pneumatic function valves

legris connectic

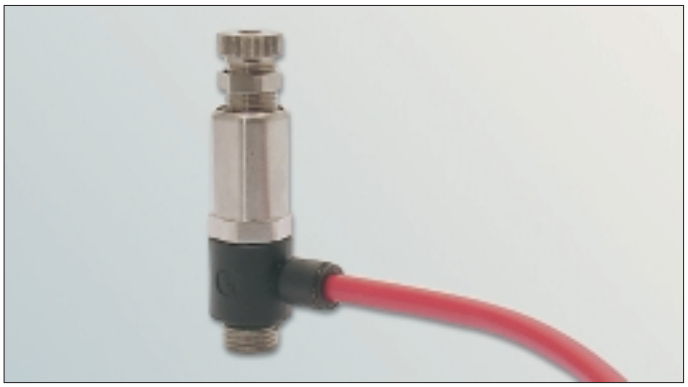
pneumatic function valves

In the field of industrial automation many functions can be controlled by purpose designed fittings.
Legris Pneumatic Function Valves have been developed to perform such functions described below.

threshold sensor fittings

Detect pressure drop and the cylinder end-of-travel, thus providing an outlet pilot signal.

pressure regulators

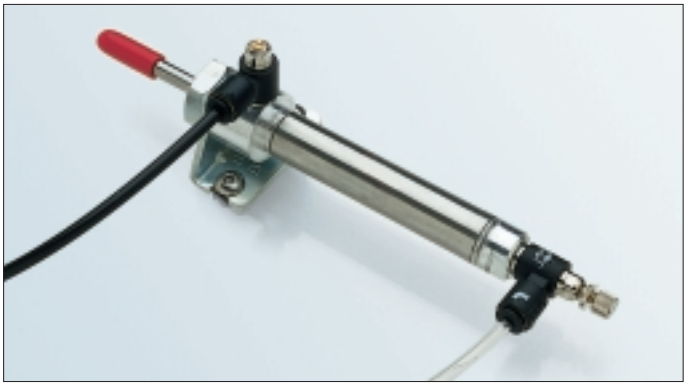


Regulate air flow to/from specific pneumatic equipment.

pneumatic slow start fittings

Allow gradual pressure increase at start up of a circuit.

miniature flow control regulators

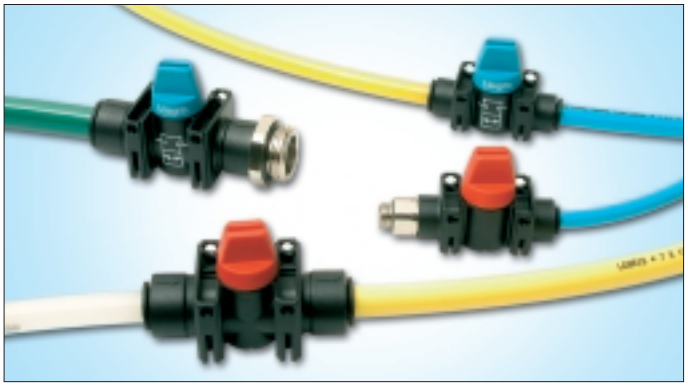


Control the speed of a pneumatic cylinder.
Designed specifically for use with small bore cylinders.

snap connectors

Isolate a circuit without venting the whole installation.

mini-ball valves

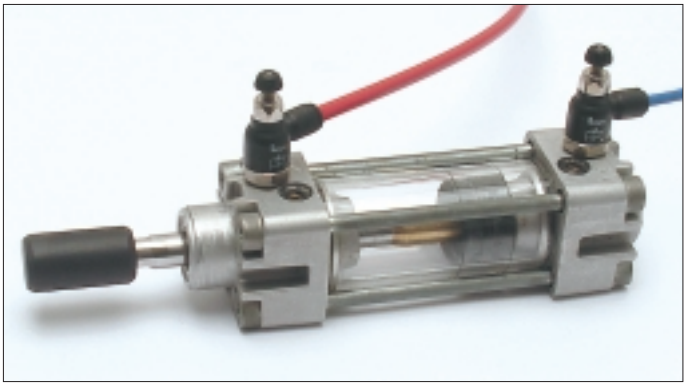


Ensure opening and closing of a pneumatic circuit.

pneumatic function valves

Legris Pneumatic Function Valves are compact, user-friendly and meet today's industrial needs perfectly.

flow control regulators



Control the speed of a pneumatic cylinder.

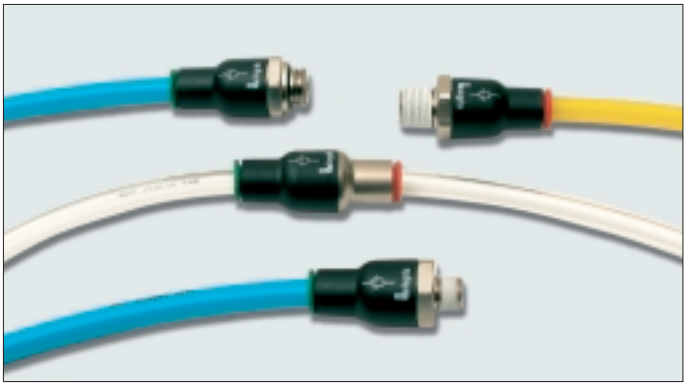
flow control regulators

Models in composite and metal.

lock-out valves

Mounted in pairs, lock the cylinder piston by simultaneously cutting off the supply and exhaust.

non-return valves

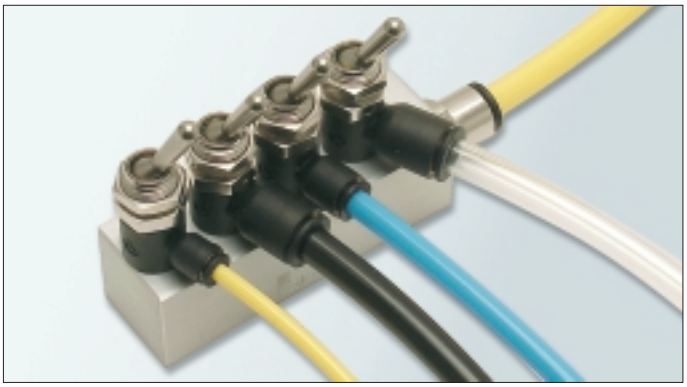


Allow air to pass in one direction while preventing flow in the other direction.

pneumatic slide valves

Allow the air supply to be closed upstream and vented downstream.

manual operated 3-way valves



Allow the air supply to be shut-off and vented downstream by a simple manual operation of the switch.

standard range of pneumatic function valves

flow regulators – nylon

7067
compact
Page B8

7062
compact
Page B8

7065/7066
compact
Page B9

7060/7061
compact
Page B9

7010/7011
knobless
Page B10

7012
knobless
Page B10

7015/7016
knobless
Page B11

7010/7011
knobless
Page B11

7660/7669/7662
miniature
Page B12

7665/7668
miniature
Page B12-B13

7660/7669
miniature
Page B13

7625
knobless mini
Page B13

7620
knobless mini
Page B13

7630/7631
plug-in mini
Page B14

7030/7031
plug-in compact
Page B14

7045
compact swivel outlet
Page B15

7640-7645
mini swivel outlet
Page B15

7040
compact swivel outlet
Page B15

7640-7649
mini swivel outlet
Page B15

7770/7772
in-line
Page B16

7776
in-line
Page B16

7775/7771
threaded in-line
Page B17

flow regulators – metal

7810/7812
7815/7817
Page B18

7835
Page B18

7160
knobless
Page B18

7105
Page B19

7100/7101
Page B19

7115
Page B19

7110/7111
Page B19

lock-out valves

7885
Page B21

7880
Page B21

7886
Page B21

7881
Page B21

mini ball valves

7913
3/2 with vent
page B25

7915
3/2 with vent
page B25

7914
3/2 with vent
page B25

7910
2/2
page B25

7911
2/2
page B25

7000
joining clips
page B24

pneumatic slide valves

0661
male/female
Page B29

0660/0669
double female
Page B29

0663
lockable male/female
Page B29

0662
lockable double female
Page B29

quick exhaust valve

7982
Page B38

manually operated 3-way venting valves

7805/7806
Page B39

7800/7801
Page B39

standard range of pneumatic function valves

non-return valve

7996
Page B22

7984/94/85/95
Page B22

7985/95
Page B22

7984/94
Page B22

4895/4890
Page B23

4891/4892
Page B23

threshold sensors

7808/7818
Page B27

7808/7818
Page B27

7828
Page B28

slow start valves

7864/7861
Page B33

7860
Page B33

7874/7871
Page B33

7870
Page B33

snap connectors

7926
body
Page B35

7925/21
body
Page B35

7960
plug
Page B35

7961
plug
Page B35

pressure regulator fittings

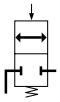
7305
Page B37

7300
Page B37

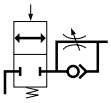
symbols of Legris pneumatic function valves

regulating
air flow

controlling
air circulation



controlling
and **regulating** air flow



controlling
the passage of fluid in one direction
and non-return in the other

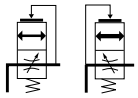
exhausting system
and **controlling** pneumatic circuit supply

detecting
pressure drop

regulating
pressure by stabilizing at a required value

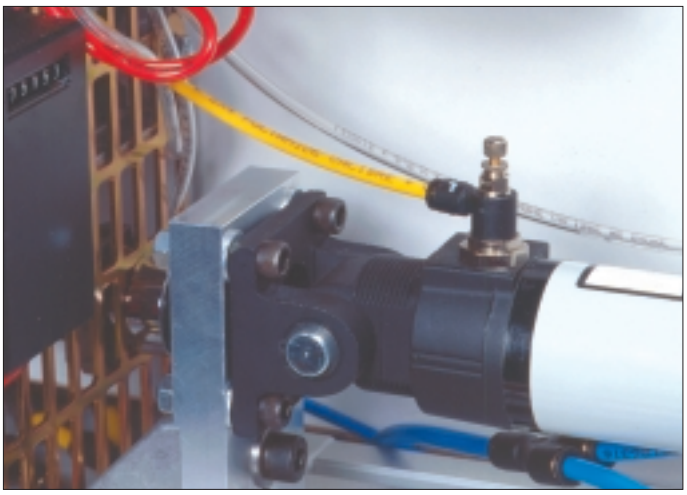
reducing
pressure supply

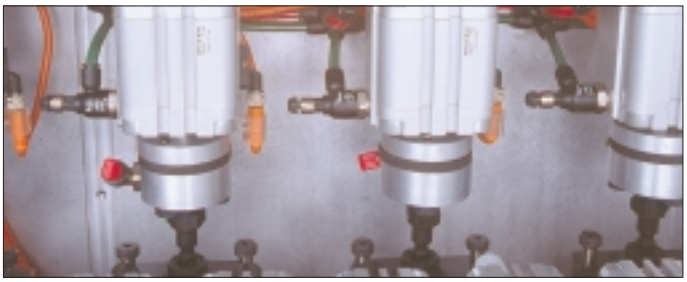
progressive
pressurizing of circuits



isolate a circuit
without venting the whole installation

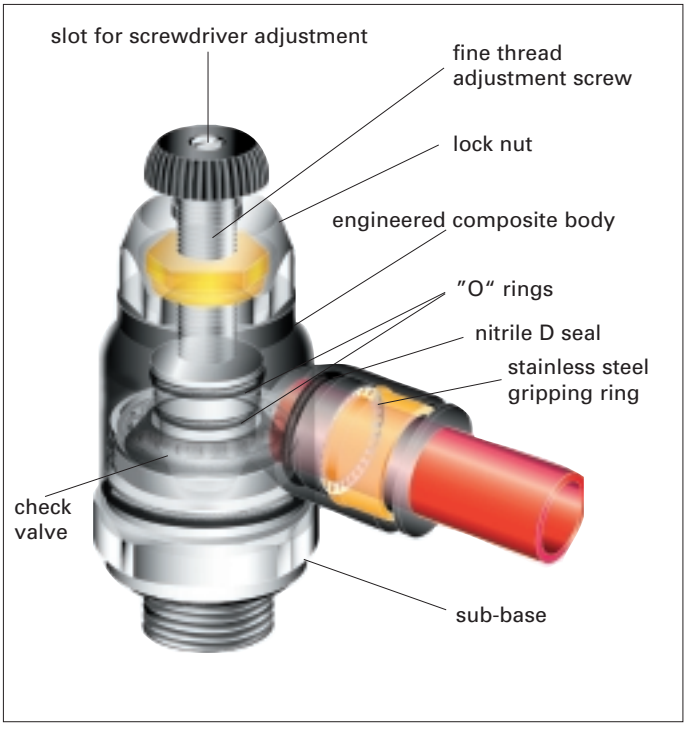
principle of flow control regulators





technical specifications

Reliable performance is dependent upon the tube being used, ambient temperature and fluid conveyed together with the component materials of the fitting.



Legris flow control flow charts can be found at the end of section B.

Push-to-connect connection
- ease of piping

Compact size
- covers a wide range of flow requirements and cylinder size requirements

Orientable
- tubing can be oriented at tube port

Lock nut
- secures valve to final setting, ensures repeatability

Fine thread
- better control across the range

Legris flow control regulators control the speed of a pneumatic cylinder. The exhaust air flow is controlled by an adjustable restrictor. The inlet flow is unrestricted full bore. Depending upon the model, Legris flow regulators may be fitted to the cylinder or in the compressed air line. However, flow regulation (and therefore a cylinder displacement speed) is more precise and constant when positioned near to the cylinder: in this way, it is possible to avoid the elastic effect of the compressed air contained in the pipework between the control valve and cylinder. Direct mounting of the 90 degree flow regulator fitting onto the cylinder is therefore the optimum solution.

The large range of Legris flow control regulators answers the specific needs of modern pneumatic applications.

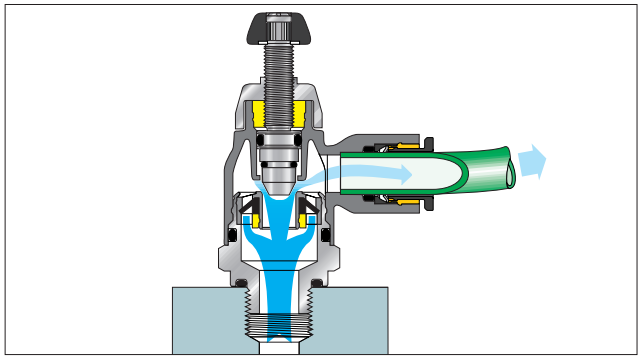
working fluid	compressed air						
working pressure	15 to 145 psi						
working temperature	30° to 160°F						
materials of construction	**body:** depending upon the model - glass reinforced nylon 6.6 - brass **gripping ring:** stainless steel **adjustment screw:** nickel-plated brass **locking nut:** nickel-plated brass **base:** nickel-plated brass						
maximum tightening torque of flow control regulators:	NPT & BSPT taper thread	10/32"	1/8"	1/4"	3/8"	1/2"	
	in. lb	13	70	100	250	308	
	parallel thread	M3 x0.5	M5 x0.8	G1/8"	G1/4"	G3/8"	G1/2"
	in. lb	5	14	70	100	266	300

parallel threads according to norms NFE3-005 – ISO 228-1 – BS 2779 – DIN 259

benefits of Legris flow control regulators

handling and easy installation

- designed for easy adjustment
- LF3000® instant connection ensures quick assembly
- dependent upon the model, fittings can be swivelled in order to facilitate optimum system design and tubing configurations
- immediate visual identification of model



proven technology

- perfectly controlled sealing both externally (tube outlet and base) and internally (adjustment screw)
- optimal flow
- stability, progressiveness and accuracy of flow
- LF3000® instant connection for Legris nylon and polyurethane tube

the large range of Legris flow control regulators answers the specific needs of modern pneumatic applications:

Which material?

- for **standard** applications

models in ***glass reinforced nylon***

- for use in **severe conditions**

models in ***metal***

Which type of fitting?

- for connection to the **cylinder or threaded control valve**

models *with NPT, UNF, BSP parallel and metric, BSP taper* ***threads***

- for connection to a **cylinder or manifold fitted with cartridge connections**

plug-in models

Compact or miniature?

- for **standard** applications requiring **full flow performance**

compact models

- for **very small sized cylinders** requiring precise and accurate adjustment

miniature models

Which type of adjustment?

- for **manual adjustment** with locking nut guaranteeing **stability of adjustment**

models with ***external screw***

- for **adjustment with screwdriver** and prevention of unwanted adjustment

knobless models

Which configuration?

