm.

Stainless Steel Fittings, Metric

M 5-G 1/2, 4-14 mm dia.

Rexroth
Bosch Group

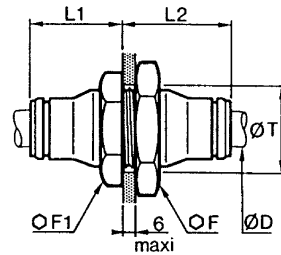
▲ T-connector, type APTK



Tube Ø D [mm]	G	H	J	L/2	Weight [kg]	Code no.
4	10	22	7	17	0,016	254-430-400-0
6	12	26	9	20	0,024	254-430-600-0
8	15	29,5	11	22	0,036	254-430-800-0
10	17,5	36,5	13	27,5	0,056	254-431-000-0
12	20	40	15	33	0,068	254-431-200-0

Materials: Stainless steel BS 316 S / Viton. Order in multiples of one. Dimensions in mm.

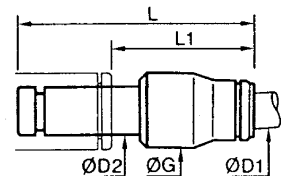
▲ Bulkhead- / Straight connector, type APSG



Tube Ø D [mm]	F	F1	L1	L2	T	Weight[kg]	Code no.
4	13	13	13,5	19,5	13	0,017	254-440-400-0
6	17	19	16,5	21,5	14	0,028	254-440-600-0
8	19	19	18	24	16	0,036	254-440-800-0
10	27	22	21,5	27,5	21	0,058	254-441-000-0
12	24	24	24	29	23	0,072	254-441-200-0

Materials: Stainless steel BS 316 S / Viton. Order in multiples of one. Dimensions in mm.

▲ Reducer connector, type APRED



Tube Ø D1 [mm]	Tube Ø D2 [mm]	G	L	L1	Weight [kg]	Code no.
4	6	13	42	28	0,012	254-450-604-0
4	8	13	42	28	0,015	254-450-804-0
6	8	15	45	27	0,016	254-450-806-0
6	10	15	49	27	0,024	254-451-006-0
8	10	18	52	30	0,027	254-451-008-0
8	12	18	53	30	0,033	254-451-208-0
10	12	22	58	35	0,042	254-451-210-0

Materials: Stainless steel BS 316 S / Viton. Order in multiples of one. Dimensions in mm.

Plastic Tubing

Inch Series

Rexroth
Bosch Group

◆ Polyurethane and Polyethylene Plastic Tubing

	Polyethylene	Polyurethane
Temperature range	-40° F to +302° F	-40° F to +329° F
Diameter tolerances	+/-0.004" - all sides	+/-0.005" - all sides
Resistance		
Abrasion	Fair	Excellent
Fungus	Good	Good
Kinking	Poor	Excellent
Moisture	Good	Good
UV rays	Poor	Fair
Fitting compatibility		
Push-in	Excellent	Good (+90 Durometer)
Compression	Excellent	Poor
Barbed	Poor	Excellent
Criteria		
Clarity	Translucent	Clear
FDA	Yes (natural only)	No
Flexibility	Good	Excellent



▶ **NOTE:** Polyurethane is softer than polyethylene, as noted in Bend radius.
Other tube sizes, colors and materials are available on request. Please contact Bosch Rexroth Pneumatics for details.

Part Numbers: Tubing Size (Inch)	Blue Polyurethane Part Number	Blue Polyethylene Part Number	Clear Polyurethane Part Number	Clear Polyethylene Part Number	Bend Radius	Max. Pressure (psi)		Package Qty. (feet)
						75° F	150° F	
						1/8 OD x .066 ID	282-932-212-0	
1/4 OD x .160 ID	282-932-244-0	—	—	—	3/8	194	97	100
3/8 OD x .245 ID	282-932-264-0	—	—	—	7/8	147	74	100
1/2 OD x .320 ID	282-932-272-0	—	—	—	1 1/8	140	70	50
1/8 OD x .062 ID	—	282-931-214-0	—	—	1/2	120	103	100
1/4 OD x .170 ID	—	282-931-244-0	—	—	1 1/4	173	69	100
3/8 OD x .250 ID	—	282-931-264-0	—	—	2	192	77	100
1/2 OD x .375 ID	—	282-931-274-0	—	—	2 1/2	123	50	100
1/8 OD x .066 ID	—	—	282-932-412-0	—	1/4	233	116	50
1/4 OD x .160 ID	—	—	282-932-444-0	—	3/8	194	97	100
3/8 OD x .245 ID	—	—	282-932-464-0	—	7/8	147	74	100
1/2 OD x .320 ID	—	—	282-932-472-0	—	1 1/8	140	70	50
1/8 OD x .062 ID	—	—	—	282-931-414-0	1/2	120	103	100
1/4 OD x .170 ID	—	—	—	282-931-444-0	1 1/4	173	69	100
3/8 OD x .250 ID	—	—	—	282-931-464-0	2	192	77	100
1/2 OD x .375 ID	—	—	—	282-931-474-0	2 1/2	123	50	100

NOTE:
Available only in lengths specified in packages above.

Plastic tubes

Working pressure, max. See table
 Ambient temperature range See table
 Pressure medium Air or oil

Materials See table
 Dimensions in mm.



Code No. for Plastic Tubes, quality PA medium hard								
Dimension	Tube length [m]	Silver	Blue	Black	Colourless	Max. press. bar +20 °C	Max. press. bar +50 °C	Min. bend. radius
4 x 0,75	25	281-550-402-0	281-520-402-0	–	–	35	25	25
	50	–	–	281-530-405-0	281-540-405-0			
	100	281-550-410-0	281-520-410-0	–	–			
5 x 0,9	25	–	281-520-502-0	–	–	35	25	30
	50	–	–	–	–			
	100	–	281-520-510-0	–	–			
6 x 1	25	281-550-602-0	281-520-602-0	–	–	30	20	35
	50	–	–	281-530-605-0	281-540-605-0			
	100	281-550-610-0	281-520-610-0	–	–			
8 x 1	25	281-550-802-0	281-520-802-0	–	–	25	14	55
	50	–	–	281-530-805-0	281-540-805-0			
	100	281-550-810-0	281-520-810-0	–	–			
10 x 1	25	281-551-002-0	281-521-002-0	–	–	20	11	60
	50	–	–	281-531-005-0	281-541-005-0			
	100	281-551-010-0	281-521-010-0	–	–			
12 x 1,5	25	281-551-202-0	281-521-202-0	–	–	15	11	75
	50	–	–	281-531-205-0	281-541-205-0			
	100	281-551-210-0	281-521-210-0	–	–			
14 x 1,5	25	281-551-402-0	281-521-402-0	–	–	15	11	80
	50	–	–	281-531-405-0	281-541-405-0			
	100	–	–	828-976-944-4	–			
15 x 1,5	25	281-551-602-0	281-521-602-0	–	–	15	11	90
	50	–	281-521-605-0	–	–			
	100	–	–	–	–			
22 x 2,5	25	281-552-202-0	281-522-202-0	–	–	15	10	125
	50	–	281-522-205-0	–	–			
	100	–	–	–	–			

Ambient temperature range: –40 °C to +80 °C

Code No. for plastic tubes, quality PUR soft					
Dimension	Blue 50 m	Black 50 m	Max. press. [bar] +20 °C	Max. press. [bar] +50 °C	Min. bend. radius
4 x 0,85	828-976-960-4	828-976-959-4	12	9	10
5 x 1	828-976-953-4	828-976-950-4	12	9	10
6 x 1	828-976-954-4	828-976-951-4	12	9	15
8 x 1	828-976-955-4	828-976-952-4	10	8	25

Ambient temperature range: –40 °C to +60 °C.

Code No. for plastic tubes, quality PA soft							
Dimension	Colourless 50 m	Black 50 m	Blue 50 m	Green 50 m	Red 50 m	Max. press. [bar]	Min. bend. radius
4 x 0,65	828-976-915-4	828-976-914-4	828-976-911-4	828-976-913-4	828-976-912-4	8	10
10 x 1	–	–	828-976-908-4	–	–	8	60

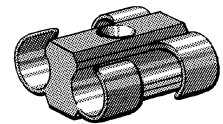
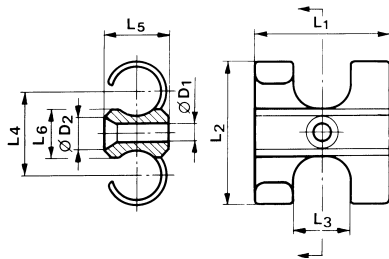
Ambient temperature range: –40 °C to +60 °C.

Code No. for spiral tubes, quality PA medium hard					
Dimension	Blue	Spiral dimensions: min. working length, [mm]	Spiral dimensions: max. working length, [mm]	Spiral dimensions: spiral inner dia. [mm]	Actual tube length [mm]
6 x 1	815-606-006-0	160	6000	102	8900
8 x 1	815-608-006-0	210	6000	102	8900
10 x 1	815-610-006-0	200	6000	132	8900

Ambient temperature range: -40 °C to +80 °C.

Code No. for teflon tubes				
Tube \varnothing x wall	Max. press. [bar] +20 °C	Max. press. [bar] +50 °C	Min. bend. Radius [mm]	Code no. 25 m length
4 x 0,75	20	12	40	281-590-402-0
6 x 1	20	12	50	281-590-602-0
8 x 1	15	10	70	281-590-802-0
10 x 1	12	7	120	281-591-002-0
12 x 1	10	6	180	281-591-202-0

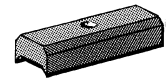
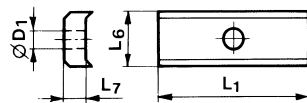
▲ T-clips for tube / hose 4-25 mm dia.



Code no. Clips	For tube dia.	\varnothing D1 [mm]	\varnothing D2 [mm]	L1	L2	L3	L4	L5	L6
818-604-000-0	4-5	3	6	18	15	6	10	7	7
818-606-000-0	6-7	3	6	20	20	8	12	10	8
818-608-000-0	8-9	4	8	24	25	10	15	12	10
818-610-000-0	10-11	4	8	28	31	12	18	15	11
818-612-000-0	12-14	4	9	35	36	14	21	17	12
818-616-000-0	15-17	5	10	42	43	17	25	20	14
818-618-000-0	18-21	6	12	49	52	20	31	23	16
818-622-000-0	22-25	7	13	63	65	25	39	29	21

Material: plastic. Order in multiples of 50.

▲ Distance for T-clips



Code no. Distance	For tube dia.	\varnothing D1 [mm]	L1	L6	L7
818-708-000-0	8-9	4	24	10	5
818-710-000-0	10-11	4	28	11	5
818-712-000-0	12-14	4	35	12	5
818-716-000-0	15-17	5	42	14	5
818-718-000-0	18-21	6	49	16	5
818-722-000-0	22-25	7	63	21	6

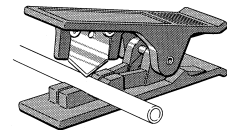
Material: plastic. Order in multiples of 50.

▲ Plastic tube cutter

For tubes \varnothing [mm]
4-16

Code no.

815-700-710-0

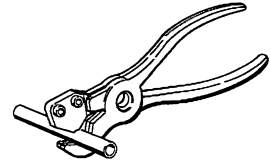


▲ Plastic tube cutter

For tubes \varnothing [mm]
4-22

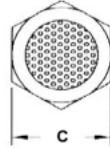
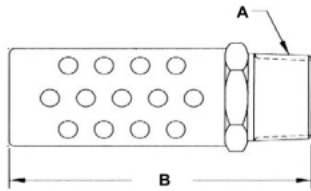
Code no.

899-700-240-2



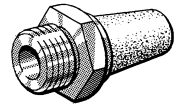
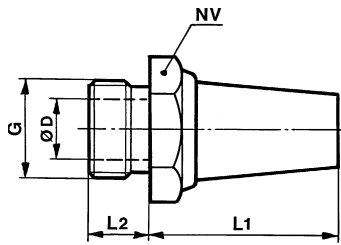
NPT Mufflers

Male threads



Dimensions [inches]					
A Thread [NPT]	B	C	Part Number	Wgt. [oz.]	Flow [SCFM] at 90 psi
1/8-27	1.38	0.44	P -049256-00006	.02	44
1/4-11 1/2	1.75	0.56	P -049256-00003	.05	96
3/8-18	2.25	0.69	P -049256-00001	.08	200
3/4-14	3.16	1.06	P -049256-00002	.30	560
1-11 1/2	3.93	1.31	P -049256-00000	.50	800
1 1/4-11 1/2	4.50	1.69	P -049256-00004	.85	1120

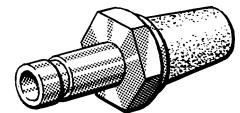
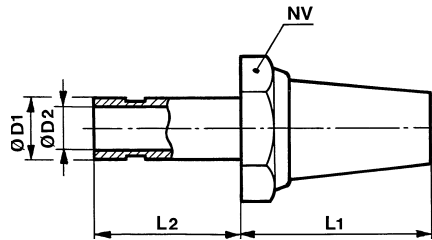
▲ Silencer, sintered bronze, with thread



Code no.	G to ISO 228/1	NV	Ø D [mm]	L1	L2	Weight [kg]	Sound pressure level to DIN 45 635	Reduction in flow %
532-400-006-0	M 5	7	2,5	15	5	0,004	65	–
814-000-070-0	M 7	10	4	15	5	0,006	70	–
532-401-110-0	G 1/8	13	6	18	6	0,010	75	6
532-401-111-0	G 1/4	17	8,5	25	8	0,020	80	22
532-401-112-0	G 3/8	22	12	34	10	0,050	85	41
532-401-113-0	G 1/2	27	14,5	44	12	0,080	85	18
532-401-114-0	G 3/4	32	19	66	14	0,130	85	20
532-401-115-0	G 1	41	25	66	16	0,180	90	22

Dimensions in mm. Materials; Sintered bronze, thread in brass.
Working pressure p max.: 10 bar.
Ambient temperature range: –25 °C to +80 °C.

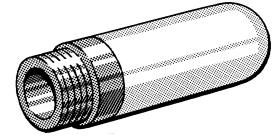
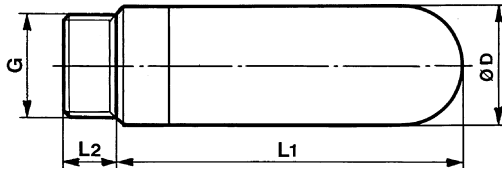
▲ Silencer, sintered bronze, with male stem



Code no.	Ø D1 [mm]	Ø D2 [mm]	L1	L2	NV	Flow rate max. [l/min.]
824-004-000-0	4	2,5	16	17	Ø 10	360
824-005-000-0	5	3	18	19	13	600
824-006-000-0	6	4	18	19	13	900
824-008-000-0	8	6	25	19	17	2100

Dimensions in mm. Materials; Sintered bronze, stem in brass.
Working pressure p max.: 10 bar.
Ambient temperature range: –20 °C to +70 °C.

▲ Silencer, porous polyethene, with thread



Code no.	G to ISO 228/1	L1	L2	Ø D [mm]	Sound pressure level to DIN 45 635	Reduction in flow %
438-100-000-0	M 5	17	4,5	6,5	55	3,5
438-110-000-0	G 1/8	29	5	13	69	1
438-120-000-0	G 1/4	36	7	17	68	8,5
438-125-000-0	G 3/8	58	11	19	69	27
438-130-000-0	G 1/2	68	11	24	68	17
438-140-000-0	G 3/4	117	16,5	39	72	31
438-150-000-0	G 1	140	20	50	76	18

Dimensions in mm. Materials: PP, PE porous.
Working pressure p max.: 10 bar.
Ambient temperature range: -25 °C to +50 °C.

◆ Exhaust Choke with Silencer

Type	Exhaust choke
Working pressure p max.	10 bar
Sound pressure level to DIN 45 633	See table
Nominal flow rate, Qn at 6 bar, Δp = 1 bar	See table
Ambient temperature range	-25 °C to +80 °C
Medium	Compressed air, lubricated or non-lubricated
Weight	See table

Dimensions in mm. Materials: Banjo bolt
Silencer
Seals

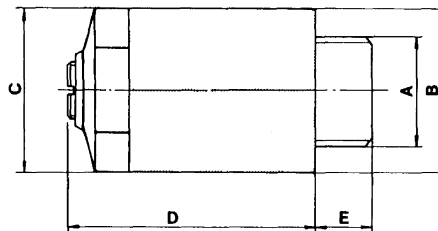
Brass, nickel plated
Stainless steel
NBR



➔ Code No.

	ND	Ports*	Sound pressure level	Qn [NI/min.]	Weight [kg]	Code no.
	4	G 1/8	76 dB (A)	0 - 800	0,025	334-105-110-0
	7	G 1/4	77 dB (A)	0 - 1660	0,042	334-105-111-0
	10	G 3/8	80 dB (A)	0 - 3240	0,085	334-105-112-0
	12	G 1/2	87 dB (A)	0 - 4750	0,129	334-105-113-0

* To ISO 228/1.



ND	A	B dia.	C	D max.	E
4	G 1/8	16	A/F 14	24,5	7
7	G 1/4	20	A/F 17	27,5	10
10	G 3/8	25	A/F 19	35	10
12	G 1/2	30	A/F 24	40	12

Exhaust cap

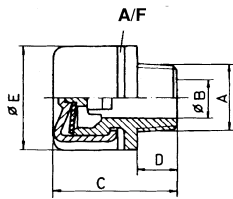


Fig. 1

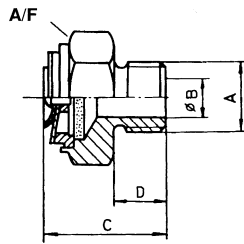
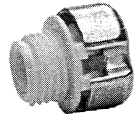


Fig. 2

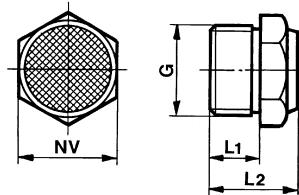


A/F = SW

Code no.	Thread A	Fig.	B	C	D	E	SW
899-470-170-0	R 1/8	1	5	19	6,5	15	14
899-470-190-0	R 1/4	1	8	20,5	8	20	19
899-470-120-0	G 3/8	2	9	30	12	-	27

Material: Fig. 1 Plastic/Fig. 2 Steel.

Filter plug, type F



The filter plug shall only be used for ventilation due to limited flow capacity.

Code no.	Thread	L1	L2	NV	Type
814-500-050-0	M5	5	11	7	F 05
814-500-180-0	G 1/8	5	12	13	F 18
814-500-140-0	G 1/4	7	14	17	F 14
814-500-380-0	G 3/8	10	18	22	F 38
814-500-120-0	G 1/2	12	20	27	F 12
814-500-340-0	G 3/4	14	23	32	F 34
814-500-100-0	G 1	16	26	41	F 10

Dimensions in mm. Materials: Brass and sintered bronze.

