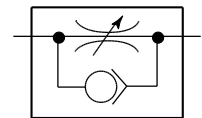
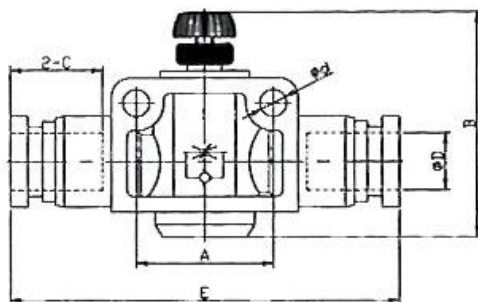


Push-in fittings series manufactured in plastic and nickel-plated brass.
All parts are suitable for use with hoses, tubes or pipes made of plastic and copper.

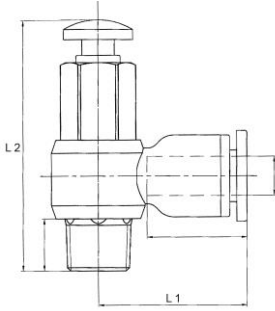
Temperature range	-20 °C to 80 °C
Material	Plastic and nickel-plated brass
Sleeve	Plastic
Sealing surface	Parallel version: O-ring in housing Conical version: thread coating
Medium	Compressed air, neutral and safe gases and liquids*
Areas of application	Air, vacuum
Recommended hose	PU or PA (nylon)



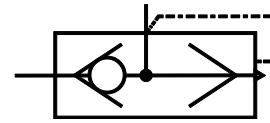
181.0808

Unidirectional flow control valve with plug connection, straight type

Art. No.	Type No.	Ø D mm	Max. working pressure bar	Ø d mm	A mm	B (max) mm	B (min) mm	E mm	C mm
109972	181.0404	4	15	3.2	14.0	30.8	28.3	39.5	14.4
109973	181.0606	6	15	4.3	20.0	47.2	41.0	47.1	15.4
109974	181.0808	8	15	4.3	22.0	51.5	44.4	52.0	16.7
109975	181.1010	10	15	4.3	26.0	55.0	48.0	62.3	19.7
109976	181.1212	12	15	4.3	32.0	57.7	52.3	73.6	22.3



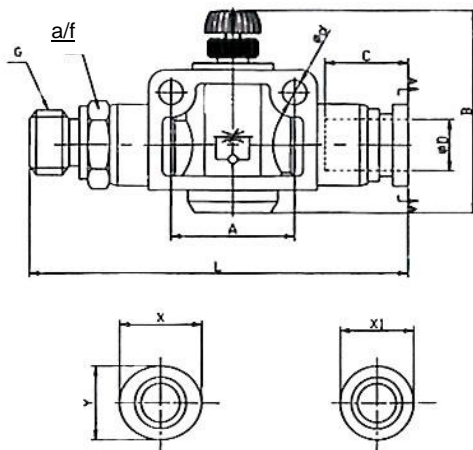
281.018-6



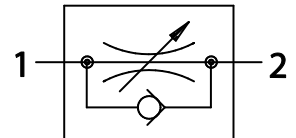
Quick-exhaust valve, manually operated, angled

Temperature range: -10 °C to 80 °C

Art. No.	Type No.	Ø D mm	Thread	Max. working pressure bar	L1 mm	L2 mm	a/f mm
135987	281.018-6	6	R 1/8	10	22.9	38.3	10

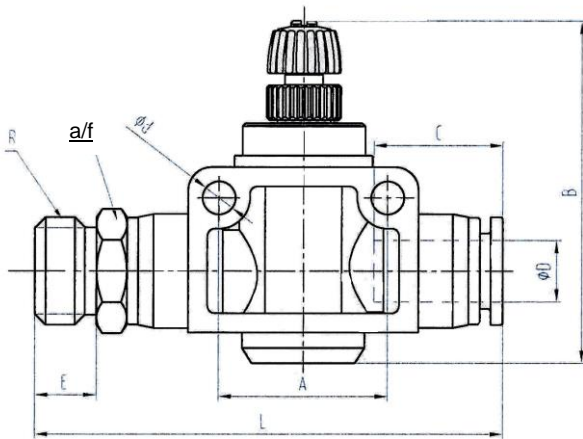


183.014-6

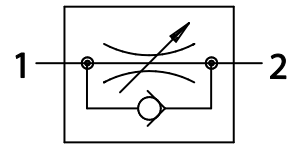


Unidirectional flow control valve with parallel male thread and plug connection, straight type, air restriction from tube to port

Art. No.	Type No.	L mm	A mm	B (max) mm	B (min) mm	C mm	Ø D mm	Max. working pressure bar	Ø d mm	Thread	a/f mm	Ø P mm
109947	183.018-4	46.5	14.0	31.2	28.9	14.3	4	15	3.2	G 1/8	12	14.0
109948	183.018-6	53.7	20.0	46.8	41.1	15.4	6	15	4.3	G 1/8	12	14.0
109949	183.018-8	58.1	22.0	47.4	41.7	16.4	8	15	4.3	G 1/8	14	14.0
109950	183.014-6	55.1	20.0	47.0	40.8	15.4	6	15	4.3	G 1/4	14	17.0
109951	183.014-8	59.6	22.0	50.8	44.8	16.4	8	15	4.3	G 1/4	17	17.0
109952	183.014-10	70.3	26.0	54.0	47.4	18.7	10	15	4.3	G 1/4	17	17.0
109953	183.014-12	80.6	32.0	55.3	50.3	22.3	12	15	4.3	G 1/4	21	21.0
109954	183.038-8	61.0	22.0	50.4	44.3	16.4	8	15	4.3	G 3/8	17	20.0
109955	183.038-10	71.6	26.0	55.3	48.5	18.7	10	15	4.3	G 3/8	20	20.0
109956	183.038-12	81.3	32.0	57.1	51.8	22.3	12	15	4.3	G 3/8	21	21.0
109957	183.012-10	76.0	26.0	54.5	48.3	18.7	10	15	4.3	G 1/2	19	24.0
109958	183.012-12	85.9	32.0	56.8	51.5	22.3	12	15	4.3	G 1/2	24	24.0

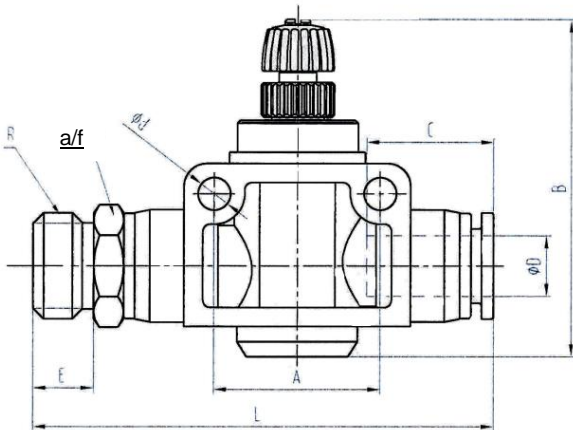


182.014-6

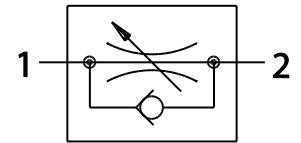


Unidirectional flow control valve with parallel male thread and plug connection, straight type, air restriction from tube to port

Art. No.	Type No.	L mm	A mm	B (max) mm	B (min) mm	C mm	Ø D mm	Max. working pressure bar	Ø d mm	Thread	a/f mm	E mm
109959	182.018-4	45.9	14.0	29.0	26.9	14.4	4	15	3.2	R 1/8	10	5.5
109960	182.018-6	53.6	20.0	43.0	37.8	15.4	6	15	4.3	R 1/8	12	5.5
109961	182.018-8	58.4	22.0	47.2	41.5	16.4	8	15	4.3	R 1/8	14	5.5
109962	182.014-6	56.2	20.0	43.6	38.0	15.4	6	15	4.3	R 1/4	14	6.5
109963	182.014-8	60.6	22.0	47.1	41.1	16.4	8	15	4.3	R 1/4	14	6.5
109964	182.014-10	71.4	26.0	55.2	47.6	18.7	10	15	4.3	R 1/4	17	6.5
109965	182.014-12	82.3	32.0	55.6	51.8	22.3	12	15	4.3	R 1/4	21	9.5
109966	182.038-8	62.1	22.0	47.2	41.9	16.4	8	15	4.3	R 3/8	17	7.5
109967	182.038-10	71.8	26.0	54.9	48.3	18.7	10	15	4.3	R 3/8	17	7.5
109968	182.038-12	83.0	32.0	55.9	51.2	22.3	12	15	4.3	R 3/8	21	7.5
109969	182.012-10	75.4	26.0	54.6	48.0	18.7	10	15	4.3	R 1/2	21	9.5
109970	182.012-12	86.2	32.0	56.6	52.0	22.3	12	15	4.3	R 1/2	21	6.5

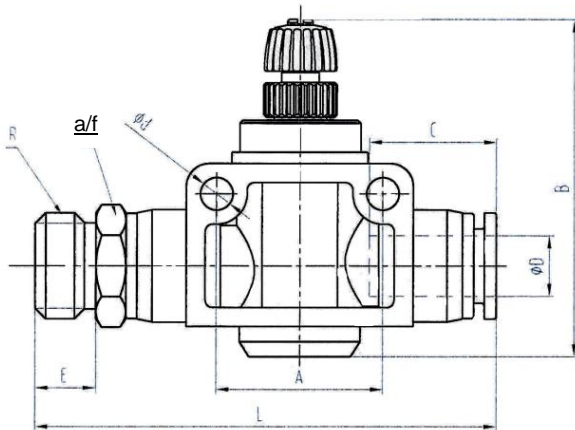


286.014-6

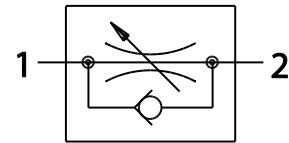


Unidirectional flow control valve with parallel male thread and plug connection, straight type, air restriction from port to tube

Art. No.	Type No.	L mm	A mm	B (max) mm	B (min) mm	C mm	Ø D mm	Max. working pressure bar	Ø d mm	Thread	a/f mm	E mm
135811	286.018-4	46.5	14.0	28.0	31.0	14.4	4	15	3.2	G 1/8	12	5.5
135812	286.018-6	54.1	20.0	40.7	47.5	15.5	6	15	4.3	G 1/8	14	5.5
135813	286.018-8	58.8	22.0	44.1	51.8	16.8	8	15	4.3	G 1/8	14	5.5
135814	286.014-6	55.6	20.0	40.7	47.5	15.5	6	15	4.3	G 1/4	14	6.5
135815	286.014-8	60.0	22.0	44.1	51.8	16.8	8	15	4.3	G 1/4	17	6.5
135816	286.014-10	69.9	26.0	47.7	55.3	19.5	10	15	4.3	G 1/4	17	6.5
135817	286.014-12	80.4	32.0	52.0	58.0	22.3	12	15	4.3	G 1/4	21	6.5
135818	286.038-8	61.5	22.0	44.1	51.8	16.8	8	15	4.3	G 3/8	17	7.5
135819	286.038-10	71.4	26.0	47.7	55.3	19.5	10	15	4.3	G 3/8	20	7.5
135820	286.038-12	81.4	32.0	52.0	58.0	22.3	12	15	4.3	G 3/8	21	7.5
135821	286.012-10	74.9	26.0	47.7	55.3	19.5	10	15	4.3	G 1/2	19	9.5
135822	286.012-12	84.9	32.0	52.0	58.0	22.3	12	15	4.3	G 1/2	24	9.5