- for **standard** applications

90 degree models

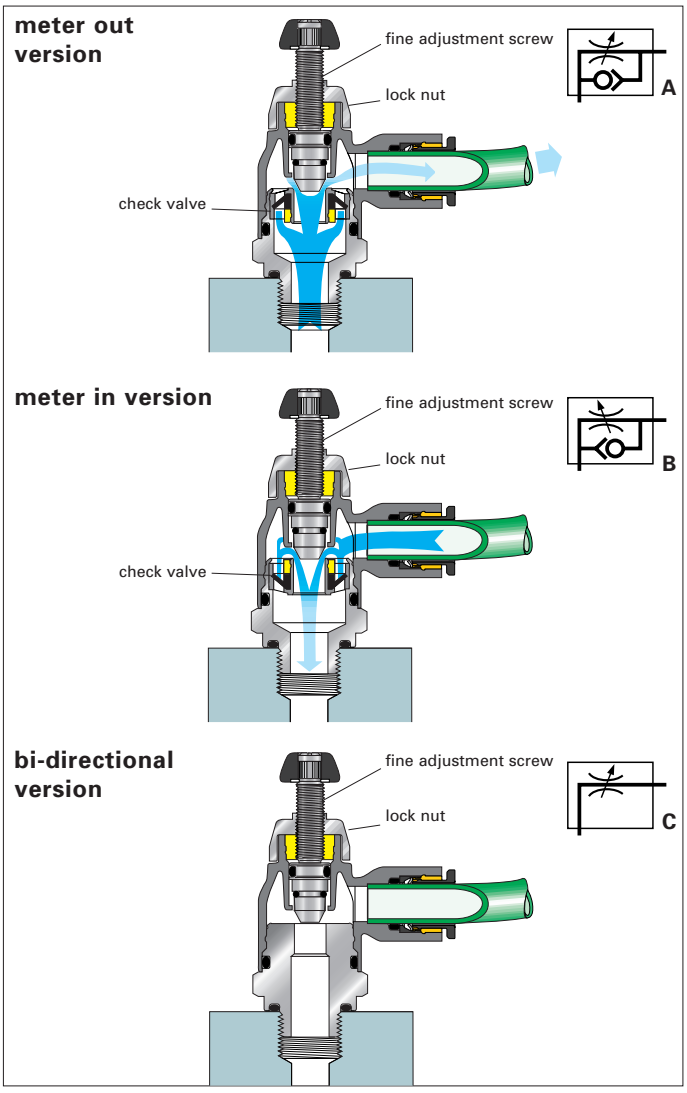
- for **vertical or angled tube exit**

swivel outlet models

- where **cylinder access is difficult** or where another function valve is attached to the cylinder port

in-line models

Our production process includes individual unit quality control and dating for all flow control regulators. This guarantees their quality and traceability.



compact type

Manufactured with robust materials, **compact flow control regulators** ensure **excellent performance** of flow and are perfectly suited for reduced spaces due to their small size.

The sensitivity of the adjustment screw provides very precise air flow control and regulation. **A locking nut** guarantees **stability** of adjustment against vibration tampering of the flow setting.

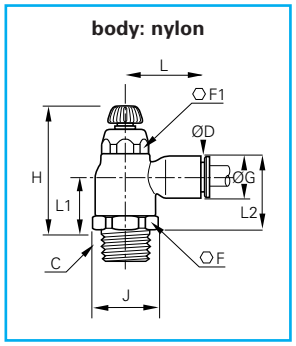
The adjustment screw and locking nut have been designed for easy manipulation, by hand. Adjustment can be made with a screwdriver and locking by use of a wrench.

Quick identification of Legris flow control regulators

To assist differentiation, each version is identified by the corresponding pneumatic symbol and a letter:

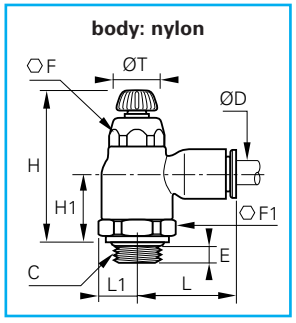
- **one-way** adjustment
  - **meter out** version: letter **A**
  - **meter in** version: letter **B**
- **bi-directional** adjustment: letter **C**

7067 compact bi-directional flow control — tube to NPT or BSPT



ØD in	C NPT	fractional inch	F in	F1 in	G in	H min in	H max in	J in	L in	L1 in	L2 in	oz
5/32	1/8	7067 04 11	.63	.39	.43	1.44	1.67	.69	.85	.59	.79	.79
1/4	1/8	7067 56 11	.63	.39	.43	1.44	1.67	.69	.85	.59	.79	.79
1/4	1/4	7067 56 14	.63	.39	.43	1.44	1.67	.69	.85	.59	.79	.79
mm	BSPT	metric	mm	mm	mm	mm	mm	mm	mm	mm	mm	kg
4	R1/8	7067 04 10	16	10	11	36.5	42.5	17.5	22	14.7	20.5	.021
6	R1/8	7067 06 10	16	10	11	36.5	42.5	17.5	22	14.7	20.5	.021
6	R1/4	7067 06 13	16	10	11	36.5	42.5	17.5	22	14.7	20.5	.021
8	R1/8	7067 08 10	19	14	13.5	40	45	21	27	16.5	23.5	.035
8	R1/4	7067 08 13	19	14	13.5	40	45	21	27	16.5	23.5	.037
8	R3/8	7067 08 17	19	14	13.5	40	45	22	27	16.5	23.5	.037

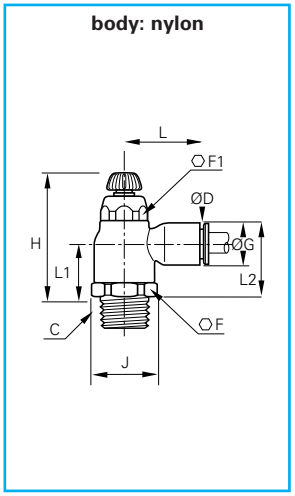
7062 compact bi-directional flow control — metric tube to BSPP



ØD mm	C BSPP		E mm	F mm	F1 mm	H min mm	H max mm	H1 mm	L mm	L1 mm	T mm	kg
4	G1/8	7062 04 10	5	10	16	38	44	16	22	9	10	.021
6	G1/8	7062 06 10	5	10	16	38	44	16	22	9	10	.021
6	G1/4	7062 06 13	5.5	10	16	36.5	42.5	15	22	9	10	.021
8	G1/8	7062 08 10	4.5	14	19	41.5	48	18	28	10.5	12	.035
8	G1/4	7062 08 13	5.5	14	19	41.5	48	18.5	28	10.5	12	.037
8	G3/8	7062 08 17	5.5	14	19	41.5	48	17	28	11	12	.037

7065 compact meter out flow control — tube to NPT or BSPT

A

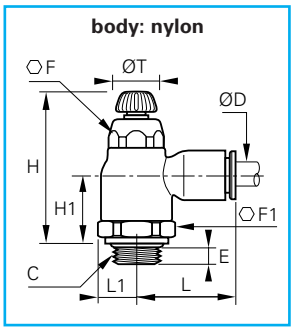


ØD in	C NPT	fractional inch	F in	F1 in	G in	H min in	H max in	J in	L in	L1 in	L2 in	oz
5/32	1/8	7065 04 11	.63	.39	.43	1.44	1.67	.69	.85	.59	.79	.79
5/32	1/4	7065 04 14	.63	.39	.43	1.44	1.67	.69	.85	.59	.79	.79
1/4	1/8	7065 56 11	.63	.39	.43	1.44	1.67	.69	.85	.59	.79	.79
1/4	1/4	7065 56 14	.63	.39	.43	1.44	1.67	.69	.85	.59	.79	.97
3/8	1/4	7065 60 14	.91	.67	.63	1.71	2.03	.98	1.22	.71	1.02	2.15
3/8	3/8	7065 60 18	.91	.67	.63	1.71	2.03	.98	1.22	.71	1.02	2.22

mm	BSPT	metric	mm	mm	mm	mm	mm	mm	mm	mm	mm	kg
6	R1/8	7065 06 10	16	10	11	36.5	42.5	17.5	22	15	20	.021
8	R1/8	7065 08 10	19	14	13.5	40	45	21	27	16.5	23.5	.035
8	R1/4	7065 08 13	19	14	13.5	40	45	21	27	16.5	23.5	.037
10	R1/4	7065 10 13	23	17	16	43.5	51.5	25	31.5	18	26	.057
10	R3/8	7065 10 17	23	17	16	43.5	51.5	25	31.5	18	26	.059
10	R1/2	7065 10 21	23	17	16	43.5	51.5	25	31.5	18	26	.060
12	R1/4	7065 12 13	23	17	19	43.5	51.5	25	35	18	27.5	.063
12	R3/8	7065 12 17	23	17	19	43.5	51.5	25	35	18	27.5	.063
12	R1/2	7065 12 21	23	17	19	43.5	51.5	25	35	18	27.5	.065

7060 compact meter out flow control — metric tube to BSPP

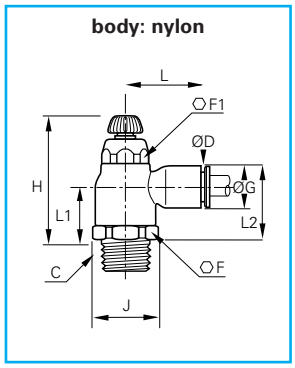
A



ØD mm	C BSPP		E mm	F mm	F1 mm	H min mm	H max mm	H1 mm	L mm	L1 mm	T mm	kg
4	G1/8	7060 04 10	5	10	16	38	44	16	22	9	10	.021
6	G1/8	7060 06 10	5	10	16	38	44	16	22	9	10	.021
6	G1/4	7060 06 13	5.5	10	16	36.5	42.5	15	22	9	10	.021
8	G1/8	7060 08 10	4.5	14	19	41.5	48	18	28	10.5	12	.035
8	G1/4	7060 08 13	5.5	14	19	41.5	48	18.5	28	10.5	12	.037
8	G3/8	7060 08 17	5.5	14	19	41.5	48	17	28	11	12	.037
10	G1/4	7060 10 13	5.5	17	23	45.5	53.5	20	31.5	12.5	17	.057
10	G3/8	7060 10 17	5.5	17	23	45.5	54	20	31.5	12.5	17	.059
12	G3/8	7060 12 17	5.5	17	23	45.5	54	20	35	12.5	17	.063
12	G1/2	7060 12 21	7.5	17	24	45.5	54	20	35	13	17	.065

7066 compact meter in flow control — tube to NPT or BSPT

B

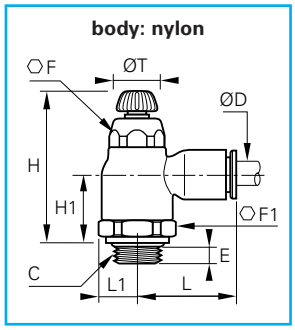


ØD in	C NPT	fractional inch	F in	F1 in	G in	H min in	H max in	J in	L in	L1 in	L2 in	oz
5/32	1/8	7066 04 11	.63	.39	.43	1.44	1.67	.69	.85	.59	.79	.79
5/32	1/4	7066 04 14	.63	.39	.43	1.44	1.67	.69	.85	.59	.79	.79
1/4	1/8	7066 56 11	.63	.39	.43	1.44	1.67	.69	.85	.59	.79	.79
1/4	1/4	7066 56 14	.63	.39	.43	1.44	1.67	.69	.85	.59	.79	.79

mm	BSPT	metric	mm	mm	mm	mm	mm	mm	mm	mm	mm	kg
10	R1/4	7066 10 13	23	17	16	43.5	51.5	25	31.5	18	26	.057
10	R3/8	7066 10 17	23	17	16	43.5	51.5	25	31.5	18	26	.059
10	R1/2	7066 10 21	23	17	16	43.5	51.5	25	31.5	18	26	.060
12	R1/4	7066 12 13	23	17	19	43.5	51.5	25	35	18	27.5	.063
12	R3/8	7066 12 17	23	17	19	43.5	51.5	25	35	18	27.5	.063
12	R1/2	7066 12 21	23	17	19	43.5	51.5	25	35	18	27.5	.065

7061 compact meter in flow control — metric tube to BSPP

B



ØD mm	C BSPP		E mm	F mm	F1 mm	H min mm	H max mm	H1 mm	L mm	L1 mm	T mm	kg
4	G1/8	7061 04 10	5	10	16	38	44	16	22	9	10	.021
6	G1/8	7061 06 10	5	10	16	38	44	16	22	9	10	.021
6	G1/4	7061 06 13	5.5	10	16	36.5	42.5	15	22	9	10	.021
8	G1/8	7061 08 10	4.5	14	19	41.5	48	18	28	10.5	12	.035
8	G1/4	7061 08 13	5.5	14	19	41.5	48	18.5	28	10.5	12	.037
8	G3/8	7061 08 17	5.5	14	19	41.5	48	17	28	11	12	.037
10	G1/4	7061 10 13	5.5	17	23	45.5	53.5	20	31.5	12.5	17	.057
10	G3/8	7061 10 17	5.5	17	23	45.5	54	20	31.5	12.5	17	.059
12	G1/2	7061 12 21	7.5	17	24	45.5	54	20	35	13	17	.065

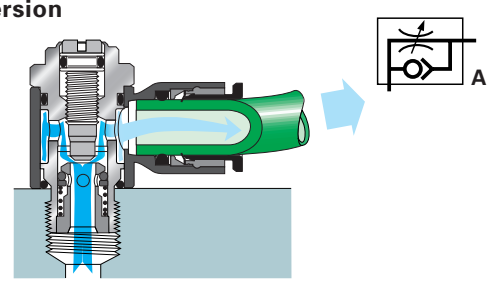
Legris flow control regulators offer:

- **Application solution across the range**
  Most comprehensive product range in industry
- **Expertise in flow controls**
  Award winning design
- **Mounting directly on the component**

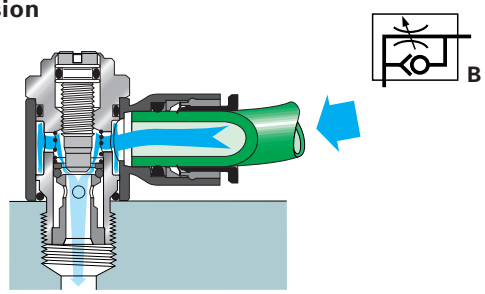
flow control regulators – compact version

knobless

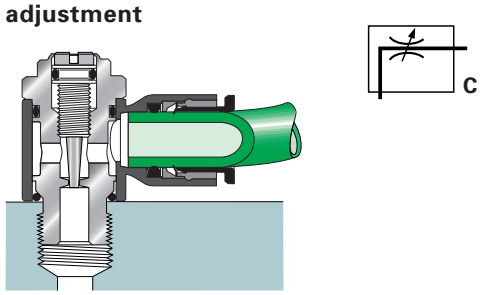
meter out version



meter in version



bi-directional adjustment



The recessed adjustment screw reduces external dimensions thus allowing use in reduced spaces and on small cylinders.

In addition, the recessed screw provides security and helps to prevent unwanted adjustment.