Flow Control Valve

Right Angle - Inch Series

Rexroth
Bosch Group

Right Angle-for Inch and Metric

Type	Right Angle - for Push-In Fittings or Threaded Inlet
Supply Pressure	150 PSIG (10 bar)
Cracking Pressure	Check Valve: 7.5 PSIG (0.5 Bar)
Temperatures	15° to 160°F (-9° to 71°C)
Media	Air or inert gas
Materials:	
Body	Nickel Plated Brass
Swivel Housing	Anodized Aluminum
Seals	Buna-N
Spring	Stainless Steel
Needle	10-32, 1/8", 1/4" Stainless Steel 3/8", 1/2" Nickel Plated Brass



Right Angle - Inch Series

Operating Characteristics

Valves Mount Directly on Cylinder
Nickel Plated Brass For Corrosion
Spring Loaded Check Valve
Thread Sealant on Male Threads
360° Swivel Body
Compact Design

Part numbers

Model Size	Threaded Style	
	Slot Adjust	Knob Adjust
10-32 UNF	540-601-600-1	540-611-600-1
1/8" NPTF	540-602-600-1	540-612-600-1
1/4" NPTF	540-603-600-1	540-613-600-1
3/8" NPTF	540-604-600-1	540-614-600-1
1/2" NPTF	540-605-600-1	540-615-600-1

Part numbers

Model Size	Push-In Fitting*	
	Slot Adjust	Knob Adjust
10-32 UNF X 5/32" tube	540-621-600-1	—
1/8" NPTF X 1/4" tube	540-622-600-1	540-632-600-1
1/4" NPTF X 1/4" tube	540-623-600-1	540-633-600-1
3/8" NPTF X 3/8" tube	540-624-600-1	540-634-600-1

*Push-in fitting not available in 1/2" NPTF size.

Tubing tolerances for push-in fittings are:

±0.2mm (.008") except for 1/4" OD tubing, +0.15/-0.35mm (+.0059"/-.0137")

Push-in fittings suitable for use with nylon, polyethylene, and soft copper tubing; not for use with polyurethane or PVC tubing.

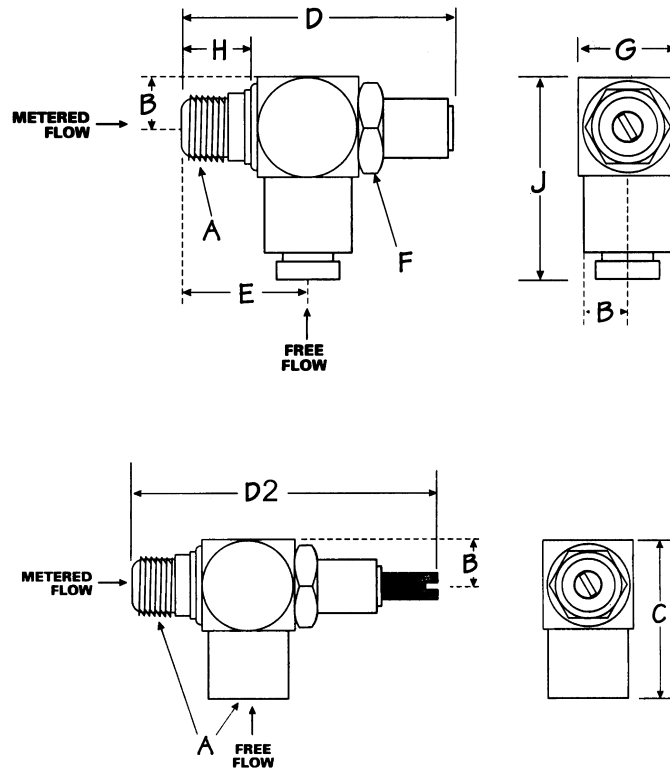
Flow Characteristics

Thread Size		10-32	1/8"	1/4"	3/8"	1/2"
Free Flow	SCFM [Cv]	3.4 [.06]	12.8 [.34]	19.1 [.67]	28.9 [1.87]	53.2 [2.84]
Throttle Closed)	L/Min	98	364	542	819	1508
Orifice Diameter	INCH	0.06	0.118	0.177	0.276	0.394
Orifice Diameter	mm	1.5	1.5	4.5	7.0	10.0
Weight	lbs	0.022	0.055	0.121	0.209	0.407
Weight	kgs	0.01	0.025	0.055	0.095	0.185

Flow Control Valve

Right Angle - Inch Series

Rexroth
Bosch Group



Dimensions (in./mm)

A	B	C	D	E	F	G	H	TUBE O.D.	J	D2
10-32UNF	0.16/4.5	0.57/14.5	0.79/20	0.33/8.5	8	0.35/9	0.12/3	----	----	1.22/31
10-32UNF*	0.22/5.5	----	0.79/20	0.37/9.5	8	0.43/11	0.12/3	5/32"	0.97/24.5	1.22/31
1/8" NPTF	0.30/7.5	0.97/24.5	1.41/35.8	0.81/20.5	13	0.59/15	0.41/10.5	1/4"	1.20/30.5	1.91/48.5
1/4" NPTF	0.37/9.5	1.28/32.5	1.62/41	0.97/24.8	17	0.75/19	0.50/12.7	1/4"	1.36/34.5	2.27/57.5
3/8" NPTF	0.43/11	1.46/37	2.21/56	1.10/28	22	0.87/22	0.55/14	3/8"	1.76/44.6	3.05/77.5
1/2" NPTF	0.55/14	1.81/46	----	1.42/36	27	1.10/28	0.71/18	N/A	N/A	3.66/93

*Slotted Adjust shown with Push-In Fittings.
Push-in fitting not available in 1/2" NPTF size.

Flow Control Valve

Right Angle - Metric Series

Rexroth
Bosch Group

Technical Data

Working pressure, max.	10 bar
Flow at 6 bar Q _{max} .	See table
Ambient temperature range	-20° C to +70° C
Pressure medium	Air
Weight	See table

Materials	Banjo body:	Reinforced plastic
	push-in M 5-G 3/8	Brass
	push-in G 1/2	Brass
	compression ring type	Oil-resistant rubber
	Seals	Brass, nickel plated
Banjo bolt		

Dimensions in mm.



Code No.

Symbol	Fig.	Design	For tube dia.	Connection thread	Flow in throttled dir. Q _n max. [NI/min.]	Flow ¹⁾ in non throttled direction Q _{max} . [NI/min.]	Weight [kg]	Code no.
	1	With quick connector	4	M 5	0-75	90/150	0,007	254-010-405-0
			4	M 7	0-75	90/150	0,012	254-010-407-0
			4	G 1/8	0-330	250/290	0,017	254-010-418-0
			6	M 5	0-75	100/150	0,017	254-010-605-0
			6	M 7	0-75	100/150	0,022	254-010-607-0
			6	G 1/8	0-440	300/360	0,024	254-010-618-0
			6	G 1/4	0-725	400/725	0,037	254-010-614-0
			8	G 1/8	0-500	300/380	0,024	254-010-818-0
			8	G 1/4	0-830	400/750	0,037	254-010-814-0
			8	G 3/8	0-1250	900/1150	0,070	254-010-838-0
			10	G 1/4	0-920	450/750	0,038	254-011-014-0
			10	G 3/8	0-2100	1300/1700	0,070	254-011-038-0
			10	G 1/2	0-2400	1500/2600	0,175	254-011-012-0
			12	G 3/8	0-2100	1300/1700	0,080	254-011-238-0
	12	G 1/2	0-2700	1500/2600	0,156	254-011-212-0		
	2	With compression ring connection	4	G 1/8	0-330	250/290	0,050	254-000-418-0
			6	G 1/8	0-440	300/360	0,054	254-000-618-0
			6	G 1/4	0-725	400/725	0,103	254-000-614-0
			8	G 1/8	0-500	300-380	0,055	254-000-818-0
			8	G 1/4	0-830	400/750	0,104	254-000-814-0
10			G 1/4	0-920	450/750	0,119	254-001-014-0	
10			G 3/8	0-2100	1300/1700	0,205	254-001-038-0	
10			G 1/2	0-2400	1500/2600	0,200	254-001-012-0	
12			G 3/8	0-2100	1300/1700	0,196	254-001-238-0	
12			G 1/2	0-2700	1500/2600	0,215	254-001-212-0	
		16	G 1/2 (3/8) ²⁾	0-4700	4100/5200	0,225	540-416-000-0	

¹⁾ Closed throttle / fully open throttle.

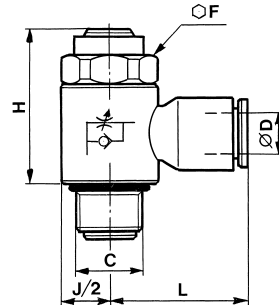
²⁾ G 3/8 banjo bolt with reducer G 1/2-G 3/8.

Flow Control Valve

Right Angle - Metric Series

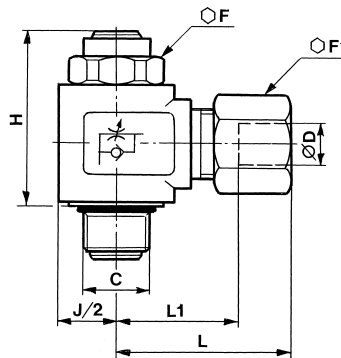
Rexroth
Bosch Group

Fig. 1



C	For tube D	H	J	L	F
M 5	4	17,5	10	18,5	8
M 5	4	25	10	18,5	8
G 1/8	4	23	14	19	13
M 7	6	25	10	19	8
M 5	6	17,5	10	19	8
G 1/8	6	23	14	21	13
G 1/4	6	26,5	19	22	17
G 1/8	8	23	14	26	13
G 1/4	8	26,5	19	27	17
G 3/8	8	39	22,5	29	20
G 1/4	10	26,5	19	29	17
G 3/8	10	39	22,5	31	20
G 1/2	10	50	27	32	23
G 3/8	12	39	22,5	34,5	20
G 1/2	12	50	34	35	23

Fig. 2



C	For tube D	H	J	L	L1	F	F1
G 1/8	4	26	17	25,5	14,5	13	10
G 1/8	6	26	17	25,5	14,5	13	13
G 1/4	6	31,5	22	28,5	17,5	17	13
G 1/8	8	26	17	29,5	15,5	13	14
G 1/4	8	31,5	22	31	17	17	14
G 1/4	10	31,5	22	35	19	17	19
G 3/8	10	44,5	22	35	19	20	19
G 1/2	10	50	27	37,5	19	23	19
G 3/8	12	44,5	22	35,5	21,5	20	22
G 1/2	12	50	34	38	21,5	23	22
G 1/2	16	64	28	38	17	24	27

Flow Control Valve

Flore®

Rexroth
Bosch Group

◆ Floreg® Type A

Type	Standard Flow Regulation
Working Pressures	Pneumatic-Vacuum to 250 PSIG Max. Hydraulic-500 PSIG Max. Non-shock applications.
Temperature Range	-40° to +160° F (+200° F Intermittent)
Media	Air or hydraulic fluid
Port Size	1/4" to 1" NPTF



◆ Floreg® Type B

Type	"Micrometer" or Fine Flow Regulation
Working Pressure	Vacuum to 250 PSIG Max.
Temperature Range	-40° to +160° F (+200° F Intermittent)
Media	Air
Port Size	1/8" to 1" NPTF

○ Operating Characteristics

The FLOREG® Valve is an adjustable device that works with other components of a fluid circuit to time, to sequence or to coordinate operations. It controls the rate at which a gas or liquid can flow in one direction through a circuit, yet allows free flow in the opposite direction.

CONTROLLED FLOW-Fluid flow is limited by orifice created by diameter differences of valve and valve seat.

FREE FLOW-Fluid forces valve upward to compress spring and increase orifice to maximum size.

Spring holds valve on its seat in body. Adjusting screw raises valve from seat for flow.

➔ Model - Type A

Characteristic Capacity Cv	Size NPTF	Standard Flow Regulation			
		Part No.	Approx Weight	Repair Kit No.*	
1.81	1/4"	P -053025-00002	2.5 oz.	P -069547-00000	
3.37	3/8"	P -053020-00002	3.5 oz.	P -069548-00000	
4.95	1/2"	P -053010-00002	6.0 oz.	P -069549-00000	
9.50	3/4"	P -055010-00000	24.0 oz.	P -069550-00000	
13.78	1"	P -054986-00000	22.0 oz.	P -069550-00000	

*Repair kits include plunger assembly, screw, spring, and 'o' rings.

➔ Model - Type B

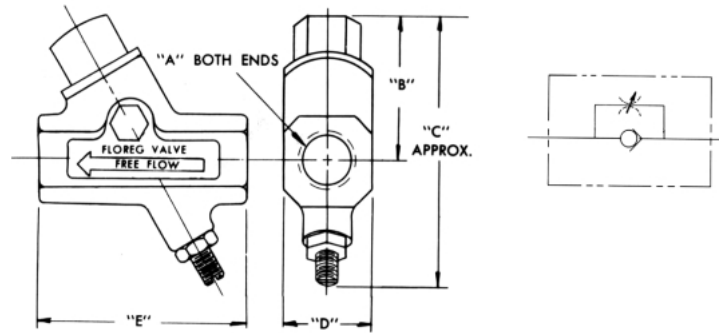
Characteristic Capacity CV	Size NPTF	Micrometer or Fine Flow Regulation			
		Part No.	Approx Weight	Repair Kit No.*	
1.16	1/8"	P -055017-00000	3.25 oz.	P -069551-00000*	
1.28	1/4"	P -055018-00000	3.25 oz.	P -069551-00000*	
2.98	3/8"	P -055019-00000	4.5 oz.	P -069552-00000*	
3.35	1/2"	P -055020-00000	8.5 oz.	P -069553-00000*	
9.50	3/4"	P -055021-00000	27.0 oz.	P -069554-00000*	
13.28	1"	P -055022-00000	25.0 oz.	P -069554-00000*	

*Repair kits include plunger assembly, screw, spring, and 'o' ring.

Flow Control Valve

Floreg®

Rexroth
Bosch Group



DIMENSIONS

Size	A	B	C	D	E
1/8"	1/8"-27 Dryseal NPTF	1 1/4"	2 7/16"	7/8"	2"
1/4"	1/4"-18 Dryseal NPTF	1 1/4"	2 7/16"	7/8"	2"
3/8"	3/8"-18 Dryseal NPTF	1 1/2"	3"	1"	2 3/8"
1/2"	1/2"-14 Dryseal NPTF	1 5/8"	3 3/16"	1 1/4"	2 3/4"
3/4"	3/4"-14 Dryseal NPTF	2 1/2"	4 3/4"	2"	4"
1"	1"-11 1/2 Dryseal NPTF	2 1/2"	4 3/4"	2"	4"

Flow Control Valves

Inline Metric M 5 - G 1/2

Rexroth
Bosch Group

Technical Data

Type		Cone choke
Working pressure	p max.	10 bar
Nominal flow rate	at 87 psi, $\Delta p = 14.7$ psi [at 6 bar, $\Delta p = 1$ bar]	See table
Ambient temperature range		-13°F to +176°F [-25 °C to +80 °C]
Medium		Compressed air, lubricated or non-lubricated
Weight		See table
Materials	Body Seals	Aluminum, black anodized NBR
Dimensions in mm.		



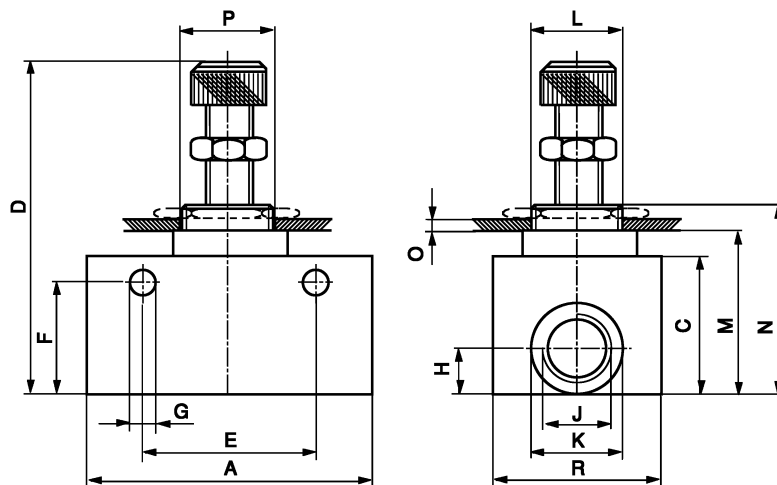
Code No.

	Ports *	Max. flow SCFM [NI/min.] in choked direction	Flow SCFM [NI/min.] backflow direction	Return pressure psi [bar]	Weight oz. [kg]	Code no.
	M 5	4.6 [130]	4.9 [140]	<0.15 [0,01]	1.76 [0,05]	534-112-000-0
	G 1/8	3.5 [100]	5.6 [160]	<0.15 [0,01]	1.76 [0,05]	534-112-110-0
	G 1/4	17.7 [500]	26.5 [750]	<0.29 [0,02]	2.47 [0,07]	534-112-210-0
	G 3/8	45.9 [1300]	47.7 [1350]	<0.15 [0,01]	2.82 [0,08]	534-112-310-0
	G 1/2	58.3 [1650]	65.3 [1850]	<0.29 [0,02]	3.17 [0,09]	534-112-410-0

* to ISO 228/1

Accessories (to be ordered separately)

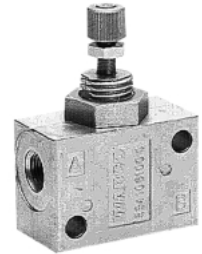
Type	Code no.	Size
Hex. nut for panel mounting	810-319-027-4	M 10 x 1
	810-319-028-4	M 12 x 1
	810-306-023-4	M 20 x 1,5
	810-306-025-4	M 24 x 1,5



J	A	B	C	D	E	F	G dia.	H	K dia.	L	M	N	O	P dia.
M 5	26	14	16	40-45	18	12,5	4,4	6	8,7	M 10x1	20	26	2	10,5
G 1/8	32	16	22	44-56	24	18	4,3	10	14,4	M 12x1	26	33,6	2	12,5
G 1/4	55	25	32	66-74	35	25	6,4	12	19,5	M 20x1,5	37,8	47,9	3	20,5
G 3/8	58	30	40	78-93	44	33	6,6	14	23	M 24x1,5	47	57	3	25
G 1/2	68	30	40	77-92	50	33	6,4	14	27,5	M 24x1,5	47	57	3	25

Technical Data

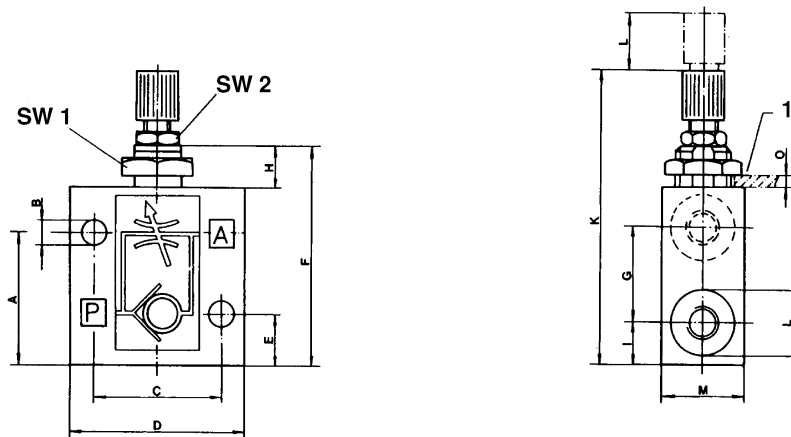
Type		Precision choke
Working pressure	p max.	147 psi [10 bar]
Nominal flow rate	at 87 psi, $\Delta p = 14.7$ psi [at 6 bar, $\Delta p = 1$ bar]	See table
Ambient temperature range		-13°F to +176°F [-25 °C to +80 °C]
Medium		Compressed air, lubricated or non-lubricated
Weight		See table
Materials	Body Seals	Zn-diecasting NBR
Dimensions in mm.		