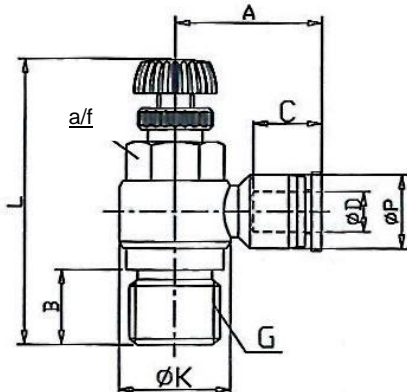


287.014-6

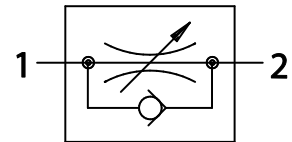


Unidirectional flow control valve with conical male thread and plug connection, straight type, air restriction from port to tube

Art. No.	Type No.	L mm	A mm	B (max) mm	B (min) mm	C mm	Ø D mm	Max. working pressure bar	Ø d mm	Thread	a/f mm	E mm
135823	287.018-4	46.0	14.0	28.0	31.0	14.4	4	15	3.2	R 1/8	10	7.5
135824	287.018-6	54.1	20.0	40.7	47.5	15.5	6	15	4.3	R 1/8	12	7.5
135825	287.018-8	59.0	22.0	44.1	51.8	16.8	8	15	4.3	R 1/8	14	7.5
135826	287.014-6	56.6	20.0	40.7	47.5	15.5	6	15	4.3	R 1/4	14	9.5
135827	287.014-8	61.0	22.0	44.1	51.8	16.8	8	15	4.3	R 1/4	14	9.5
135828	287.014-10	71.4	26.0	47.7	55.3	19.5	10	15	4.3	R 1/4	17	9.5
135829	287.014-12	82.8	32.0	52.0	58.0	22.3	12	15	4.3	R 1/4	21	9.5
135830	287.038-8	62.5	22.0	44.1	51.8	16.8	8	15	4.3	R 3/8	17	10.5
135831	287.038-10	72.4	26.0	47.7	55.3	19.5	10	15	4.3	R 3/8	17	10.5
135832	287.038-12	83.8	32.0	52.0	58.0	22.3	12	15	4.3	R 3/8	21	10.5
135833	287.012-10	75.9	26.0	47.7	55.3	19.5	10	15	4.3	R 1/2	21	13.5
135834	287.012-12	86.8	32.0	52.0	58.0	22.3	12	15	4.3	R 1/2	21	13.5

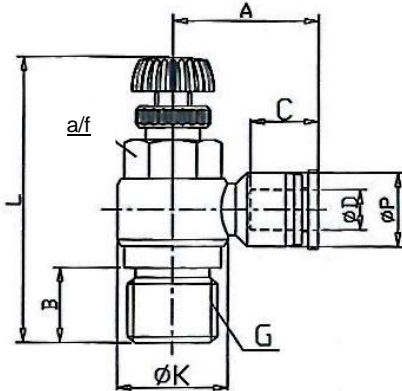


187.014-10

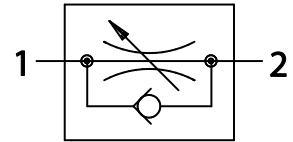


Unidirectional flow control valve with incoming air restriction, adjustable with knurled screw, angled, swivel type, parallel male thread with O-ring (NBR)

Art. No.	Type No.	L (max) mm	L (min) mm	A mm	B mm	C mm	Ø D mm	Max. working pressure bar	Ø P mm	Ø K mm	Thread	a/f mm
109977	187.005-4	31.9	29.0	20.0	3.5	14.9	4	15	-	-	M5	8
109978	187.005-6	31.9	29.0	21.7	3.5	15.4	6	15	-	-	M5	8
109979	187.018-4	44.0	37.8	22.3	6.0	14.9	4	15	10.0	14.4	G 1/8	10
109980	187.018-6	44.0	37.8	22.9	6.0	15.4	6	15	12.0	14.4	G 1/8	10
109981	187.018-8	44.0	37.8	25.3	6.0	17.8	8	15	14.0	14.4	G 1/8	10
109982	187.018-10	44.0	37.8	30.1	6.0	20.4	10	15	17.0	14.4	G 1/8	10
109983	187.014-4	51.0	44.0	24.0	8.3	14.9	4	15	10.0	18.3	G 1/4	14
109984	187.014-6	51.0	44.0	24.9	8.3	15.4	6	15	12.0	18.3	G 1/4	14
109985	187.014-8	51.0	44.0	28.4	8.3	17.8	8	15	14.0	18.3	G 1/4	14
109986	187.014-10	51.0	44.0	32.0	8.3	20.4	10	15	17.0	18.3	G 1/4	14
109987	187.014-12	51.0	44.0	32.0	8.3	22.9	12	15	20.0	18.3	G 1/4	14
109988	187.038-8	55.0	48.7	29.3	9.5	17.8	8	15	14.0	22.0	G 3/8	19
109989	187.038-10	55.0	48.7	32.5	9.5	20.4	10	15	17.0	22.0	G 3/8	19
109990	187.038-12	55.0	48.7	35.3	9.5	22.9	12	15	20.0	22.0	G 3/8	19
109991	187.012-8	59.2	53.0	32.3	13.0	17.8	8	15	14.0	28.0	G 1/2	24
109992	187.012-10	59.2	53.0	35.5	13.0	20.4	10	15	17.0	28.0	G 1/2	24
109993	187.012-12	59.2	53.0	36.3	13.0	22.9	12	15	20.0	28.0	G 1/2	24



188.018-6

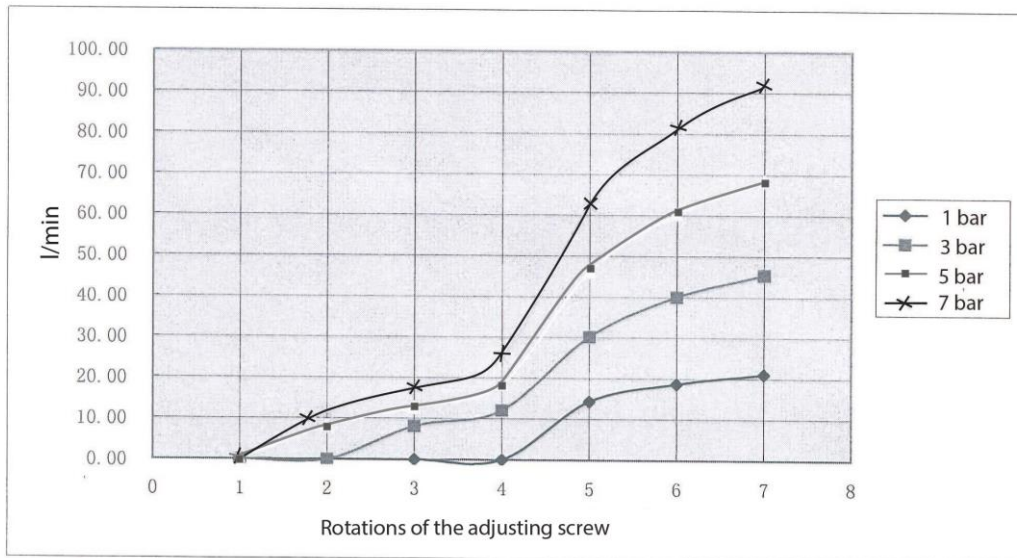


Unidirectional flow control valve with outgoing air restriction, adjustable with knurled screw, angled, swivel type, parallel male thread with O-ring (NBR)

Art. No.	Type No.	L (max) mm	L (min) mm	A mm	B mm	C mm	Ø D mm	Max. working pressure bar	Ø P mm	Ø K mm	Thread	a/f mm
110011	188.005-4	31.9	29.0	20.0	3.5	14.9	4	15	-	-	M5	8
110012	188.005-6	31.9	29.0	21.7	3.5	15.4	6	15	-	-	M5	8
110013	188.018-4	44.0	37.8	22.3	6.0	14.9	4	15	10.0	14.4	G 1/8	10
110014	188.018-6	44.0	37.8	22.9	6.0	15.4	6	15	12.0	14.4	G 1/8	10
110015	188.018-8	44.0	37.8	25.3	6.0	17.8	8	15	14.0	14.4	G 1/8	10
110016	188.018-10	44.0	37.8	30.1	6.0	20.4	10	15	17.0	14.4	G 1/8	10
110017	188.014-4	51.0	44.0	24.0	8.3	14.9	4	15	10.0	18.3	G 1/4	14
110018	188.014-6	51.0	44.0	24.9	8.3	15.4	6	15	12.0	18.3	G 1/4	14
110019	188.014-8	51.0	44.0	28.4	8.3	17.8	8	15	14.0	18.3	G 1/4	14
110020	188.014-10	51.0	44.0	32.0	8.3	20.4	10	15	17.0	18.3	G 1/4	14
110021	188.014-12	51.0	44.0	32.0	8.3	22.9	12	15	20.0	18.3	G 1/4	14
110022	188.038-8	55.0	48.7	29.3	9.5	17.8	8	15	14.0	22.0	G 3/8	19
110023	188.038-10	55.0	48.7	32.5	9.5	20.4	10	15	17.0	22.0	G 3/8	19
110024	188.038-12	55.0	48.7	35.3	9.5	22.9	12	15	20.0	22.0	G 3/8	19
110025	188.012-8	59.2	53.0	32.3	13.0	17.8	8	15	14.0	28.0	G 1/2	24
110026	188.012-10	59.2	53.0	35.5	13.0	20.4	10	15	17.0	28.0	G 1/2	24
110027	188.012-12	59.2	53.0	36.3	13.0	22.9	12	15	20.0	28.0	G 1/2	24

