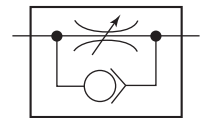
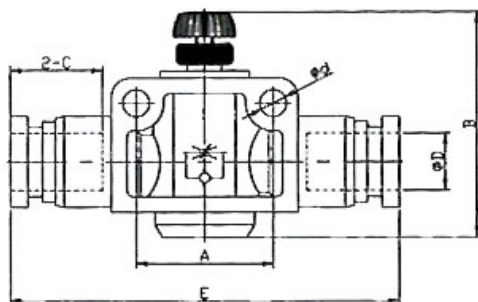


Push-in fittings series manufactured in plastic and nickel-plated brass.
All parts are suitable for use with hoses, tubes or pipes made of plastic and copper.

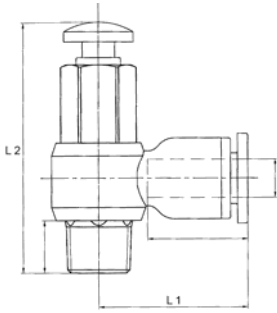
Temperature range	-20 °C to 80 °C
Material	Plastic and nickel-plated brass
Sleeve	Plastic
Sealing surface	Parallel version: O-ring in housing Conical version: thread coating
Medium	Compressed air and all gases or liquids that are compatible with the materials
Areas of application	Air, vacuum
Recommended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



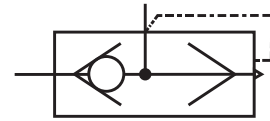
181.0808

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



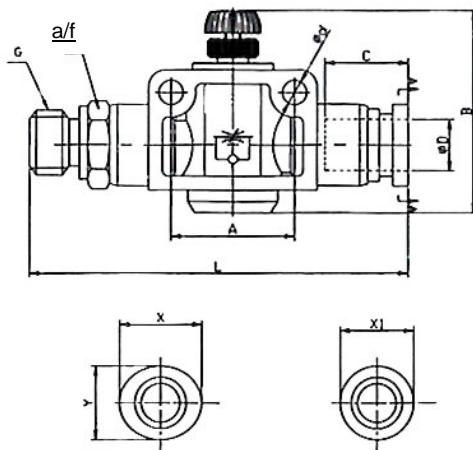
281.018-6



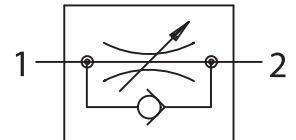
Quick-exhaust valve, manually operated, angled

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

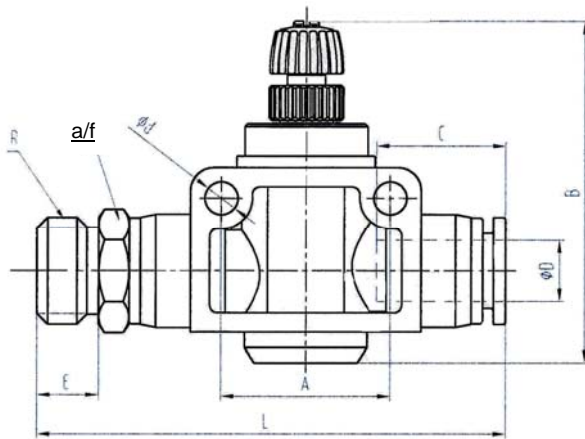


183.014-6

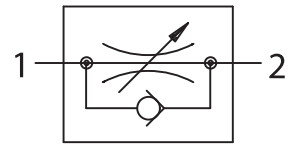


Unidirectional flow control valve with parallel male thread and plug connection, straight type, air restriction from tube to port

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

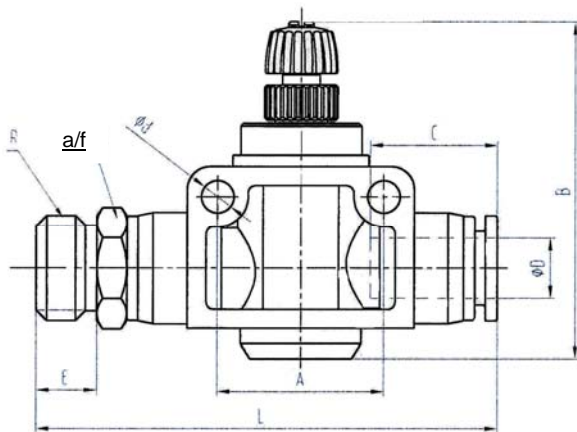


182.014-6

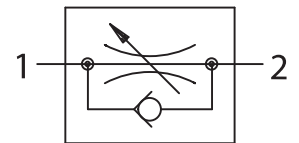


Unidirectional flow control valve with parallel male thread and plug connection, straight type, air restriction from tube to port

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

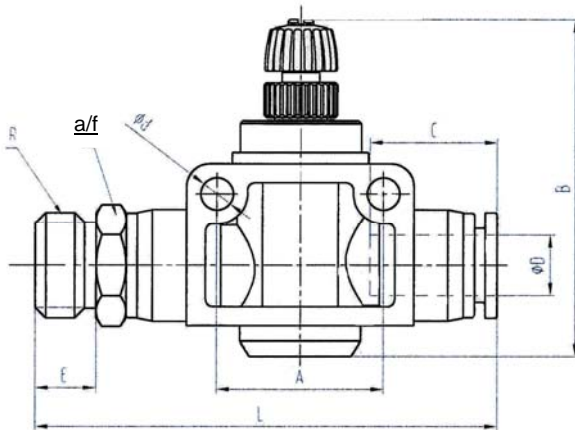


286.014-6

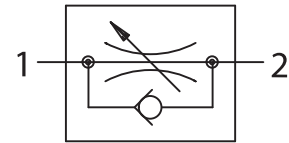


Unidirectional flow control valve with parallel male thread and plug connection, straight type, air restriction from port to tube

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

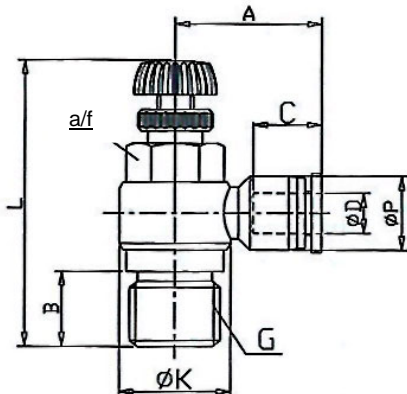


287.014-6

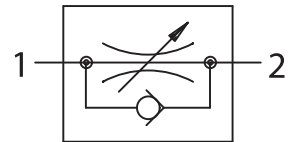


Unidirectional flow control valve with conical male thread and plug connection, straight type, air restriction from port to tube