Code No.

	Ports*	Max. flow SCFM [NI/min.] in choked direction	Flow SCFM [NI/min.] backflow direction	Weight oz. [kg]	Code no.
	M 5	4.4 [125]	5.6 [160]	1.76 [0,05]	534-105-000-0
	G 1/8	13.2 [375]	13.4 [380]	2.47 [0,07]	534-106-100-0
	G 1/4	20.3 [575]	25.2 [715]	3.00 [0,085]	534-108-100-0

* to ISO 228/1



1) Hole in mounting panel

ND	A	B	C	D	E	F	G	H	I	K	L	M	N	O max.	Hole in mounting panel	SW 1	SW 2
2	18	3,4	18	25	7	31	12	6	6	41,5	8	12	9	3	9 dia.	6	10
4	23	5,5	30	42	6	40	8	11	10	55	10,5	22	20	4	15 dia.	9	19
7	23	5,5	30	50	6	40	8	11	10	55	10,5	22	20	4	15 dia.	9	19

Flow Control Valve

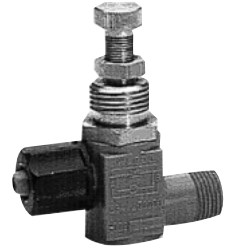
Type "C" Flow Control

Rexroth
Bosch Group


Technical Data

Type	Fine Control, Cone type	
Working pressure	p max.	150 psi [10 bar]
Nominal flow rate	SCFM	
at 87 psi, $\Delta p = 14.5$ psi	[at 6 bar, $\Delta p = 1$ bar]	See table
Ambient temp. range	-10° to 140°F	[-25 °C to +60 °C]
Medium	Compressed air, lubricated or non-lubricated	
Weight	1.23 oz.	

Materials	Body	POM / Brass
	Seals	NBR



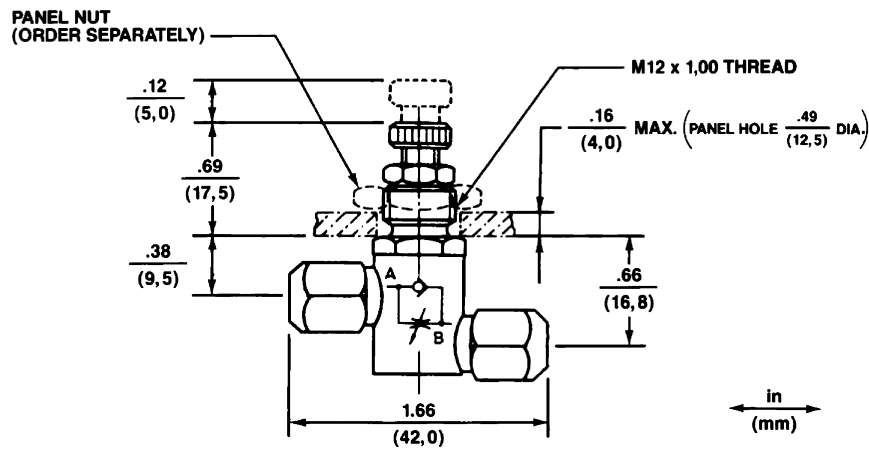
Code No.

	Valve ¹⁾	Extra tube nuts ²⁾	For plastic tube ports	SCFM [NI/min.] in choked direction	SCFM [NI/min.] backflow direction max.	Panel mount nut
	HH-534120-00600	P -069532-00000	1/4" or 6mm	2.5 [70]	3 [85]	H -891500-09904

¹⁾ Valve is supplied with two nuts for M6x1 poly tubing, and two nuts for 1/4 OD x .040 wall poly tubing.

²⁾ Tubing nut kit includes two nuts for 1/4 OD x .040 wall poly tubing.

Dimensions



Quick Exhaust Valves

Inch version - Aluminum body

Rexroth
Bosch Group

Quick Release Valves

The Quick Release Valve speeds the exhausting of air cylinders, clutches or other pneumatic devices.

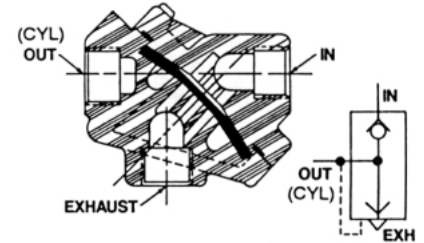
It vents air pressure close to the operated device instead of back through the control valve.

Equipment cycling or release times are reduced for increased output.

Features:

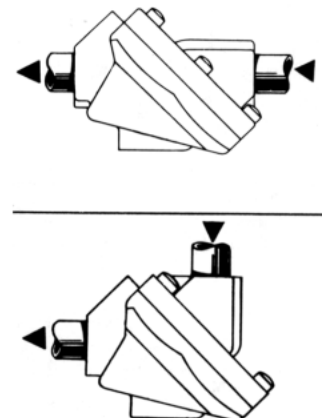
- Sensitivity: A few psi pressure differential across the diaphragm opens the exhaust.
- Large capacity: Large internal air passages exhaust air quickly for top speed of your operation.
- Quiet operation: Special diaphragm design eliminates chattering associated with exhaust valves.
- Long operating life: Corrosion resistant body has only one wearing part - a rugged, oil-resistant diaphragm.
- Reduced weight: Built of aluminum or plastic, they are light enough to be supported by piping alone (mounting brackets are optional on smaller sizes).

- ▶ For instant response in Air Circuits



Mounting Flexibility - For in-line or right-angle piping

A desirable feature is that the inlet port may be assembled on the valve in one of two positions. This allows both ports to be mounted on the same center line, or at right angles to each other. The added flexibility simplifies many mounting problems. Field changeout is made by rotating the cover 180°.



Operating Characteristics

Air pressure entering the inlet port forces the diaphragm against the exhaust port, closing it. Air pressure also deflects against the rim of the diaphragm to open a direct passage around the diaphragm to the outlet port.

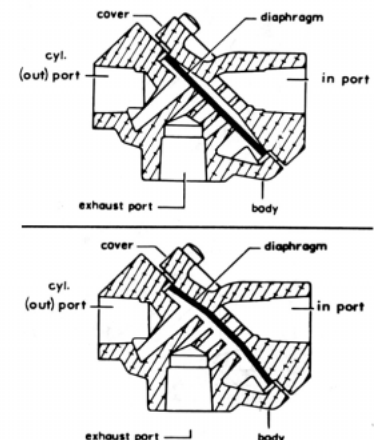
When air pressure at the inlet port is reduced, a differential in the pressure acting on the diaphragm is created. This differential in pressure lifts the diaphragm from the exhaust port and seats it on the inlet port. This opens the exhaust port, allows air to flow freely from the outlet port to atmosphere, and closes the inlet port.

Should outlet air pressure drop below inlet pressure, the differential in pressure seats the diaphragm on the exhaust port, stopping further exhaust.

▶ MOUNTING

The 1/4" and 3/8" models are normally mounted directly in the piping. A mounting bracket is available as an accessory, if required.

The 1/2", 3/4" and 1" models have an integral mounting bracket.



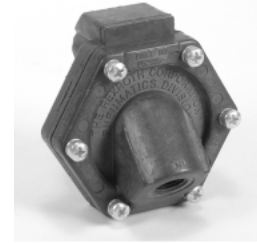
Quick Exhaust Valves

Inch version - Aluminum body

Rexroth
Bosch Group

Technical Data

Type	Aluminum Body, for in-line or right-angle piping
Working Pressure	200 psi max. on 1/4" and 3/8" 150 psi max. on 1/2" thru 1" sizes
Temperature Range	-40°F to 160°F (200°F Intermittent)
Media	Air or inert gas
Port Size	1/4" to 1" NPTF

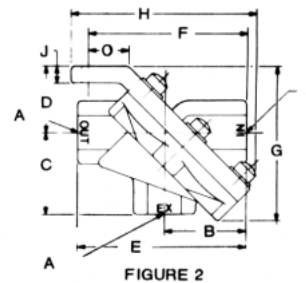
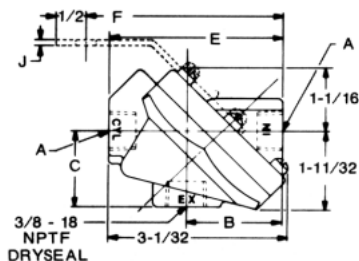
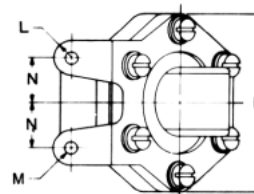
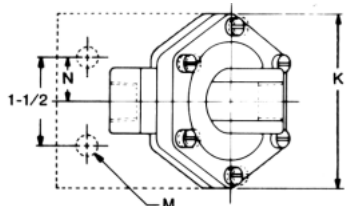


Part numbers

Model	Aluminum Body	For in-line or right angle piping					Repair Kit
		Part number	Port Size	Description	Weight	Capacity CV	
In to out	Out to exh.						
P -052935-00002	1/4"	In-Line Piping	10 oz.	1.77	2.50	P -060213-00002	
P -052935-00021	1/4"	Right Angle Piping	10 oz.	1.77	2.50	P -060213-00002	
P -052935-00003	3/8"	In-Line Piping	10 oz.	2.73	3.08	P -060213-00002	
P -052935-00031	3/8"	Right Angle Piping	10 oz.	2.73	3.08	P -060213-00002	
P -052935-00004	1/2"	In-Line Piping	1 lb., 7 oz.	5.00	5.50	P -060214-00002	
P -052935-00006	3/4"	*Integral mounting bracket	2 lb., 14 oz.	9.70	10.55	P -060215-00001	
P -052935-00008	1"	In-Line Piping	3 lb., 5 oz.	11.95	13.45	P -060215-00001	

*MOUNTING BRACKET for 1/4" and 3/8" models: Part Number P -053067-00000
[Sizes 1/2" through 1" have integral mounting bracket.]

Inch dimensions: QRV-Aluminum (in-line configuration shown)



Inch dimensions: QRV-Aluminum

Fig. No.	A NPTF Dryseal	B	C	D	E	F	G	H	J	K	L	M (2 Holes)	N	O
Fig. 1	1/4-18	1 3/4	1 11/32	—	3	3 3/8	—	—	1/16	3	—	11/32 Ø	3/4	—
Fig. 1	3/8-14	1 3/4	1 11/32	—	3	3 3/8	—	—	1/16	3	—	11/32 Ø	3/4	—
Fig. 2	1/2-14	1 3/4	1 11/32	1 1/2	3 11/16	3 7/16	3 15/32	4 1/8	3/8	3 15/16	3/8 R.	9/32 Ø	1	7/8
Fig. 2	3/4-14	2 11/16	2 21/32	2 1/16	5 1/4	5	4 13/16	5 1/2	7/16	6 1/2	1/2 R.	13/32 Ø	1 1/2	1 1/8
Fig. 2	1"-11 1/2	2 11/16	2 21/32	2 1/16	5 1/4	5	4 13/16	5 1/2	7/16	6 1/2	1/2 R.	13/32 Ø	1 1/2	1 1/8

Quick Exhaust Valves

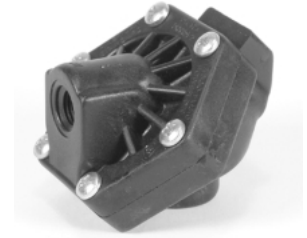
Inch version - Plastic body

Technical Data

Type	Plastic Body, for in-line or right-angle piping
Working Pressure	150 psi max.
Temperature Range	-20°F to 160°F (200°F Intermittent)
Media	Air
Port Size	1/4" & 3/8" NPT

Note

Maximum Pipe Thread Torque: 120 in-lbs.
Maximum Body Screw Torque: 18 in-lbs.



Part numbers

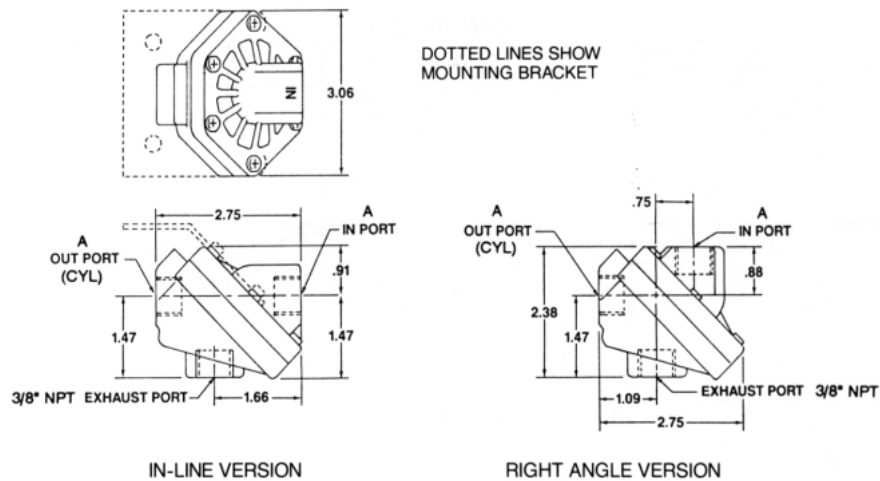
Model	Plastic Body Port Size NPT	For in-line or right angle piping				Repair Kit ¹	Mounting Bracket ²
		Description	Weight	Capacity CV			
				In to out	Out to exh.		
P -069324-00002	1/4"	In-Line	7 oz.	1.54	1.84	P -060213-00002	P -053067-00000
P -069324-00021	1/4"	Right Angle	7 oz.	1.54	1.84	P -060213-00002	
P -069324-00003	3/8"	In-Line	7 oz.	2.30	2.76	P -060213-00002	
P -069324-00031	3/8"	Right Angle	7 oz.	2.30	2.76	P -060213-00002	

¹Repair kit includes diaphragm and gasket.

²The plastic Quick Exhaust Valve is normally mounted directly in the piping.

A mounting bracket (part no. P -053067-00000) is furnished as an accessory, if required.

Inch dimensions: QRV-Plastic



If needed, a mounting bracket may be ordered separately.

Check Valve

Dryseal NPTF

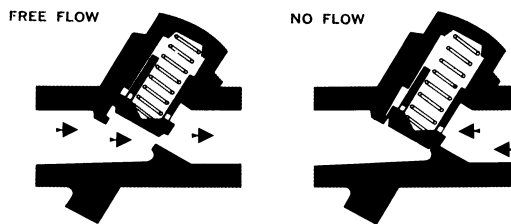
Rexroth
Bosch Group

Dryseal NPTF

Type High Capacity
 Working Pressure 250 psi maximum
 Operating Temperature -40°F to +160°F (+200°F intermittent service)
 Media Air
 Port Size 1/8" to 1" NPTF

Application

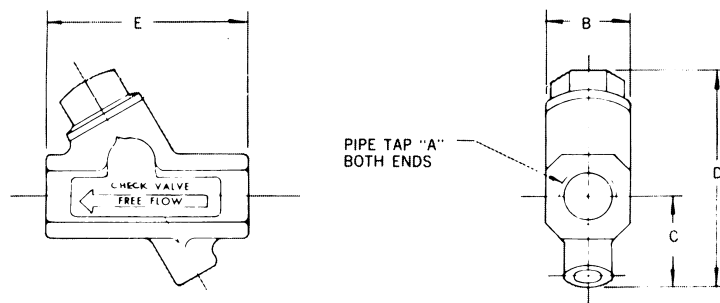
Check valves are installed in a pipeline to permit flow of air in one direction only. Less than 1/2 psi pressure is required to open the valve. The valve is spring loaded to close when no pressure differential exists. Therefore, it may be mounted in any position. The body and cap are made of anodized die cast aluminum. A stainless steel valve, plated spring and Buna N Seal also contribute to trouble free service.



Model

	PORT SIZE	PART NUMBER	APPROX. WEIGHT	CAPACITY C _v	"A" PIPE TAPS
	1/8"	P -055023-00000	2 3/4 oz.	1.19	1/8"-27 Dryseal NPTF
	1/4"	P -055024-00000	2 1/2 oz.	1.34	1/4"-18 Dryseal NPTF
	3/8"	P -055025-00000	3 3/4 oz.	3.03	3/8"-14 Dryseal NPTF
	1/2"	P -055026-00000	6 1/2 oz.	3.50	1/2"-14 Dryseal NPTF
	3/4"	P -055027-00000	26 oz.	10.00	3/4"-14 Dryseal NPTF
	1"	P -055028-00000	24 oz.	13.80	1"-11 1/2" Dryseal NPTF

All pipe taps are DRYSEAL NPTF. Choice of 1/8", 1/4", 3/8", 1/2", 3/4" and 1".



Dimensions

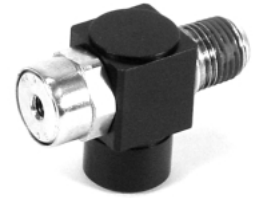
"A" PIPE TAPS	B	C	D	E
1/8"-27 Dryseal NPTF	7/8"	15/16"	2 3/16"	2"
1/4"-18 Dryseal NPTF	7/8"	15/16"	2 3/16"	2"
3/8"-14 Dryseal NPTF	1"	1 1/16"	2 9/16"	2 3/8"
1/2"-14 Dryseal NPTF	1 1/4"	1 3/16"	2 13/16"	2 3/4"
3/4"-14 Dryseal NPTF	2"	1 3/4"	4 1/4"	4"
1"-11 1/2" Dryseal NPTF	2"	1 3/4"	4 1/4"	4"

Check Valve

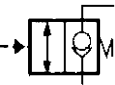
Right Angle, Inch Series

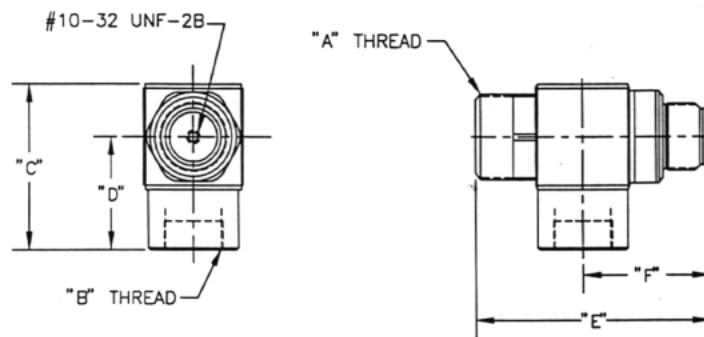
Check Valve, Right Angle, Inch series

Type	Pilot Operated, Right Angle - for Inch Threaded Inlet	
Supply Pressure	150 PSIG (10 bar)	
Minimum Pressure	14.5 PSIG (1 bar)	
Temperatures	15° to 160°F (-9° to 71°C)	
Media	Air or inert gas	
Materials:		
Body	Nickel Plated Brass	
Swivel Housing	Anodized Aluminum	
Seals	Buna-N	
Pilot port thread	10-32 UNF	for sizes 1/8 - 1/2 NPTF



Part numbers

	Thread Size	Part Number	Flow (2-1) p=87 psi/6 bar SCFM/Nl/m	Flow (1-2) p=0 SCFM/Nl/m
	1/8"	P -029977-00000	10.2/289	4.5/128
1/4"	P -029978-00000	23.8/676	21.8/617	
3/8"	P -029979-00000	40.8/1156	41.2/1168	
1/2"	P -029980-00000	67.5/1910	66.7/1888	



Dimensions						
Size	A	B	C	D	E	F
1/8	1/8" NPTF	1/8" NPTF	26.7	18.5	41.0	19.8
1/4	1/4" NPTF	1/4" NPTF	32.9	22.5	48.0	25.8
3/8	3/8" NPTF	3/8" NPTF	41.0	28.5	55.0	29.0
1/2	1/2" NPTF	1/2" NPTF	46.3	31.0	65.5	36.0

Dimensions in mm except as noted.