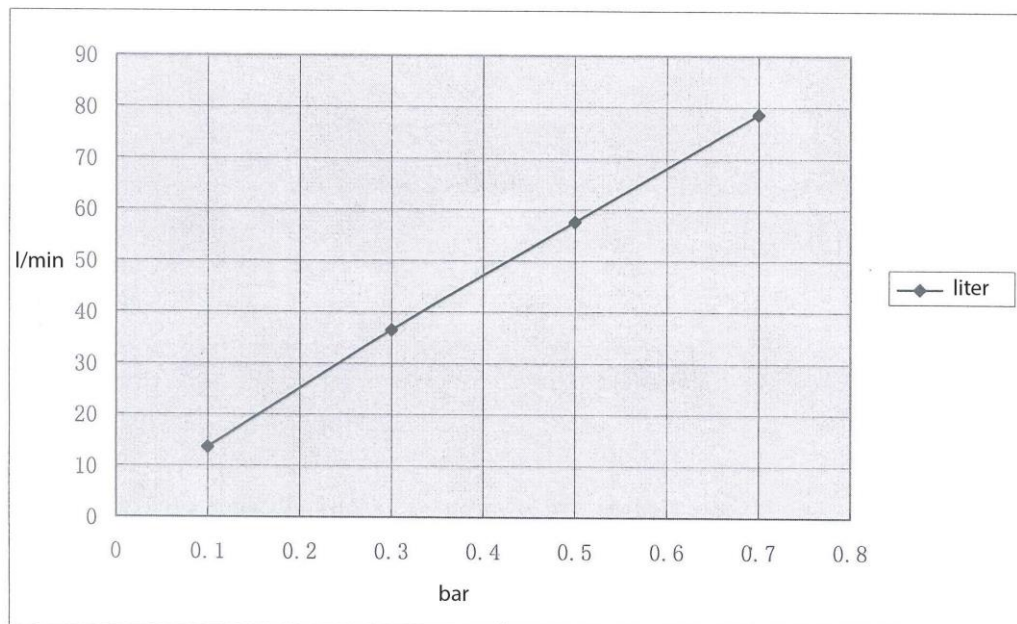
Art. No. 110011

	1	2	3	4	5	6	7
1 bar	0.00	0.00	0.00	0.00	14.27	18.66	21.07
3 bar	0	0	8.1	12.08	30.18	40.09	45.45
5 bar	0.01	8.1	12.73	18.45	46.14	60.34	68.5
7 bar	0.01	11.43	17.77	25.01	62.32	81.38	91.97



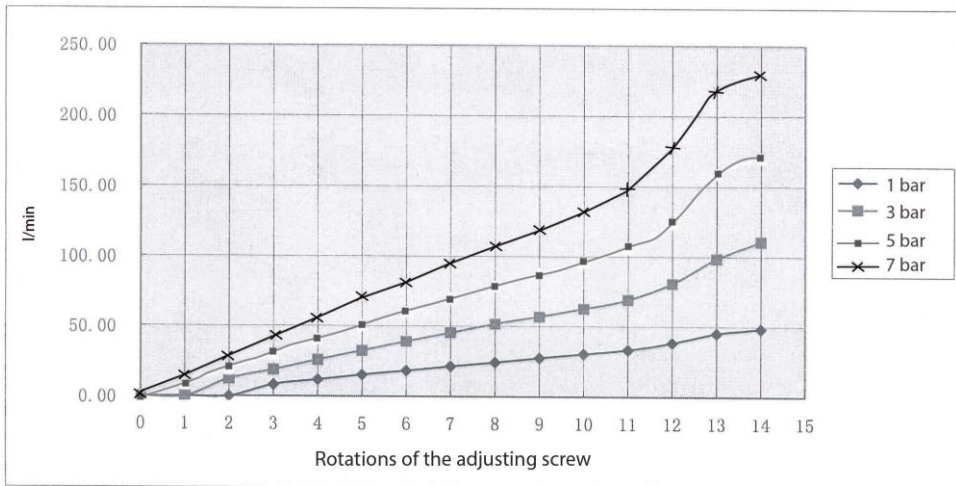
Art. No. 110011

bar	0.1	0.3	0.5	0.7
l/min	13.62	36.5	57.6	78.6



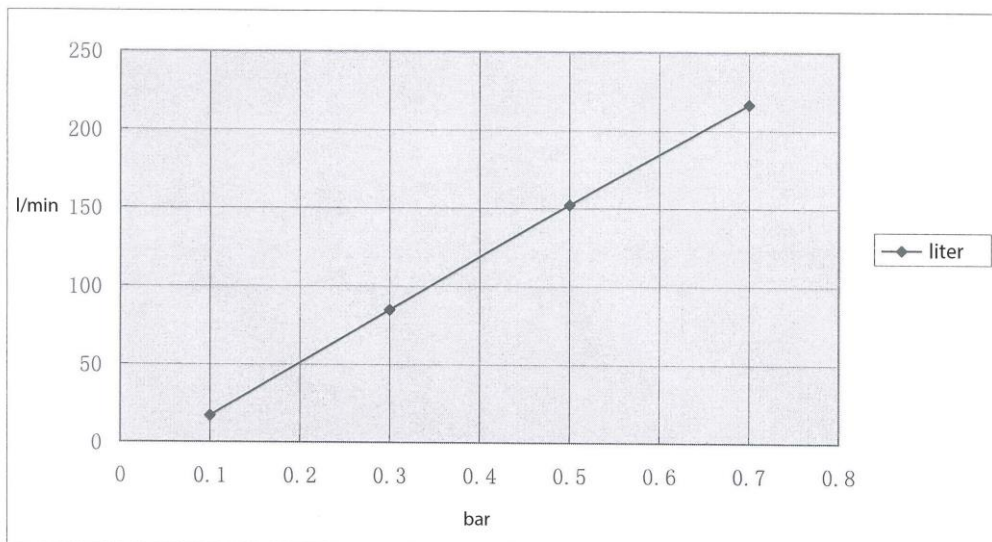
Art. No. 110015

	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1 bar	0.00	0.00	0.00	8.11	11.62	15.14	18.24	21.48	24.34	27.42	30.35	33.32	38.39	45.19	48.42
3 bar	0	0	12.07	18.86	25.88	32.44	39.11	45.41	51.79	57.03	62.86	69.43	81.02	98.84	110.93
5 bar	0	8.1	19.08	29.63	40.54	50.61	60.28	70.06	78.99	88.3	96.14	106.1	124.05	158.94	170.3
7 bar	0	12.94	27.19	41.5	56	69.75	83.25	95.31	107.53	119.25	131.67	146.5	177.67	218.83	229.44



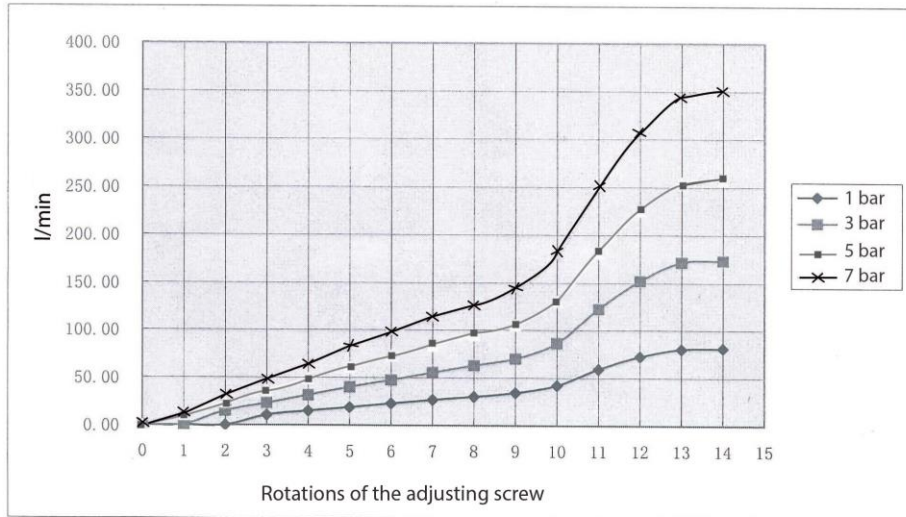
Art. No. 110015

bar	0.1	0.3	0.5	0.7
l/min	17.1	84.77	152.27	216.59



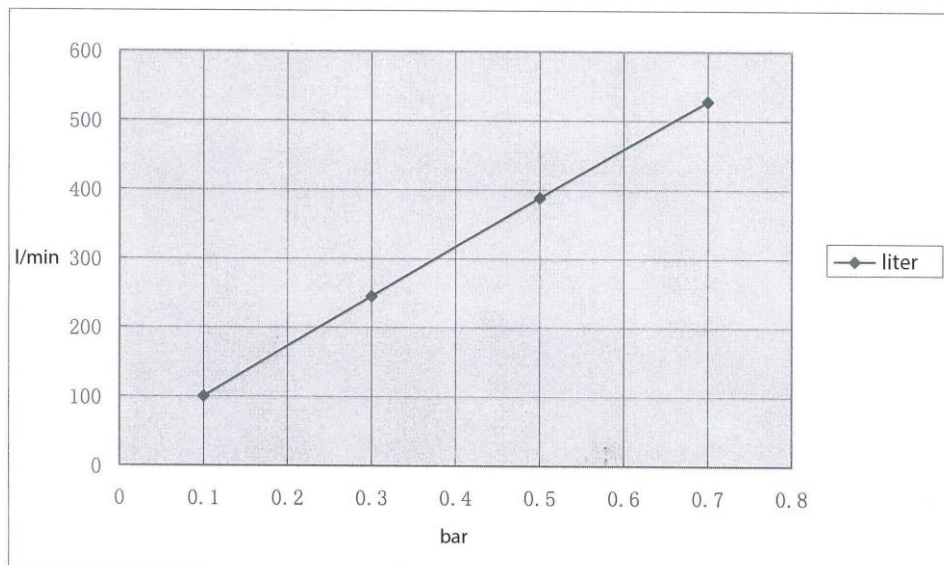
Art. No. 110019

	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1 bar	0.00	0.00	0.00	10.67	14.93	18.70	22.80	26.73	30.20	34.18	42.04	59.20	72.43	80.14	81.12
3 bar	0.01	0.76	14.95	23.23	31.50	39.93	47.46	55.31	62.93	70.18	86.48	122.74	152.26	171.74	173.57
5 bar	0.00	10.69	23.66	35.91	48.71	60.51	72.68	83.67	94.71	105.30	130.89	181.34	225.50	254.66	257.48
7 bar	0.00	13.85	31.43	48.41	65.34	81.65	96.49	111.32	126.30	141.71	177.11	247.48	306.09	344.31	349.86