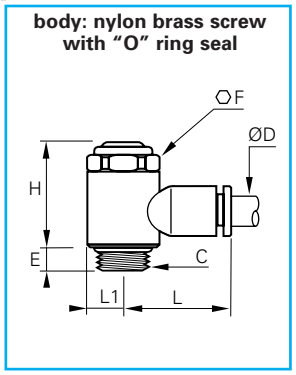
	NPT, UNF & BSPT tapered thread	10/32"	1/8"	1/4"	3/8"	1/2"
maximum tightening torque of models with recessed screw	in. lb	8	35	40	50	58
	parallel thread	M5 x0.8	G1/8"	G1/4"	G3/8"	G1/2"
	in. lb	8	35	40	50	58

Quick identification of Legris flow control regulators

To assist differentiation, each version is identified by the corresponding pneumatic symbol and a letter:

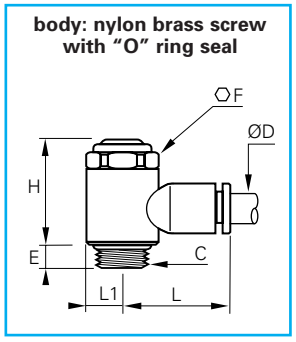
- **one-way** adjustment
  meter out version: letter **A**
  meter in version: letter **B**
- **bi-directional** adjustment: letter **C**

7010/7011 knobless compact flow control — metric tube to BSPP or M5



ØD mm	C M5/ BSPP	meter out	meter in	E mm	F mm	H mm	L mm	L1 mm	kg
4	M5x0.8	7010 04 19	7011 04 19	4	8	17.5	17	5	.007
4	G1/8	7010 04 10	7011 04 10	5	13	25	19	7	.017
6	M5x0.8	7010 06 19	7011 06 19	4	8	17.5	19	5	.017
6	G1/8	7010 06 10	7011 06 10	5	13	25	21	7	.019
6	G1/4	7010 06 13	7011 06 13	8	17	26.5	22	9.5	.034
8	G1/8	7010 08 10	7011 08 10	5	13	25	26	7	.020
8	G1/4	7010 08 13	7011 08 13	8	17	26.5	27	9.5	.035
8	G3/8	7010 08 17	7011 08 17	7.5	20	37.5	29	11.2	.042
10	G1/4	7010 10 13	7011 10 13	8	17	26.5	29	9.5	.038
10	G3/8	7010 10 17	7011 10 17	7.5	20	37.5	31	11.2	.043
10	G1/2	7010 10 21		8	23	43	37	13.5	.117
12	G3/8	7010 12 17		7.5	20	37.5	34.5	11.2	.045
12	G1/2	7010 12 21		8	23	43	37	13.5	.111

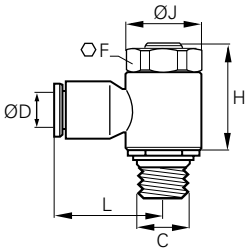
7012 knobless bi-directional flow control — metric tube to BSPP or M5



ØD mm	C BSPP/M5	bi-directional	E mm	F mm	H mm	L mm	L1 mm	kg
4	M5x0.8	7012 04 19	4	8	17.5	17	5	.007
4	G1/8	7012 04 10	5	13	25	19	7	.017
6	M5x0.8	7012 06 19	4	8	17.5	19	5	.017
6	G1/8	7012 06 10	5	13	25	21	7	.019
6	G1/4	7012 06 13	8	17	26.5	22	9.5	.034
8	G1/8	7012 08 10	5	13	25	26	7	.020
8	G1/4	7012 08 13	8	17	26.5	27	9.5	.035
8	G3/8	7012 08 17	7.5	20	37.5	29	11.2	.042

7015/7016 knobless compact flow control — fractional inch tube to NPT

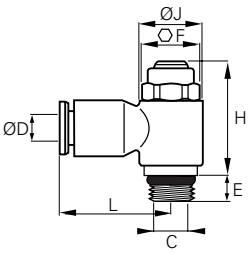
body: nylon



ØD in	C NPT	meter out	meter in	F mm	H in	J in	L in	oz
1/8	1/8	7015 53 11		13	.79	.55	.75	.60
5/32	1/8	7015 04 11	7016 04 11	13	.79	.55	.75	.60
1/4	1/8	7015 56 11	7016 56 11	13	.79	.55	.85	.67
1/4	1/4	7015 56 14	7016 56 14	17	1.04	.75	.89	1.20
5/16	1/8	7015 08 11		13	.79	.55	1.02	.71
5/16	1/4	7015 08 14		17	1.04	.75	1.06	1.23
3/8	1/4	7015 60 14		17	1.04	.75	1.14	1.34
3/8	3/8	7015 60 18		20	1.14	.89	1.36	1.52

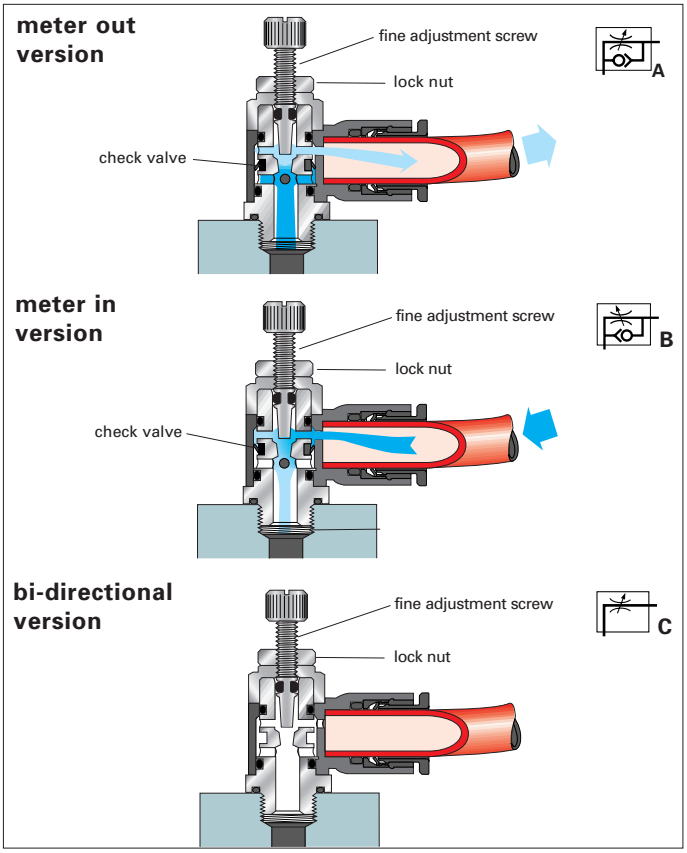
7010/7011 knobless compact flow control — fractional inch tube to UNF

body: nylon brass screw with "O" ring seal



ØD in	C UNF	meter out	meter in	E in	F mm	H in	J in	L in	oz
1/8	10-32	7010 53 20		.16	8	.69	.37	.65	.25
5/32	10-32	7010 04 20	7011 04 20	.16	8	.69	.37	.65	.25
1/4	10-32	7010 56 20	7011 56 20	.16	8	.69	.37	.77	.60

flow control regulators – miniature version



miniature type

One of the smallest in the world, the miniature flow control regulator is especially adapted for all **very small sized pneumatic applications** (micro-pneumatic in particular). They are specifically designed for use with small bore cylinders (pancake/flat cylinders).

Control is achieved gradually due to the extreme sensitivity of the adjustment screw, which allows exceptionally fine setting levels.

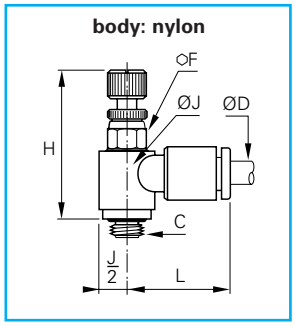
Miniature flow control regulators are available in **meter out**, **meter in** and **bi-directional** versions.

Quick identification of Legris flow control regulators

To assist differentiation, each version is identified by the corresponding pneumatic symbol and a letter:

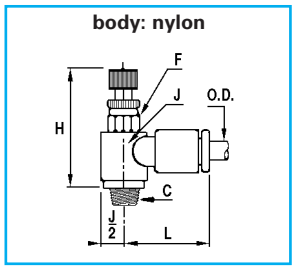
- **one-way** adjustment
  - **meter out** version: letter **A**
  - **meter in** version: letter **B**
- **bi-directional** adjustment: letter **C**

7660/7669/7662 miniature flow control — metric tube to BSPP or metric



ØD mm	C BSPP/ metric	meter out	meter in	bi-directional	F mm	H min mm	H max mm	J mm	L mm	kg
3	M3x0.5	7660 03 09	7669 03 09		6	23.5	26	9	17	.008
3	M5x0.8	7660 03 19	7669 03 19		6	23.5	26	9	17	.008
4	M3x0.5	7660 04 09			6	23.5	26	9	16.5	.007
4	M5x0.8	7660 04 19	7669 04 19	7662 04 19	6	23.5	26	9	17	.008
4	G1/8	7660 04 10	7669 04 10	7662 04 10	7	27	29.5	11.5	18	.012
6	M5x0.8	7660 06 19	7669 06 19	7662 06 19	6	23.5	26	9	18	.010
6	G1/8	7660 06 10	7669 06 10	7662 06 10	7	27	29.5	11.5	18.5	.012
6	G1/4	7660 06 13	7669 06 13	7662 06 13	8	30	32.5	12	19	.019
8	G1/8	7660 08 10	7669 08 10		13	26.5	31	14	26	.020
8	G1/4	7660 08 13	7669 08 13		16	29	34	19	27.5	.022
8	G3/8	7660 08 17	7669 08 17		20	36	42	23	29	.025

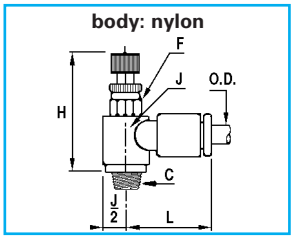
7665/7668 miniature flow control — metric tube to BSPT



ØD mm	C BSPT	meter out	meter in	F mm	H min mm	H max mm	J mm	L mm	oz
4	R1/8	7665 04 10	7668 04 10	7	25	27.5	11.5	18	.46
6	R1/8	7665 06 10	7668 06 10	7	25	27.5	11.5	18.5	.64
6	R1/4	7665 06 13	7668 06 13	8	27.5	30	13.5	19	.79
6	R3/8	7665 06 17*		17	31.5	34		19	.85
8	R1/8	7665 08 10	7668 08 10	13	28.5	33		26	.90
8	R1/4	7665 08 13	7668 08 13	16	31	35		27.5	.93
8	R3/8	7665 08 17	7668 08 17	20	36	42		29	.95

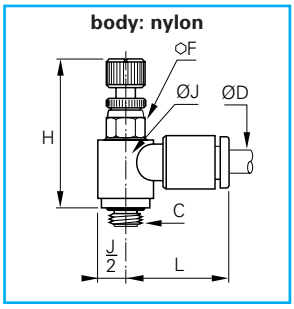
* on the 7665 06 17 the hex is right above the threads.

7665/7668 miniature flow control — fractional inch tube to NPT



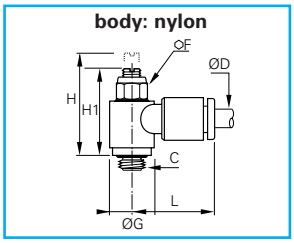
ØD in	C NPT	meter out	meter in	F mm	H min in	H1 in	J in	L in	oz
1/8	1/8	7665 53 11		7	1.26	1.41	.45	.69	.42
5/32	1/8	7665 04 11	7668 04 11	7	1.06	1.16	.45	.71	.46
1/4	1/8	7665 56 11	7668 56 11	7	1.06	1.16	.45	.75	.64
1/4	1/4	7665 56 14	7668 56 14	8	1.18	1.28	.47	.77	.79

7660/7669 miniature flow control — fractional inch tube to UNF



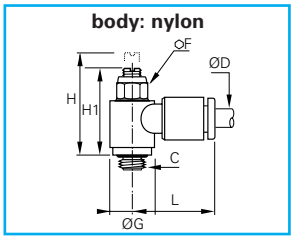
ØD in	C UNF	meter out	meter in	F mm	H min in	H1 in	J in	L in	oz
1/8	10-32	7660 53 20	7669 53 20	6	.91	1.14	.35	.67	.23
5/32	10-32	7660 04 20	7669 04 20	6	.93	1.02	.35	.67	.23
1/4	10-32	7660 56 20	7669 56 20	6	.93	1.02	.35	.73	.25

7625 knobless mini meter out flow control — fractional inch tube to NPT



ØD in	C NPT	meter out	F mm	G in	H in	H1 in	L in	oz
1/8	1/8	7625 53 11	6	.45	.85	.71	.71	.25
5/32	1/8	7625 04 11	6	.45	.85	.71	.71	.37
1/4	1/8	7625 56 11	6	.45	.85	.71	.73	1.98
1/4	1/4	7625 56 14	6	.53	.97	.83	.73	3.23

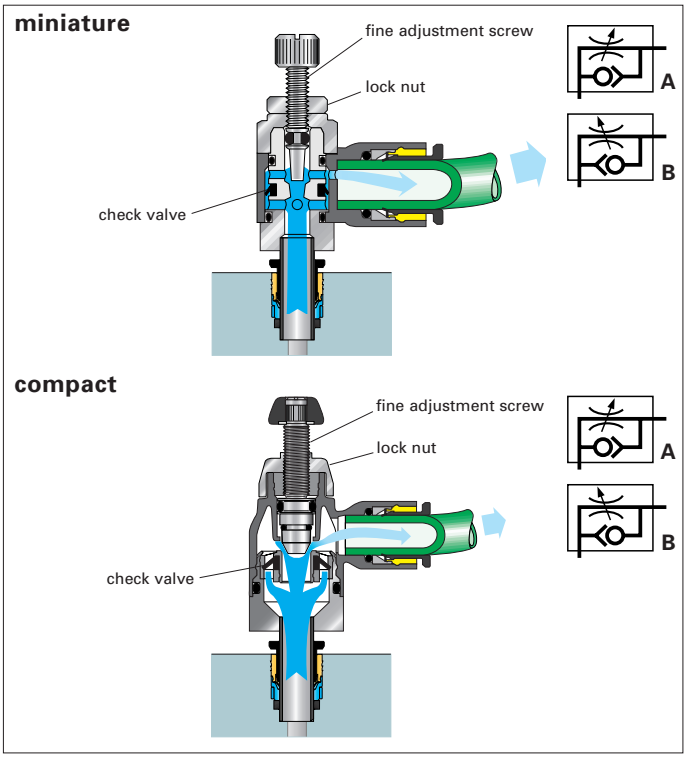
7620 knobless mini meter out flow control — fractional inch tube to UNF



ØD in	C UNF	meter out	F mm	G in	H in	H1 in	L in	oz
1/8	10-32	7620 53 20	6	.35	.79	.65	.65	.18
5/32	10-32	7620 04 20	6	.35	.79	.65	.65	.18
1/4	10-32	7620 56 20	6	.35	.79	.65	.65	.20

Legris push-to-connect flow controls are designed for use with various types of tubing found in this catalog in the Tubing and Hoses section:

- **semi-rigid nylon tube**
  1/8" to 1/2" O.D. - page M7
  3mm to 16mm O.D. - page M9
- **flexible polyurethane tube**
  1/8" to 1/2" O.D. - page M11
  3mm to 14mm O.D. - page M13
- **low density polyethylene**
  1/8" to 1/2" O.D. - page M15
  4mm to 12mm O.D. - page M15



plug-in type

Plug-in flow control regulators can be directly mounted into existing fittings and allow very compact installations. They are particularly suited for mounting in manifolds using Legris Carstick cartridges.

Their design and function give equal performance to that of flow control regulators with threaded connection.

Depending upon the application, Legris offers 2 types of fitting:

miniature plug-in flow control regulators, for micro-pneumatic equipment in particular.

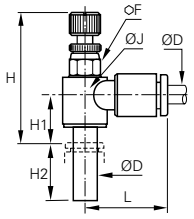
– meter out and meter in versions

compact plug-in flow control regulators

– meter out and meter in versions

7630/7631 plug-in miniature flow control — fractional inch tube

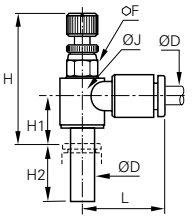
body: nylon
tailpiece: nickel-plated brass



ØD in	meter out	meter in	F mm	H min in	H max in	H1 in	H2 in	L in	oz
1/8	7630 53 00	7631 53 00	6	.94	1.04	.12	.59	.67	.25
5/32	7630 04 00	7631 04 00	6	1.00	1.10	.37	.61	.67	.25
1/4	7630 56 00	7631 56 00	7	1.08	1.18	.12	.73	.73	.39

7630/7631 plug-in miniature flow control — metric tube

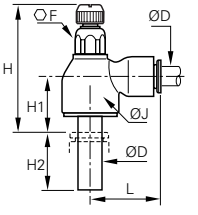
body: nylon
tailpiece: nickel-plated brass



ØD mm	meter out	meter in	F mm	H min mm	H max mm	H1 mm	H2 mm	J mm	L mm	kg
4	7630 04 00	7631 04 00	6	25.5	28	9.5	15.5	9	17	.007
6	7630 06 00	7631 06 00	7	27.5	29	10.5	17	11.5	18.5	.011

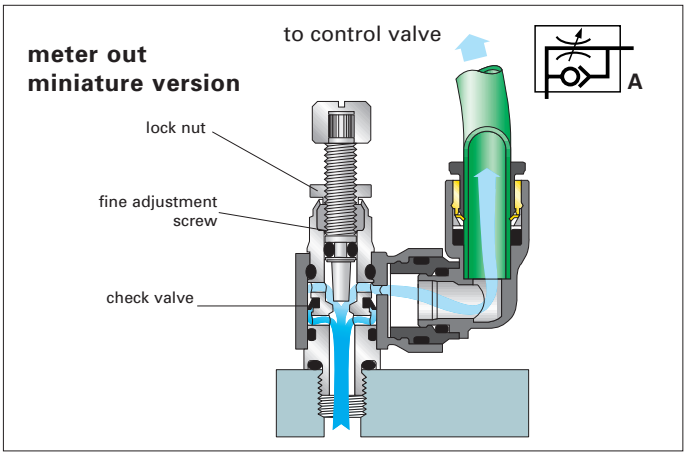
7030/7031 plug-in compact flow control — metric tube

body: nylon
tailpiece: nickel-plated brass



ØD mm	meter out	meter in	F mm	H min mm	H max mm	H1 mm	H2 mm	J mm	L mm	kg
6	7030 06 00	7031 06 00	10	35	41	14	17	16	22	.019
8	7030 08 00	7031 08 00	14	39.5	46.5	16	21.5	19	28	.035
10	7030 10 00	7031 10 00	17	43.5	51.5	17.5	24.5	23	31.5	.055
12	7030 12 00	7031 12 00	17	43	51	17	27	23	31.5	.060

adjustment screw



swivel outlet type

Flow control regulators with "swivel outlet" are especially designed to allow a vertical or angled tube exit where access is restricted.