Shuttle Valve

NPT Ports

Rexroth
Bosch Group

NPT Ports

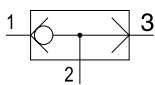
Type
Supply Pressure 200 psi max.
Temperature range -40°F to 160°F; intermittent 200°F is permissible.
Media Air or inert gas

Application data

The Shuttle Valve automatically selects and directs the flow of air from one or the other of two controlling devices to a common outlet. It serves to connect two independent lines to a common line without destroying the segregation.



Flow data

	Port size	Part No.	Weight	Repair kit	Flow (Cv)
	1/8"	P -054350-00001	7 oz.	P -060918-00000	1.25
	1/4"	P -054350-00002	7 oz.	P -060918-00000	1.58
	3/8"	P -054350-00003	1 lb. 3 oz.	P -054350-00003	3.61
	1/2"	P -054350-00004	1 lb. 3 oz.	P -054350-00004	5.12

Note: Kits include diaphragm and gasket.

Operating Characteristics

FEATURES-

SIMPLE-Contains only one moving part-an easily replaceable fabric reinforced synthetic rubber diaphragm.

Two body segments, a gasket and four screws complete the assembly.

It has no spring; nothing can bind or stick. Its compact size presents no installation problems.

LIGHTWEIGHT-The Shuttle Valve can easily be supported by piping alone.

Mounting feet are included, however, for installations with vibration or long pipe runs.

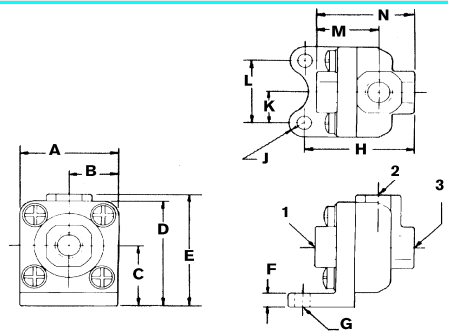
SENSITIVE-Will seal off the opposite inlet line with less than one psi pressure differential.

LONG LIFE-Tests have shown no diaphragm wear after hundreds of thousands of cycles.

To order, refer to port size and part number.

When a pressure differential of one psi or more exists at either inlet port, the higher pressure forces the diaphragm to seal against the opposite

The low (or zero) pressure inlet port is sealed from both the outlet and the opposite inlet port.



DIMENSIONS

DRYSEAL NPTF Ports		
ALL PORTS	1/8"-27 and 1/4"-18	3/8"-18 and 1/2"-14
A	1 7/8"	2 1/2"
B	15/16"	1 1/4"
C	1 1/4"	1 7/8"
D	2 3/16"	3 1/8"
E	2 3/8"	3 3/4"
F	9/32"	5/16"
G dia.	9/32"	9/32"
H	2 1/8"	3 1/4"
J radius	9/32"	21/64"
K	21/32"	29/32"
L	1 5/16"	1 13/16"
M	1 7/32"	2 1/8"
N	1 29/32"	3 3/8"

Function Fittings Series 545

Pressure drop sensors

Rexroth
Bosch Group

Technical Data

Working pressure, max. 10 bar
Ambient temperature range -20 °C to +70 °C
Pressure medium Air, lubricated or non-lubricated
Weight See table

Materials Banjo thread Brass
Connecting body Plastic
Sensor modules Plastic
Seals Buna N

Dimensions in mm.

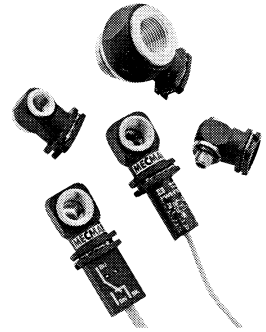
Technical Information

Function

The pressure drop sensor senses the pressure in the cylinder chamber.

When piston movement ceases, the pressure in the discharge chamber drops.

The sensor then resets at a preset pressure (see the table below) and emits a pneumatic, electrical or electronic signal.

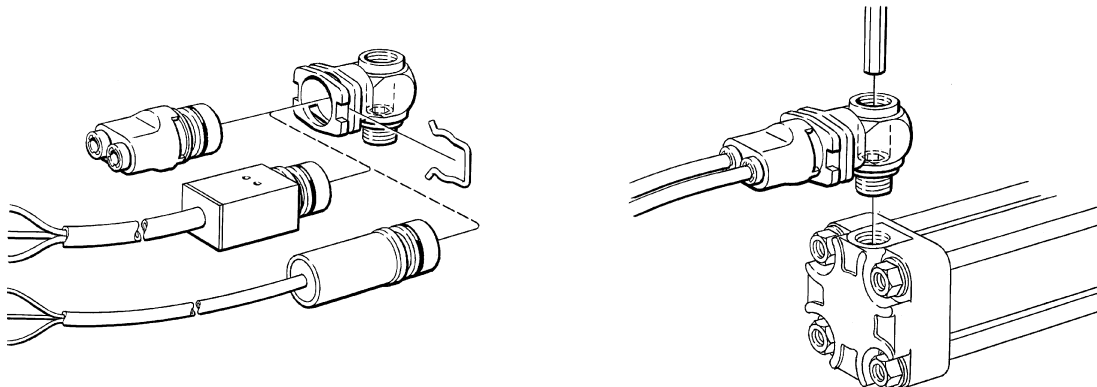


Code No. signal transmitter

Symbol	Fig.	Signal transmitter function	Output signal	Polarity	Reset. press. [bar] On	Reset. press. [bar] Off	Weight [kg]	Code no.
	1	Pneumatic signal quick conn. 4 mm dia.	Qn 50 NI/min.	-	0,4	2,3	0,085	545-011-040-0
	2	Electrical signal	Alternating function 5 A/250 V AC 5 W/48 V DC	(BN) brown + (BU) blue- (BK) black output signal	0,4	0,5	0,080	545-012-000-0
	3	Electronic signal	Breaking function 12/24 V DC 100 mA	(BN) brown + (BU) blue- (BK) black output signal	0,4	0,5	0,070	545-013-000-0

Banjo connection for signal transmitter

Fig.	Dimensions	Weight [kg]	Code no.
4	G 1/8	0,04	545-110-000-0
4	G 1/4	0,05	545-210-000-0
4	G 3/8	0,07	545-310-000-0
4	G 1/2	0,10	545-410-000-0



Assembly diagram.

Function Fittings Series 545

Pressure drop sensors

Rexroth
Bosch Group

Dimensions signal transmitter

Fig.1

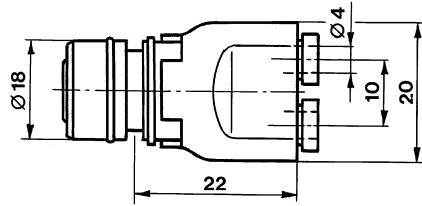


Fig.2

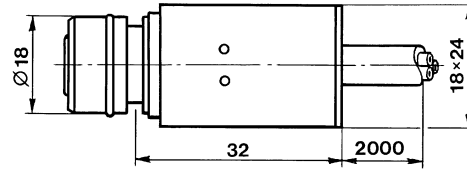
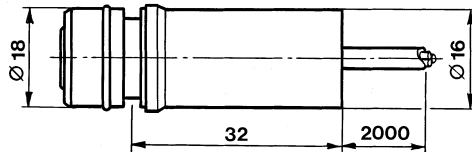


Fig.3



Dimensions banjo connection

Fig. 4

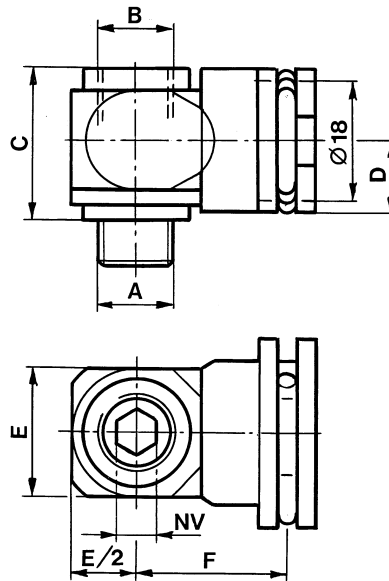


Fig. 4

Port dimensions Cylinder A	Port dimensions Feed air B	C	D	E	F	NV
G 1/8	G 1/8	20	10	16	20	6
G 1/4	G 1/4	20	10	21	22	8
G 3/8	G 3/8	22	12	28	25	10
G 1/2	G 1/2	26	14	33	26	12

Function Fittings Series 545

Blocking valves and quick exhaust valves

Rexroth
Bosch Group

Technical Data

Working pressure, max.	10 bar
Flow Qn at 6 bar and Δp (pressure drop) 1 bar, C-value	See table
Temperature range	See table
Pressure medium	-20 °C to +70 °C
Weight	Air or oil
	See table

Materials	Valve body	Zinc
	Banjo thread	Steel
	Seals	Buna N

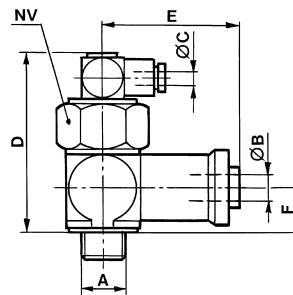
Dimensions in mm.



Code No.

Symbol	Function	Fig.	Dimensions			Flow		Weight [kg]	Code no.
			Banjo thread	Conn. port	Signal port	Qn [Nl/min.]	C-value		
	Blocking valve	1	G 1/4	$\varnothing 8$	$\varnothing 4$	260	1,2	0,150	545-221-080-0
	Blocking valve	2	G 1/4	G 1/4	$\varnothing 4$	260	1,2	0,160	545-221-920-0
			G 3/8	G 3/8	M 5	770	3,2	0,190	545-321-930-0
	Quick exhaust valve	3	G 1/2	G 1/2	M 5	1400	5,6	0,475	545-421-940-0
			Quick exhaust valve	4	G 1/8	$\varnothing 6$	$\varnothing 4$	840	4,2
	G 1/4	$\varnothing 8$			$\varnothing 4$	1450	10,9	0,150	545-231-080-0
	G 1/8	G 1/8			M 5	840	4,2	0,130	545-131-920-0
	G 1/4	G 1/4	M 5	1450	10,9	0,160	545-231-920-0		
G 3/8	G 3/8	M 5	1800	14,4	0,190	545-331-930-0			
G 1/2	G 1/2	M 5	3300	18,7	0,475	545-431-940-0			

Fig. 1

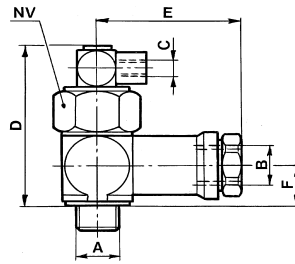


Port dimensions			D	E	F	NV
1 A	2 B	12 C				
G 1/4	8	4	53	39	13,5	24

Function Fittings Series 545

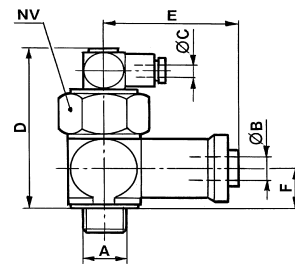
Blocking valves and quick exhaust valves

Fig. 2



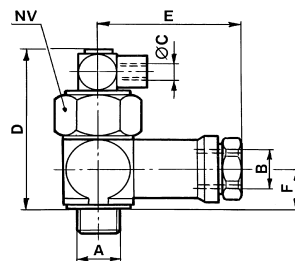
Port dimensions			D	E	F	NV
1 A	2 B	12 C				
G 1/4	G 1/4	M 5	53	43,5	13,5	24
G 3/8	G 3/8	M 5	53	55,5	14,5	24
G 1/2	G 1/2	M 5	66	63	24	30

Fig. 3



Port dimensions			D	E	F	NV
1 A	2 B	12 C				
G 1/8	6	4	54	39	13	24
G 1/4	8	4	54	39	13	24

Fig. 4



Port dimensions			D	E	F	NV
1 A	2 B	12 C				
G 1/8	G 1/8	4	54	43	13	24
G 1/4	G 1/4	4	54	43	13	24
G 3/8	G 3/8	4	62	55	16	27
G 1/2	G 1/2	4	73	63	24	30

Pressure Switches

G1/8, conical, threaded ports internal or external

Rexroth
Bosch Group

Technical Data

Type	Diaphragm, spring loaded
Working pressure range	See table
Pressure max	20 bar
Ambient temperature range	-20 °C to + 100 °C
Medium	Compressed air, lubricated or non-lubricated
Weight	0,09 kg

Materials	Body Seals	Brass NBR (Fig. 1) FKM (Fig. 2)
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Dimensions in mm.

Technical Information

Voltage max.	42 V DC/AC
Rating max.	100 VA
Switching element	Normally open (by rising pressure)
Switching frequency	200/min
Electrical connection	AMP 6,3 x 0,8
Protection (with protective cap)	IP 65 to IEC 529 (DIN VDE 0470)
Installation position	Any
Pressure adjustment	Via adjusting screw

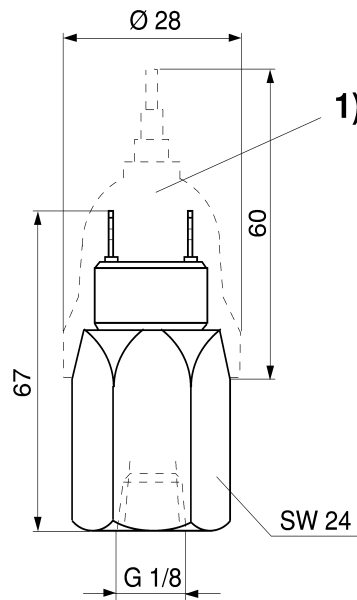
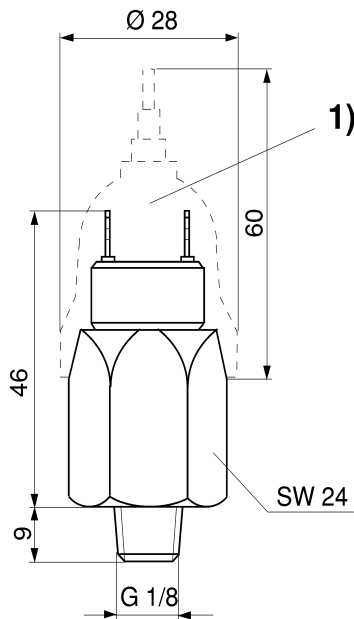


Code No.

	Fig.	Threaded port ISO 228/1	Working pressure range	Tolerance	Code no.
	1	R 1/8 conical out	1 to 10 bar	± 0,5 bar	894-040-012-2
	2	G 1/8 conical in	-0,2 to -1 bar	± 0,1 bar	894-040-011-2

Accessories (to be ordered separately)

Accessory	Type	Code no.
	Protective cap 28 mm dia. with cable entry for 1,5 to 5 mm cable dia.	894-160-011-4



1) Protective cap PG 7 SW = A/F

Pressure Switches

G 1/8, N/O, external thread

Rexroth
Bosch Group

Technical Data

Type	Diaphragm, spring loaded
Working pressure range	1–10 bar
Excess pressure	300 bar
Ambient temperature range	–20 °C to + 100 °C
Medium	Compressed air, lubricated or non-lubricated
Weight	0,09 kg

Materials	Body	steel, zink plated
	Seals	NBR

Dimensions in mm.

Technical Information

Voltage	max.	250 V
Current	max.	2 A
Switching element		Normally open (by rising pressure)
Switching frequency	max.	200/min
Hysteresis		5 %
Reproducibility		5–10%
Protection		IP 55 to DIN VDE 0470
Installation position		Any
Pressure adjustment		Via adjusting screw



Code No.

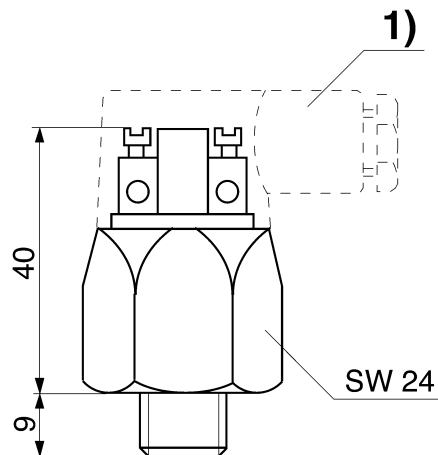


Code no.

399-990-106-0

Accessories (to be ordered separately)

Accessory	Type	Code no.
	Protective cap PG 7	399-990-107-2



1) Protective cap PG 7 SW = A/F

Pressure Switches

G 1/4 with gold-plated contacts

Rexroth
Bosch Group

Technical Data

Type	Diaphragm, spring loaded	
Operating pressure range	see table	
Working pressure, max.	80 bar	
Hysteresis	depends on switching point 0,15 to 0,65 bar max.	
Switching point position	optimal in the middle of the range	
Reproducibility	± 3% from max. value of range	
Ambient temperature range	- 10° to + 80° C	
Medium	compressed air, gas, liquid (neutral)	
Installation position	any	
Weight	0,2 kg	
Materials	Body	Al
	Seals	Perbunan
Dimensions in mm.		
Switching element	Micro switch, SPDT	
Rating	3 A	
Rating	5 mA, 5 V	
Switching time	100 min ⁻¹	
Electrical connection	Electrical connector to DIN 43 650	
Protection with plug	IP 65 to DIN VDE 0470	

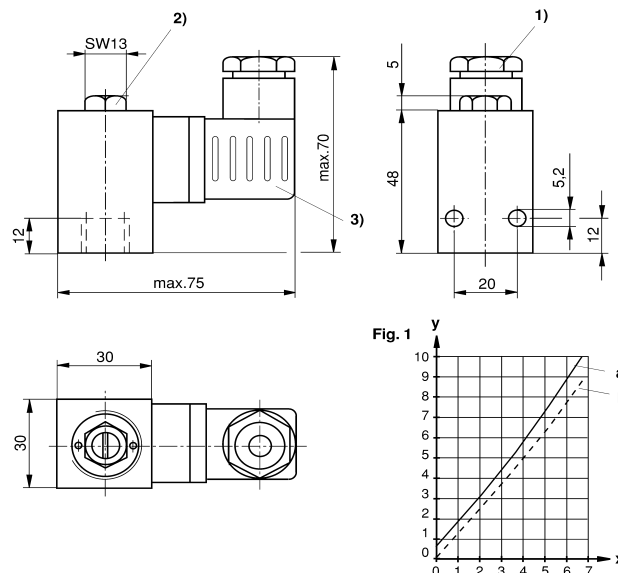


Code No.