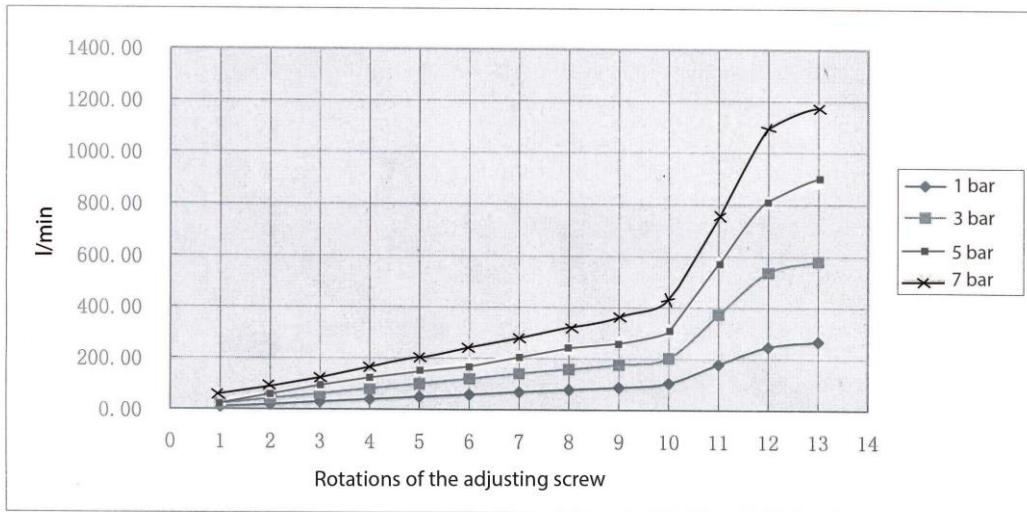
Art. No. 110019

bar	0.1	0.3	0.5	0.7
l/min	100.18	245.36	388.48	527.9



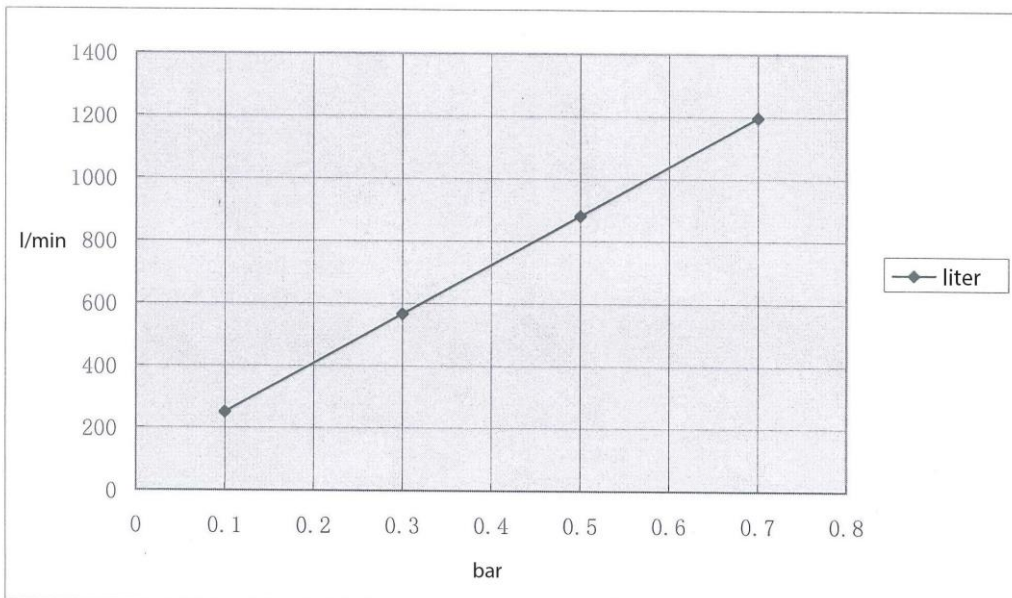
Art. No. 110023

	1	2	3	4	5	6	7	8	9	10	11	12	13
1 bar	9.22	18.54	29.63	39.55	49.21	58.98	69.34	78.72	87.64	104.22	179.24	246.45	268.07
3 bar	21.09	41.88	61.52	81.93	100.39	120.00	140.77	158.96	176.57	202.83	372.27	537.98	581.49
5 bar	33.99	64.07	94.28	123.36	152.83	181.05	207.78	240.49	267.20	312.19	577.88	810.92	887.45
7 bar	47.13	87.24	126.42	167.72	202.60	246.45	285.40	323.02	362.16	432.43	750.53	1090.98	1183.22



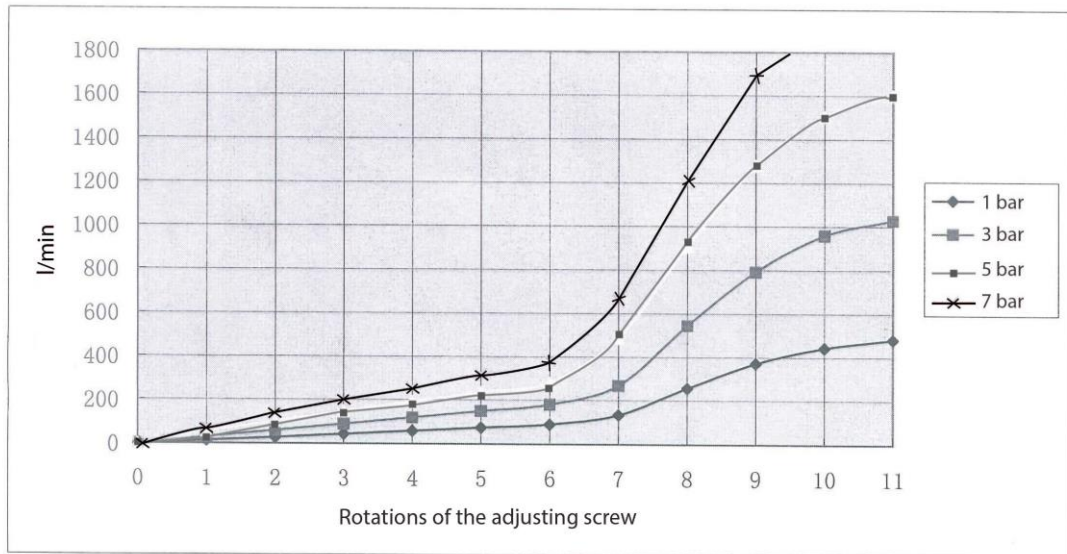
Art. No. 110023

bar	0.1	0.3	0.5	0.7
l/min	251.15	566.5	881.35	1196.54



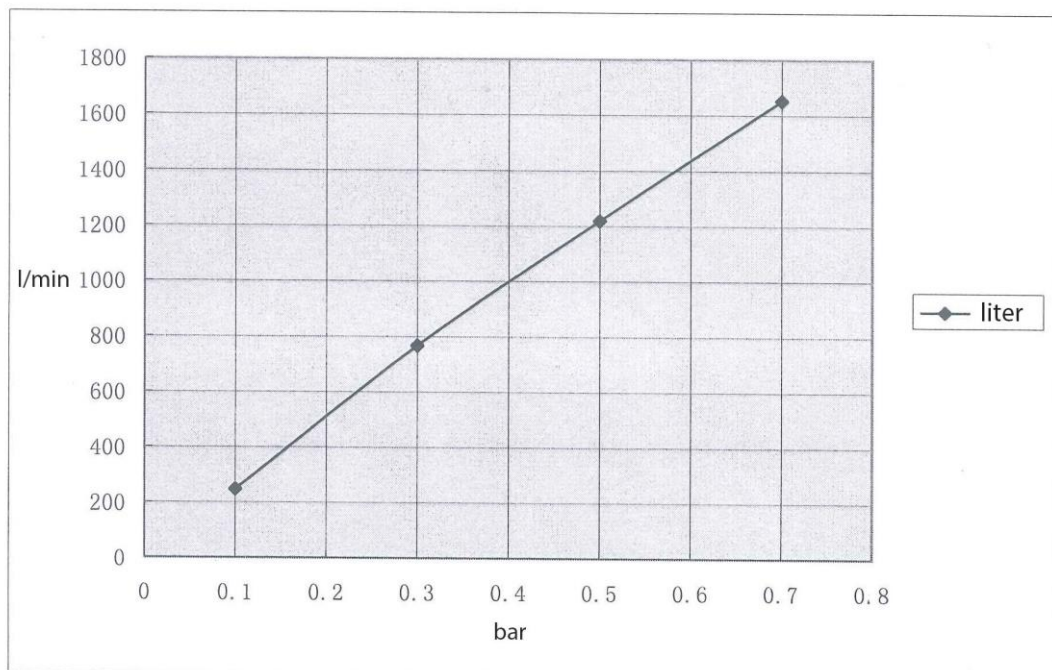
Art. No. 110027

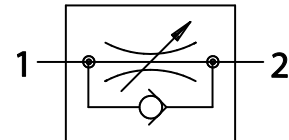
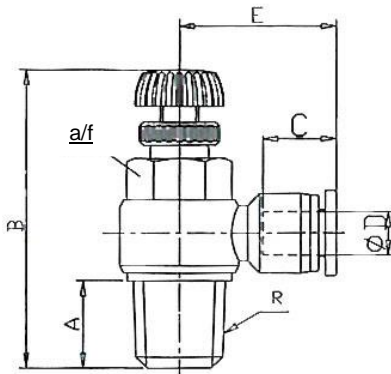
	0	1	2	3	4	5	6	7	8	9	10	11
1 bar	0	12.96	28.09	43.70	58.98	74.37	90.11	134.66	256.28	371.36	443.91	481.96
3 bar	0	29.73	59.59	89.80	120.29	151.26	180.84	268.78	545.48	791.67	958.91	1028.69
5 bar	0	53.92	100.73	147.81	192.32	235.39	280.57	487.92	906.52	1278.55	1504.68	1603.00
7 bar	0	73.49	136.74	197.20	257.16	321.73	381.90	664.30	1196.58	1684.88		



Art. No. 110027

bar	0.1	0.3	0.5	0.7
l/min	247.42	767.17	1219.37	1653.1

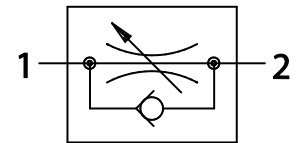
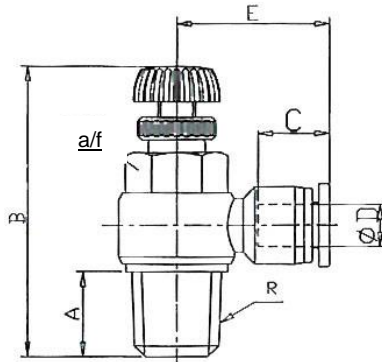




185.014-10

Unidirectional flow control valve with incoming air restriction, adjustable with knurled screw, angled, swivel type, conical male thread, coated

Art. No.	Type No.	Ø D mm	Thread	Max. working pressure bar	A mm	a/f mm	E mm	B (max) mm	B (min) mm	C mm	L mm
109994	185.018-4	4	R 1/8	15	7.5	10	22.3	44.0	37.8	14.9	37.8
109995	185.018-6	6	R 1/8	15	7.5	10	22.9	44.0	37.8	15.4	37.8
109996	185.018-8	8	R 1/8	15	7.5	10	25.3	44.0	37.8	17.8	37.8
109997	185.018-10	10	R 1/8	15	7.5	10	30.1	44.0	37.8	20.5	37.8
109998	185.014-4	4	R 1/4	15	11.2	14	24.1	51.0	44.0	14.9	44.0
109999	185.014-6	6	R 1/4	15	11.2	14	24.9	51.0	44.0	15.4	44.0
110000	185.014-8	8	R 1/4	15	11.2	14	28.4	51.0	44.0	17.8	44.0
110001	185.014-10	10	R 1/4	15	11.2	14	32.0	51.0	44.0	20.5	44.0
110002	185.014-12	12	R 1/4	15	11.2	14	32.0	51.0	44.0	22.9	44.0
110003	185.038-6	6	R 3/8	15	12.3	19	26.6	55.0	48.7	15.4	48.7
110004	185.038-8	8	R 3/8	15	12.3	19	29.2	55.0	48.7	17.8	48.7
110005	185.038-10	10	R 3/8	15	12.3	19	32.5	55.0	48.7	20.5	48.7
110006	185.038-12	12	R 3/8	15	12.3	19	35.3	55.0	48.7	22.9	48.7
110007	185.012-6	6	R 1/2	15	14.0	24	29.6	59.2	53.0	15.4	53.0
110008	185.012-8	8	R 1/2	15	14.0	24	32.3	59.2	53.0	17.8	53.0
110009	185.012-10	10	R 1/2	15	14.0	24	35.5	59.2	53.0	20.5	53.0
110010	185.012-12	12	R 1/2	15	14.0	24	36.3	59.2	53.0	22.9	53.0