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

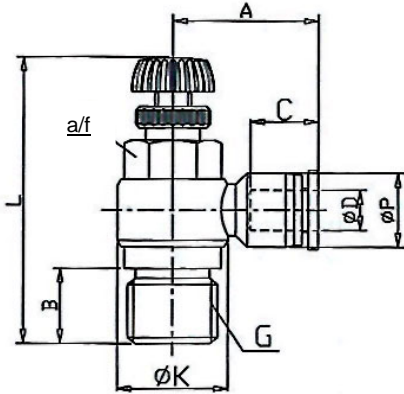


187.014-10

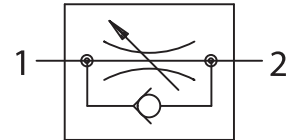


Unidirectional flow control valve with incoming air restriction, adjustable with knurled screw, angled, swivel type, parallel male thread with O-ring (NBR)

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

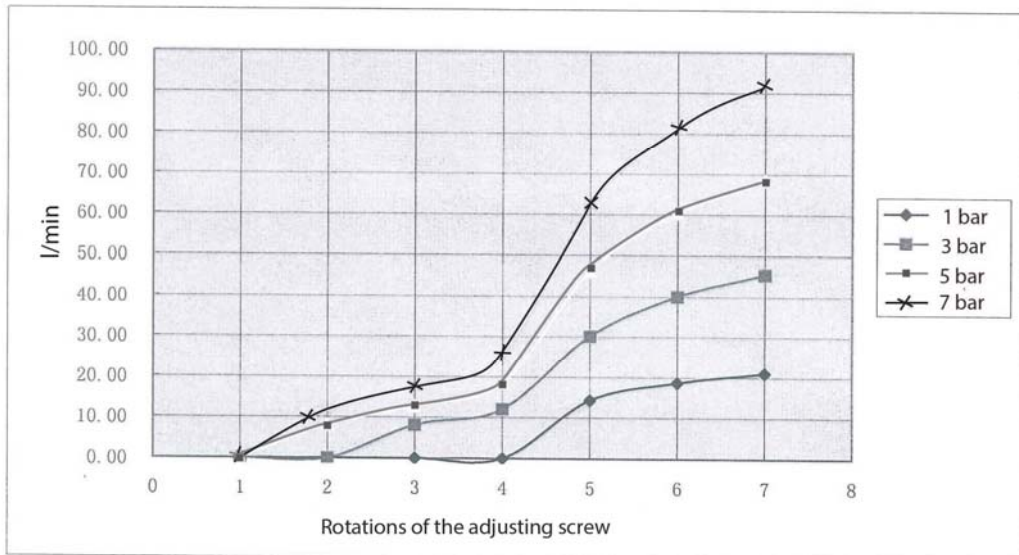


Unidirectional flow control valve with outgoing air restriction, adjustable with knurled screw, angled, swivel type, parallel male thread with O-ring (NBR)