	Switching function	Compressed air connection	Operating pressure range	Code no.
	By rising pressure the contact in the switching point changes	G 1/4 to ISO 228/1	0,5 to 10 bar	341-058-200-0
		G 1/4 to ISO 228/1	0,2 to 2 bar	341-058-210-0
	from 1-2 to 1- 3	CNOMO 060580	0,5 to 10 bar	341-058-290-0

Accessories (to be ordered separately)

Accessory	Electrical connector to DIN 43650 with screw type conduit fitting to DIN 46320	Code no.
	PG 9	894-101-241-2
	PG 11	894-100-226-2
	PG 11 with LED (red/green)	894-101-246-2



A* 9,5 mm for type 341-058-200-0, 15,5 mm for type 341-058-210-0

1) PG gland connection. 2) Adjusting screw (Secured by lock nut). 3) Electrical connector can be fixed at 90° intervals. 4) CNOMO 060580

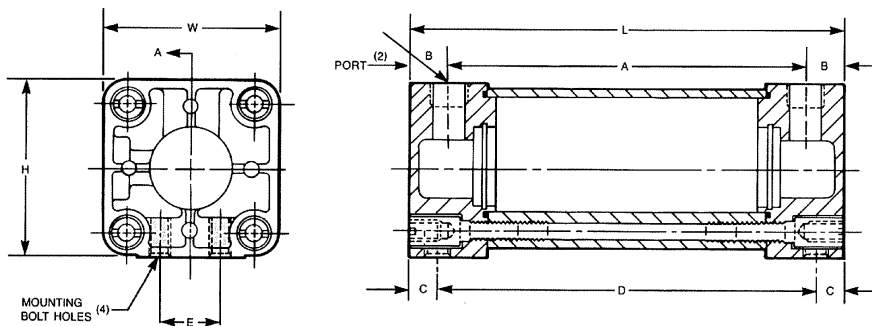
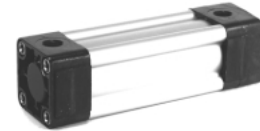
Taskmaster® Pneumatic Cylinder

Pneumatic Timing Volumes

Rexroth
Bosch Group

Pneumatic Timing Volumes

Bosch Rexroth offers a wide range of timing volumes for a variety of pneumatic system uses. These volumes are rated at 200 psi maximum working pressure with a 5 to 1 safety factor. They are constructed of light weight corrosion resistant anodized aluminum ends and tubing. Two ports are threaded mounting holes are provided.



Volume Capacity (cu. in.)	Overall Size			Dimensions (Ports)			Mounting Holes			Part		
	H	W	L	Thread*	A	B	Thread	C	D	E	Number	Weight
5	2	2	5-5/16	1/4-18	4-3/16	9/16	1/4-20	7/16	4-7/16	5/8	P-061890-00005	1 lb.
8	2	2	7-1/16	1/4-18	5-15/16	9/16	1/4-20	7/16	6-3/16	5/8	P-061890-00008	1.25 lbs.
8	3	3	4-5/16	1/4-18	3-3/16	9/16	3/8-16	7/16	3-7/16	1-1/4	P-061891-00008	1.8 lbs.
12	2	2	9-5/16	1/4-18	8-3/16	9/16	1/4-20	7/16	8-7/16	5/8	P-061890-00012	1.5 lbs.
12	3	3	5-3/16	1/4-18	4-1/16	9/16	3/8-16	7/16	4-5/16	1-1/4	P-061891-00012	2 lbs.
20	2	2	13-13/16	1/4-18	12-11/16	9/16	1/4-20	7/16	12-15/16	5/8	P-061890-00020	2 lbs.
20	3	3	6-13/16	1/4-18	5-11/16	9/16	3/8-16	7/16	5-15/16	1-1/4	P-061891-00020	2.3 lbs.
20	4-1/2	4-1/2	4-1/8	3/8-18	1-7/8	9/16	1/2-13	9/16	3	2-1/16	P-058887-00020	3.8 lbs.
30	3	3	8-13/16	1/4-18	7-11/16	9/16	3/8-16	7/16	7-15/16	1-1/4	P-061891-00030	2.6 lbs.
30	4-1/2	4-1/2	4-7/8	3/8-18	2-5/8	9/16	1/2-13	9/16	3-3/4	2-1/16	P-058887-00030	4.1 lbs.
45	3	3	11-15/16	1/4-18	10-13/16	9/16	3/8-16	7/16	11-1/16	1-1/4	P-061891-00045	3.2 lbs.
45	4-1/2	4-1/2	6-1/8	3/8-18	3-7/8	9/16	1/2-13	9/16	5	2-1/16	P-058887-00045	4.7 lbs.
60	4-1/2	4-1/2	7-1/4	3/8-18	5	9/16	1/2-13	9/16	6-1/8	2-1/16	P-058887-00060	5.2 lbs.
80	4-1/2	4-1/2	8-3/4	3/8-18	7	9/16	1/2-13	9/16	8-1/8	2-1/16	P-058887-00080	5.8 lbs.
100	4-1/2	4-1/2	10-1/2	3/8-18	8-1/4	9/16	1/2-13	9/16	9-3/8	2-1/16	P-058887-00100	6.6 lbs.
225	4-1/2	4-1/2	20-3/8	3/8-18	18-1/8	9/16	1/2-13	9/16	19-1/4	2-1/16	P-058887-00225	10.9 lbs.

*NPT ports.

Other sizes available, contact factory.

Pressure Control Valves

"M" Plus™ Pressure Control Valves

"M" Plus™ Pressure Control Valves

Type	Pressure regulating valve	
Sensitivity	2% of range	
Supply Pressure	150 psi max.	
Outlet Pressure	Controllable ranges: 0-60 or 0-100 psi (for other, see table).	
Temperature Range	-40°F to 160°F	
Media	Air or inert gas	
Port Size	1/4" NPT	
Materials	Anodized aluminum	Body, cover
	Steel	Handle, shaft
	Sintered iron	Cam
	Buna-N	Seals



► Applications

Accurate control with medium flow and short distances, M Plus can be used with the proper positioner instead of mechanical linkage, push-pull cables or master-slave hydraulic systems. Delivery pressure is determined by the position of the operator, either handle or foot-pedal; system pressure is automatically compensated for by the valve itself.

► Part numbers

Model Output Pressure (psi)	M-1 Foot pedal, Spring Return	M-2 Hand lever, Spring Return	M-2-F Hand lever, Friction holding handle	MC-2 Hand lever, Spring Return	MC-2-F Hand lever, Friction holding handle
0-60	P -026716-00001	P -026714-00001	P -026715-00001*	P -026720-00001	P -026719-00001
0-100	P -026716-00002	P -026714-00002	P -026715-00002	P -026720-00002	P -026719-00002
10-60			P -026715-00011 ¹		
Model Output Pressure (psi)	ME-2 Hand lever, Spring Return	ME-2-F Hand lever, Friction holding handle	M-5 Direct push, Spring Return		
0-60	P -026722-00001		P -026718-00001		
0-100	P -026722-00002	P -026721-00002	P -026718-00002		
10-60					

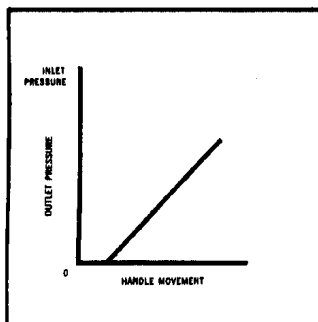
*For chrome plated cam housing and hub, use P -026773-00001.

¹ Yoke reversed for preload pressure range reducing the handle travel to 75° from the standard 90°.

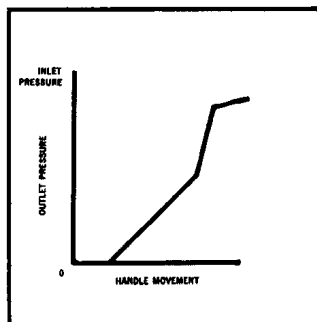
Note: No suffix on the model designation indicates a self-returning valve operator; a -F suffix is a self-holding type, with adjustable friction.

For additional parts, information, mounting dimensions, and service instructions, refer to Service Bulletin SM-800.11.

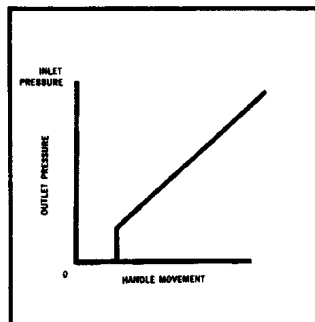
CONTROL OUTPUTS



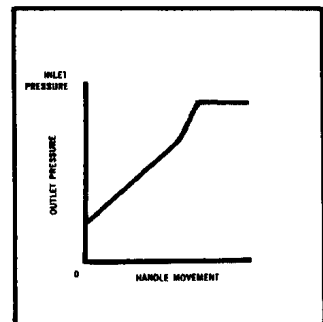
GRADUATION WITHOUT FULL PRESSURE



GRADUATION WITH FULL PRESSURE



GRADUATION WITHOUT FULL PRESSURE AND NON-RETAINED PRELOAD



GRADUATION WITH FULL PRESSURE AND RETAINED PRELOAD

Other combinations of the above outputs can also be made available.

Pressure Control Valves

"M" Plus™ Pressure Control Valves

Rexroth
Bosch Group

➔ Repair kits

Type	Part number	Description
New Type M Plus™	P -026784-00000	Includes supply valve, roller, exhaust valve spring, o-rings
Type M Pressure (obsolete)	P -061666-00000	Kit, Valve Portion Repair- includes supply valve assembly, roller assembly, exhaust valve spring, O-rings, & grease tube (Old style, "M" Pressure Control.)
M-2	P -061241-K0000	Cam Housing complete (M PLUS & old style "M" Pressure
--	P -028822-00002	Valve portion for P -028897-00000 and P -028817-00000 Series
M-2-F	P -060395-K0000	Cam Housing complete (M PLUS & old style "M" Pressure
M-1	P -029029-00001	Complete valve portion for P -029028-00001
M-1	P -029037-00000	Complete repair kit for P -029028-00001, includes cartridge, boot, piston, o-ring and exhaust valve
M-1	P -029036-K0000	Replacement boot and protector for P -029028-00001

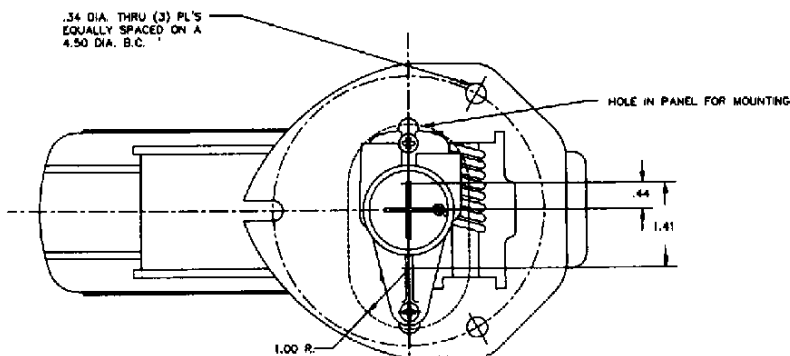
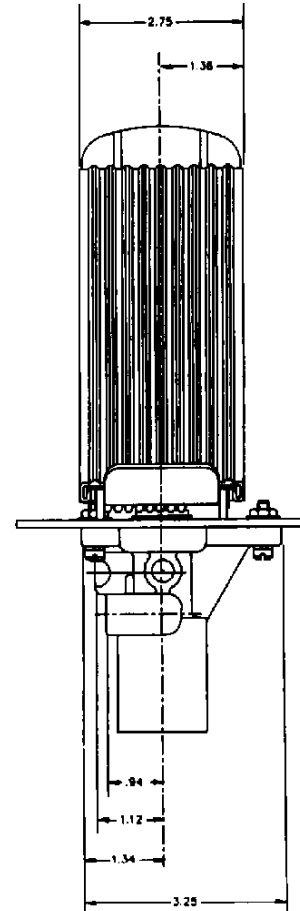
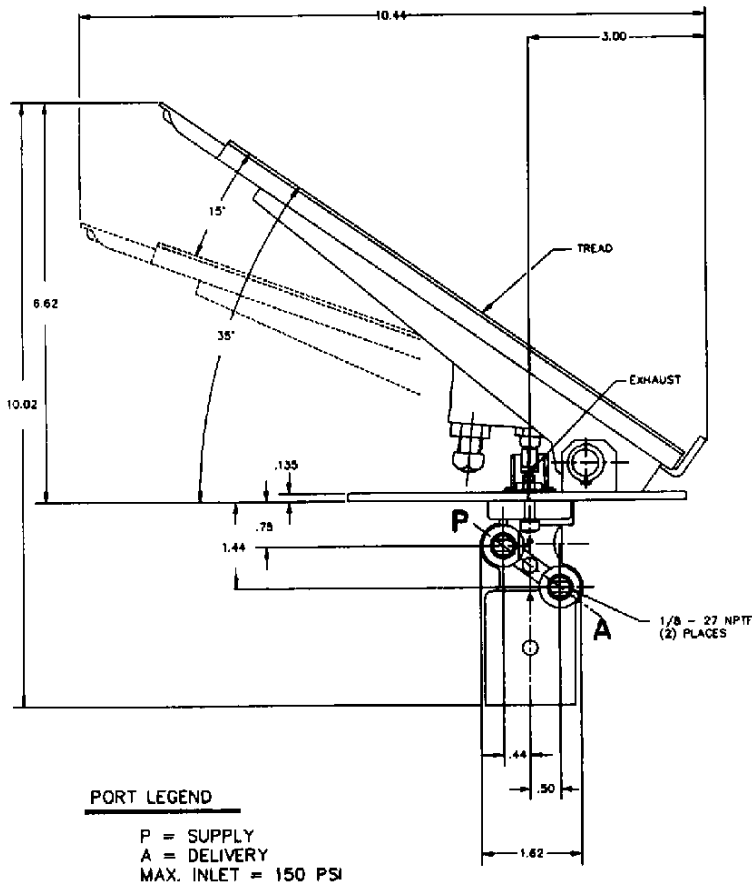
For severely worn or damaged valves, see
Service Bulletin SM-800.11 for parts list.

Pressure Control Valves

"M" Plus™ Pressure Control Valves

Rexroth
Bosch Group

M-1 Pedal Actuated



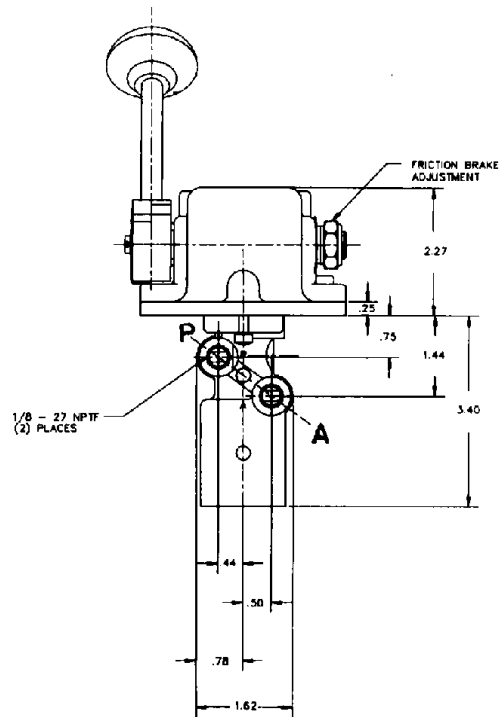
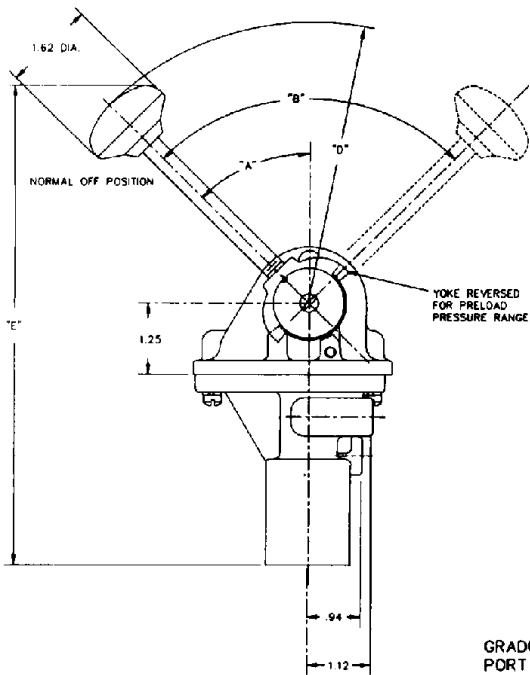
P26716-2	0-100 PSI	W/PEDAL
P26716-1	0-60 PSI	TREAD
PC. NO.	RATING	REMARKS

Pressure Control Valves

"M" Plus™ Pressure Control Valves

Rexroth
Bosch Group

M-2 Lever Operated

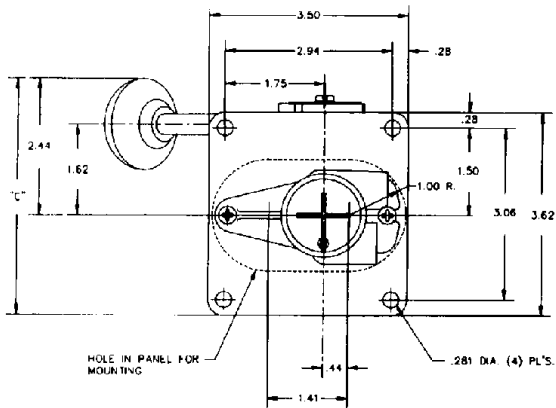


GRADUATING VALVE PORT LEGEND

P = SUPPLY
A = DELIVERY
MAX. INLET = 150 PSI

NOTES:

ON VALVE PC. NO. P26773-1 CAM HOUSING AND HUB IS CHROME PLATED, AND HANDLE IS STAINLESS STEEL.