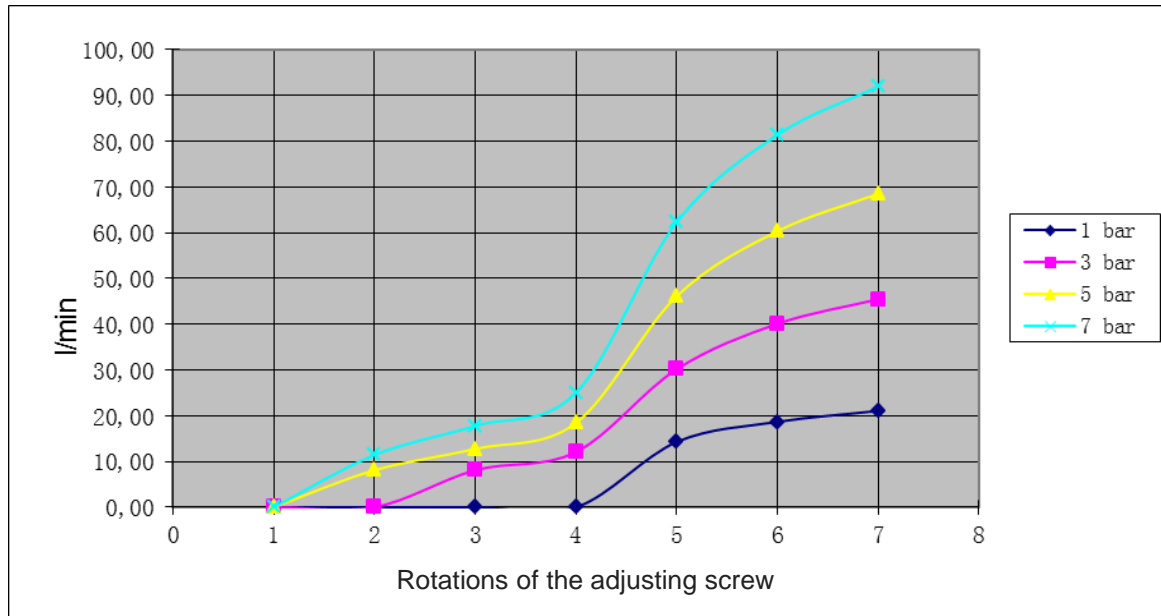
186.014-10

Unidirectional flow control valve with outgoing air restriction, adjustable with knurled screw, angled, swivel type, conical male thread, coated

Art. No.	Type No.	Ø D mm	Thread	Max. working pressure bar	A mm	a/f mm	E mm	B (max) mm	B (min) mm	C mm	L mm
110044	186.018-4	4	R 1/8	15	7.5	10	22.3	44.0	37.8	14.9	36.7
110045	186.018-6	6	R 1/8	15	7.5	10	22.9	44.0	37.8	15.4	36.7
110046	186.018-8	8	R 1/8	15	7.5	10	24.8	44.0	37.8	17.8	36.7
110047	186.018-10	10	R 1/8	15	7.5	10	30.1	44.0	37.8	20.5	36.7
110048	186.014-4	4	R 1/4	15	11.2	14	24.1	51.0	44.0	14.9	44.2
110049	186.014-6	6	R 1/4	15	11.2	14	24.9	51.0	44.0	15.4	44.2
110050	186.014-8	8	R 1/4	15	11.2	14	28.4	51.0	44.0	17.8	44.2
110051	186.014-10	10	R 1/4	15	11.2	14	32.0	51.0	44.0	20.5	44.2
110052	186.014-12	12	R 1/4	15	11.2	14	32.0	51.0	44.0	22.9	44.2
110053	186.038-6	6	R 3/8	15	12.3	19	26.6	55.0	48.7	15.4	49.0
110054	186.038-8	8	R 3/8	15	12.3	19	29.2	55.0	48.7	17.8	49.0
110055	186.038-10	10	R 3/8	15	12.3	19	32.5	55.0	48.7	20.5	49.0
110056	186.038-12	12	R 3/8	15	12.3	19	35.3	55.0	48.7	22.9	49.0
110057	186.012-6	6	R 1/2	15	14.0	24	29.6	59.2	53.0	15.4	55.8
110058	186.012-8	8	R 1/2	15	14.0	24	32.3	59.2	53.0	17.8	55.8
110059	186.012-10	10	R 1/2	15	14.0	24	35.5	59.2	53.0	20.5	55.8
110060	186.012-12	12	R 1/2	15	14.0	24	36.3	59.2	53.0	22.9	55.8

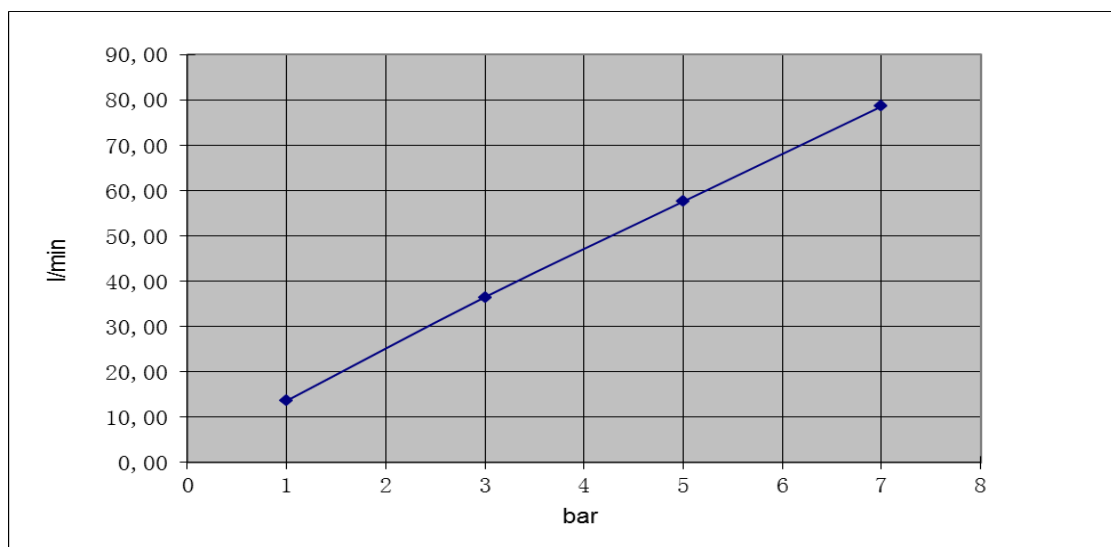
Flow rates for Type No. 188.005-4 and 188.005-6

	1	2	3	4	5	6	7
1 bar	0.00	0.00	0.00	0.00	14.27	18.66	21.07
3 bar	0.00	0.00	8.10	12.08	30.18	40.09	45.45
5 bar	0.01	8.10	12.73	18.45	46.14	60.34	68.50
7 bar	0.01	11.43	17.77	25.01	62.32	81.38	91.97



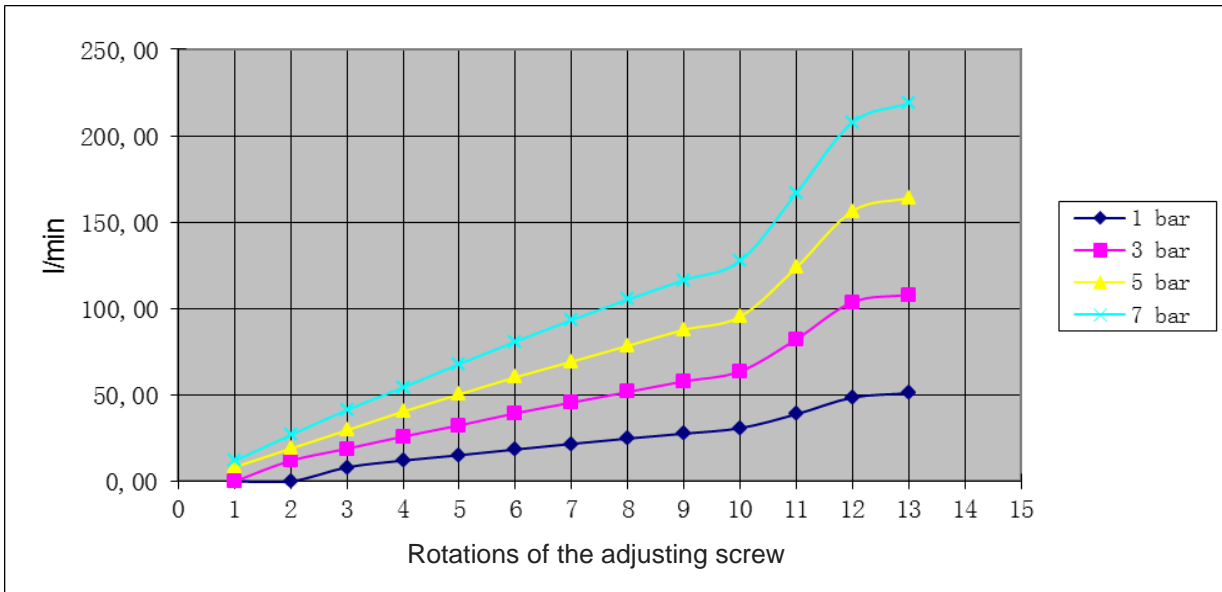
Full flow

Pressure - bar	1	3	5	7
Flow rate - l/min	13.62	36.50	57.60	78.60

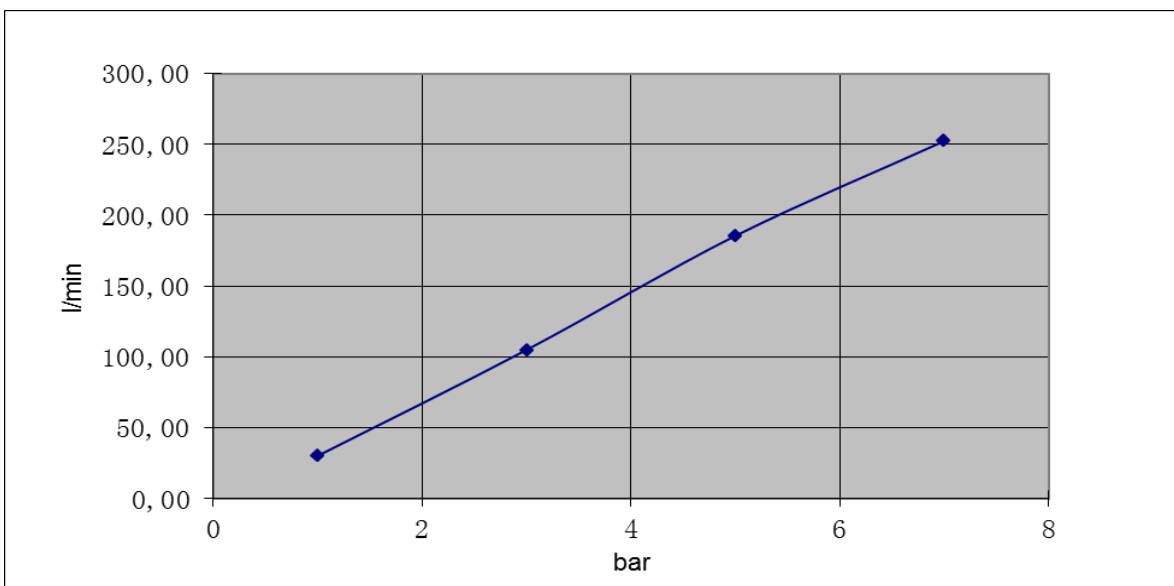


Flow rates for Type No. 188.018-4, 188.018-6 and 188.018-8; 186.018-4, 186.018-6 and 186.018-8