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

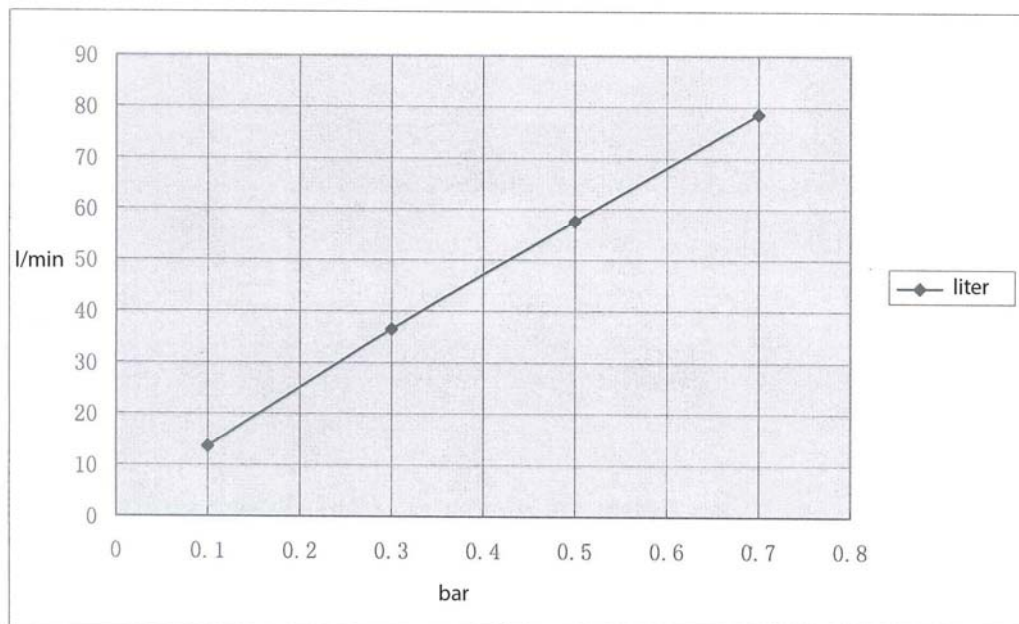
Art. No. 110011

	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



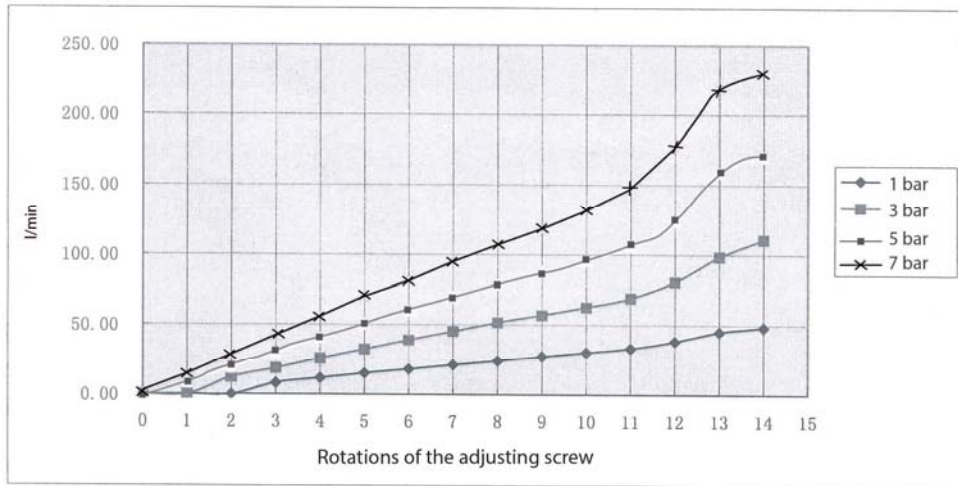
Art. No. 110011

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



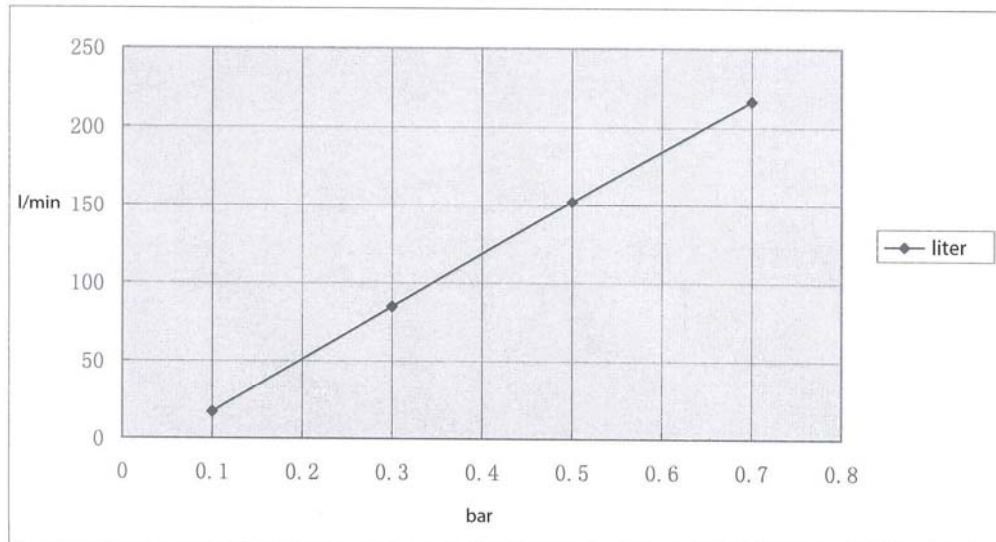
Art. No. 110015

	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



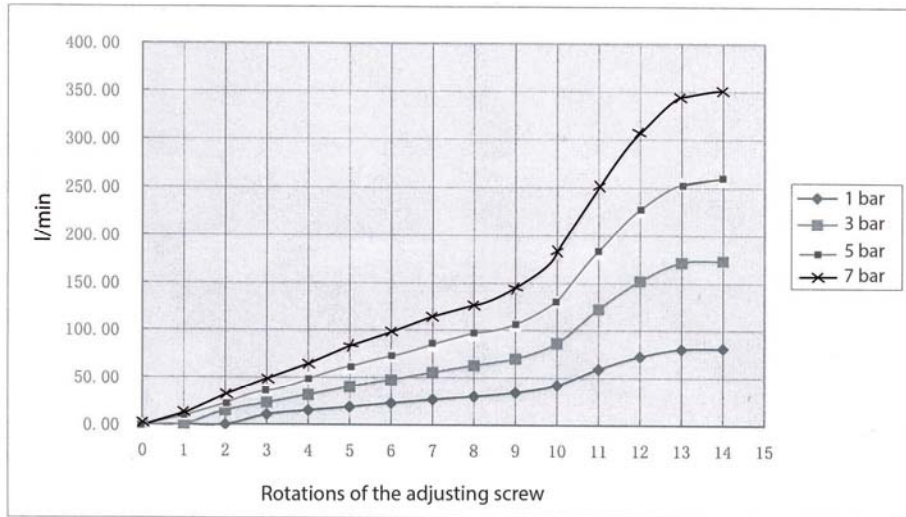
Art. No. 110015

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



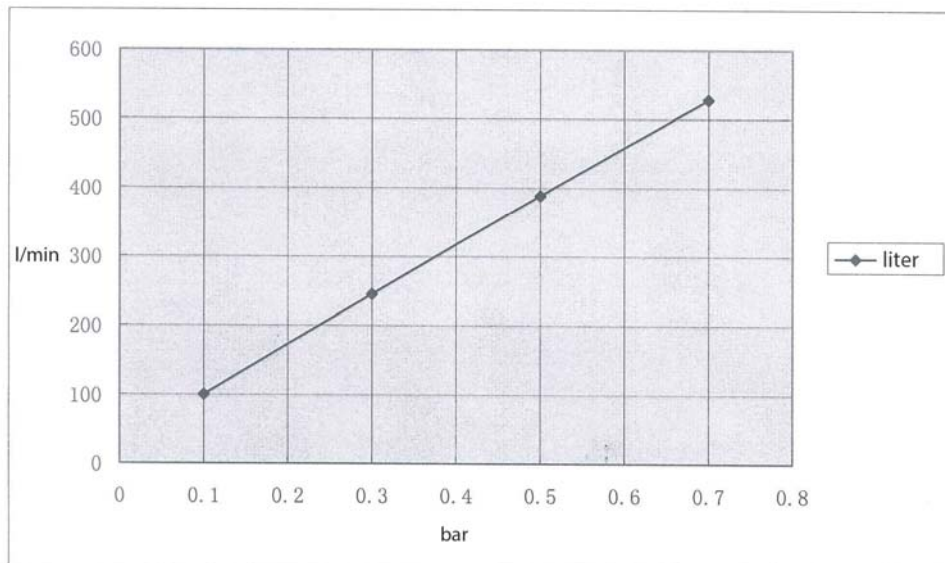
Art. No. 110019

	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



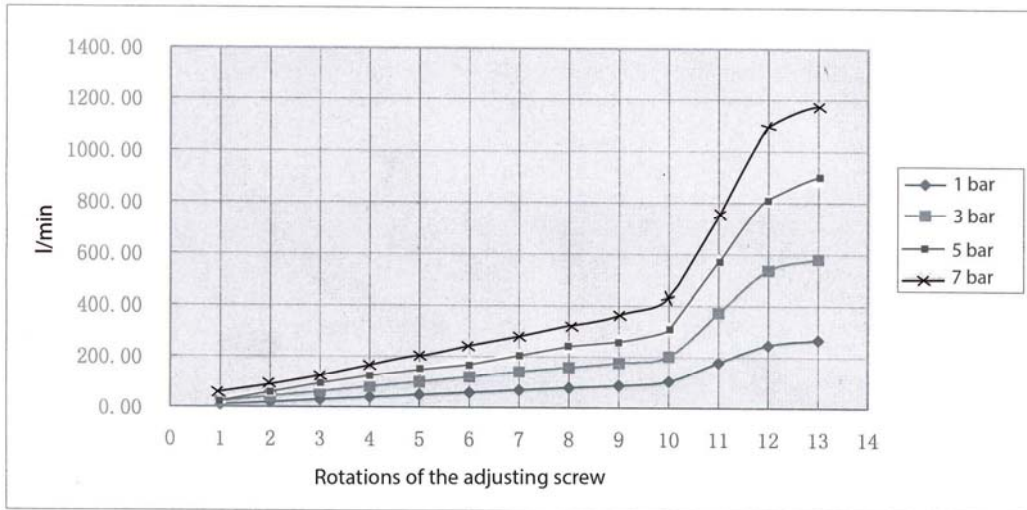
Art. No. 110019

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



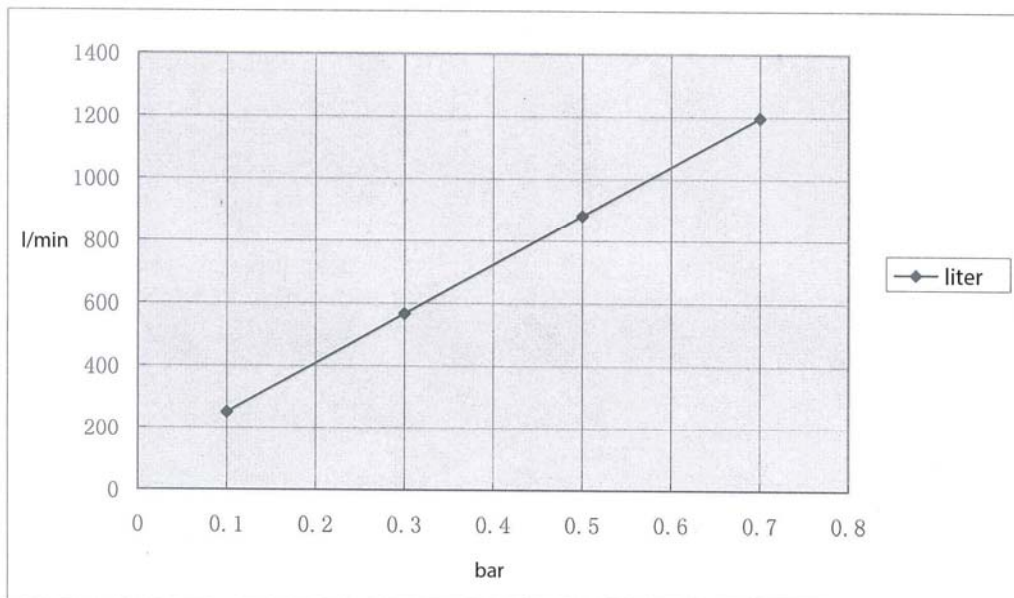