P26714-2	0-100 PSI						Spring Returned Handle
P26714-1	0-60 PSI	45°	90°	4.25	5.09	8.68	
P26773-1	0-60 PSI	45°	90°				Friction Retained Handle, See Notes
P26715-11	0-60 PSI	30°	75°	4.34	5.09	8.68	Friction Retained Handle
P26715-2	0-100 PSI	45°	90°				
P26715-1	0-60 PSI						
PC. NO.	RATING	"A"	"B"	"C"	"D"	"E"	REMARKS

Pressure Control Valves

"M" Plus™ Pressure Control Valves

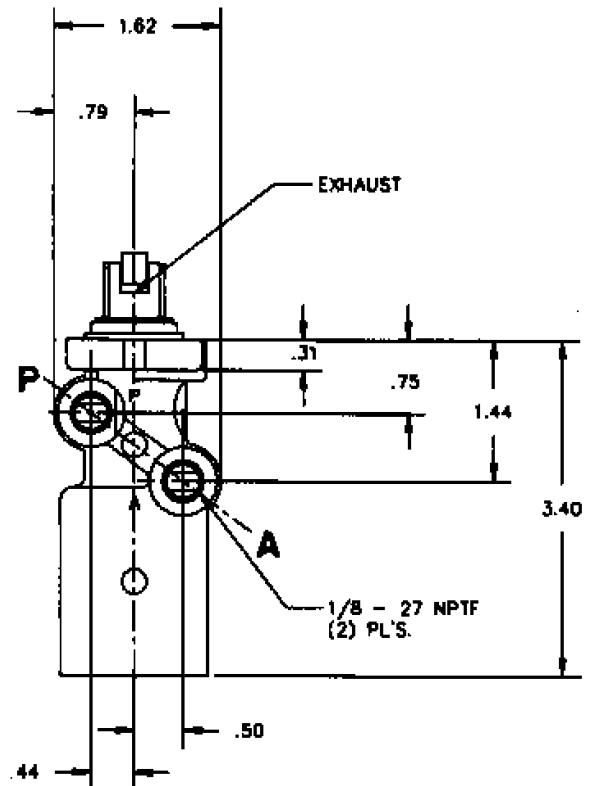
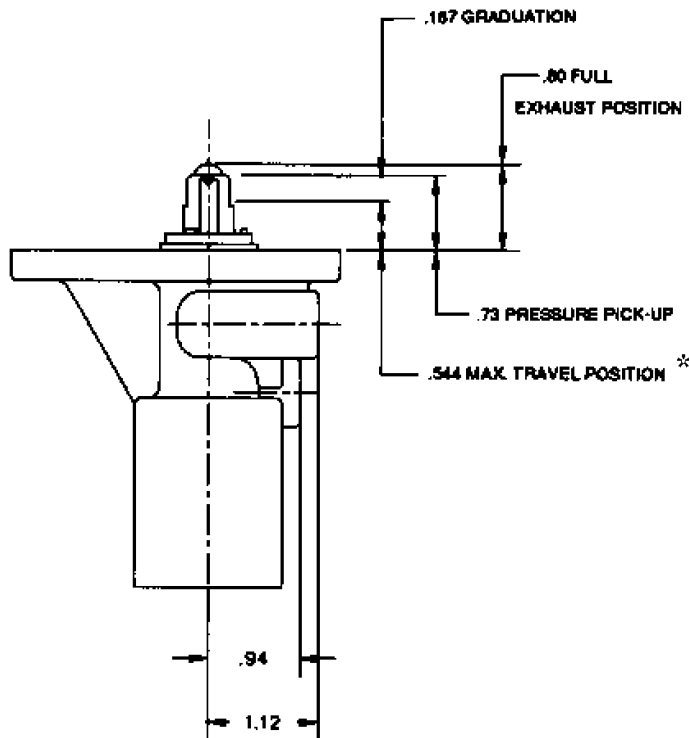
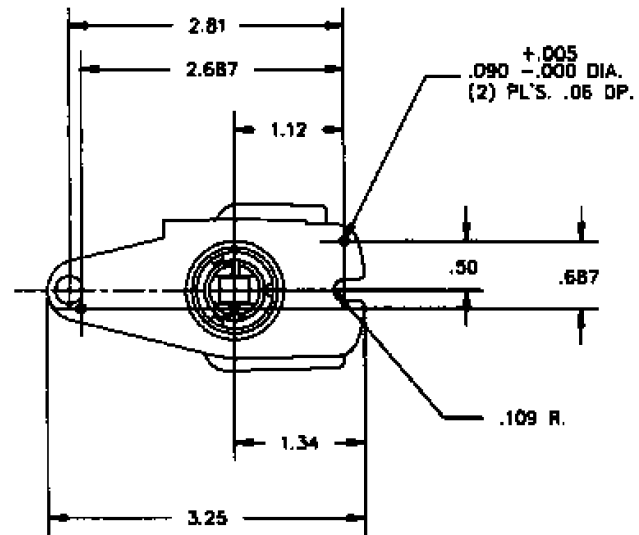
Rexroth
Bosch Group

M-5 Mechanically Operated

P26718-2	0-100 PSI
P26718-1	0-60 PSI
PC. NO.	RATING

PORT LEGEND

P = SUPPLY
A = DELIVERY
MAX. INLET = 150 PSI



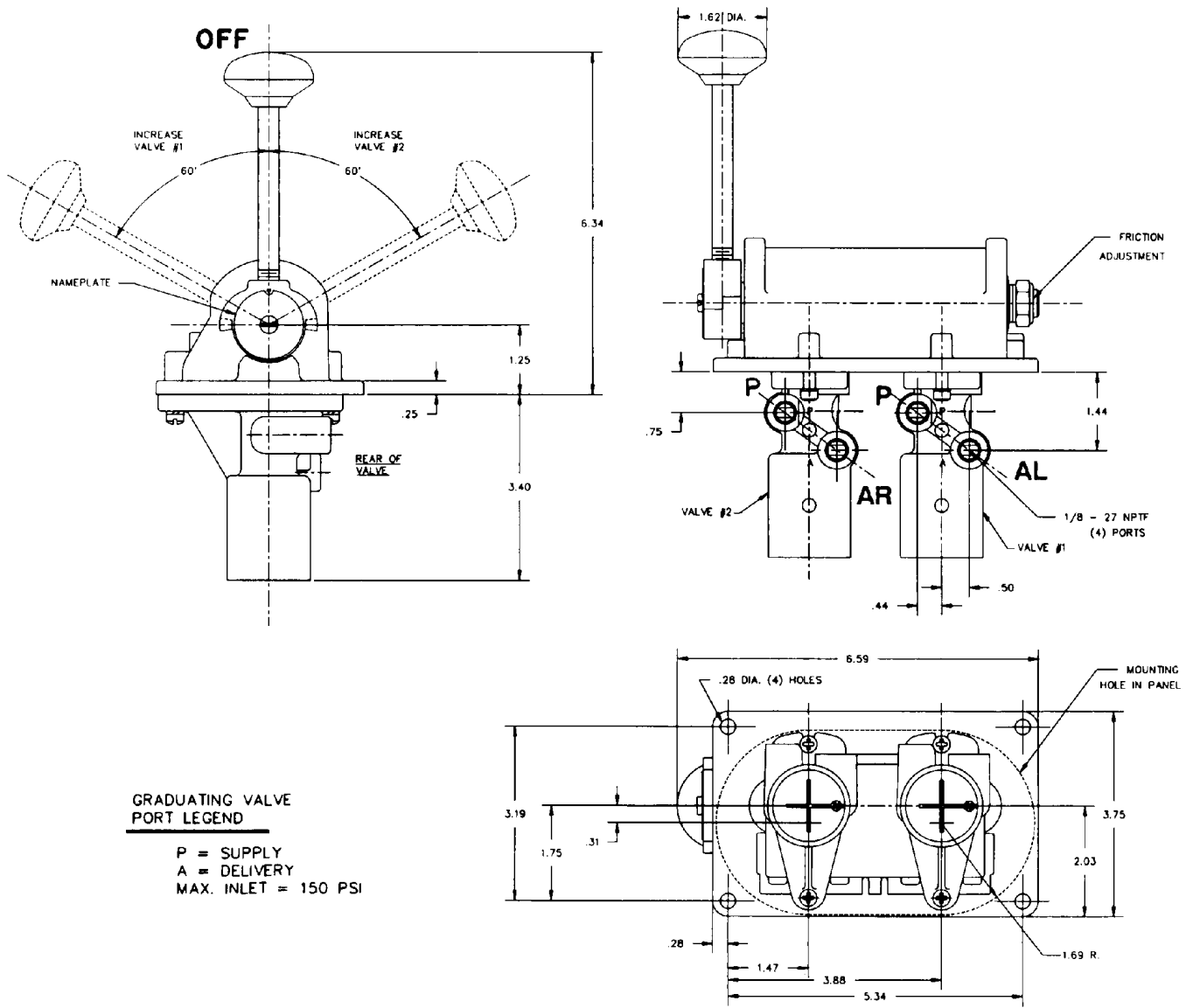
*Travel beyond this position can result in over pressure with possible valve damage.

Pressure Control Valves

"M" Plus™ Pressure Control Valves

Rexroth
Bosch Group

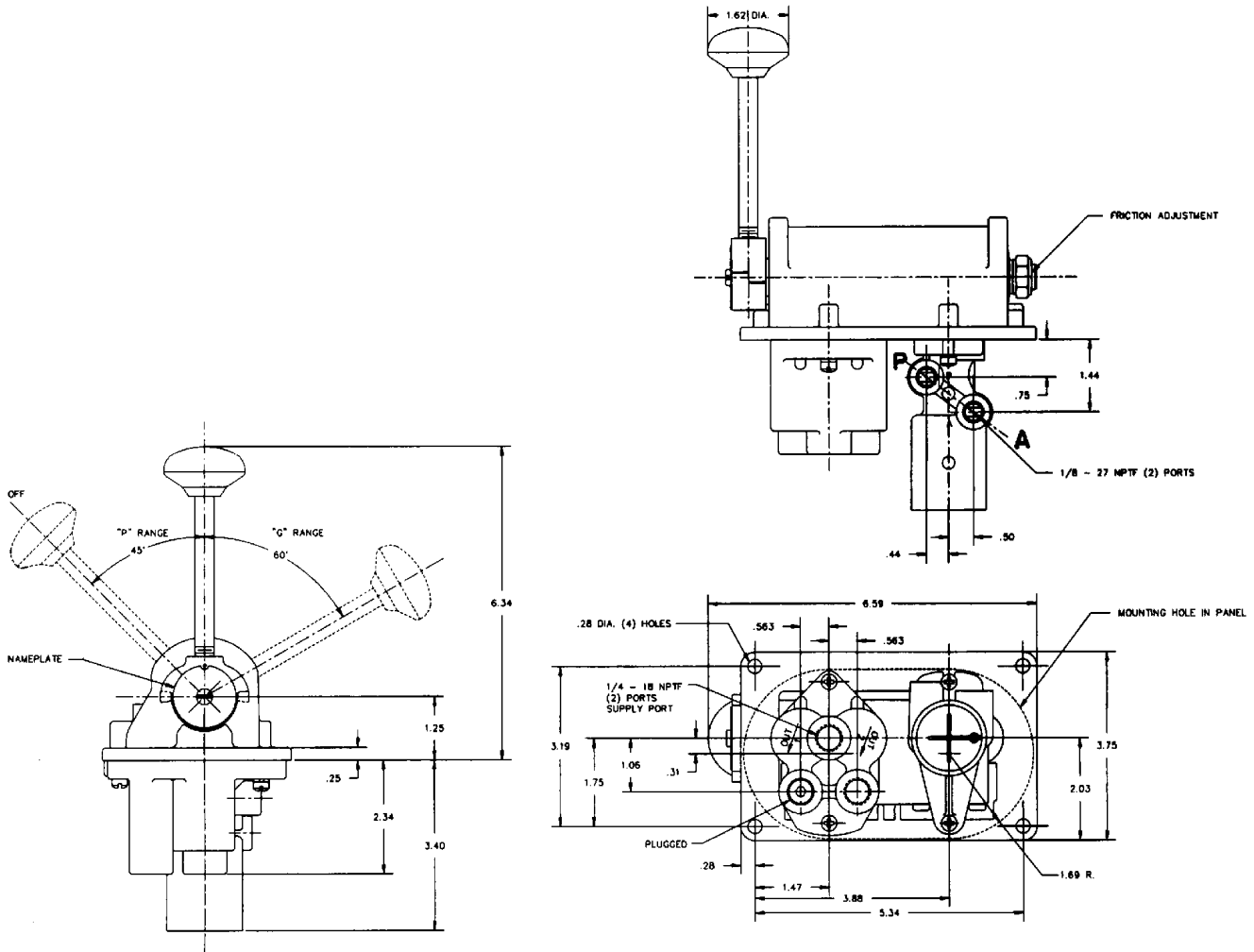
MC-2 Lever Operated [Centered]



Pressure Control Valves

"M" Plus™ Pressure Control Valves

ME-2 Lever Operated {Composite Functions}



Pressure Control Valves

"M" Plus™ Pressure Control Valves

Rexroth
Bosch Group

➔ M-Plus Cross Reference Identity Schedule

Designation	Obsoleted M Valves	New M Plus Valves	Obsoleted M Valve Portions	Mew M Plus Valve Portions	Operator Portions
M-5 (0-60 psi)	P -060403-00001	P -026718-00001	P -060394-00001	P -026672-00001	–
M-5 (0-100 psi)	P -060403-00002	P -026718-00002	P -060394-00002	P -026672-00002	–
M-1 (0-60 psi)	P -060401-00001	P -026716-00001	P -060394-00001	P -026672-00001	P -060397-00001
M-1 (0-100 psi)	P -060401-00002	P -026716-00002	P -060394-00002	P -026672-00002	P -060397-00001
M-1 (0-60 psi)	P -060402-00001	P -026717-00001	P -060394-00001	P -026672-00001	P -060397-00000
M-1 (0-100 psi)	P -060402-00002	P -026717-00002	P -060394-00002	P -026672-00002	P -060397-00000
M-2 (0-60 psi)	P -061230-00001	P -026714-00001	P -060394-00001	P -026672-00001	P -061241-00000
M-2 (0-100 psi)	P -061230-00002	P -026714-00002	P -060394-00002	P -026672-00002	P -061241-00000
M-2-F (0-60 psi)	P -060400-00001	P -026715-00001	P -060394-00001	P -026672-00001	P -060395-00000
M-2-F (0-100 psi)	P -060400-00002	P -026715-00002	P -060394-00002	P -026672-00002	P -060395-00000
M-2-F (10-60 psi)	P -060400-00011	P -026715-00011	P -060394-00001	P -026672-00001	P -060395-00001
M-2-F (0-100 psi)	P -062142-00002	–	P -060394-00002	P -026672-00002	P -062143-00000
M-2-F (0-100 psi)	P -062147-00002	P -027161-00002	P -060394-00002	P -026672-00002	P -060395-00002
M-2-F (0-60 psi)	P -064905-00001	P -026772-00001	P -060394-00001	P -026672-00001	P -060395-00004
M-2-F (0-100 psi)	P -064905-00002	P -026772-00002	P -060394-00002	P -026672-00002	P -060395-00004
M-2-F (0-60 psi)	P -065286-00001	P -026773-00001	P -060394-00001	P -026672-00001	P -060395-00005
MC-2 (0-60 psi)	P -061239-00001	P -026720-00001	P -060394-00001 (2 required)	P -026672-00001 (2 required)	P -061243-00000
MC-2 (0-100 psi)	P -061239-00002	P -026720-00002	P -060394-00002 (2 required)	P -026672-00002 (2 required)	P -061243-00000
MC-2 (0-100 psi)	P -064338-00002	–	P -060394-00001 (2 required)	P -026672-00001 (2 required)	P -061243-00002
MC-2-F (0-60 psi)	P -061142-00001	P -026719-00001	P -060394-00001 (2 required)	P -026672-00001 (2 required)	P -061132-00000
MC-2-F (0-100 psi)	P -061142-00002	P -026719-00002	P -060394-00002 (2 required)	P -026672-00002 (2 required)	P -061132-00000
ME-2 (0-60 psi)	P -061953-00001	P -026722-00001	P -060394-00001 & +P -058453-00002	P -026672-00001 & +P -058453-00002	P -061954-00000
ME-2 (0-100 psi)	P -061953-00002	P -026722-00002	P -060394-00002 & +P -058453-00002	P -026672-00002 & +P -058453-00002	P -061954-00000
ME-2-F (0-100 psi)	P -061910-00002	P -026721-00002	P -060394-00002 & +P -058453-00002	P -026672-00002 & +P -058453-00002	P -061911-00000
ME-2-F (0-100 psi)	P -060971-00002	–	P -060394-00002 & +P -058453-00002	P -026672-00002 & +P -058453-00002	P -060972-00000
M-1 Special	P -067530-00000	P -026775-00000	P -060394-00001	P -026672-00001	–

+ On-Off Valve Portion

Relay Valves

Type "S" Relay

Type "S" Relay

Type	3 way pilot operated pressure control
Supply Pressure	250 psi max.
Pilot Pressure	250 psi max.
Ratio- pilot to delivery	1:1 standard; others noted below.
Temperature Range	-20°F to 160°F
Media	Air or inert gas
Pilot Port Size	1/4" NPT
Body Port size	1/4" and 1" as noted below
Hysteresis	Less than 5 psi.

Materials	Body	3/8" & 1/2" die cast zinc 3/4" and 1" die cast aluminum
	Diaphragm	Nylon reinforced HYCAR
	Other	Anodized aluminum or plated



Features

Reliability

Automatically sustains pressure directed by the pilot line on a 1 to 1 ratio (optional ratios shown below). The balanced internal valve functions to relieve excess pressure, or to maintain pressure against demand. Rubber seated valves provide zero leakage.

Installation Versatility

Operates in any position. May be supported by piping alone or by a mounting bracket. The IN and OUT ports are plainly marked on the body.

Ease of Maintenance

The valve may be serviced without disturbing line connections. All parts are accessible by removing top cover. No special tools are required.

Large Capacity

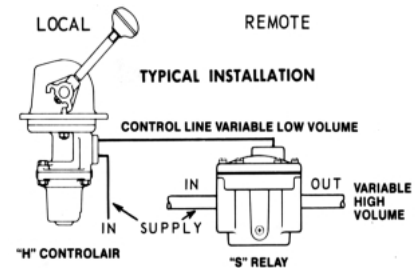
Designed with minimum valving to provide maximum flow (see graph).

Modern Construction

All materials are corrosion resistant. The sturdy die cast body contains wrench flats for ease of installation. Ports have dry seal pipe threads (suitable with standard pipe thread).

Positive Seals

Packing rings are located at all critical points in the assembly to eliminate internal and external leakage.



Application

The "S" Relay Valve is a pilot-operated, 3-way, pneumatic pressure control valve with open exhaust. The large capacity of this valve makes it an ideal volume booster. It receives pressure signals from a remote control valve and repeats this pressure with a greater rate of flow to the component being controlled. The valve serves to speed response time between sending and receiving stations in a pneumatic circuit which involves long piping runs or branch circuits. Where the controlled component is not in a readily accessible location, remote piloting provides a solution.

Technical Information



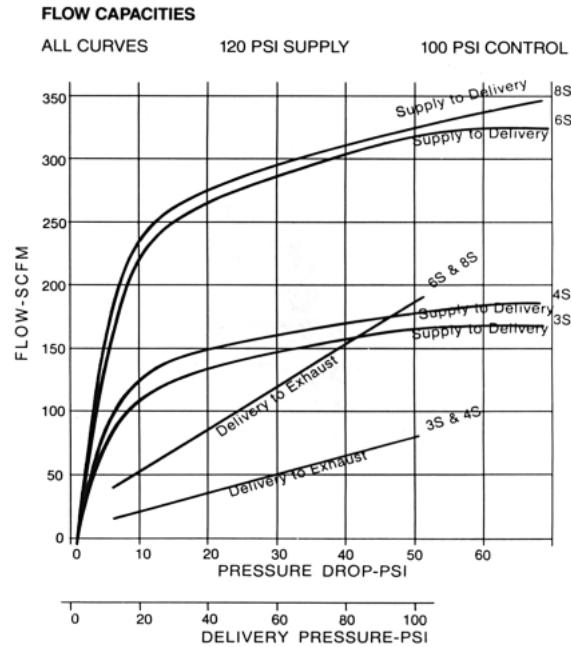
Pipe Size Dryseal NPTF	Model Designation	Part Number	Weight	Repair Kits
3/8-18	3-S	P -055160-00000	2 lb 6 oz.	P -057429-00000
1/2-14	4-S	P -055161-00000	2 lb 4 oz.	P -057429-00000
3/4-14	6-S	P -055162-00000	2 lb 10 oz.	P -057431-00000
1-11	8-S	P -055163-00000	2 lb 7 oz.	P -057431-00000
1/2-14 Multifunction (2:1 ratio)*	4-S	P -065671-00001	2 lb 10 oz.	-
3/4-14 Multifunction (2:1 or 3:1)	6-S	P -027450-00000	-	-
1/2-14 Hydraulic piloted 300 psi max-Air inlet 150 psi max*	4-S	P -064955-00002	2 lb 10 oz.	-
1/2-18 Reducing 3:1	2-S	P -062243-00000	-	-
3/8-18 Reducing 3:1	3-S	P -062243-00001	-	-
1/2-18 Adjustable	2-S	P -027257-00000	-	P -027803-00000
Optional Tapped exhaust kit	3-S & 4-S	-	-	P -066236-00000
Model 2-S (P -027257-00000) shown at left.				