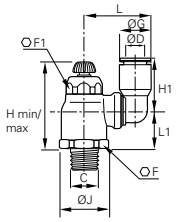
The swivel outlet comes with instant push-in connection to ease installation.

flexibility of rotation movements

7045 compact swivel outlet flow control — tube to NPT or BSPT

A

body: nylon

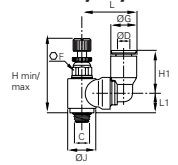


ØD in	C NPT	fractional inch meter out	F mm	F1 mm	G in	H min in	H max in	H1 in	J in	L in	L1 in	oz
1/4	1/8	7045 56 11	19	10	.41	1.87	2.09	.63	.83	.93	.65	.91
1/4	1/4	7045 56 14	19	14	.43	1.79	1.99	.73	.83	1.00	.89	.91
3/8	1/4	7045 60 14	23	17	.63	1.93	2.20	1.04	.98	1.34	.97	2.19
3/8	3/8	7045 60 18	23	17	.63	1.93	2.20	1.04	.98	1.34	.97	2.29
mm	BSPT	metric	mm	mm	mm	mm	mm	mm	mm	mm	mm	kg
6	R1/4	7045 06 13	16	10	10.5	36.5	42.5	16	17.5	23.5	16.5	.026
8	R1/8	7045 08 10	19	14	13.5	40	46	23	21	28	17.5	.034
8	R1/4	7045 08 13	19	14	13.5	40	46	23	21	28	17.5	.043
8	R3/8	7045 08 17	19	14	13.5	40	46	23	21	28	17.5	.044
10	R1/4	7045 10 13	23	17	16	43.5	51.5	26.5	25	34	19.5	.062
10	R3/8	7045 10 17	23	17	16	43.5	51.5	26.5	25	34	19.5	.065
12	R3/8	7045 12 17	23	17	19	43.5	51.5	31	25	37	19.5	.067
12	R1/2	7045 12 21	23	17	19	43.5	51.5	31	25	37	19.5	.070

7640/7645 miniature swivel outlet flow control — tube to NPT, UNF, or BSPT

A

body: nylon

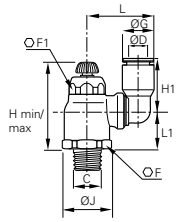


ØD in	C UNF/ NPT	fractional inch meter out	F mm	G in	H min in	H max in	H1 in	J in	L in	L1 in	oz
5/32	10-32	7640 04 20	6	.33	.96	1.08	.55	.37	.73	.26	.39
5/32	1/8	7645 04 11	8	.33	1.08	1.20	.55	.45	.73	.33	.39
mm	BSPT	metric	mm	mm	mm	mm	mm	mm	mm	mm	kg
4	R1/8	7645 04 10	7	8.5	25	28.5	14.5	11.5	20	6	.012
6	R1/8	7645 06 10	7	10.5	25	28.5	16	11.5	22	6	.014

7040 compact swivel outlet flow control — metric tube to BSPP

A B

body: nylon
brass screw with "O" ring seal

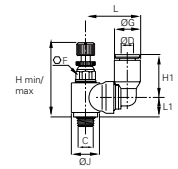


ØD mm	C BSPP	meter out	meter in	F mm	F1 mm	G mm	H min mm	H max mm	H1 mm	J mm	L mm	L1 mm	kg
6	G1/8	7040 06 10		16	10	10.5	38	44	16	17.5	23.5	18	.026
6	G1/4	7040 06 13	7041 06 13	16	10	10.5	36.5	42.5	16	17.5	23.5	16.5	.029
8	G1/8	7040 08 10	7041 08 10	19	14	13.5	41.5	48	23	21	28	19	.035
8	G1/4	7040 08 13	7041 08 13	19	14	13.5	41.5	48	23	21	28	19.5	.039
8	G3/8	7040 08 17		19	14	13.5	41.5	48	23	22	28	17.5	.043
10	G1/4	7040 10 13		23	17	16	45.5	53.5	26.5	25	35	21	.051
10	G3/8	7040 10 17		23	17	16	45.5	54	26.5	25	35	21.5	.063
12	G3/8	7040 12 17		23	17	19	45.5	54	31	25	38	21.5	.066
12	G1/2	7040 12 21		24	17	19	45.5	54	31	26	38	21	.071

7640/7649 miniature swivel outlet — metric tube to M5 or BSPP

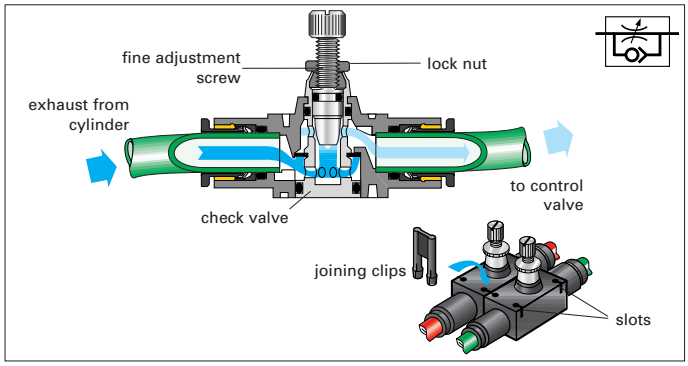
A B

body: nylon
brass screw with "O" ring seal



ØD mm	C M5/ BSPP	meter out	meter in	F mm	G mm	H min mm	H max mm	H1 mm	J mm	L mm	L1 mm	kg
4	M5x0.8	7640 04 19	7649 04 19	6	8.5	24.5	27.5	14.5	9.5	19.5	6.5	.011
4	G1/8	7640 04 10	7649 04 10	7	8.5	27.5	31	14.5	11.5	20	8.5	.015
6	M5x0.8	7640 06 19	7649 06 19	6	10.5	24.5	27.5	16	9.5	21.5	6.5	.013
6	G1/8	7640 06 10	7649 06 10	7	10.5	27.5	31	16	11.5	22	8.5	.015

flow control regulators – in-line



- **designed to be versatile**

Legris In-Line Flow Controls are unidirectional flow control valves. Intake air flows freely through the flow control; exhaust air is metered out through a specially designed adjustment screw. An arrow on the body of the valve indicates the direction of controlled flow.

These models may be installed as meter in or meter out devices.

They can be easily added to existing circuitry. Simply splice it into the cylinder port line.

They may be used individually or, they may be stacked together using two joining clips, supplied with each valve. Panel mounting is accomplished by using the through holes in the molded body.

- **adjustment characteristics**

Control is achieved gradually due to the extreme sensitivity of the adjustment screw, which allows exceptionally fine setting levels. With the use of a locking nut, the in-line flow control may be secured in its final setting. Settings are maintained even under adverse conditions such as vibration. A captive adjustment screw prevents loss or dangerous blow out.

- **full flow in both directions**

Intake capacity is always slightly greater than the full open exhaust capacity, enabling maximum variation of speeds between outward and return strokes.

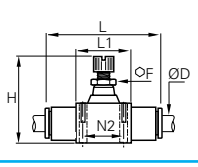
7770/7772 in-line flow control — fractional inch

ØD in	one-way	bi-directional	DN min	F mm	H min in	H max in	K in	L in	L1 in	N1 in	N2 in	T in	oz
5/32	7770 04 00	7772 04 00	.12	5	1.15	1.31	.47	1.52	.59	.31	.43	.09	.42
1/4	7770 56 00	7772 56 00	.16	8	1.54	1.74	.66	2.00	.90	.43	.66	.12	1.06
5/16	7770 08 00	7772 08 00	.24	11	1.73	1.97	.73	2.38	1.02	.49	.79	.13	1.66
3/8	7770 60 00		.31	14	2.03	2.38	.94	2.87	1.29	.62	1.01	.16	4.06
1/2	7770 62 00		.39	14	2.24	2.63	1.09	3.35	1.37	.78	1.07	.16	5.56

metric tube

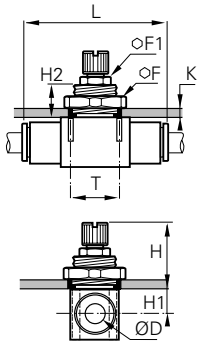
ØD mm	one-way	bi-directional	DN min	F mm	H min mm	H max mm	L mm	L1 mm	K mm	N1 mm	N2 mm	T mm	kg
4	7770 04 00	7772 04 00	3	5	29.5	33.5	39	15	12	8	11	2.2	.012
6	7770 06 00	7772 06 00	4	8	39.5	44.5	54	23	17	11	17	3.2	.030
8	7770 08 00	7772 08 00	6	11	44	50	60.5	26	18.5	12.5	20	3.2	.047
10	7770 10 00		8	14	52	61	76	33	24	16	26	4.2	.103
12	7770 12 00		10	14	57.5	67.5	86	35	28	20	27.5	4.2	.138

body: nylon



7776 in-line panel mountable flow control — metric tube

body: nylon



ØD mm	one-way	F mm	F1 mm	H min	H max	L1 mm	kg
4	7776 04 00*	14	-	21.5	25.5	39	.012
6	7776 06 00*	19	-	27.5	32.5	54	.030
8	7776 08 00	24	11	28.5	34.5	60.5	.047
10	7776 10 00	30	14	29.5	38.5	76	.103
12	7776 12 00	32	14	32	42	86	.138

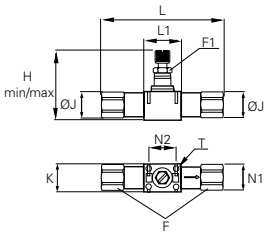
fixing dimensions

ØD mm		K max mm	H1mm	H2mm	Tmm
4	7776 04 00	6	6.5	11	2.2
6	7776 06 00	7	7.5	13.5	3.2
8	7776 08 00	7	9	13.5	3.2
10	7776 10 00	7	11.5	13.5	4.2
12	7776 12 00	8	12.5	15.5	4.2

*ultrafine adjustment

7775 threaded in-line flow control — NPT

body: nylon with nickel-plated brass thread

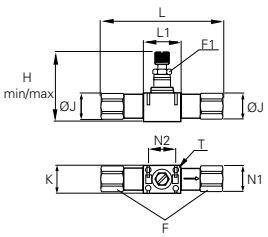


C NPT		F mm	F1 mm	H min in	H max in	J in	L in	oz
1/8	7775 11 11	13	8	1.56	1.75	.55	2.70	.55
1/4	7775 14 14	16	11	1.73	1.97	.69	3.27	1.20
3/8	7775 18 18	22	14	2.05	2.40	.94	3.82	4.61
1/2	7775 22 22	24	14	2.26	2.66	1.02	4.76	5.58

C NPT		L1 in	K in	N1 in	N2 in	ØT in
1/8	7775 11 11	.91	.67	.43	.67	.12
1/4	7775 14 14	1.02	.73	.49	.79	.12
3/8	7775 18 18	1.30	.94	.63	1.02	.16
1/2	7775 22 22	1.38	1.10	.79	1.08	.16

7771 threaded in-line flow control — BSPP

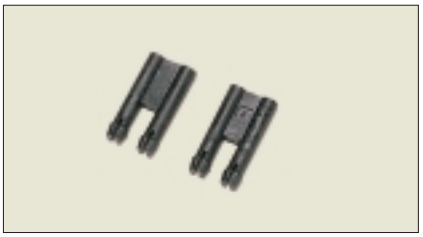
body: nylon with nickel-plated brass thread



C BSPP		F mm	F1 mm	H min mm	H max mm	J mm	L mm	kg
G1/8	7771 10 10	13	8	39.5	44.5	14	68.5	.043
G1/4	7771 13 13	16	11	44	50	17.5	83	.103
G3/8	7771 17 17	19	14	52	61	21	97	.160
G1/2	7771 21 21	24	14	57.5	67.5	26	121	.247

C BSPP		L1 mm	K mm	N1 mm	N2 mm	ØT mm
G1/8	7771 10 10	23	17	11	17	3.2
G1/4	7771 13 13	26	18.5	12.5	20	3.2
G3/8	7771 17 17	33	24	16	26	4.2
G1/2	7771 21 21	35	28	20	27.5	4.2

7000 joining clips for in-line flow controls and mini ball valves*



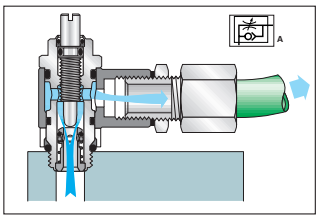
nylon

ØD in	ØD mm		oz
5/32	4	7000 00 05	.14
1/4	6	7000 00 05	.14
5/16	8	7000 00 05	.14
3/8	10	7000 00 06	.32
1/2	12	7000 00 06	.32

* Two clips are supplied with flow control.
Order additional clips using the part numbers above.

flow control regulators – stainless steel

meter out version



stainless steel flow control regulator

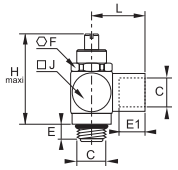
To enable easy cleaning, this flow control regulator is designed without retention zones and provides excellent resistance to detergents.

Due to these characteristics and its materials of construction – stainless steel body and FKM seals - the Legris stainless steel flow control regulator is ideally suited for food industry applications.

7810/7815/7812/7817 threaded port knobless stainless steel flow control — NPT/UNF

A

stainless steel body

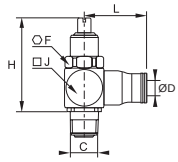


C UNF/NPT	meter out (A)	bi-directional (C)	E in	E1 in	F mm	H in	J in	L in	oz
10-32	7810 20 20	7812 20 20	.16	.16	8	.94	.35	.43	.95
1/8	7815 11 11	7817 11 11	.20	.31	13	1.50	.59	.67	1.23
1/4	7815 14 14	7817 14 14	.31	.47	17	1.38	.71	.94	1.69
3/8	7815 18 18	7817 18 18	.28	.55	20	1.89	.87	1.06	2.08
1/2	7815 22 22	7817 22 22	.31	.59	23	2.52	1.10	1.22	2.68

7835 push-to-connect knobless stainless steel flow control — fractional inch tube to NPT

A

stainless steel body

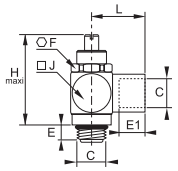


ØD in	C NPT	meter out (A)	F mm	H in	J in	L in	oz
5/32	1/8	7835 04 11	13	1.30	.59	.79	1.23
5/32	1/4	7835 04 14	17	1.38	.71	.87	1.54
1/4	1/8	7835 56 11	13	1.30	.59	.87	1.69
1/4	1/4	7835 56 14	17	1.38	.71	.95	1.82
3/8	1/4	7835 60 14	17	1.38	.71	1.18	2.08
3/8	3/8	7835 60 18	20	1.89	.87	1.26	2.68

7810/7812 threaded port knobless stainless steel flow control - BSPP/metric

A

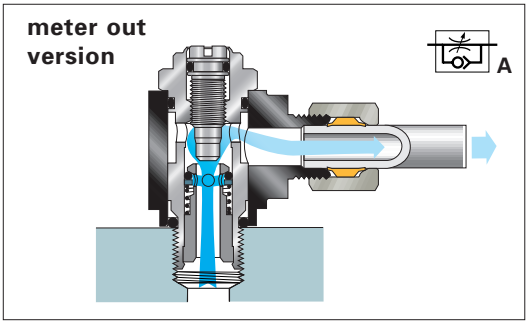
stainless steel body



C metric/ BSPP	meter out (A)	bi-directional (C)	E mm	E1 mm	F mm	H mm	J mm	L mm	kg
M5x0.8	7810 19 19	7812 19 19	4	4	8	24	10	11	0.027
G1/8	7810 10 10	7812 10 10	5	8	13	38	15	17	0.035
G1/4	7810 13 13	7812 13 13	8	12	17	40	18	24	0.048
G3/8	7810 17 17	7812 17 17	7	12	20	53	22	24	0.059
G1/2	7810 21 21	7812 21 21	8	15	23	69	28	31	0.076

knobless flow control regulators — metal

meter out version



A

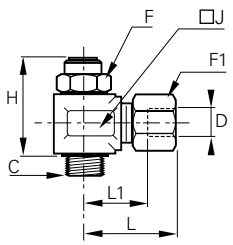
The recessed adjustment screw reduces external dimensions allowing use in reduced spaces and on small cylinders.

In addition, the recessed screw provides security and helps to prevent unwanted adjustment.