	0	1	2	3	4	5	6	7	8	9	10	11	12	13
1 bar	0.00	0.00	0.00	8.10	12.04	15.14	18.47	21.72	24.76	27.65	30.82	38.87	48.51	50.99
3 bar	0.00	0.00	11.93	18.86	25.95	32.41	39.41	45.59	51.74	57.89	63.68	82.28	103.71	107.91
5 bar	0.00	8.26	18.93	29.59	40.36	50.37	60.24	69.27	78.43	87.76	95.39	123.85	156.48	164.07
7 bar	0.00	11.84	26.82	41.33	54.37	67.93	80.91	93.42	105.22	116.51	127.59	166.75	207.75	218.75

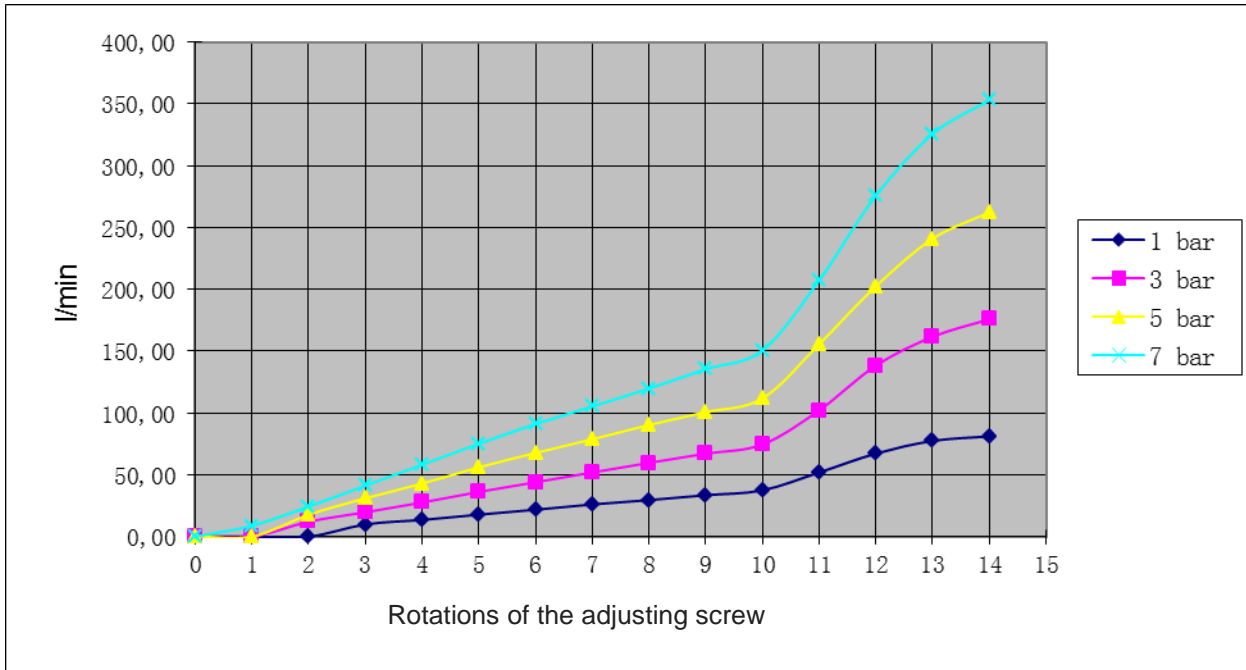

Full flow

Pressure - bar	1	3	5	7
Flow rate - l/min	30.30	105.00	185.48	252.31



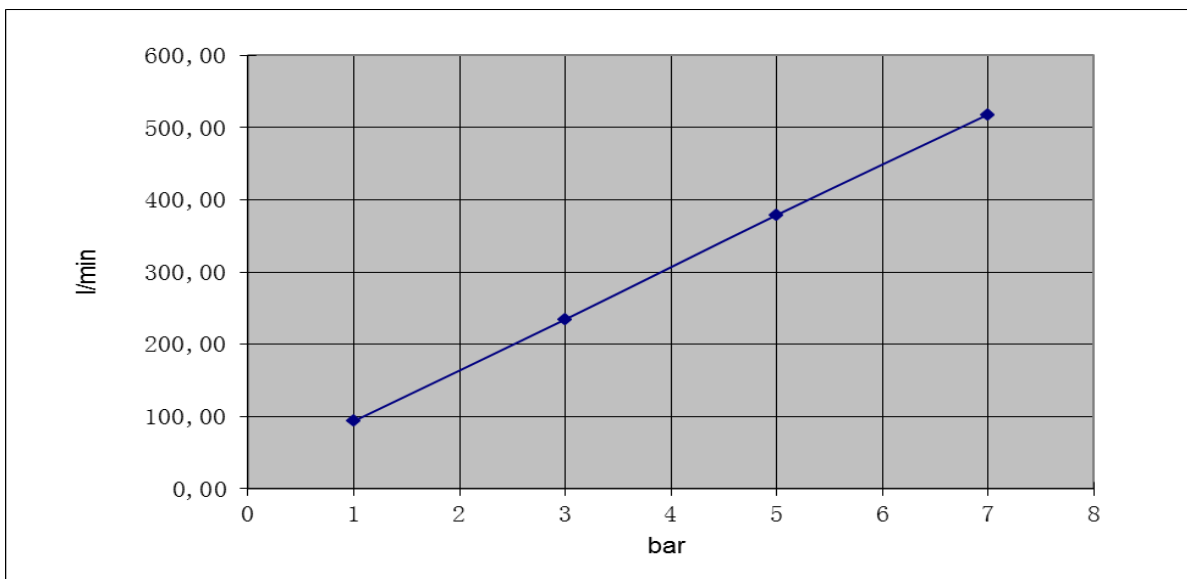
Flow rates for Type No. 188.014-6, 188.014-8 and 188.014-10; 186.014-6, 186.014-8 and 186.014-10

	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1 bar	0.00	0.00	0.01	9.88	13.50	17.75	21.80	26.06	29.57	33.53	37.46	51.92	67.16	77.45	81.14
3 bar	0.00	0.00	12.06	19.72	27.60	36.15	44.01	51.93	59.66	67.12	74.58	102.21	138.39	161.70	175.86
5 bar	0.13	0.00	17.72	31.02	42.95	56.06	67.66	78.79	90.33	100.75	111.83	155.75	202.57	241.09	262.37
7 bar	0.01	8.78	24.36	41.24	58.14	75.12	91.13	105.34	119.82	135.47	150.71	207.39	275.80	325.70	353.15