*Contact Rexroth for outline drawings. Part number includes Mounting Bracket.

Relay Valves

Type "S" Relay

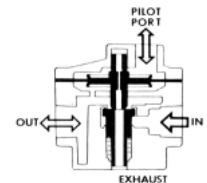
Operating characteristics



Operating characteristics

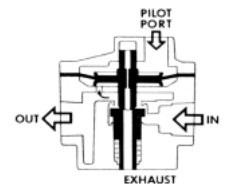
CLOSED CENTER POSITION

When the outlet pressure (pressure below the diaphragm) is equal to the pilot pressure (pressure above the diaphragm), the balance of pressure allows the inlet valve spring to move the valve assembly up. This seats the inlet valve and exhaust valve, sealing the IN and OUT ports.



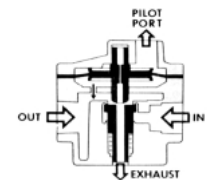
INCREASING PRESSURE

Applying pressure to the pilot port moves the diaphragm assembly down to seat the exhaust valve, unseat the inlet valve plunger, and compress the inlet valve spring. Air pressure from a local source at the IN port flows to the OUT port. A controlled flow of air is also directed to the underside of the diaphragm. Air flow continues until the pressure at the OUT port equals the pressure at the pilot port.



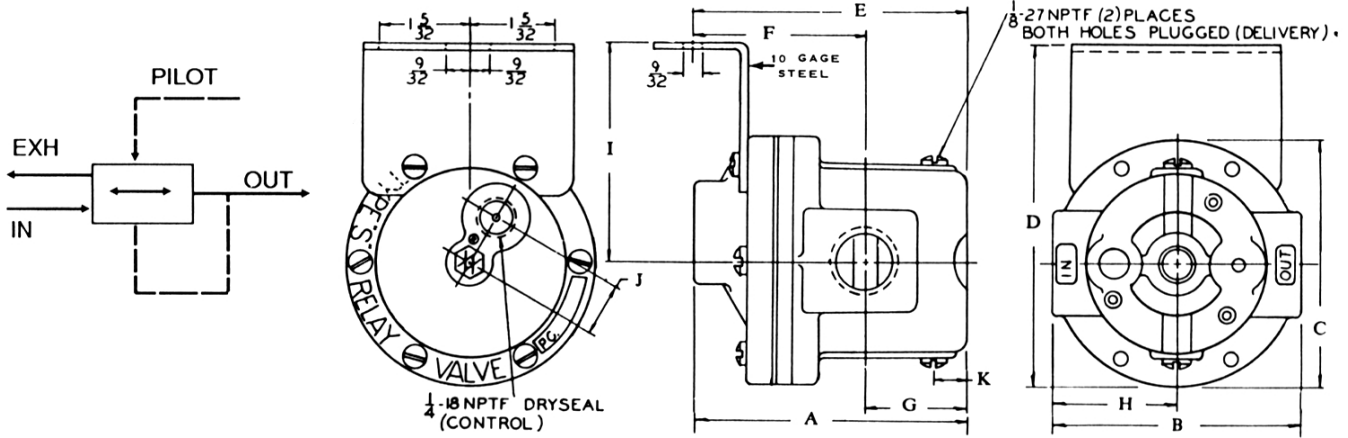
DECREASING PRESSURE

Reducing pressure in the pilot port unbalances the pressure across the diaphragm. The diaphragm assembly and exhaust valve move away from the seated inlet valve, opening the OUT port to exhaust through the hollow inlet valve plunger. Air continues to exhaust until the air pressure at the OUT port under the diaphragm balances the air pressure to the pilot port on the top of the diaphragm.



Relay Valves

Type "S" Relay



Dimensions											
Model	A	B	C	D	E	F	G	H	I	J	K
3-S	3 ⁹ / ₁₆	3 ¹ / ₄	3 ¹ / ₄	4 ¹ / ₂	4 ¹ / ₁₆	2 ¹ / ₄	1 ¹¹ / ₃₂	1 ⁵ / ₈	2 ⁷ / ₈	1 ¹ / ₁₆	1 ⁵ / ₃₂
4-S	3 ⁹ / ₁₆	3 ¹ / ₄	3 ¹ / ₄	4 ¹ / ₂	4 ¹ / ₁₆	2 ¹ / ₄	1 ¹¹ / ₃₂	1 ⁵ / ₈	2 ⁷ / ₈	1 ¹ / ₁₆	1 ⁵ / ₃₂
6-S	4 ¹¹ / ₃₂	4 ¹ / ₈	4 ¹ / ₈	5 ¹ / ₄	4 ⁷ / ₈	2 ⁷ / ₈	1 ¹ / ₂	2 ¹ / ₁₆	3 ³ / ₁₆	3 ³ / ₄	1 ³ / ₁₆
8-S	4 ¹¹ / ₃₂	4 ¹ / ₈	4 ¹ / ₈	5 ¹ / ₄	4 ⁷ / ₈	2 ⁷ / ₈	1 ¹ / ₂	2 ¹ / ₁₆	3 ³ / ₁₆	3 ³ / ₄	1 ³ / ₁₆

Relay Valves

C-2 Relay

Technical Data

Type	spring loaded diaphragm	
Supply Pressure	250 psi max.	
Control Pressure	150 psi max.	
Temperature range	-20°F to 160°F	
Media	Air or inert gas	
Port Size		
1- Supply	1/2"-14 NPT	
2- Control	1/4"-18 NPT	
3- Delivery	1/2"-14 NPT	
EX- Exhaust	3/4"-14 NPT	



Application Notes

The C-2 Relay Valve functions to reproduce in substantial volume whatever pressure is applied to the small volume control portion of the valve itself. Its essential purpose is to increase the speed of operation for devices such as brakes, clutches, positioning devices and to reduce transmission time in control lines. This valve is usually directed by a relatively small pressure control valve, such as a CONTROLAIR™ Valve, which is located at some distance from the controlled volume and is connected by small diameter pipe or tubing.

Code No.

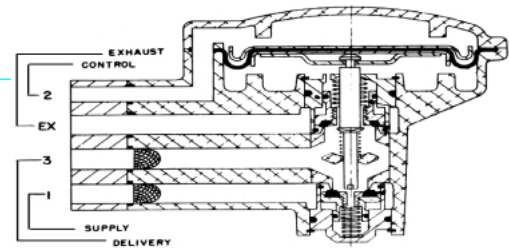
	C-2 Relay Valve [complete]	Replacement [valve portion only]	Spare parts kit
	-538975-00000	-850012-K0000	P -059191-00000

Operating Characteristics

Supply air	Port 1
Control air signal	Port 2
Delivery	Port 3
Exhaust	EX

Application

Reproduces pressure from control line independent of leakage or temperature effects.

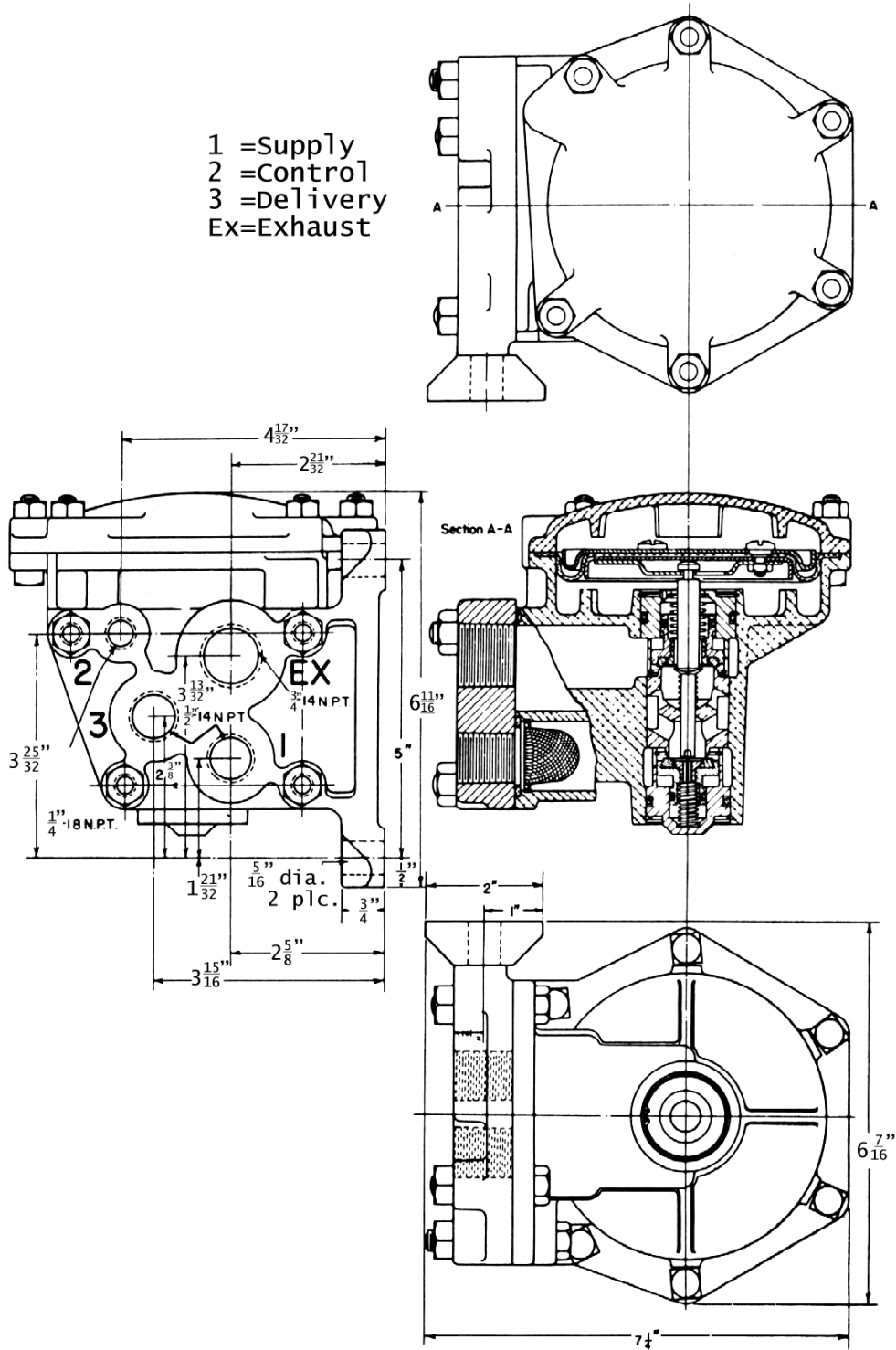


Relay Valves

C-2 Relay

Dimensions

1 =Supply
2 =Control
3 =Delivery
Ex=Exhaust



Relay Valves

"H" and "L" Relayair® Valves

◆ "H" and "L" Relayair® Valves

Type	Pilot operated sequence valve	
Supply Pressure	200 PSI Max. Except P -059158-00045 (300 PSI)	
Control Pressure	140 psi max.	
Temperature range	-40°F to 160°F	
Media	Air or inert gas	
Port Size:		
Control port (port 10), breather port (port 1):	1/4" NPT	
All other ports:	3/8" NPT	



◆ Operating Characteristics

The Relayair® Valve has three basic uses:

1. As a nongraduated relay to provide a large flow of air from a separate source when piloted by small amount of control media and to stop this flow and exhaust the air to atmosphere when the control pressure is vented.
2. As an interlock to govern the flow in one circuit by placing its control in another independent circuit.
3. As a pressure-sensitive sequence valve for such circuit functions as timing, cycling, etc.

► Application Notes

RELAYAIR Valves operated by pilot pressures less than 35 psi utilize one control spring while valves operated by pilot pressures greater than 35 psi use two springs. To obtain pilot pressures less than 10 psi, two diaphragms are used in series.

► Model

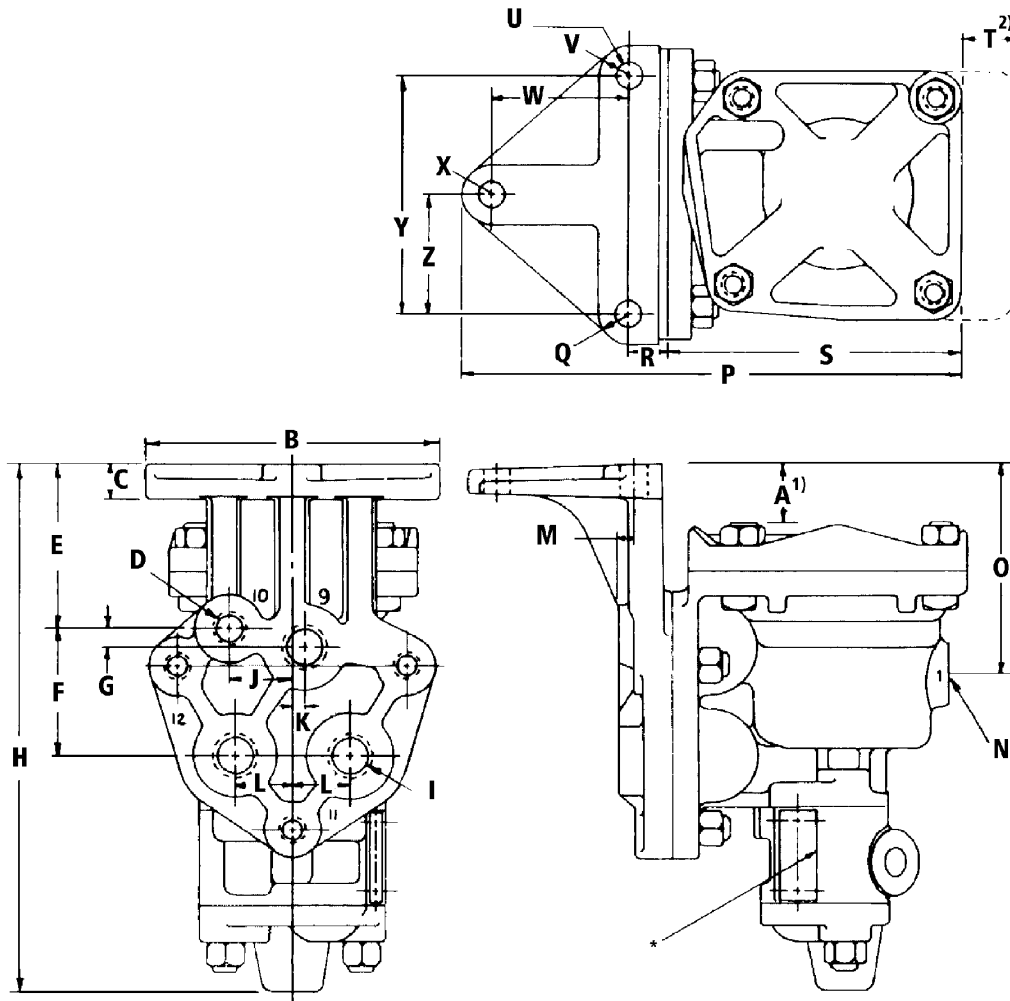
Part Number	Pilot Pressure	Designation	Repair kit - Metal parts	Repair kit - Rubber parts
P -059567-00003	3	H-5-D	P -060312-K0000	P -060310-00000
P -059567-00012	12	H-5-D	P -060312-K0000	P -060310-00000
P -059155-00010	10	H-5	P -060312-K0000	P -060309-K0000
P -059155-00015	15	H-5	P -060312-K0000	P -060309-K0000
P -059155-00020	20	H-5	P -060312-K0000	P -060309-K0000
P -059155-00025	25	H-5	P -060312-K0000	P -060309-K0000
P -059155-00030	30	H-5	P -060312-K0000	P -060309-K0000
P -059155-00035	35	H-5	P -060312-K0000	P -060309-K0000
P -059155-00045	45	H-5	P -060312-K0000	P -060309-K0000
P -059158-00045	45	H-5	P -060313-00000*	P -060309-K0000
P -059155-00050	50	H-5	P -060312-K0000	P -060309-K0000
P -059155-00060	60	H-5	P -060312-K0000	P -060309-K0000
P -059155-00070	70	H-5	P -060312-K0000	P -060309-K0000
P -059155-00080	80	H-5	P -060312-K0000	P -060309-K0000
P -059155-00090	90	H-5	P -060312-K0000	P -060309-K0000
P -059155-00100	100	H-5	P -060312-K0000	P -060309-K0000
P -059155-00110	110	H-5	P -060312-K0000	P -060309-K0000
P -062482-00015	15	L-2-A	P -060312-K0000	P -060392-00000
P -062482-00040	40	L-2-A	P -060312-K0000	P -060392-00000
P -062482-00070	70	L-2-A	P -060312-K0000	P -060392-00000
P -062482-00085	85	L-2-A	P -060312-K0000	P -060392-00000
P -062482-00110	110	L-2-A	P -060312-K0000	P -060392-00000
P -062482-00135	135	L-2-A	P -060312-K0000	P -060392-00000
P -062482-00150	150	L-2-A	P -060312-K0000	P -060392-00000

*Repair kit for 300 psi model.

Relay Valves

"H" and "L" Relayair® Valves

H-5 Relay Valve Dimensions



* Nameplate location.

H-5 Relay Dimensions

A ¹⁾	B	C	D - NPTF	E	F	G	H	I - NPTF	J	K	L	M
13/16	4-3/8	1/2	1/4-18	2-7/16	1-7/8	9/32	7-3/4	3/8-18	15/16	3/16	27/32	1/4

N - NPT	O	P	Q	R	S	T ²⁾	U (3 places)	V	W	X	Y	Z
1/4-18	3-1/8	7-3/8	∅7/16	9/16	4-3/8	13/16	13/32	∅7/16	2	∅7/16	3-1/2	1-3/4

1) H-5 shown. "A" for H-5-D = 1/8"; for L-2-A = 5/16".

2) Clearance required for removal.

* Nameplate location.

Relay Valves

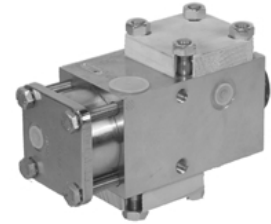
Start Air Valve

Rexroth
Bosch Group

Technical Data

Type	Pilot operated 3-way pneumatic relay valve	
Supply Pressure	450 psi [31.0 bar]	
Pilot Pressure	75 psi max. [5.2 bar]	(Reset at 20 psi [1.3 bar])
Temperature range	-40°F to 160°F	
Media	Air or inert gas	
Port Size	1-1/4" NPT	In and Out ports [A, P]
	3/4"-14 NPT	Exhaust port [R]
	1/4"-18 NPT	Pilot port [Z]

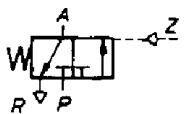
Weight: 23 lbs. [8.6 kg]. Mounting: M 12 threads.