Art. No. 110023

	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



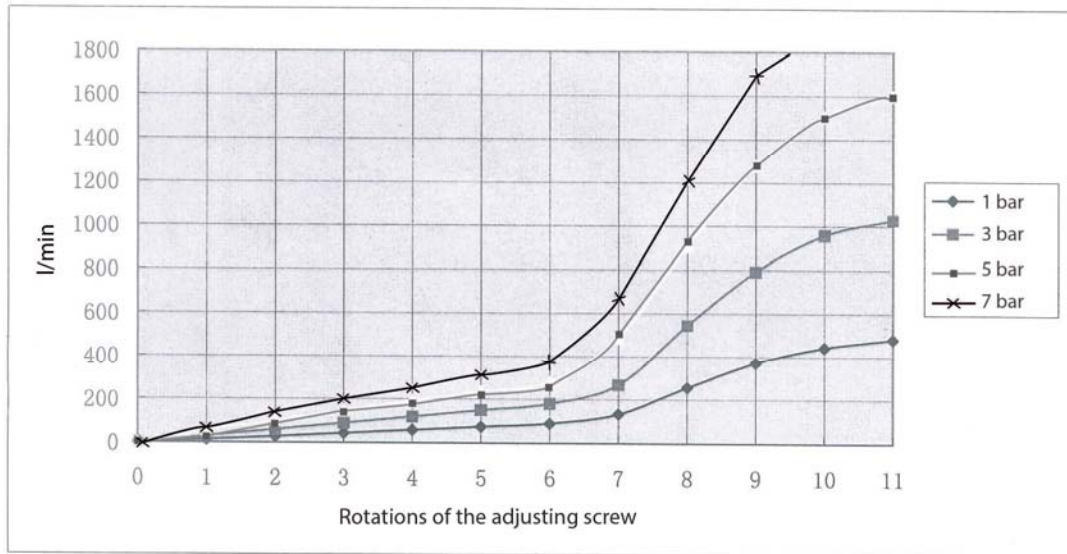
Art. No. 110023

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



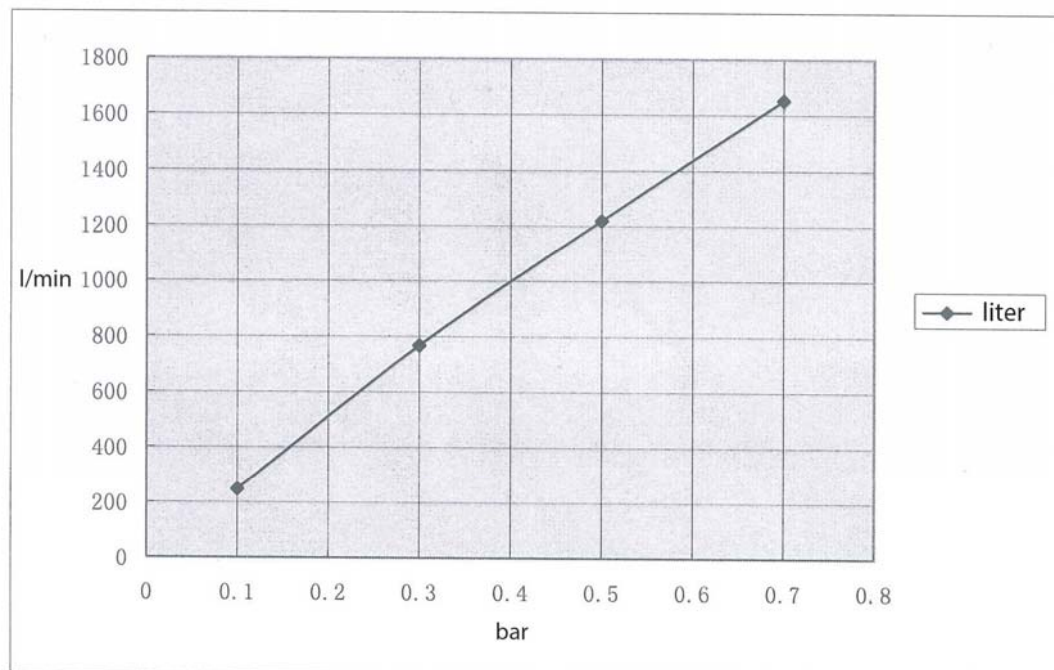
Art. No. 110027

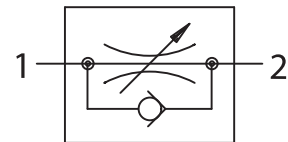
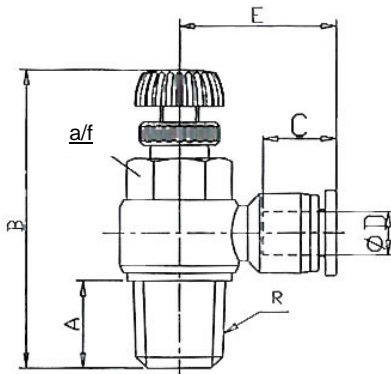
	0	1	2	3	4	5	6	7	8	9	10	11
1 bar	0	12.96	28.09	43.70	58.98	74.37	90.11	134.66	256.28	371.36	443.91	481.96
3 bar	0	29.73	59.59	89.80	120.29	151.26	180.84	268.78	545.48	791.67	958.91	1028.69
5 bar	0	53.92	100.73	147.81	192.32	235.39	280.57	487.92	906.52	1278.55	1504.68	1603.00
7 bar	0	73.49	136.74	197.20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

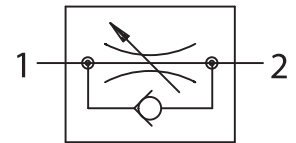
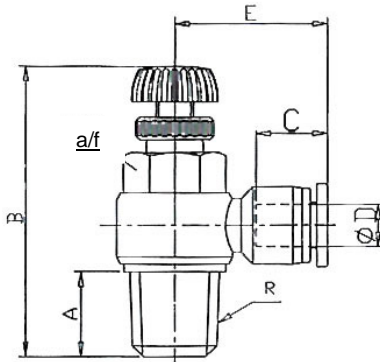