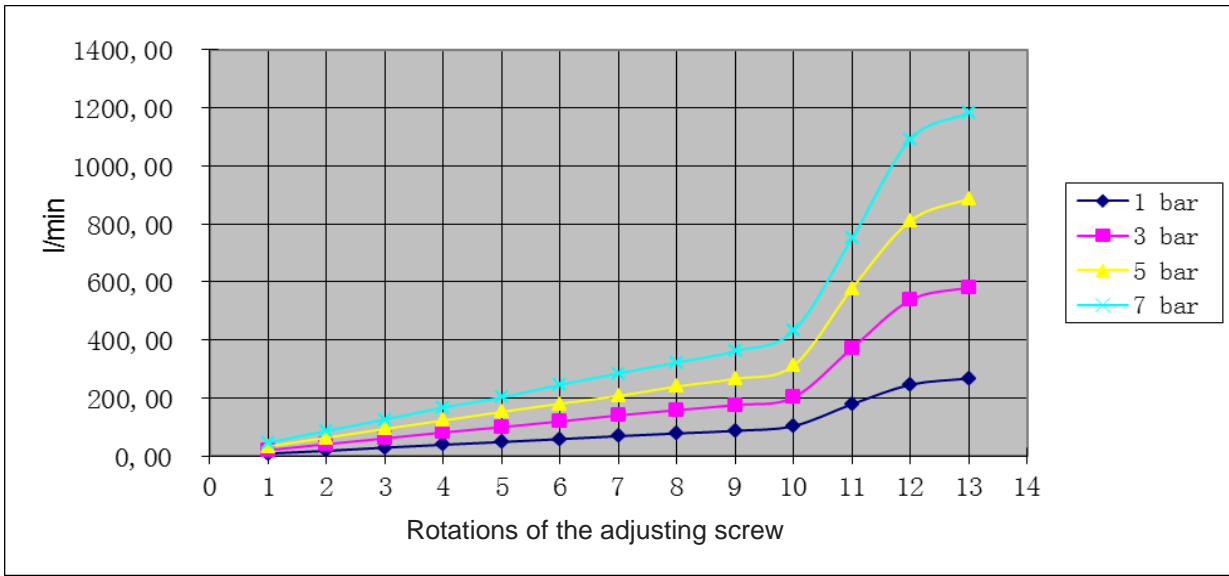
Full flow

Pressure - bar	1	3	5	7
Flow rate - l/min	93.55	234.41	378.98	518.19

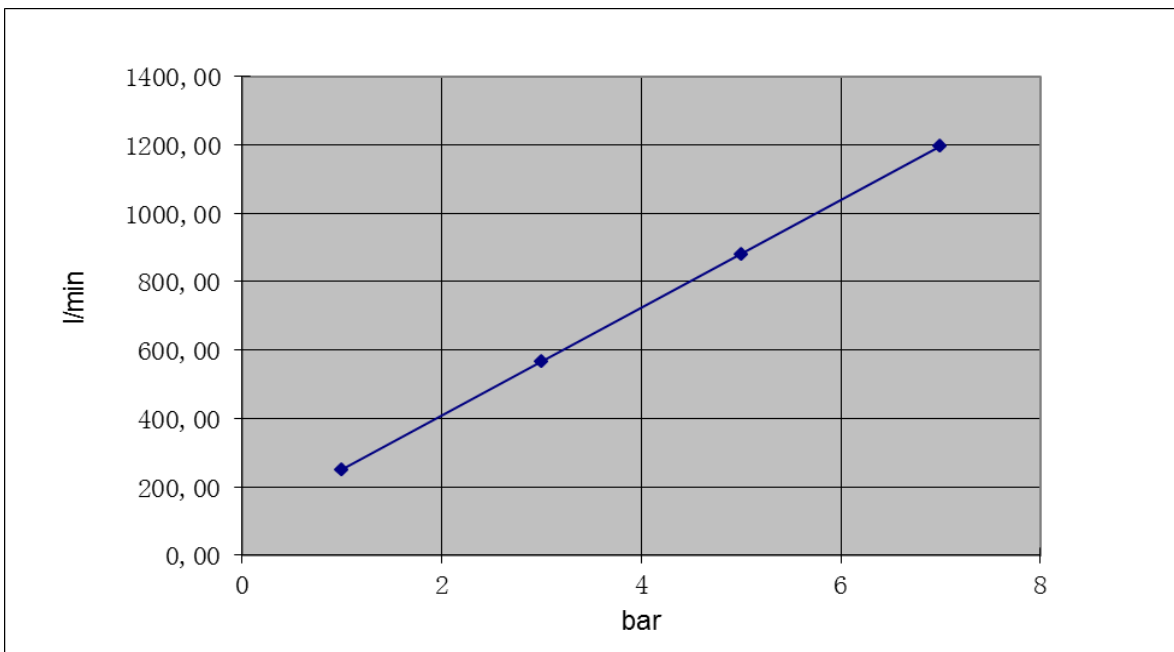


Flow rates for Type No. 188.038-8, 188.038-10 and 188.038-12; 186.0138-6, 186.038-8 and 186.038-10

	1	2	3	4	5	6	7	8	9	10	11	12	13
1 bar	9.22	18.54	29.63	39.55	49.21	58.98	69.34	78.72	87.64	104.22	179.24	246.45	268.07
3 bar	21.09	41.88	61.52	81.93	100.39	120.00	140.77	158.96	176.57	202.83	372.27	537.98	581.49
5 bar	33.99	64.07	94.28	123.36	152.83	181.05	207.78	240.49	267.20	312.19	577.88	810.92	887.45
7 bar	47.13	87.24	126.42	167.72	202.60	246.45	285.40	323.02	362.16	432.43	750.53	1090.98	1183.22

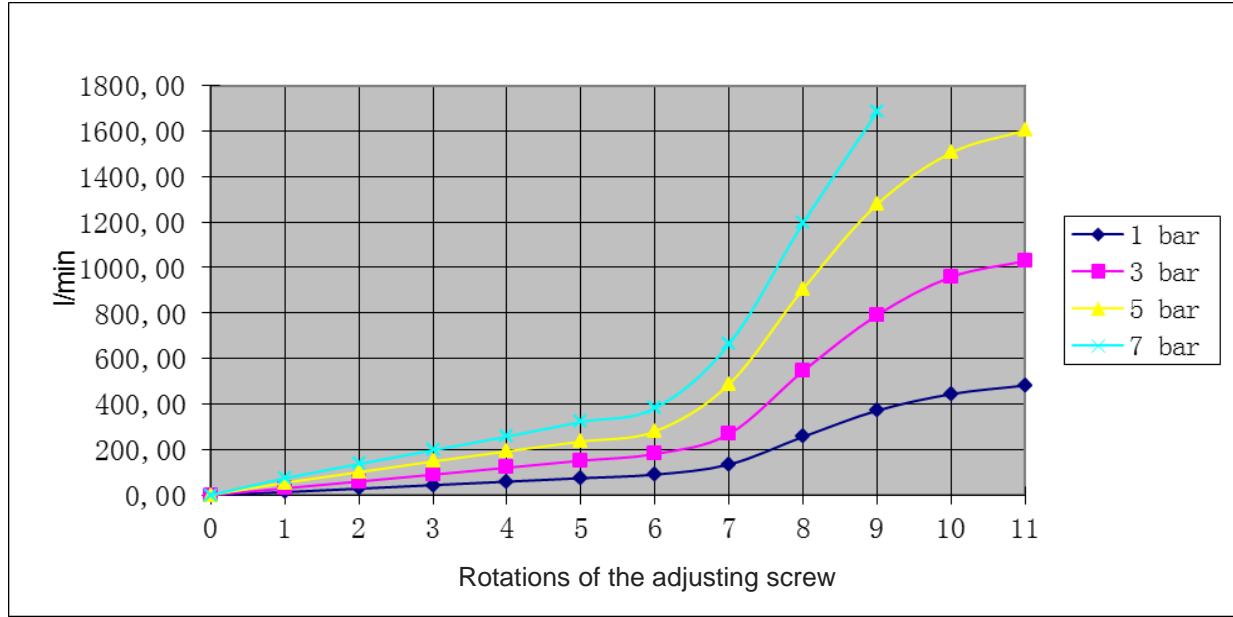

Full flow

Pressure - bar	1	3	5	7
Flow rate - l/min	251.15	566.50	881.35	1196.54



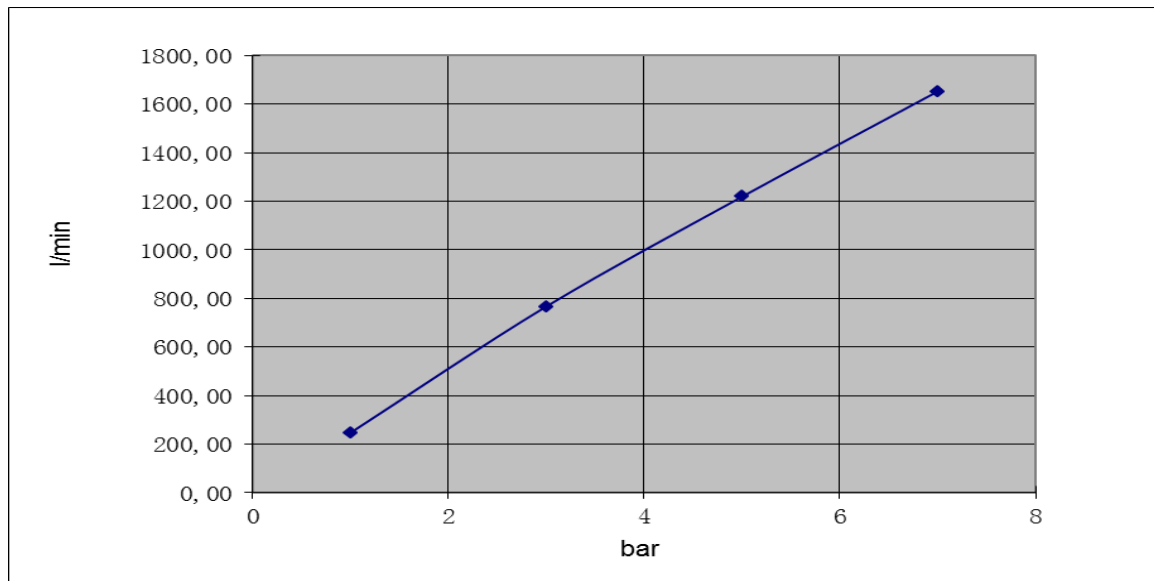
Flow rates for Type No. 188.012-8, 188.012-10 and 188.012-12; 186.012-8, 186.012-10 and 186.012-12

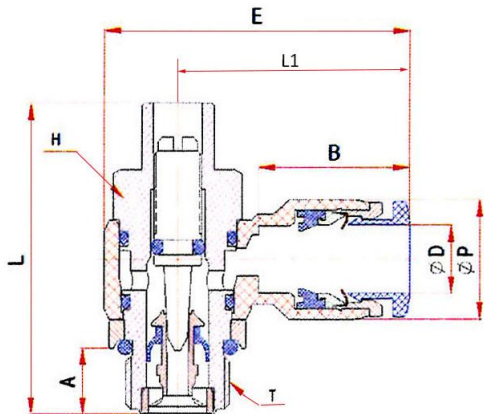
	0	1	2	3	4	5	6	7	8	9	10	11
1 bar	0.00	12.96	28.09	43.70	58.98	74.37	90.11	134.66	256.28	371.36	443.91	481.96
3 bar	0.00	29.73	59.59	89.80	120.29	151.26	180.84	268.78	545.48	791.67	958.91	1028.69
5 bar	0.00	53.92	100.73	147.81	192.32	235.39	280.57	487.92	906.52	1278.55	1504.68	1603.00
7 bar	0.00	73.49	136.74	197.20	257.16	321.73	381.90	664.30	1196.58	1684.88		



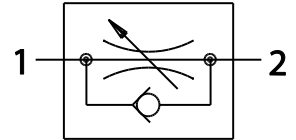
Full flow

Pressure - bar	1	3	5	7
Flow rate - l/min	247.42	767.17	1219.37	1653.10



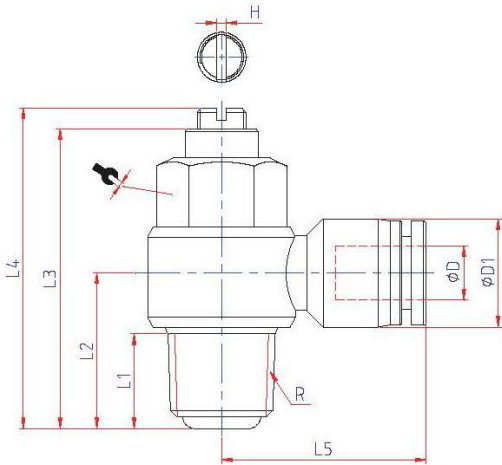
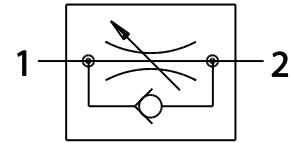


285.014-8



Unidirectional flow control valve with outgoing air restriction, adjustable with slotted screw, angled, swivel type, parallel male thread with O-ring (NBR)