Operating Characteristics

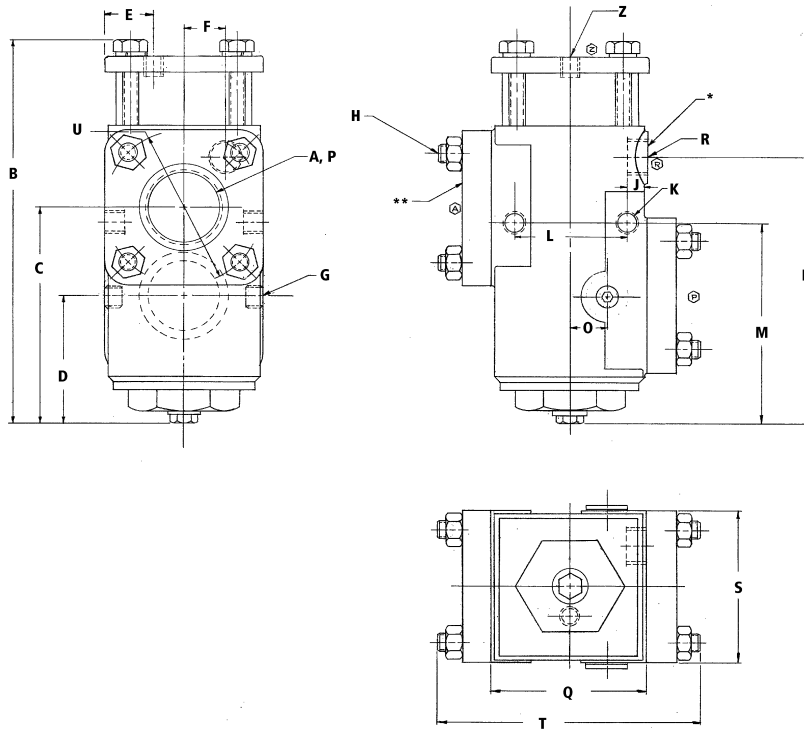
Used in pneumatic circuits to start diesel engines or operate a number of receivers requiring higher pressure activation, or anywhere that larger volume and/or higher pressures are used.

Part Numbers



Description	Service Bulletin number	Part Number
Start Air Valve NPT Flange ¹⁾	A5-81.01-SA -	P -065227-00000
		P -065228-00000

1) One per part number; two required for P -065227-00000.



Start Air Valve Dimensions

A - NPT	B	C	D	E	F	G - NPT	H	J	K - UNC
1-1/4-11 ¹ / ₂	9.14	5.19	3.07	0.83	0.98	1/4-18	M12	0.47	1/2-13
L	M	N	O	P - NPT	Q	R - NPT	S	T	∅U
2.52	4.85	6.42	0.87	1-1/4-11 ¹ / ₂	3.53	3/4-14	3.53	5.95	3.54

* Location for nameplate.

** Flange [2 required].

Dimensions in inches unless noted.

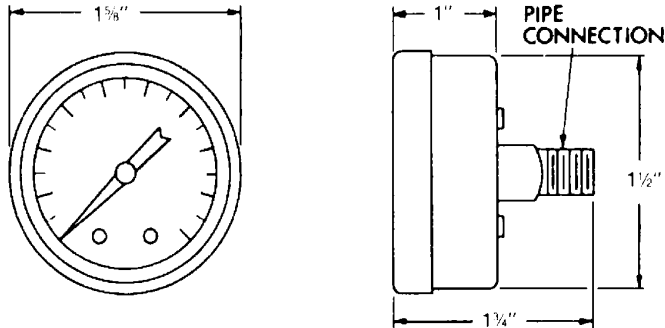
Gauges

Pressure gauges, psi

▲ Pressure gauges, psi

1-1/2" dial

1 1/2" WHITE DIAL - BLACK STEEL CASE PIPE MOUNTED



Air Gauges are generally most accurate at about half their maximum dial marking and should be ordered with dials approximately double the working pressure desired.
Orders should specify part number and description.

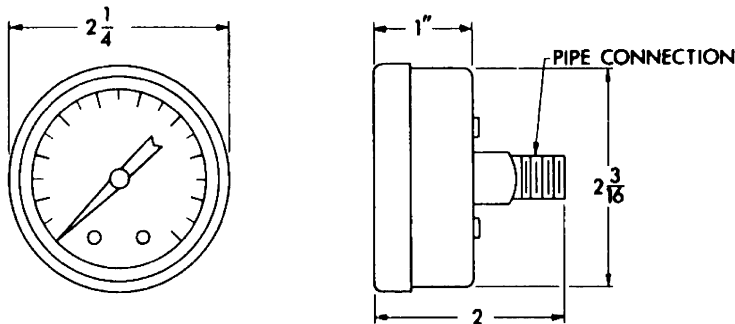
Pressure range	Dial graduations	Pipe connection	Part number
0-60 psig	2 psi	1/8-27 NPT	P -049788-00006
0-200 psig	5 psi	1/8-27 NPT	P -049788-00007

PSI - Pounds per square inch.
For use with compressed air or other inert gas.

▲ Pressure gauges, psi

2" dial

2" WHITE DIAL - BLACK STEEL CASE PIPE MOUNTED



Air Gauges are generally most accurate at about half their maximum dial marking and should be ordered with dials approximately double the working pressure desired.
Orders should specify part number and description.

Pressure range	Dial graduations	Pipe connection	Part number
0-60 psig	2 psi	1/4-18 NPT	P -049788-00005
0-60 psig	2 psi	1/8-27 NPT	P -049788-00003
0-160 psig	2 psi	1/8-27 NPT	P -049788-00000
0-160 psig	2 psi	1/4-18 NPT	P -049788-00002
0-300 psig	5 psi	1/8-27 NPT	P -049788-00001
0-300 psig	5 psi	1/4-18 NPT	P -049788-00004

PSI - Pounds per square inch.
For use with compressed air or other inert gas.

Gauges

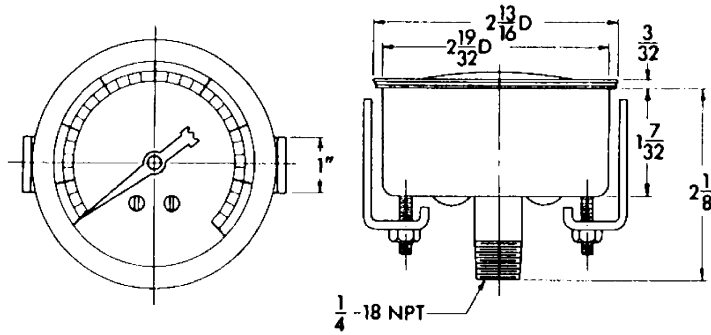
Pressure gauges, psi

Rexroth
Bosch Group

▲ Pressure gauges, psi

2-1/2" dial

2 1/2" WHITE DIAL - FLUSH PANEL MOUNTED



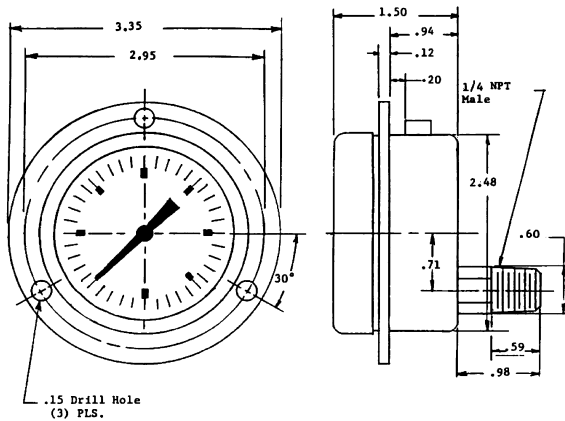
Material - Black brass, nonmagnetic case.
Orders should specify part number and description.

Pressure range	Dial graduations	Pipe connection	Part number
0-160 psig	5 psi	1/4-18 NPT	P-048026-00000

PSI - Pounds per square inch.
For use with compressed air or other inert gas.

▲ Pressure gauges, psi

2-3/4" dial



Material - Black Steel case, fluid filled chrome.
Orders should specify part number and description.

Pressure range	Dial graduations	Pipe connection	Part number
0-160 psig	5 psi	1/4-18 NPT	P-048134-00000

PSI - Pounds per square inch.
For use with compressed air or other inert gas.

Industrial Shock Absorbers, Series 370

Energy absorption 0,4-4000 Nm

Rexroth
Bosch Group

Technical Data

Ambient temperature range 14°F to 158°F (-10 °C to +70 °C)
Working medium Oil

Materials	Piston rod, barrel size M 8 – M 20	Stainless steel
	Piston rod, barrel size M 27 – M 64	Hardened, hard chromium-plated steel
	Cylinder barrel	Black anodized steel
	Locknut	Black anodized steel
	Rod end button	Hardened steel

Dimensions in mm.

Shock absorber M 8 x 0,75 - M 20 x 1,5 are self compensating and are chosen in respect to energy and m_e (effective mass).

Shock absorber M 27 x 2 - M 64 x 4 are adjustable with respect to mass and speed.



Application Area

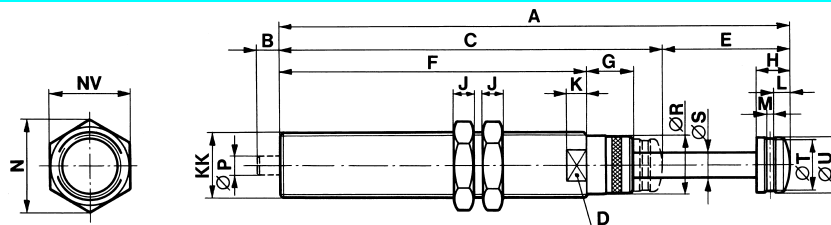
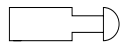
Soft retardation of moving masses. The shock absorber can also function as a mechanical stop.

Performance and Code No. (For further information and calculation see section 15)

Symbol	Barrel thread	Stroke S_d [m]	Max. energy-absorption/stroke E/stroke [Nm]	Max. energy-absorption/hour E/h [Nm]	Max. mass m_e [kg]	Max/min striking velocity [m/s]	Weight [kg]	Code no.
	M 8 x 0,75	0,005	0,45	1700	0,3–2,7	4,3/0,15	0,01	370-020-100-0
	M 8 x 0,75	0,005	0,8	1700	0,7–5	4,3/0,15	0,01	370-020-200-0
	M 10 x 1	0,0064	2,8	22000	0,9–6,8	4,3/0,15	0,03	370-030-100-0
	M 10 x 1	0,0064	2,8	22000	3,6–13	4,3/0,15	0,03	370-030-200-0
	M 12 x 1	0,01	8,5	28000	0,9–16	4,3/0,15	0,04	370-035-100-0
	M 14 x 1,5	0,016	21	34000	1,4–6,8	3,7/0,15	0,09	370-040-100-0
	M 14 x 1,5	0,016	21	34000	3,6–16	3,7/0,15	0,09	370-040-200-0
	M 14 x 1,5	0,016	21	34000	9–40	3,7/0,15	0,09	370-040-300-0
	M 14 x 1,5	0,016	21	34000	23–90	3,7/0,15	0,09	370-040-400-0
	M 20 x 1,5	0,019	34	45000	1,4–6,8	3,7/0,15	0,12	370-050-100-0
	M 20 x 1,5	0,019	34	45000	4,5–23	3,7/0,15	0,12	370-050-200-0
	M 20 x 1,5	0,019	34	45000	14–68	3,7/0,15	0,12	370-050-300-0
	M 20 x 1,5	0,019	34	45000	32–180	3,7/0,15	0,12	370-050-400-0
	M 27 x 2	0,025	60	54000	10–500	3,5/0,2	0,5	370-120-100-0
	M 27 x 2	0,04	100	54000	15–500	3,5/0,2	0,5	370-120-400-0
	M 42 x 3	0,05	375	126000	50–5000	3,5-0,2	1,850	370-200-500-0
	M 42 x 3	0,08	600	126000	50–5000	3,5-0,2	1,850	370-200-800-0
	M 64 x 2	0,1	4080	192000	270–52000	5/0,15	7,200	082-100-507-0
	M 64 x 2	0,15	6120	248000	330–80000	5/0,15	7,200	082-100-507-1

With shock absorbers sizes M 8 x 0,75 - M 20 x 1,5 and M64 x 2 one locknut is included.

With shock absorbers sizes M 27 x 2 - M 42 x 3 two locknuts are included.



KK	A	B	C	D	E	F	G	H	J	K	L	M	N	P	R	S	T	U	NV
M 8 x 0,75	38,5	–	33,5	–	5	26	2,5	5	2*	–	–	–	12,8	–	–	2	–	6,4	11
M 10 x 1	57,7	–	51,1	–	6,6	37,9	5,1	8	3*	–	–	–	15	–	–	3,2	–	7,6	13
M 12 x 1	69,8	–	59,8	–	10	48,5	3,2	8	4*	–	–	–	16,2	–	–	3,2	–	7,6	14
M 14 x 1,5	115	–	98,3	–	16	87,4	–	10,7	5*	–	–	–	19,7	–	–	4,1	–	12	17
M 20 x 1,5	118	–	98,5	–	19	87,5	–	11	6*	–	–	–	27,8	–	–	4,8	–	17	24
M 27 x 2	183	6,5	158	24	25	115	27	16	8	10	7,5	5	37	6	23,5	12	2	23	32
M 27 x 2	198	6,5	158	24	40	115	27	16	8	10	7,5	5	37	6	23,5	12	22	23	32
M 42 x 3	297	7	247	39	50	199	28	20	12	13	9	6	58	8	37,5	16	34	35	50
M 42 x 3	326	7	247	39	80	199	28	20	12	13	9	6	58	8	37,5	16	34	35	50
M 64 x 2	326	–	226	–	100	191	36	25	10*	–	–	–	76	–	60	19	–	48	Ø76
M 64 x 2	450	–	300	–	150	241	59	25	10*	–	–	–	76	–	60	19	–	48	Ø76

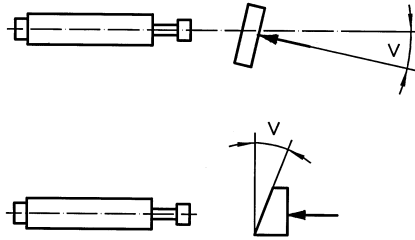
* Only one nut in delivery.

Industrial Shock Absorbers, Series 370

Accessories for series 370

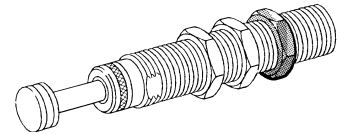
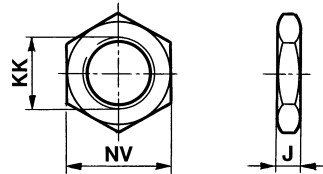
Rexroth
Bosch Group

Max. side load angle



Shock absorber	Max. V°
M 8 x 0,75	3
M 10 x 1	3
M 12 x 1	3
M 14 x 1,5	5
M 20 x 1,5	5
M 27 x 2	5
M 42 x 3	5
M 64 x 4	3

▲ Extra locknut



KK for Shock absorber	NV	J	Code no.
M 8 x 0,75	11	2	370-020-015-0
M 10 x 1	13	3	370-030-015-0
M 12 x 1	14	4	370-035-015-0
M 14 x 1	17	5	370-040-015-0
M 20 x 1,5	24	6	370-050-015-0
M 27 x 2	32	8	041-321-311-8
M 42 x 3	60	12	041-321-320-7
M 64 x 2	Ø76	10	182-331-501-7

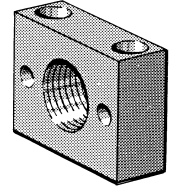
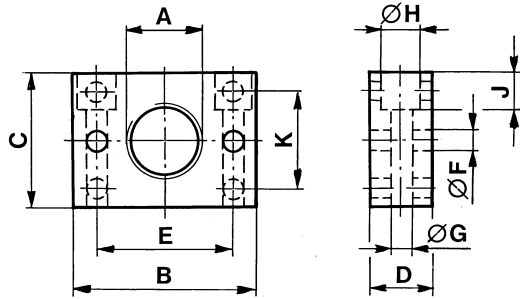
Material: Black oxidized steel.

Industrial Shock Absorbers, Series 370

Accessories for series 370

Rexroth
Bosch Group

▲ Mounting

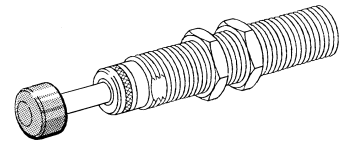
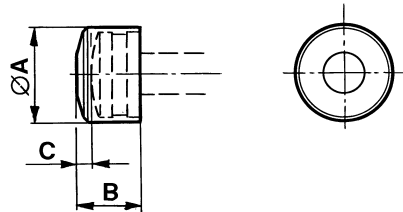


A Shock absorber	B	C	D	E	F	G	H	J	K	Code no.
M 10 x 1	38	25,4	12	25,4	2 x 4,5	4,5	8	5	-	370-030-014-0
M 12 x 1	38	25,4	12	25,4	2 x 4,5	4,5	8	5	-	370-035-014-0
M 14 x 1,5	45	28	16	35	2 x 4,5	4,5	8	5	-	370-040-014-0
M 20 x 1,5	47	35	16	35	6 x 5,5	5,5	10	10	25,4	370-050-014-0
M 27 x 2	63,5	50,8	12,7	41,3	-	-	-	-	28,6	370-99-0000-1
M 42 x 3	88,9	69,9	15,9	60,3	-	-	-	-	41,3	370-99-0000-2
M 64 x 2*	100	80	25	78	-	11	18	12	-	182-701-066-3

Material: Aluminium.

*Set of 2.

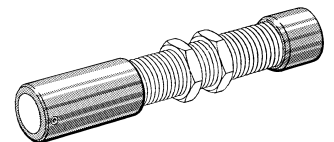
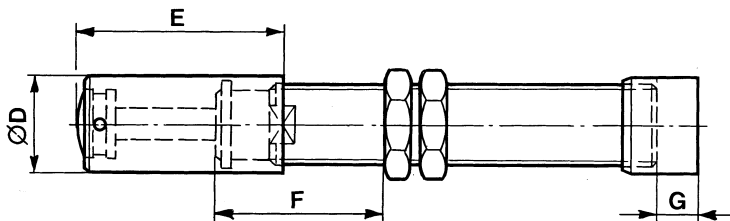
▲ Impact protection



Shock absorber	∅ A	B	C	Code no.
M 27 x 2	26	19	3	370-010-012-0
M 42 x 3	38,5	25	5	370-010-020-0

Material: Urethane rubber.

▲ Piston rod protection



Shock absorber	D	G	E	F min.	Code no.
M 27 x 2	32	17,6	60	48	370-020-012-0
M 42 x 3	50	21	103	88	370-020-020-0
M 64 x 2	74	17,5	176	159	370-020-032-0

Material: Aluminium.