185.014-10

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



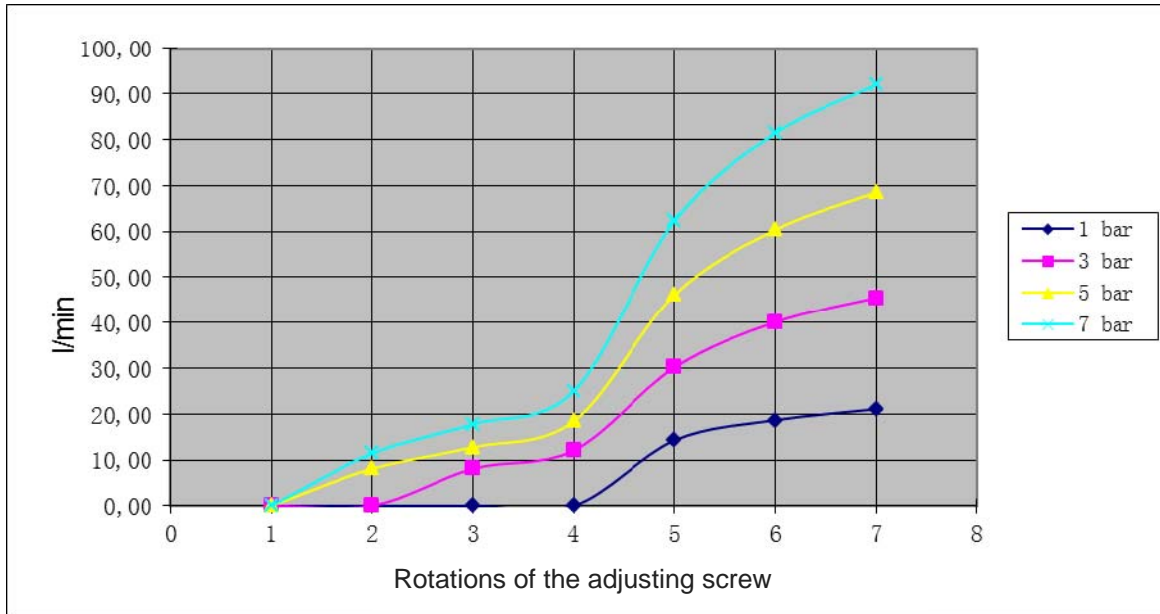
186.014-10

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

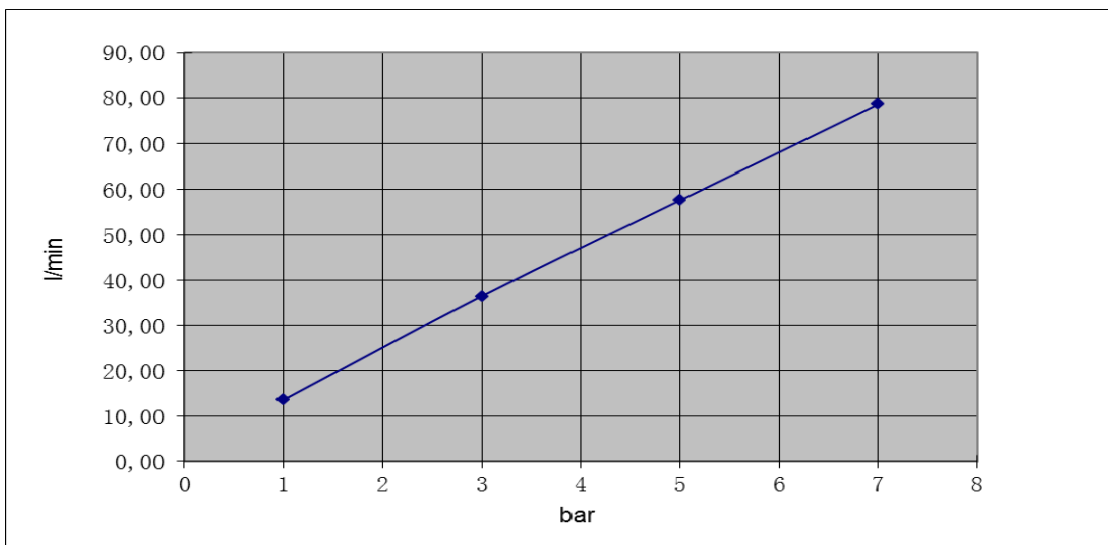
Flow rates for Type No. 188.005-4 and 188.005-6