Art. No.	Type No.	ØD mm	Thread	Max. working pressure bar	E mm	L mm	A mm	B mm	H mm	ØP mm	L1 mm
110028	285.005-4	4	M5	10	24.5	23.0	3.5	15.0	8	11.0	20.0
110029	285.005-6	6	M5	10	26.5	23.0	3.5	15.0	8	13.0	21.5
110030	285.018-4	4	G 1/8	10	29.5	31.5	4.3	15.0	12	11.0	23.0
110031	285.018-6	6	G 1/8	10	30.0	31.5	4.3	15.0	12	13.0	23.0
110032	285.018-8	8	G 1/8	10	32.5	31.5	4.3	18.0	12	14.5	26.5
110033	285.014-4	4	G 1/4	10	33.0	38.3	6.5	15.0	14	11.0	25.0
110034	285.014-6	6	G 1/4	10	34.0	38.3	6.5	15.0	14	13.0	25.0
110035	285.014-8	8	G 1/4	10	37.5	38.3	6.5	18.0	14	14.5	29.0
110036	285.014-10	10	G 1/4	10	41.0	38.3	6.5	22.0	14	18.5	31.0
110037	285.038-6	6	G 3/8	10	39.5	43.0	7.5	15.0	19	13.0	27.0
110038	285.038-8	8	G 3/8	10	40.0	43.0	7.5	18.0	19	14.5	30.5
110039	285.038-10	10	G 3/8	10	44.0	43.0	7.5	22.0	19	18.5	32.0
110040	285.038-12	12	G 3/8	10	46.0	43.0	7.5	22.0	19	21.0	35.0
110041	285.012-8	8	G 1/2	10	46.0	49.0	9.6	18.0	24	14.5	33.0
110042	285.012-10	10	G 1/2	10	49.5	49.0	9.6	22.0	24	18.5	34.5
110043	285.012-12	12	G 1/2	10	50.0	49.0	9.6	22.0	24	21.0	36.5



297.012-8

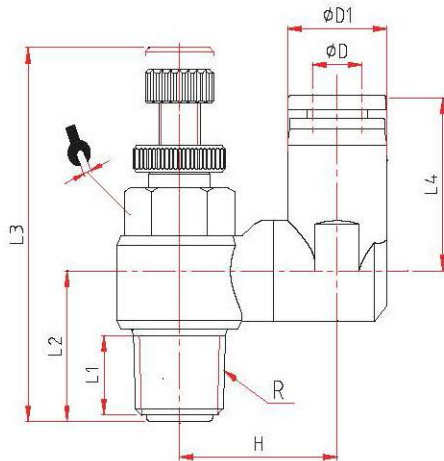


297.014-8

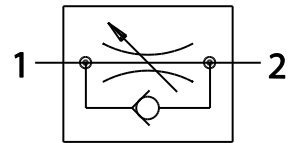
Unidirectional flow control valve with outgoing air restriction, adjustable with slotted screw, angled, swivel type, conical male thread, coated

Temperature range: 0 °C to 60 °C

Art. No.	Type No.	ØD mm	Thread	Max. working pressure bar	L1 mm	L2 mm	L3 mm	L4 (max) mm	L5 mm	ØD1 mm	H mm	a/f mm
136005	297.018-4	4	R 1/8	10	7.0	15.0	29.0	32.0	23.0	11.3	0.8	12
136006	297.018-6	6	R 1/8	10	7.7	-	-	33.5	21.3	-	-	12
135007	297.018-8	8	R 1/8	10	7.7	-	-	33.5	25.3	-	-	12
136008	297.014-4	4	R 1/4	10	11.0	18.5	34.8	37.5	25.2	11.3	1.2	14
136009	297.014-6	6	R 1/4	10	11.4	-	-	41.0	25.2	-	-	14
136010	297.014-8	8	R 1/4	10	11.4	-	-	41.0	28.4	-	-	14
136011	297.014-10	10	R 1/4	10	11.0	21.2	34.8	37.5	32.7	19.0	1.2	14
136012	297.038-6	6	R 3/8	10	12.5	22.0	40.8	43.5	26.7	13.3	1.2	19
136013	297.038-8	8	R 3/8	10	12.5	21.3	40.8	43.5	29.8	15.0	1.2	19
136014	297.038-10	10	R 3/8	10	12.5	23.2	40.8	43.5	33.0	19.0	1.2	19
136015	297.038-12	12	R 3/8	10	12.5	24.5	40.8	43.5	35.5	21.5	1.2	19
136016	297.012-8	8	R 1/2	10	15.0	26.0	46.6	51.0	32.8	15.0	1.6	24
136017	297.012-10	10	R 1/2	10	15.0	26.2	46.6	51.0	36.0	19.0	1.6	24
136018	297.012-12	12	R 1/2	10	15.0	27.5	46.6	51.0	36.5	21.5	1.6	24



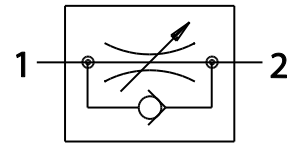
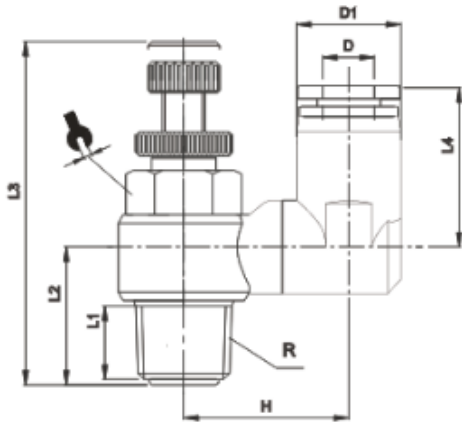
299.038-12



Unidirectional flow control valve with outgoing air restriction, adjustable with knurled screw, straight type, swivel type, conical male thread, coated

Temperature range: 0 °C to 60 °C

Art. No.	Type No.	ØD mm	Thread	Max. working pressure bar	L1 mm	L2 mm	L3 (max) mm	L4 mm	H mm	ØD1 mm	a/f mm
136019	299.005-4	4	M5	10	3.2	11.5	33.5	20.5	11.5	11.0	8
136020	299.005-6	6	M5	10	3.2	11.5	33.5	22.0	13.0	13.5	8
136021	299.018-4	4	R 1/8	10	6.4	14.0	42.0	26.5	18.0	15.0	12
136022	299.018-6	6	R 1/8	10	6.4	14.0	42.0	26.5	18.0	15.0	12
136023	299.018-8	8	R 1/8	10	6.4	14.0	42.0	26.5	18.0	15.0	12
136024	299.014-4	4	R 1/4	10	10.0	17.5	48.0	27.0	20.5	15.0	14
136025	299.014-6	6	R 1/4	10	10.0	17.5	48.0	27.0	20.5	15.0	14
136026	299.014-8	8	R 1/4	10	10.0	17.5	48.0	27.0	20.5	15.0	14
136027	299.014-10	10	R 1/4	10	10.0	17.5	48.0	30.0	22.0	21.5	14
136028	299.014-12	12	R 1/4	10	10.0	17.5	48.0	30.0	22.0	21.5	14
136029	299.038-10	10	R 3/8	10	11.4	21.5	53.0	31.0	23.0	21.5	19
136030	299.038-12	12	R 3/8	10	11.4	21.5	53.0	31.0	23.0	21.5	19



298.038-12

Unidirectional flow control valve with incoming air restriction, adjustable with knurled screw, straight type, swivel type, conical male thread, coated

Temperature range: 0 °C to 60 °C

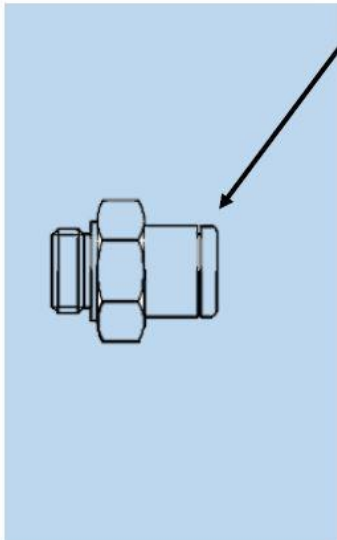
Art. No.	Type No.	ØD mm	Thread	Max. working pressure bar	L1 mm	L2 mm	L3 mm	L4 mm	H mm	ØD1 mm	a/f mm
136032	298.005-4	4	M5	10	3.2	11.5	33.5	20.5	11.5	11.0	8
153628	298.005-4-1	4	M5	10	4.0	11.0	28.0	25.5	14.5	12.0	8
Art. No. 153628 replaces Art. No. 136032											
136033	298.005-6	6	M5	10	3.2	11.5	33.5	22.0	13.0	13.5	8
136034	298.018-4	4	R 1/8	10	6.4	14.0	42.0	26.5	18.0	15.0	12
136035	298.018-6	6	R 1/8	10	6.4	14.0	42.0	26.5	18.0	15.0	12
135979	298.018-8	8	R 1/8	10	6.4	14.0	42.0	26.5	18.0	15.0	12
135980	298.014-4	4	R 1/4	10	10.0	17.5	48.0	27.0	20.5	15.0	14
135981	298.014-6	6	R 1/4	10	10.0	17.5	48.0	27.0	20.5	15.0	14
135982	298.014-8	8	R 1/4	10	10.0	17.5	48.0	27.0	20.5	15.0	14
135983	298.014-10	10	R 1/4	10	10.0	17.5	48.0	30.0	22.0	21.5	14
135984	298.014-12	12	R 1/4	10	10.0	17.5	48.0	30.0	22.0	21.5	14
135985	298.038-10	10	R 3/8	10	11.4	21.5	53.0	31.0	23.0	21.5	19
135986	298.038-12	12	R 3/8	10	11.4	21.5	53.0	31.0	23.0	21.5	19

Assembling instructions for push-in fittings

- Cut the hose ends plain. To ensure an ideal sealing effect and secure stop of the fitting make sure the hose end is not oval.
- Clean the hose ends and make sure that it is free of burrs.
- Push the hose ends into the fitting till it stops.
- Test stability by pulling the hose shortly.
- Push the release ring to release the hose.
- Pull out the hose with slight rotation.
- For a new assembling cut the hose plain again. Then pushing and releasing the tube should not be affected adversely.

*The suitability test for the individual application is the user's responsibility.

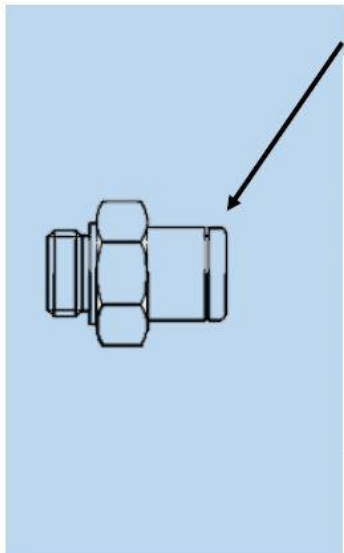
We recommend for improved strength of push-in fittings with **PA** hoses, the following push-in fitting - hose combination:



For tube O.D.	Recommended hose \emptyset	Recommended hose
3	3x1.5 *	259.08 X
4	4x2 *	259.09 X
5	5x3	259.10 X
6	6x4 *	259.11 X
8	8x6 *	259.12 X
10	10x7 *	259.61 X
12	12x9 *	259.14 X
14	14x11	259.62 X
16	16x12	259.25 X

* Recommended and based on ISO 14743

We recommend for improved strength of push-in fittings with **PU** hoses, the following push-in fitting - hose combination:



For tube O.D.	Recommended hose \emptyset	Recommended hose
3	3x1.5 *	259.50 X
4	4x2 *	259.04 X
5	5x3	259.15 X
6	6x4 *	259.16 X
8	8x5 *	259.63 X
10	10x7 *	259.64 X
12	12x8 *	259.65 X
14	14x10	259.51 X
16	16x12	259.52 X

* Recommended and based on ISO 14743