7160 compression knobless metal flow control — metric tube to BSPP

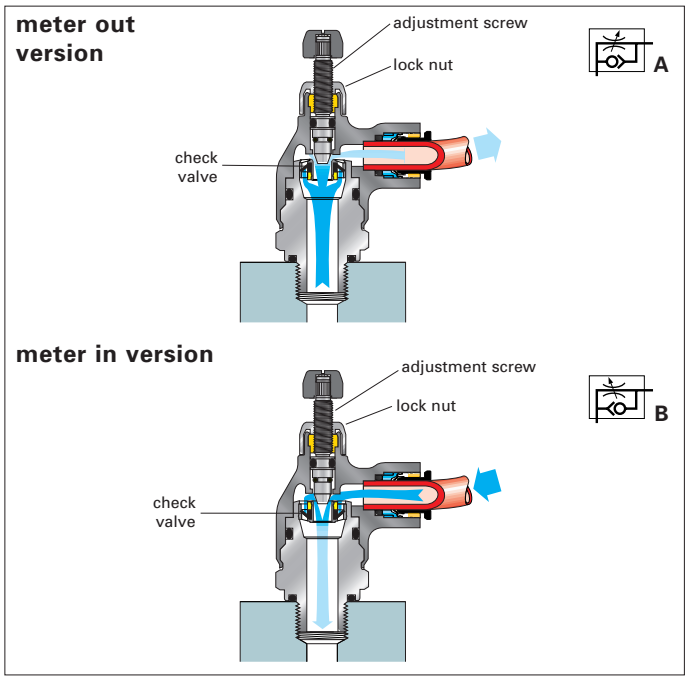
A

body: treated brass



ØD mm	C BSPP		F mm	F1 mm	H mm	J mm	L mm	L1 mm	kg
4	G1/8	7160 04 10	13	10	26	17	25.5	14.5	.050
6	G1/8	7160 06 10	13	13	26	17	25.5	14.5	.054
6	G1/4	7160 06 13	17	13	31.5	22	28.5	17.5	.108
8	G1/8	7160 08 10	13	14	26	17	29.5	15.5	.054
8	G1/4	7160 08 13	17	14	31.5	22	31	17	.109
10	G1/4	7160 10 13	17	19	31.5	22	35	19	.119
10	G3/8	7160 10 17	20	19	44.5	22	37.5	19	.186
10	G1/2	7160 10 21	23	19	50	27	37.5	19	.201
12	G3/8	7160 12 17	20	22	44.5	22	38	21.5	.195
12	G1/2	7160 12 21	23	22	50	34	38	21.5	.212

adjustment screw



Legris metal flow control regulators are suited for use in severe conditions. They are designed to withstand high temperatures, sparks, abrasion etc.

The sensitivity of the adjustment screw provides **very precise** air flow control and regulation. A locking nut guarantees **adjustment stability** against vibration and prevents unwanted adjustment.

The screw and locking nut have been designed for easy manipulation, by hand. Adjustment can be made with a screwdriver and locking by use of a wrench.

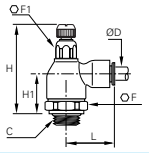
Depending upon the application, Legris offers 3 types of connection:

- with push-to-connect port for Legris nylon and polyurethane tubing
- with threaded fitting
- with universal brass compression fitting – series 7160

7105 push-to-connect meter out metal flow control — fractional inch tube to NPT

A

body: treated brass

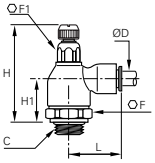


ØD in	C NPT	meter out	F mm	F1 mm	G in	H min in	H max in	J in	L in	L1 in	L2 in	oz
5/32	1/8	7105 04 11	19	10	.59	1.79	2.01	.83	.85	.87	1.14	2.72
1/4	1/8	7105 56 11	19	10	.59	1.79	2.01	.83	.97	.87	1.14	2.82
1/4	1/4	7105 56 14	19	10	.59	1.79	2.01	.83	.97	.87	1.14	2.92
3/8	1/4	7105 60 14	19	14	.77	1.91	2.11	.83	1.14	.91	1.28	3.80
3/8	3/8	7105 60 18	25	17	1.06	2.15	2.40	1.06	1.40	.91	1.44	3.90

7100/7101 push-to-connect metal flow control — metric tube to BSPP

A B

body: treated brass with "O" ring seal

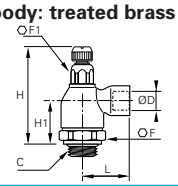


ØD mm	C BSPP	meter out	meter in	F mm	F1 mm	H min mm	H max mm	H1 mm	L mm	kg
4	G1/8	7100 04 10	7101 04 10	10	19	47	53	23	21	.076
6	G1/8	7100 06 10	7101 06 10	10	19	47	53	23	24.5	.077
6	G1/4	7100 06 13	7101 06 13	10	19	47.5	53	23.5	24.5	.080
8	G1/8	7100 08 10	7101 08 10	14	19	50	55	24.5	29	.090
8	G1/4	7100 08 13	7101 08 13	14	19	50	56	25	29	.101
8	G3/8	7100 08 17	7101 08 17	17	25	56	62	27	30.5	.121
10	G1/4	7100 10 13		14	19	50	56	25	35	.140
10	G3/8	7100 10 17		17	25	56	62	27	35	.161
12	G3/8	7100 12 17		17	25	56	62	27	38	.181
12	G1/2	7100 12 21		17	25	55	62	27	38	.203
14	G1/2	7100 14 21		17	25	55	62	27	41	.201

7115 threaded port meter out metal flow control — NPT

A

body: treated brass

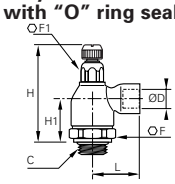


C NPT	meter out	F mm	F1 mm	G in	H min in	H max in	J in	L in	L1 in	L2 in	oz
1/8	7115 11 11	19	10	.59	1.79	2.01	.83	.89	.87	1.14	2.75
1/4	7115 14 14	19	14	.77	1.91	2.11	.83	1.28	.87	1.28	3.90
3/8	7115 18 18	25	17	1.06	2.15	2.40	1.06	1.36	.91	1.44	7.25
1/2	7115 22 22	25	17	1.06	2.15	2.40	1.06	1.50	.91	1.50	7.64

7110/7111 threaded port metal flow control — BSPP

A B

body: treated brass with "O" ring seal

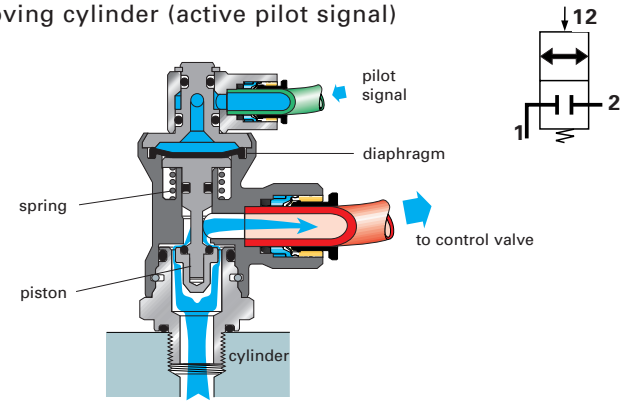


C BSPP	meter out	meter in	F mm	F1 mm	H min mm	H max mm	H1 mm	L mm	kg
G1/8	7110 10 10	7111 10 10	10	19	47	52.5	23	22.5	.076
G1/4	7110 13 13	7111 13 13	14	19	50.5	55.5	25	32	.107
G3/8	7110 17 17		17	25	56	62	27	34.5	.212
G1/2	7110 21 21		17	25	55	62	27	37.5	.194

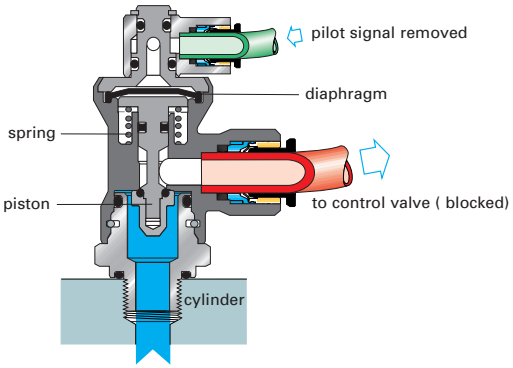
lock-out valves

operating principle

moving cylinder (active pilot signal)



blocked cylinder (pilot signal removed)



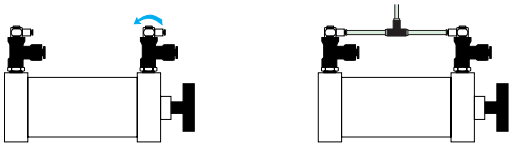
A flow control can be added between the lock-out valve and directional valve.

Removal of the pilot pressure causes the internal spring to reseat the pilot piston, thus closing the valve.

Must be mounted in pairs (signal Line "T"), as the two components are operated with a common pilot signal.

installation

Mounted in pairs, lock-out valves are installed directly on the cylinder.
As they can be fully swiveled, their use provides excellent flexibility in the design and installation of pneumatic circuits.



- push-to-connect connection or threaded connection
- compact design
- fully orientable
- no adjustments

Two-way normally closed pilot operated valve
Emergency stop valve system
Function is to stop cylinder in mid-stroke

- emergency shut off
- loss of pressure
- loss of power

Prevents damage to work and equipment in the event of a loss of pressure

Legris lock-out valves – which are mounted in pairs on a cylinder – lock the piston by simultaneously cutting off the supply and exhaust. Functional locks are more precise and rapid when lock-out valves are located on the cylinder: the volume of air in the pipework no longer needs to be taken into consideration.

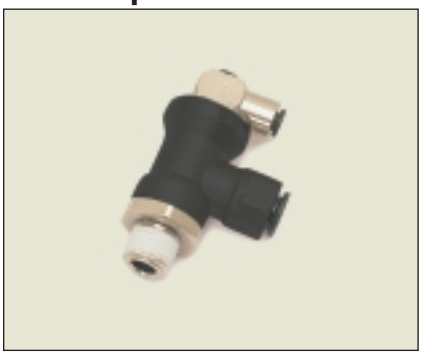
Legris lock-out valves are designed to offer **maximum flow capacity** and compactness (high flow performance and reduced external dimensions). Manufactured in robust materials, they are compatible with aggressive environments due to their excellent resistance to salty atmosphere, sparks (model with threaded fitting). A tried and tested automatic sealing and tube gripping technology guarantees performance and reliability.

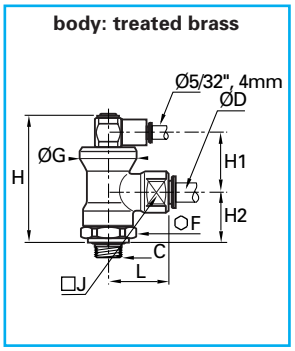
technical specifications of lock-out valves

working pressure	15 to 145 psi
working temperature	-4° to 160°F
number of cycles	> 10 million at 68°F and 1 Hz
leak rate	< 3.2 ccm
materials of construction	**body:** treated brass **seals, diaphragm:** nitrile **gripping ring:** stainless steel

model	supply flow at 90 psi	pilot/depilot pressure (in psi) depending on the supply pressure					
			30 psi	60 psi	90 psi	115 psi	145 psi
O.D. 1/4", 6 and 8mm, threads G1/8 and G1/4"	624 x 10^3 ccm	pilot pressure	35	42	48	52	58
	624 x 10^3 ccm	depilot pressure	22	26	31	35	40
O.D. 3/8", 1/2", 10 and 12mm, threads G3/8 and G1/2	1,536 x 10^3 ccm	pilot pressure	39	46	51	55	59
	1,536 x 10^3 ccm	depilot pressure	20	26	30	35	39

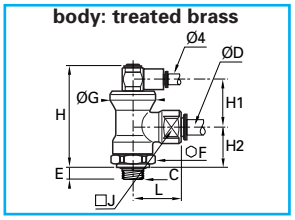
7885 push-to-connect lock-out valves — tube to NPT or BSPT





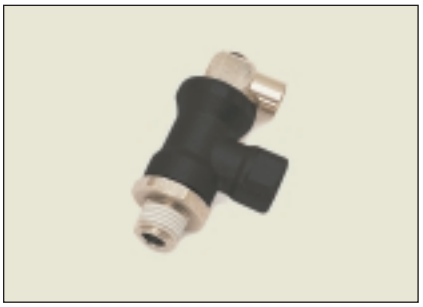
ØD in	C NPT	fractional inch	F mm	G in	H in	H1 in	H2 in	J in	L in	oz
1/4	1/8	7885 56 11	21	.95	2.03	1.24	.79	.67	1.10	6.53
1/4	1/4	7885 56 14	21	.95	2.03	1.24	.79	.67	1.10	4.77
3/8	3/8	7885 60 18	24	1.10	2.19	1.14	1.04	1.06	1.38	7.59
1/2	1/2	7885 62 22	24	1.10	2.19	1.14	1.04	1.06	1.69	18.00
mm	BSPT	metric	mm	mm	mm	mm	mm	mm	mm	kg
6	R1/8	7885 06 10	21	24	51.5	31.5	20	17	28	.121
6	R1/4	7885 06 13	21	24	51.5	31.5	20	17	28	.124
8	R1/4	7885 08 13	21	24	51.5	31.5	20	17	28	.119
8	R3/8	7885 08 17	21	24	51.5	31.5	20	17	28	.122
10	R3/8	7885 10 17	24	28	55.5	29	26.5	27	35	.197
12	R1/2	7885 12 21	24	28	55.5	29	26.5	27	37.5	.203

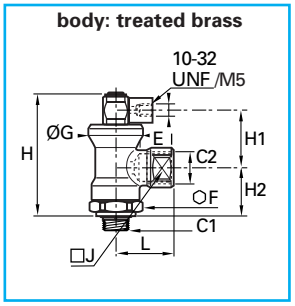
7880 push-to-connect lock-out valves — metric tube to BSPP



ØD mm	C BSPP		E mm	F mm	G mm	H mm	H1 mm	H2 mm	J mm	L mm	kg
6	G1/8	7880 06 10	5	21	24	53	24.5	21	17	28	.121
6	G1/4	7880 06 13	5.5	21	24	53	24.5	21	17	28	.124
8	G1/4	7880 08 13	5.5	21	24	53	24.5	21	17	28	.119
8	G3/8	7880 08 17	5.5	24	28	56	25	23	27	34.5	.122
10	G3/8	7880 10 17	5.5	24	28	56	25	23	27	35	.197
12	G1/2	7880 12 21	7	24	28	56	25	23	27	37.5	.203

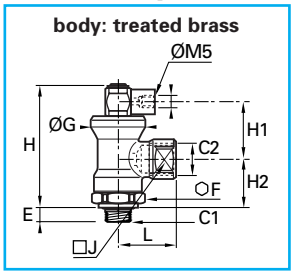
7886 lock-out valves — threaded ports — NPT or BSPT





C1 NPT	C2 NPT	fractional inch	E in	F mm	G in	H in	H1 in	H2 in	J in	L in	oz
1/8	1/8	7886 11 11	.37	21	.95	2.03	1.24	.79	.67	1.04	7.24
1/4	1/4	7886 14 14	.55	21	.95	2.03	1.24	.79	.67	1.04	4.59
3/8	3/8	7886 18 18	.65	24	1.10	2.19	1.14	1.04	1.06	1.34	7.77
1/2	1/2	7886 22 22	.77	24	1.10	2.19	1.14	1.04	1.06	1.57	8.47
BSPT	BSPT	metric	mm	mm	mm	mm	mm	mm	mm	mm	kg
R1/4	R1/8	7886 13 10	14	21	24	51.5	31.5	20	17	26.5	.113
R1/4	R1/4	7886 13 13	14	21	24	51.5	31.5	20	17	26.5	.115
R3/8	R3/8	7886 17 17	16.5	24	28	55.5	29	26.5	27	34	.200
R1/2	R1/2	7886 21 21	19.5	24	28	55.5	29	26.5	27	40	.209

7881 lock-out valves — threaded ports — BSPP



C1 BSPP	C2 BSPP		E mm	F mm	G mm	H mm	H1 mm	H2 mm	J mm	L mm	kg
G1/8	G1/4	7881 13 10	5	21	24	53	24.5	21	17	28	.113
G1/4	G1/4	7881 13 13	5.5	21	24	53	24.5	21	17	28	.115
G3/8	G3/8	7881 17 17	5.5	24	28	56	25	23	27	34	.200
G1/2	G1/2	7881 21 21	7	24	28	56	25	23	27	41	.209

typical applications

1. Legris lock-out valves incorporated into a 5/2 valve.

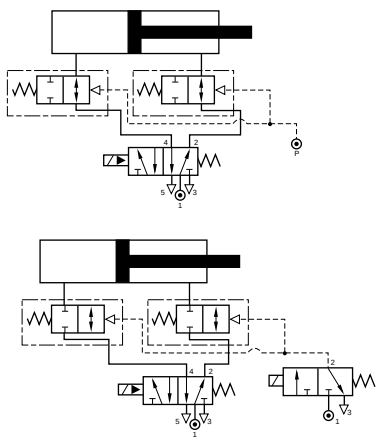
   The compressed air maintains the lock-out valves in their normal position where air can easily pass through exactly like a normal fitting.