	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



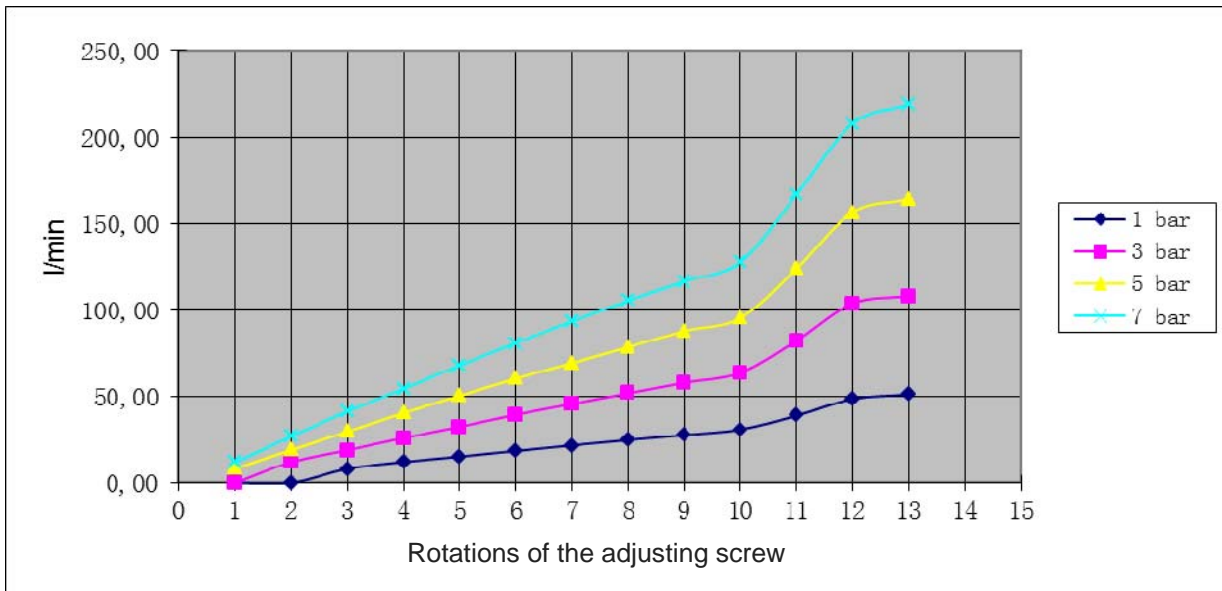
Full flow

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



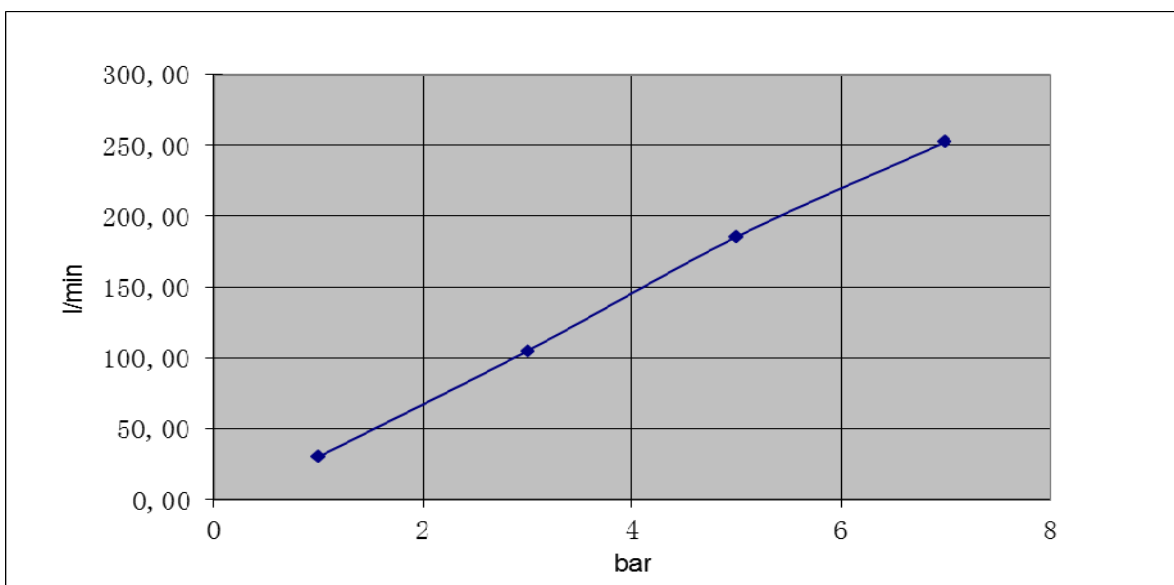
Flow rates for Type No. 188.018-4, 188.018-6 and 188.018-8; 186.018-4, 186.018-6 and 186.018-8

	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



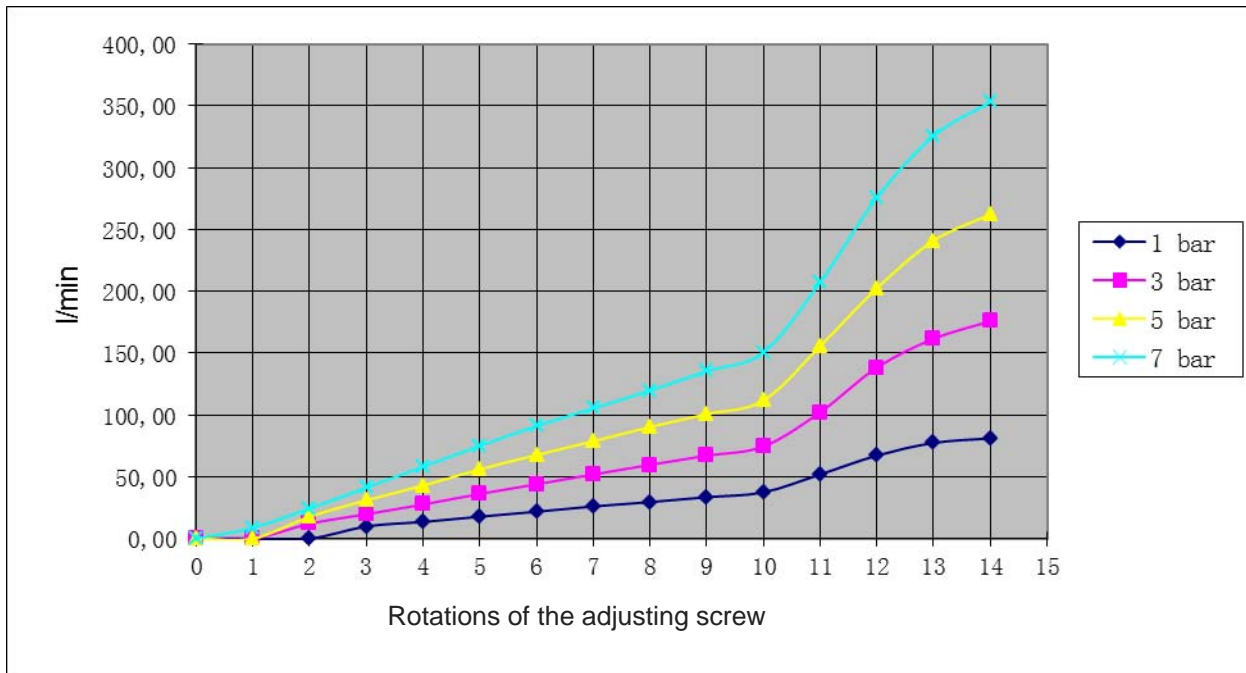
Full flow

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



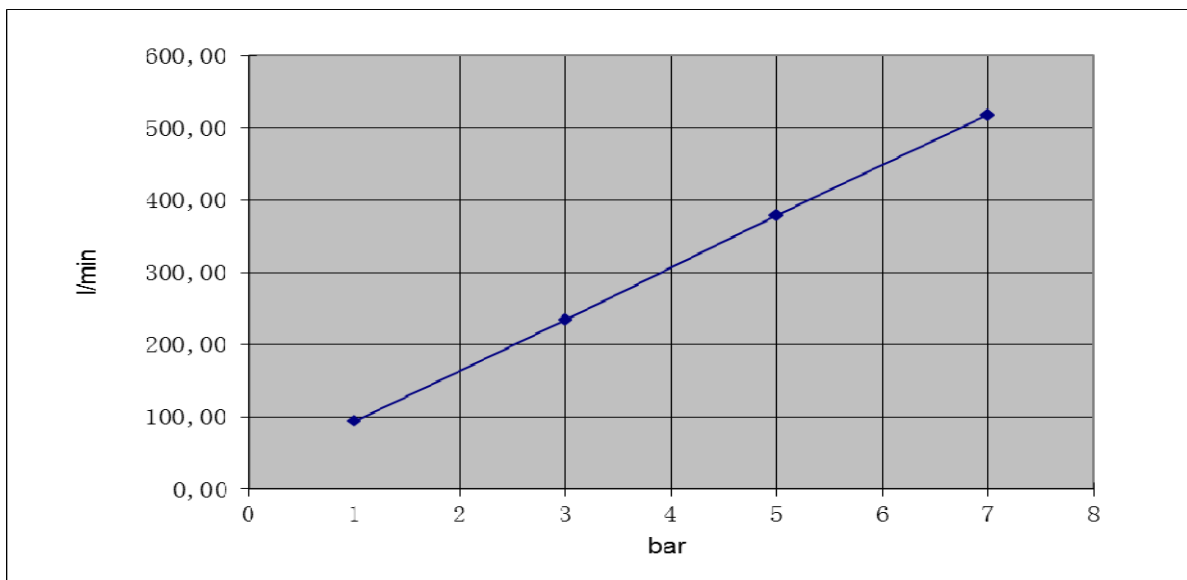
Flow rates for Type No. 188.014-6, 188.014-8 and 188.014-10; 186.014-6, 186.014-8 and 186.014-10

	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



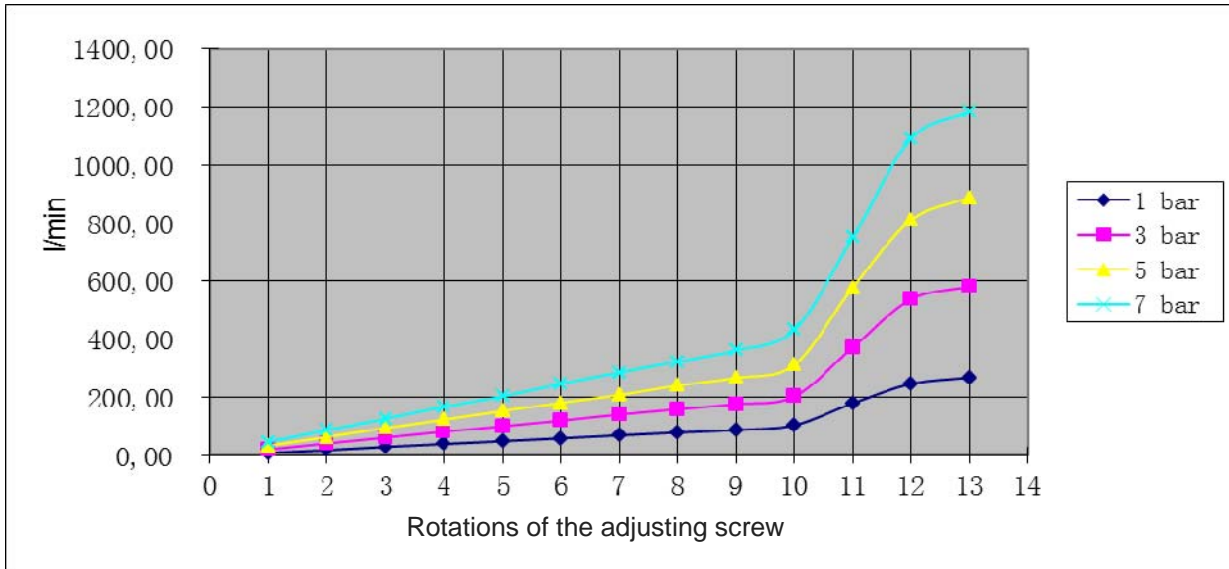
Full flow

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



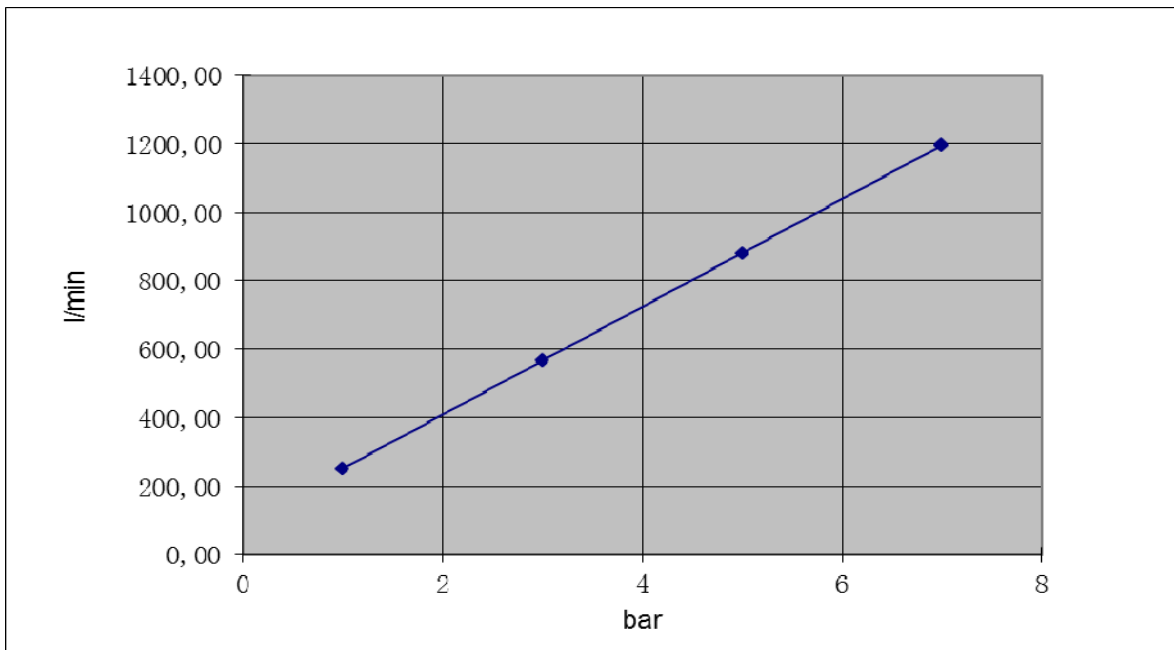
Flow rates for Type No. 188.038-8, 188.038-10 and 188.038-12; 186.0138-6, 186.038-8 and 186.038-10