   In the event of compressed air failure, the springs at both the lock-out valves will close the double-acting cylinder ports (2 & 4) thereby preventing downward movement.

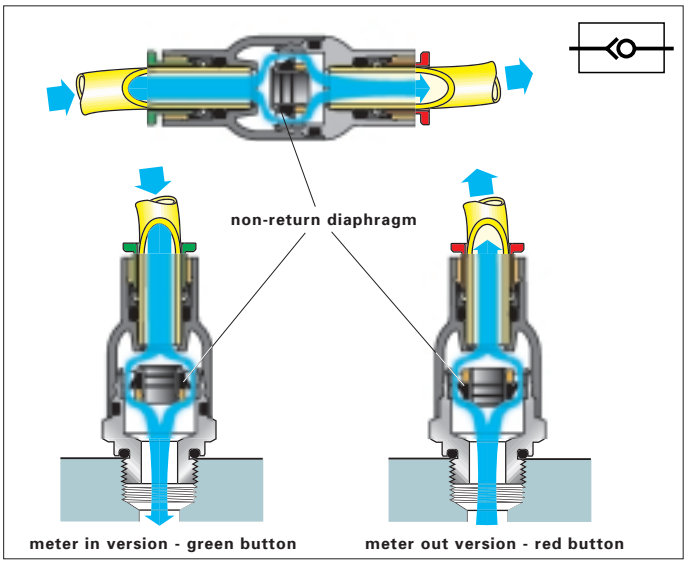
   Only with the recovery of compressed air will the lock-out valves allow normal flow and operation.

2. With the introduction of a 3/2 way valve more interesting variations can be achieved for specific applications.

   With a normally open valve, the lock-out valves will assume their closed positions when the pilot signal is lost. A typical application is a fail safe mode or with the introduction of a signal like an emergency signal.



check valves



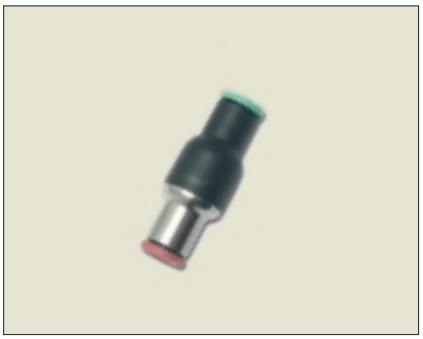
The Legris in-line check valve allows air to pass in one direction while blocking flow in the other direction. Their extreme compactness and light weight make them suitable as a safety item in compressed air circuits.

The body of the fitting contains an arrow to indicate the direction of flow.

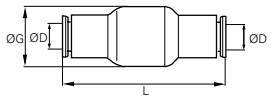
A pressure of more than 7 psi will overcome the spring pressure, which is keeping the valve closed, thus allowing the passage of air.

technical characteristics		15 to 145 psi
model	**air flow at 90 psi**	**Kv**
7996 04 00	307 x 10^3 ccm	.12
7996 56 00/7996 06 00	638 x 10^3 ccm	.14
7996 08 00	1564 x 10^3 ccm	.80

7996 in-line check valve — tube to tube



nylon/nickel-plated brass body

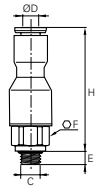


ØD in	fractional inch tube	G in	L in	oz
5/32	7996 04 00	.63	1.52	.28
1/4	7996 56 00	.63	1.61	.51
5/16	7996 08 00	.75	2.03	.63
3/8	7996 60 00	.91	2.50	.63

mm	metric tube	mm	mm	kg
4	7996 04 00	16	38.5	.008
6	7996 06 00	16	41	.013
8	7996 08 00	19	51.5	.018
10	7996 10 00	23	63.5	.018
12	7996 12 00	23	66.5	.018

7984/7994/7985/7995 male check valve — inch tube to UNF or NPT

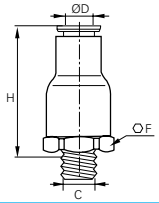
nylon body with nickel-plated brass base



ØD in	C NPT/ UNF	meter out	meter in	E in	F mm	H in	oz
5/32	10-32	7994 04 20	7984 04 20	.14	9	1.26	.28
5/32	1/8	7995 04 11	7985 04 11		16	1.12	.28
1/4	1/8	7995 56 11	7985 56 11		19	1.42	.51
1/4	1/4	7995 56 14	7985 56 14		19	1.42	.51
3/8	1/4	7995 60 14	7985 60 14		23	1.65	.63
3/8	3/8	7995 60 18	7985 60 18		23	1.65	.63

7985/7995 male check valve — metric tube to BSPT

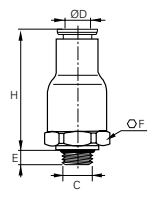
nylon body with nickel-plated brass base



ØD mm	C BSPT	meter out	meter in	F mm	H mm	kg
4	R1/8	7995 04 10	7985 04 10	16	28.5	.016
6	R1/8	7995 06 10	7985 06 10	16	30.5	.016
6	R1/4	7995 06 13	7985 06 13	16	30.5	.021
8	R1/8	7995 08 10	7985 08 10	19	36	.022
8	R1/4	7995 08 13	7985 08 13	19	36	.026
10	R3/8	7995 10 17	7985 10 17	23	42	.027
12	R3/8	7995 12 17	7985 12 17	23	42	.029
12	R1/2	7995 12 21	7985 12 21	23	44	.034

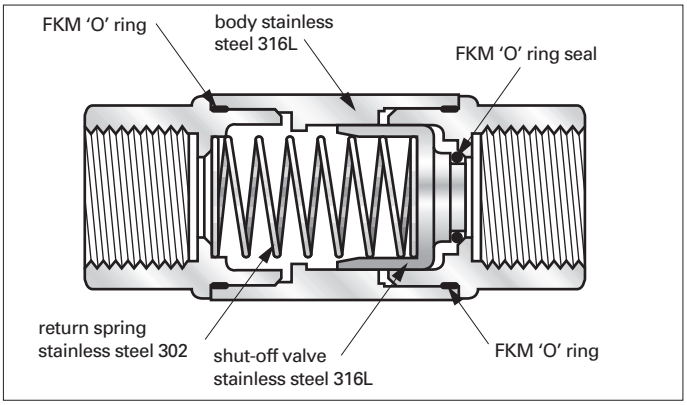
7984/7994 male check valve — metric tube to BSPP

nylon body with nickel-plated brass base



ØD mm	C BSPP	meter out	meter in	E mm	F mm	H mm	kg
4	M5	7994 04 19	7984 04 19	3	9	32	.023
4	G1/8	7994 04 10	7984 04 10	5	16	28.5	.015
6	G1/8	7994 06 10	7984 06 10	5	16	30.5	.015
6	G1/4	7994 06 13	7984 06 13	5.5	16	30.5	.015
8	G1/8	7994 08 10	7984 08 10	5	19	36	.021
8	G1/4	7994 08 13	7984 08 13	5.5	19	36	.023
10	G3/8	7994 10 17	7984 10 17	5.5	23	42	.024
12	G3/8	7994 12 17	7984 12 17	5.5	23	42	.029
12	G1/2	7994 12 21	7984 12 21	7.5	23	44	.034

check valves – stainless steel



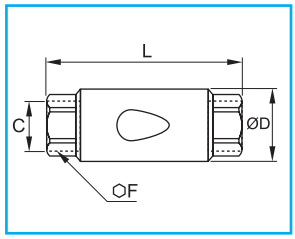
Operation : a stainless steel valve blocks the fluid passage, when the pressure differential is lower than 3.6 psi. Connection is by use of an allen key, upstream of the circuit.

working pressure	7 to 580 psi
working temperature	-4° to +360°F

model	water flow at 90 psi	Kv
1/8	.67 scfm	1.60
1/4	.70 scfm	1.69
3/8	1.26 scfm	3.01
1/2	1.29 scfm	3.10
3/4	2.33 scfm	5.59
1"	3.27 scfm	7.86

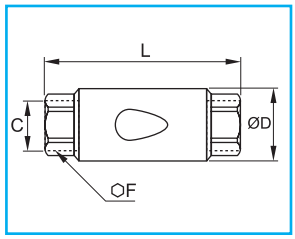
On request, we can provide you with male/female models with NPT threads and other types of seals (nitrile, EPDM, FDA).

4895 unidirectional, double-female – NPT



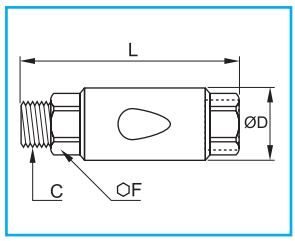
C NPT	DN		ØD mm	F mm	L mm	kg
1/8	10	4895 11 11	22	18	50	0.084
1/4	10	4895 14 14	22	18	54	0.080
3/8	15	4895 18 18	30	22	73	0.198
1/2	15	4895 22 22	30	25	77	0.213

4890 unidirectional, double-female – BSPP



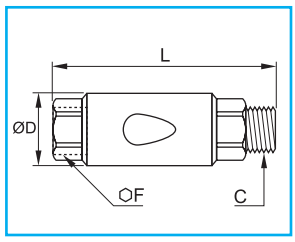
C BSPP	DN		ØD mm	F mm	L mm	kg
G1/8	10	4890 10 10	22	17	50	0.084
G1/4	10	4890 13 13	22	17	50	0.074
G3/8	15	4890 17 17	30	22	67	0.182
G1/2	15	4890 21 21	30	25	71	0.196
G3/4	20	4890 27 27	42	32	84	0.288
G1"	25	4890 34 34	42	38	90	0.416

4891 unidirectional, male/female – BSPP



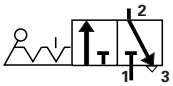
C BSPP	DN		ØD mm	F mm	L mm	kg
G1/8	10	4891 10 10	22	17	56	0.086
G1/4	10	4891 13 13	22	17	58	0.082
G3/8	15	4891 17 17	30	22	75	0.190
G1/2	15	4891 21 21	30	25	79	0.280
G3/4	20	4891 27 27	42	32	98	0.302
G1"	25	4891 34 34	42	38	104	0.424

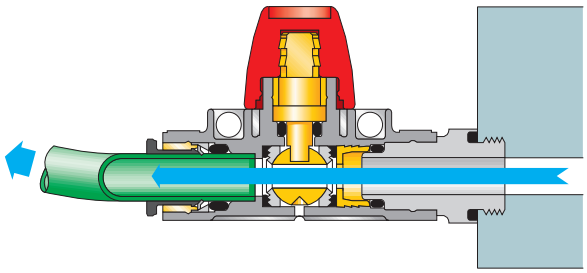
4892 unidirectional, female/male – BSPP

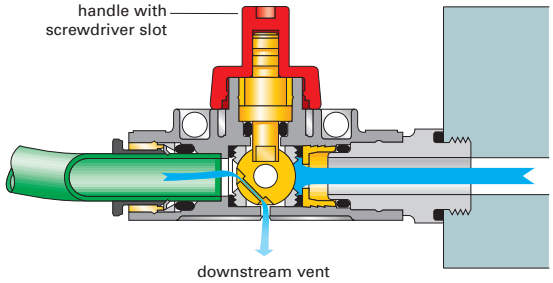


C BSPP	DN		ØD mm	F mm	L mm	kg
G1/8	10	4892 10 10	22	17	56	0.086
G1/4	10	4892 13 13	22	17	58	0.082
G3/8	15	4892 17 17	30	22	75	0.190
G1/2	15	4892 21 21	30	25	79	0.280
G3/4	20	4892 27 27	42	32	98	0.302
G1"	25	4892 34 34	42	38	104	0.424

models 3/2 with vent







Legris mini ball valves enable in-line opening and closing of a pneumatic circuit.

Compact and light weight, they are suited to all types of installation. Moreover, due to the **3 types of mounting** available, these models are suited to all applications.

Their screwdriver slot allows opening and closing, even when access is difficult. Depending on the model, the handle is differentiated by color and marked with the corresponding pneumatic symbol, in order to enable **immediate identification** by the user.

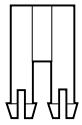
Full passage, Legris mini ball valves offer excellent flow performance.

technical specifications

suitable fluid	compressed air
max pressure	15 psi
vacuum capability	vacuum of 28" Hg (99% of vacuum)
working temperature	- 4° to + 175°C

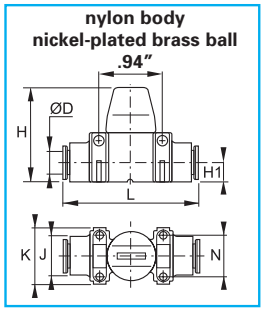
7000 joining clips for in-line flow controls and mini ball valves

nylon



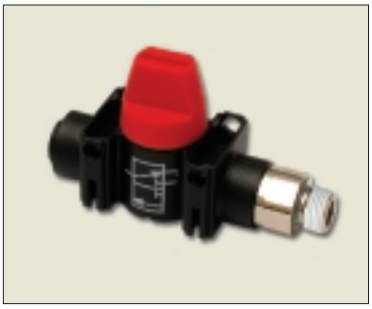
ØD in	ØD mm		oz
5/32	4	7000 00 05	.14
1/4	6	7000 00 05	.14
5/16	8	7000 00 05	.14
3/8	10	7000 00 06	.32
1/2	12	7000 00 06	.32

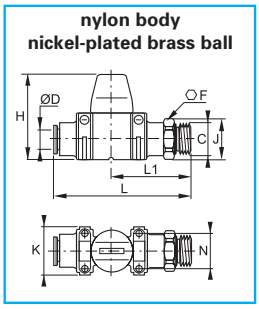
7913 3/2, with vent, with push-to-connect ports



ØD in	fractional inch	H in	H1 in	J in	K in	L in	N in	oz
5/32	7913 04 00	1.46	.30	.59	.87	2.0	.64	.78
1/4	7913 56 00	1.46	.30	.59	.87	2.0	.64	1.45
5/16	7913 08 00	1.46	.30	.59	.87	2.0	.64	1.98
3/8	7913 60 00	1.69	.43	.79	1.18	2.6	.87	4.06
mm	**metric**	**mm**	**mm**	**mm**	**mm**	**mm**	**mm**	**kg**
4	7913 04 00	37	7.5	15	22	51	16.2	0.022
6	7913 06 00	37	7.5	15	22	52	16.2	0.041
8	7913 08 00	37	7.5	15	22	52	16.2	0.056
10	7913 10 00	43	11	20	30	66	22	0.115
12	7913 12 00	43	11	20	30	66	22	0.147

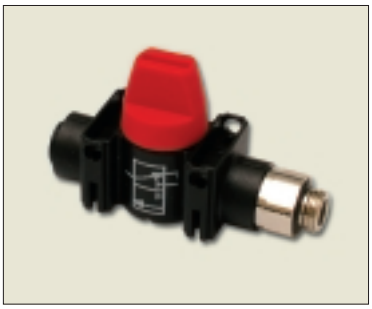
7915 3/2, with vent, with male NPT thread and push-to-connect ports

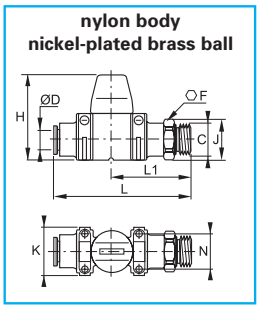




ØD in	C NPT	fractional inch	F mm	H in	J in	K in	L in	L1 in	N in	oz
5/32	1/8	7915 04 11	13	1.46	.55	.87	2.44	1.46	.64	1.76
1/4	1/8	7915 56 11	13	1.46	.55	.87	2.44	1.46	.64	1.90
1/4	1/4	7915 56 14	14	1.46	.59	.87	2.44	1.38	.64	2.40
5/16	1/4	7915 08 14	14	1.46	.59	1.18	2.40	1.61	.64	2.40
5/16	3/8	7915 08 18	18	1.46	.77	1.18	2.91	1.61	.64	2.82
3/8	1/4	7915 60 14	16	1.69	.69	1.18	2.40	1.65	.87	3.60
3/8	3/8	7915 60 18	18	1.69	.77	1.18	2.91	1.65	.87	4.94

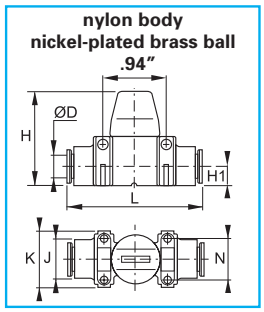
7914 3/2, with vent, with male BSP parallel thread and push-to-connect ports