	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



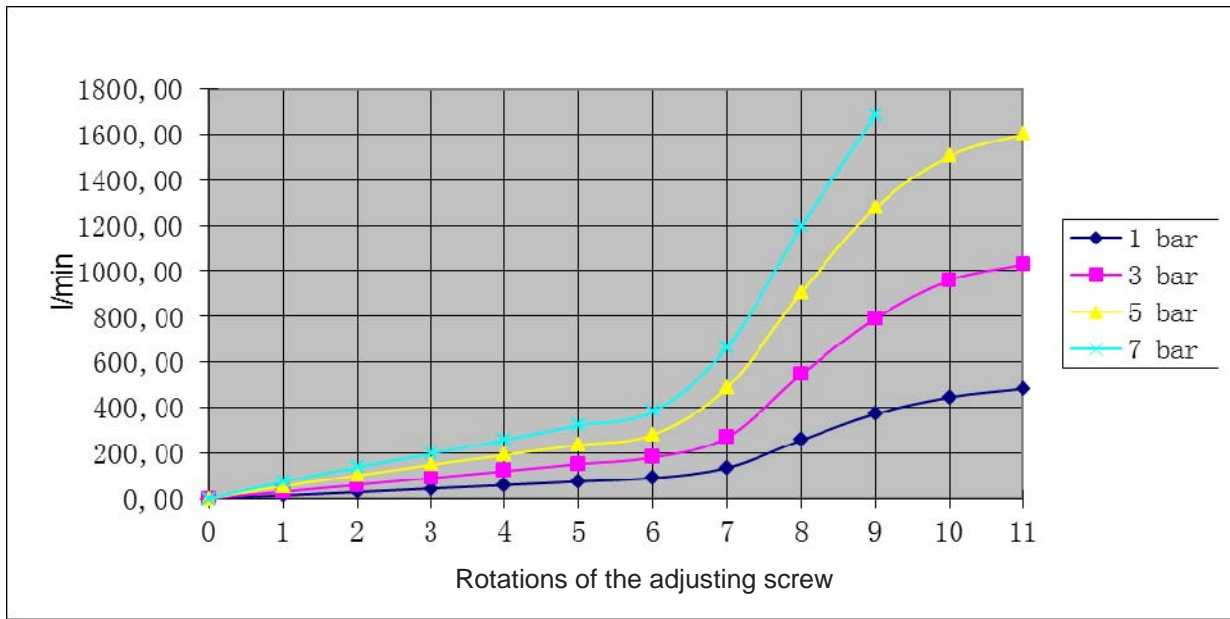
Full flow

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



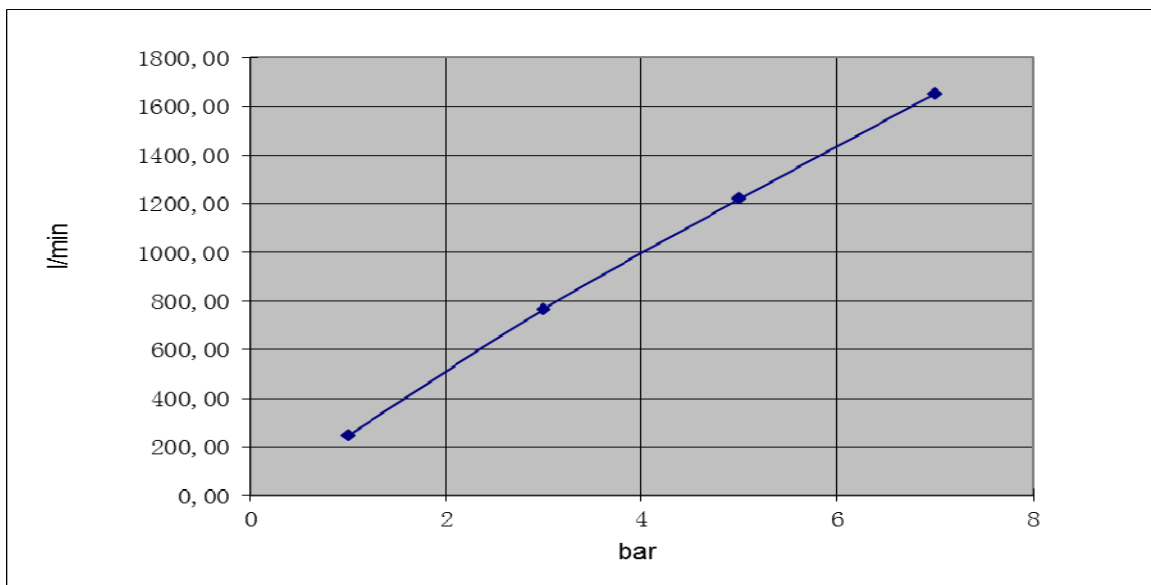
Flow rates for Type No. 188.012-8, 188.012-10 and 188.012-12; 186.012-8, 186.012-10 and 186.012-12

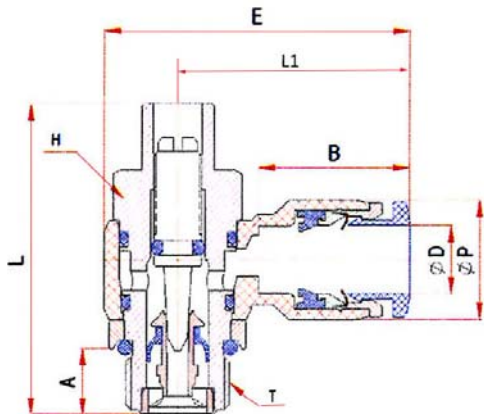
	0	1	2	3	4	5	6	7	8	9	10	11
1 bar	0.00	12.96	28.09	43.70	58.98	74.37	90.11	134.66	256.28	371.36	443.91	481.96
3 bar	0.00	29.73	59.59	89.80	120.29	151.26	180.84	268.78	545.48	791.67	958.91	1028.69
5 bar	0.00	53.92	100.73	147.81	192.32	235.39	280.57	487.92	906.52	1278.55	1504.68	1603.00
7 bar	0.00	73.49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



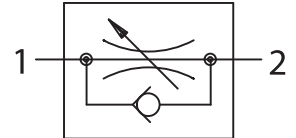
Full flow

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



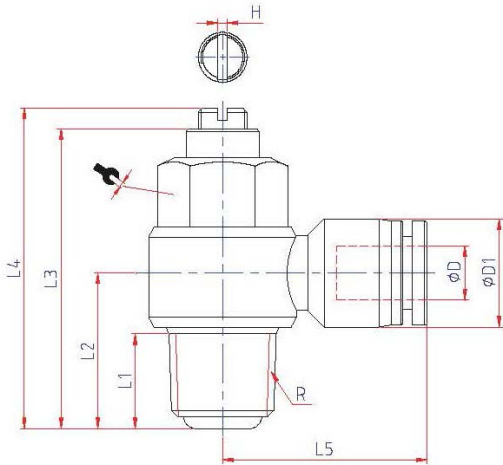
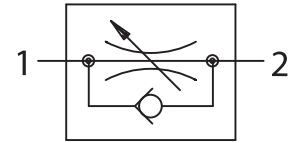


285.014-8



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

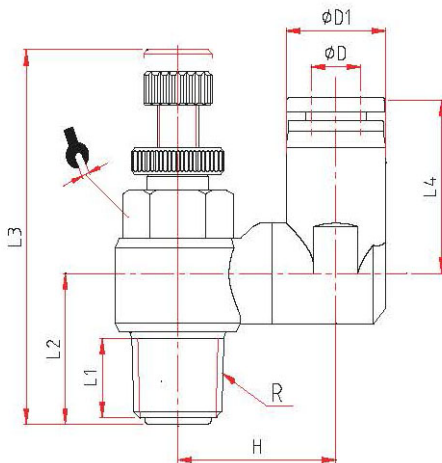


297.014-8

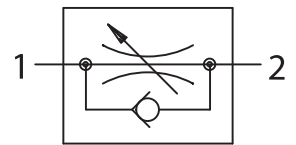
Unidirectional flow control valve with outgoing air restriction, adjustable with slotted screw, angled, swivel type, conical male thread, coated

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



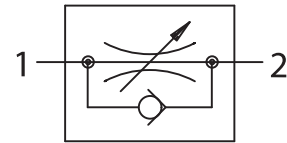
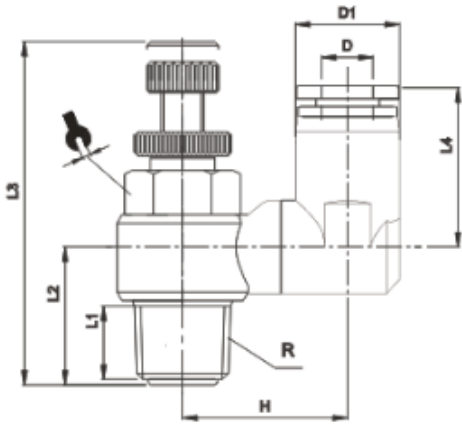
299.038-12



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
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	R1/4	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.