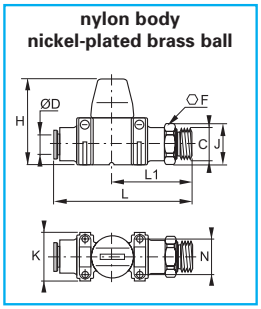
ØD mm	C BSPP	metric	F mm	H mm	J mm	K mm	L mm	L1 mm	N mm	kg
6	G1/8	7914 06 10	13	37	14	22	62	37	16.2	0.054
8	G1/4	7914 08 13	16	37	17.5	22	61	35	16.2	0.068
10	G3/8	7914 10 17	20	43	22	30	74	41	22	0.102
12	G1/2	7914 12 21	24	43	26	30	75	42	22	0.140

7910 2/2, with push-to-connect ports



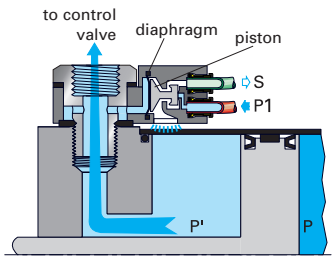
ØD in	fractional inch	H in	H1 in	J in	K in	L in	N in	oz
5/32	7910 04 00	1.46	.30	.59	.87	2.01	.64	.74
1/4	7910 56 00	1.46	.30	.59	.87	2.05	.64	1.41
5/16	7910 08 00	1.46	.30	.59	.87	2.05	.64	1.94
3/8	7910 60 00	1.69	.43	.79	1.18	2.60	.64	3.95
ØD mm	**metric**	**mm**	**mm**	**mm**	**mm**	**mm**	**mm**	**kg**
4	7910 04 00	37	7.5	15	22	51	16.2	0.021
6	7910 06 00	37	7.5	15	22	52	16.2	0.040
8	7910 08 00	37	7.5	15	22	52	16.2	0.055
10	7910 10 00	43	11	20	30	66	16.2	0.112
12	7910 12 00	43	11	20	30	66	16.2	0.144

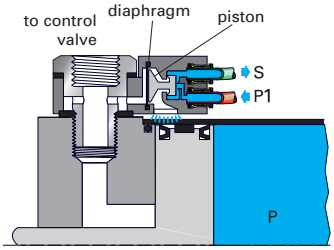
7911 2/2, with male BSP parallel thread and push-to-connect ports



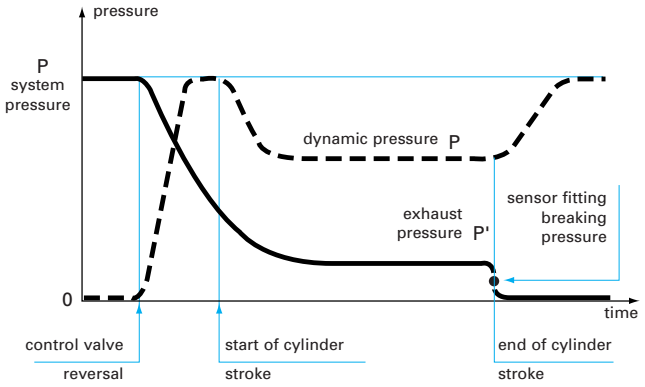
ØD mm	C BSPP	metric	F mm	H mm	J mm	K mm	L mm	L1 mm	N mm	kg
6	G1/8	7911 06 10	13	37	14	22	62	37	16.2	0.052
8	G1/4	7911 08 13	16	37	17.5	22	61	35	16.2	0.066
10	G3/8	7911 10 17	20	43	22	30	74	41	16.2	0.098
12	G1/2	7911 12 21	24	43	26	30	75	42	16.2	0.129

principle of operation





P' : exhaust pressure
P : system pressure
P1: supply pressure for sensor
S : output signal



Sensor shifts when P' is 10% of P

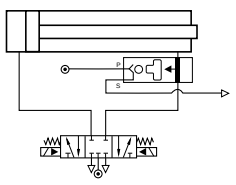
connections

pneumatic sensors

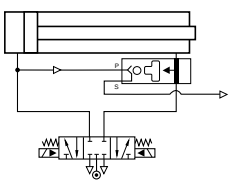
1. basic connection
The threshold sensor is supplied with constant pilot pressure: this type of connection remains simple and is suitable for the majority of applications. It is therefore possible to produce various locking positions by supplying the threshold sensor with a conditional pilot signal.

2. recommended connection
The sensor fitting is supplied by a branch made on the cylinder and control valve line on the opposite side. As the driving pressure P supplies the sensor fitting no untimely signal can appear on start-up.

Constant pilot source



Piloted from blind end of cylinder



Possible uses for signal
- sequence valve signal
- pilot valve

- senses the end of the "stroke" and reverses the operation of cylinder – sensor on each end (blind/red)
- variable end of stroke sensing capability not limited to a fixed return position
- mounting flow control directly on sensor provides an additional benefit of control without adding additional fittings
- pneumatic device does not require adjustment like mechanical devices
- pneumatic or electric version use with air piloted valve and solenoid piloted valve
- no limit switch pneumatic or electrical
- size small device

The **Legris sensor** fitting detects the absence of pressure and translates it to a high pressure pneumatic output. When used to monitor the decaying or exhausting side of a pneumatic cylinder's piston, it emits a positive output. When the cylinder comes to the end of its stroke, wherever that may be, the signal emitted from the sensor can then be used to pilot the next step.

Legris sensor fittings are very **compact.**

Legris sensor fittings can be mounted on the **cylinder**, on the **control valve** or on a terminal block provided it is between the cylinder and the flow control. For accuracy, the flow control regulator should be positioned as close as possible to the cylinder. It can also be fitted to a sensor fitting mounted on the cylinder.

This range offers 2 models:

- **models with pneumatic output sensor**
  2 possibilities:

– supplied with permanent pressure. This is suitable for most applications.

– supplied by a branch made on the cylinder and control valve line on the opposite side. As the driving pressure supplies the sensor fitting no untimely signal can appear on start up.

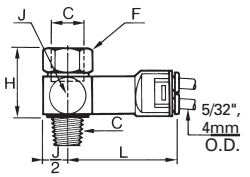
- **models with electric output sensor**
  supplied with 3 core 0.5mm^2 cable, length 2 meters (6.5 ft.)

technical specifications of pneumatic sensors

	working temperature	5° to 140°F
models 7818	**working pressure**	45 to 115 psi
	breaking pressure	8.5 psi
	response time	3 ms
models 7828	**working pressure**	45 to 115 psi
	breaking pressure	7 psi
	contact "OC"	2A/0-48 V 2A/250 V 50 Hz
	degree of protection	IP 40

7808 pneumatic threshold sensor — 5/32 tube pilot/signal ports to NPT or UNF

body: nylon
bolt: brass with sealing washer

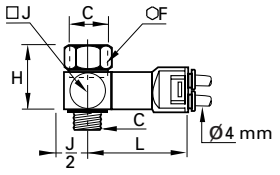


C NPT/UNF		orifice	F in	H in	J in	L in	oz
10-32	7818 04 20*	.08	5/16	.62	.43	1.70	.88
1/8	7808 04 11	.20	9/16	.90	.62	1.74	1.55
1/4	7808 04 14	.27	5/8	1.09	.76	1.81	2.51
3/8	7808 04 18	.39	7/8	1.13	.92	1.91	3.25
1/2	7808 04 22	.55	1	1.17	1.23	2.05	5.47

*10-32: bolt zinc passivated steel

7818 pneumatic threshold sensor — 4mm tube pilot/signal ports to BSPP or M5

body: nylon
bolt: brass with sealing washer

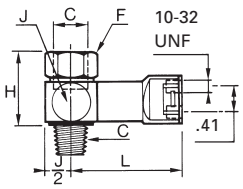


C BSPP/M5		DN min	F mm	H mm	J mm	L mm	kg
M5x0.8	7818 04 19*	2	8	16	11	43.5	.025
G1/8	7818 04 10	5	14	23	16	44.5	.082
G1/4	7818 04 13	7	17	28	19.5	46.5	.113
G3/8	7818 04 17	10	22	29	23.5	49	.128
G1/2	7818 04 21	14	27	30	31.5	52.5	.159

*M5: bolt zinc passivated steel

7808 pneumatic threshold sensor — 10-32 UNF pilot/signal ports to NPT

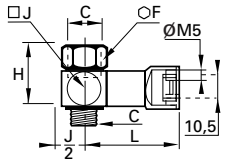
body: nylon
bolt: brass with sealing washer



C NPT		orifice	F in	H in	J in	L in	oz
1/8	7808 20 11	.20	9/16	.90	.62	1.58	1.66
1/4	7808 20 14	.27	5/8	1.09	.76	1.66	2.61
3/8	7808 20 18	.39	7/8	1.13	.92	1.76	3.46

7818 pneumatic threshold sensor — M5 pilot/signal ports to BSPP or M5

body: nylon
bolt: brass with sealing washer

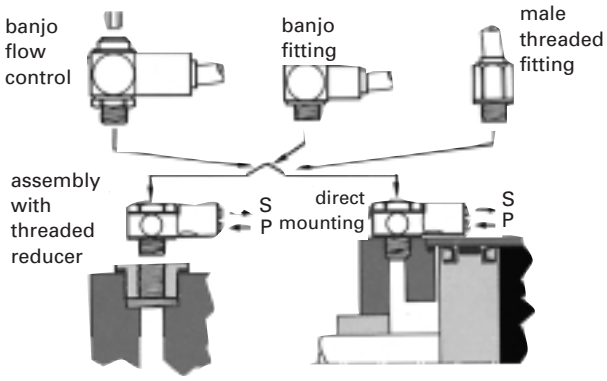


C BSPP		DN min	F mm	H mm	J mm	L mm	kg
G1/8	7818 19 10	5	14	23	16	40.5	.087
G1/4	7818 19 13	7	17	28	19.5	42.5	.117

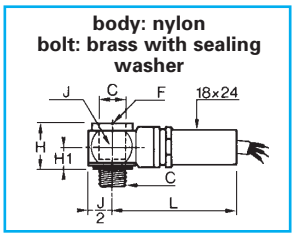
installation

The threshold sensor can be mounted on the cylinder, on the control valve or on a terminal block provided it is between the cylinder and the flow control. For accuracy, the flow control is mounted as close as possible to the cylinder. It can be fitted to a sensor fitting mounted on the cylinder.

assembly on cylinder

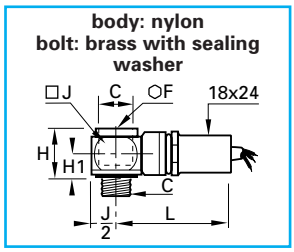


7828 pneumatic/electric threshold sensor — NPT or UNF



C NPT/UNF		F mm	H in	H1 in	J in	L in	oz
10-32	7828 00 20	8	.79	.39	.43	1.93	5.30
1/8	7828 00 11	6	.79	.39	.63	2.05	6.10
1/4	7828 00 14	8	.79	.39	.83	2.13	6.35
3/8	7828 00 18	10	.87	.47	1.10	2.24	7.50
1/2	7828 00 22	12	1.02	.55	1.30	2.28	9.35

7828 pneumatic/electric threshold sensor — BSPP or M5



C BSPP/M5		F mm	H mm	H1 mm	J mm	L mm	kg
M5x0.8	7828 00 19	8	20	10	11	49	.115
G1/8	7828 00 10	6	20	10	16	52	.120
G1/4	7828 00 13	8	20	10	21	54	.125
G3/8	7828 00 17	10	22	12	28	57	.150
G1/2	7828 00 21	12	26	14	33	58	.185

pneumatic/electric sensors

Exhaust pressure is sensed by a N/O, N/C contract relay switch.

Pneumatic/Electric Threshold valves are ideally suited to turn on or off a light, or to send an electric signal to another function in the system. They are supplied with a 6 ft., 3 core cable and can be used with AC or DC voltages.

advantages for the user

– small size

– replaces traditional sequence valves and/or limit switches

– eliminates on going normal adjustment associated with limit valves

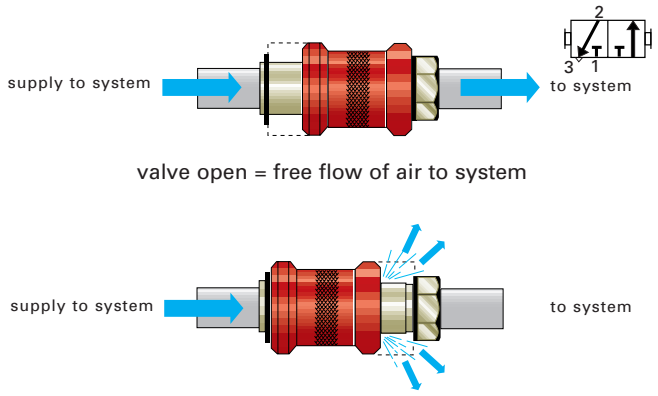
technical specifications for pneumatic/electric threshold sensor valves

working pressure: 0 to 115 psi
threshold signal pressure: 7 psi
current rating: 5A/250VAC - 5W/48VDC
UL listed component
reset pressure: 10 psi
connection pneumatic/electric sensor: cable– 3 core

BLACK (NC)
BLUE (COMM)
BROWN (NO)
2 meters (6.5 ft.) long

pneumatic slide valves

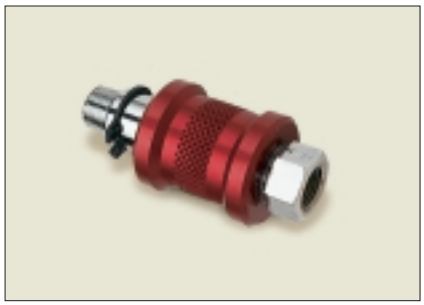
principle of operation



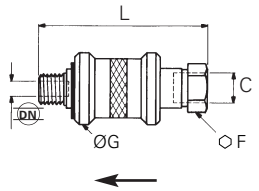
Legris pneumatic slide valves may be used to effect **an immediate isolation of the air line** by venting the system to atmosphere. By moving the sleeve in one direction, the air is free to pass through the slide valve to the system. By moving it in the opposite direction, the supply is shut off and the **downstream air is allowed to exhaust** to the atmosphere. The design is compact, neat, aesthetic and can be directly installed in the circuit

suitable fluid	compressed air
direction of medium	one way
maximum working pressure	230 psi (0661/60/69); 300 psi (0662/63)
working temperature	15° to 175°F (0661/60/69); -40° to 250°F (0662/63)
materials of construction	sleeve: anodized aluminum (0661/0660/0669) brass (0662/0663) body: nickel-plated brass (0661/0660/0669) brass (0662/0663) seals: nitrile rubber

0661 male/female slide valves — NPT



body: nickel-plated brass
sleeve: anodized aluminum

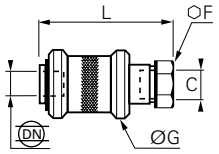


arrow indicates direction of flow

C NPT	DN		F in	G in	L in	oz
1/8	.16	0661 04 11	.55	.98	2.19	2.47
1/4	.27	0661 07 14	.67	1.18	2.75	4.59
3/8	.39	0661 10 18	.87	1.38	3.21	7.59
1/2	.55	0661 14 22	1.06	1.57	3.75	11.30

0660/0669 double female slide valve — NPT or BSPP

body: nickel-plated brass
sleeve: anodized aluminum

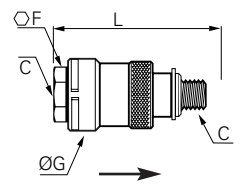


arrow indicates direction of flow

C NPT	DN		F in	G in	L in	oz
1/8	.16	0660 04 11	.55	.98	1.89	2.12
1/4	.27	0660 07 14	.67	1.18	2.28	3.71
3/8	.39	0660 10 18	.87	1.38	2.68	6.18
1/2	.55	0660 14 22	1.06	1.57	3.15	9.53
BSPP/M5			mm	mm	mm	kg
M5x0.8	2	0669 02 19	10	14	30.5	.045
G1/8	4	0669 04 10	14	25	48	.051
G1/4	7	0669 07 13	19	30	58	.084
G3/8	10	0669 10 17	22	35	68	.153
G1/2	14	0669 14 21	27	40	80	.227
G3/4	19	0669 19 27	32	50	83	.242

0663 lockable slide valve — male/female — NPT

body and sleeve: brass



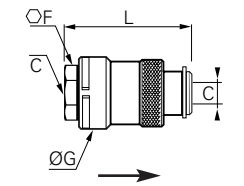
arrow indicates direction of flow

C NPT	DN		F in	G in	L in	oz
1/8	.25	0663 06 11	—	.93	2.00	3.14
1/4	.34	0663 08 14	3/4	1.13	2.58	4.59
3/8	.44	0663 10 18	7/8	1.19	2.60	5.80

The lockable slide valves can accommodate standard locks shank sizes up to 0.145" (pictured, but not included).

0662 lockable slide valve — double female — NPT

body and sleeve: brass



arrow indicates direction of flow

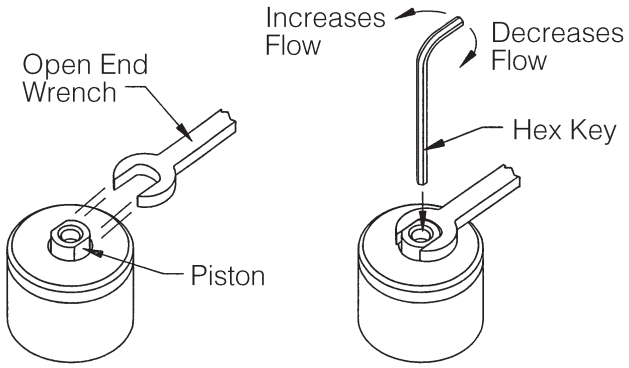
C NPT	DN		F in	G in	L in	oz
1/8	.34	0662 06 11	—	.93	1.61	2.71
1/4	.44	0662 08 14	3/4	1.13	2.58	4.40
3/8	.50	0662 10 18	7/8	1.19	2.10	7.91

The lockable slide valves can accommodate standard locks shank sizes up to 0.145" (pictured, but not included).

adjusting the speed of pressurization

Adjusting the needle to regulate the flow of air optimizes the time taken to pressurize depending on the air volume to be refilled and the system requirements.

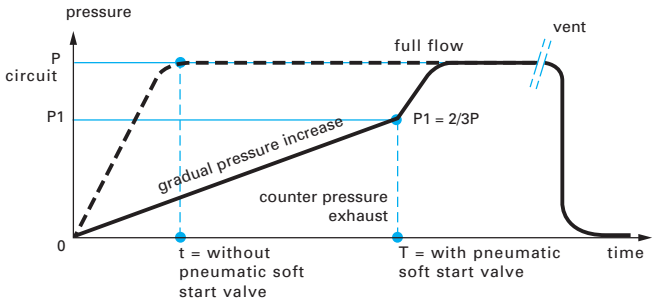
method of adjustment



Adjustment requires only basic tools:

1. secure the piston with a 5.5mm (7/32") open end wrench.
2. adjust the needle (valve opening time) using a hex key while holding the piston with the open end wrench.
3. A 1.5mm hex key is required for the 1/4" size and a 2.5mm hex key is required for the 3/8" size. Wrench flats are 5.5mm on both sizes of valves. Maximum torque for hex key: 8 in. lb

When the downstream pressure equals 2/3 of the supply pressure, full flow is automatically established.



These Function Valves allow air pressure to **gradually increase** when a compressed air line is restarted after it has been vented for any reason (eg. at the end of work, after an emergency stop or when adjusting the system). This gradual pressure increase, or "slow start" **prevents shocks to the system** which can occur when full working pressure is immediately introduced, thus saving wear and preventing injury to users or components. Each cylinder thus protected gradually returns to the position it stopped when the system was vented.

Types 7860/7861/7864 are mounted on the FRL outlet. These versions protect the **whole downstream installation.**

All cylinders downstream of the slow start fitting pressurize simultaneously when the system is pressurized after an emergency stop.

They return to their end-of-stroke position one after the other depending on their resistive forces.

Types 7870/7871/7874 are mounted to the supply port of the control valve or the common supply line of several associated valves. Therefore the action of the fitting is immediate and **controls directly the designated cylinders.**

Thus the pressurization speed of the control valve, or group of valves, can be adjusted to an optimum. When the system is pressurized after an emergency stop, cylinders return to their end-of-stroke position one after the other depending on their resistive forces.

technical specifications of pneumatic slow start fittings

working temperature	**5° to 140°F**
working pressure	**40 to 150 psi**
materials of construction 7861/64, 7871/74, 7860, 7870	**body:** nickel-plated brass **7860/7870 body:** composite material **seals:** nitrile **threads:** nickel-plated brass

	threads	**in. lb**
maximum tightening torque	G1/4	108
	G3/8	125
	G1/2	150
model	**air flow at 90 psi**	**Kv**
7860 08 13	1440 x 10^3 ccm	0.80
7860 10 13	2016 x 10^3 ccm	1.20
7860 10 17	2112 x 10^3 ccm	1.30
7860 12 17	2976 x 10^3 ccm	1.00
7860 12 21	2976 x 10^3 ccm	1.00
7861 13 13	2016 x 10^3 ccm	1.20
7861 17 17	2976 x 10^3 ccm	1.00
7861 21 21	2976 x 10^3 ccm	1.00
7870 08 13	1440 x 10^3 ccm	0.80
7870 10 13	1920 x 10^3 ccm	1.15
7870 10 17	1920 x 10^3 ccm	1.15
7871 13 13	1920 x 10^3 ccm	1.15
7871 17 17	1920 x 10^3 ccm	1.15

pneumatic slow start valves

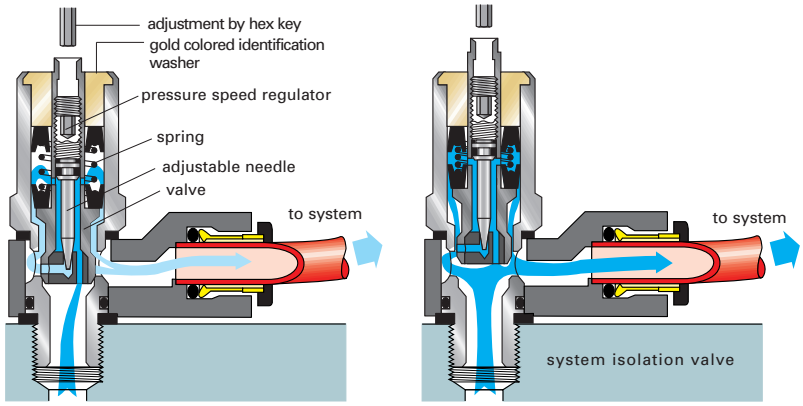
The Legris Pneumatic slow start valve enables you to control the rate supply pressures introduced into your system after it has been vented (e.g. at the end of the work day, emergency stops, or adjustments). This gradual increase in pressure or “slow start”, prevents harmful mechanical shock which may occur when full system pressure is immediately introduced into a system. When the slow start valve is used, it gradually returns cylinders to the position they were in before the system air was vented.

working principles

operating characteristics
The slow start fitting is an internally piloted control valve. It replaces any fitting without system modification.

Note: For adjustment information see page B28.

system version: type 7860/7861/7864



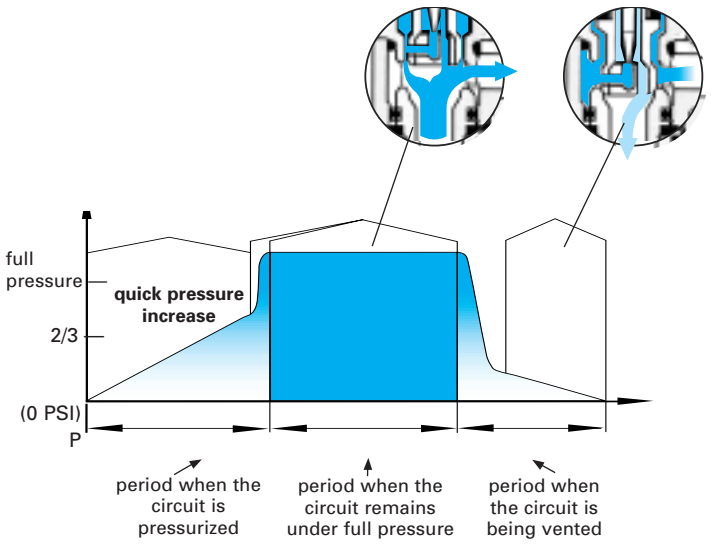
application information

system version: type 7864

1. When the system has been vented, pressure “P” is at zero. After the system air is restarted, the pneumatic “slow start” valve allows a gradual buildup of pressure into the system. System cylinders slowly return to their extended or retracted positions.

2. An adjustable needle valve is utilized to accomplish the gradual buildup of pressure in the system. Adjusting the needle valve sets the rate of fill. The setting is determined by the requirements of the installation.

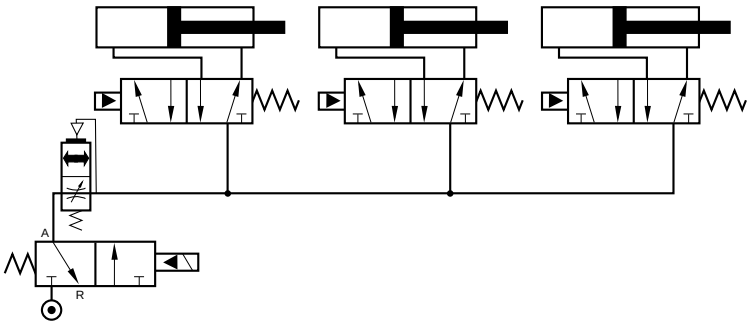
3. When the pressure in the system is at 2/3 its maximum, the “slow start” valve fully opens. The operating pressure “P” is maintained and a full flow rate is assumed until the system air is cut off and vented.



installation

system version: type 7864

The series 7864 “slow start” valve is mounted directly to the outlet port of the system isolation valve. Thus it protects the entire system from mechanical shock. The rate of pressurization will be common to all cylinders in the system. The speed at which each cylinder moves depends on the resistive forces acting against it.



pneumatic slow start valves

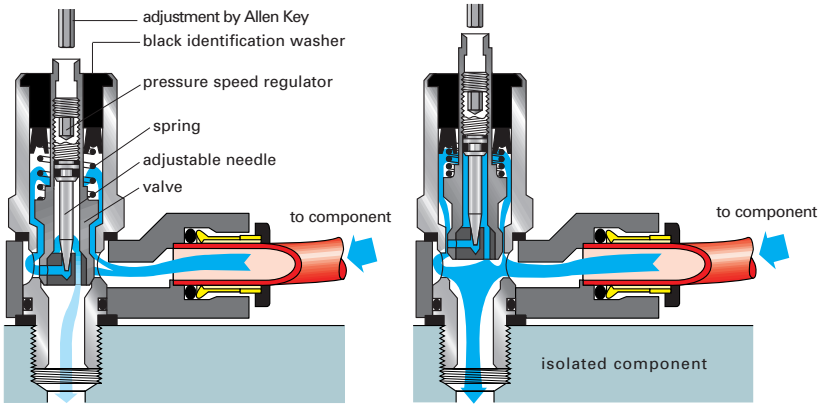
The Legris Pneumatic slow start valve enables you to control the rate supply pressures introduced into your selected actuator after it has been vented (e.g. at the end of the work day, emergency stops, or adjustments). This gradual increase in pressure or “slow start”, prevents harmful mechanical shock which may occur when full system pressure is immediately introduced into a system. When the slow start valve is used, it gradually returns cylinders to the position they were in before the system air was vented.

working principles

operating characteristics
The slow start fitting is an internally piloted control valve. It replaces any fitting without system modification.

Note: For adjustment information see page B28.

component version: type 7870/7871/7874



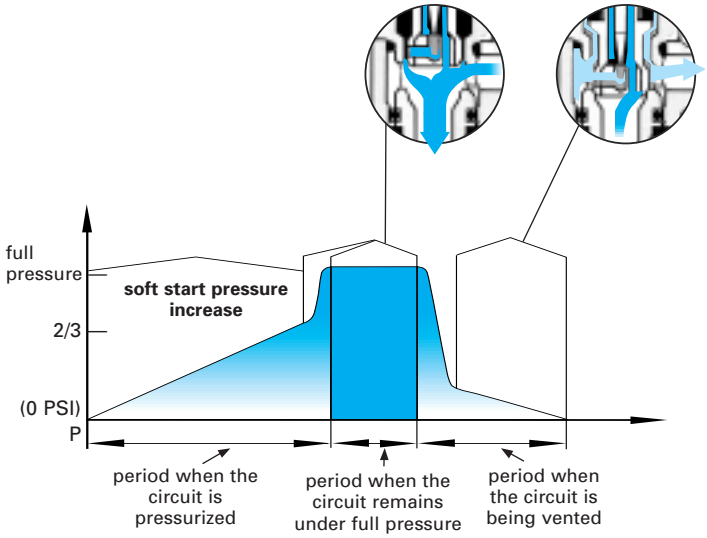
application information

component version: type 7874

1. When the cylinder air has been vented, pressure “P” is at zero. When the system air is restarted, the pneumatic “slow start” fitting allows a gradual buildup of pressure into the selected cylinder. Resulting in the cylinder’s slow return to its extended or retracted position.

2. An internal needle valve is utilized to accomplish the gradual buildup of pressure in the system. Adjusting the needle sets the rate of fill. The setting is determined by the requirements of the installation.

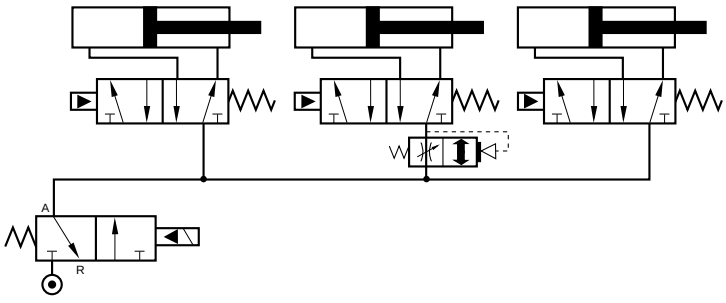
3. When the pressure in the system is at 2/3 “P” circuit, the “slow start” fully opens. The operating pressure is maintained and a full flow rate is assumed until the system air is cut off and vented.



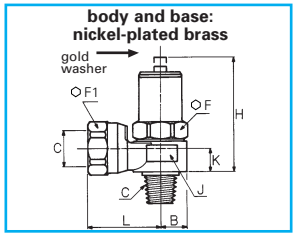
installation

isolated component version: type 7874

The series 7874 “slow start” valve is mounted directly to the inlet of a control valve, it provides “slow start” protection to a select cylinder. Thus the rate of pressurization to a specific cylinder may be individually controlled.

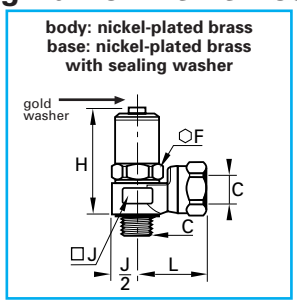


7864 for system isolating valve with threaded connection — NPT



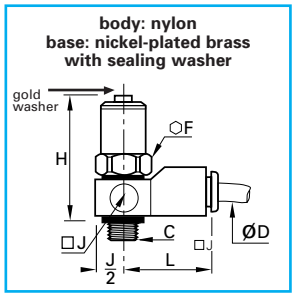
C NPT		F in	F1 in	H min in	H max in	J in	L in	K in	oz
1/4	7864 14 14	7/8	3/4	2.44	2.17	.95	1.22	.55	5.40
3/8	7864 18 18	7/8	3/4	2.44	2.17	.95	1.36	.55	5.47

7861 for system isolating valve with threaded connection — BSPP



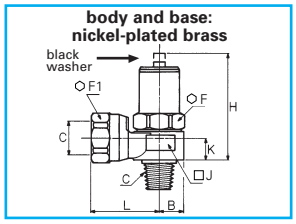
C BSPP		F mm	H min mm	H max mm	J mm	L mm	kg
G1/4	7861 13 13	22	62	54	24	31	.148
G3/8	7861 17 17	22	62	55	24	31	.140
G1/2	7861 21 21	24	70.5	63.5	24	34.5	.178

7860 for system isolating valve with LF3000® push-in fitting — metric tube to BSPP



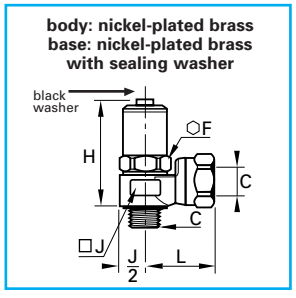
ØD mm	C BSPP		F mm	H min mm	H max mm	J mm	L mm	kg
8	G1/4	7860 08 13	17	61	54	20	35	.066
10	G1/4	7860 10 13	22	62	55	25	41	.110
10	G3/8	7860 10 17	22	62	55	25	41	.113
12	G3/8	7860 12 17	22	62	55	25	45	.125
12	G1/2	7860 12 21	22	70.5	63.5	25	45	.151

7874 for isolated component version with threaded connection — NPT



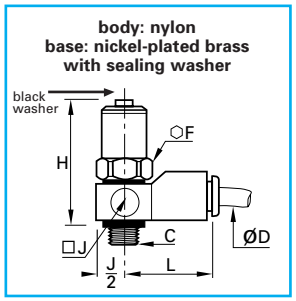
C NPT		F in	F1 in	H min in	H max in	J in	L in	K in	oz
1/4	7874 14 14	7/8	3/4	2.44	2.17	.95	1.22	.55	5.47
3/8	7874 18 18	7/8	3/4	2.44	2.17	.95	1.36	.55	4.60

7871 for isolated component version with threaded connection — BSPP



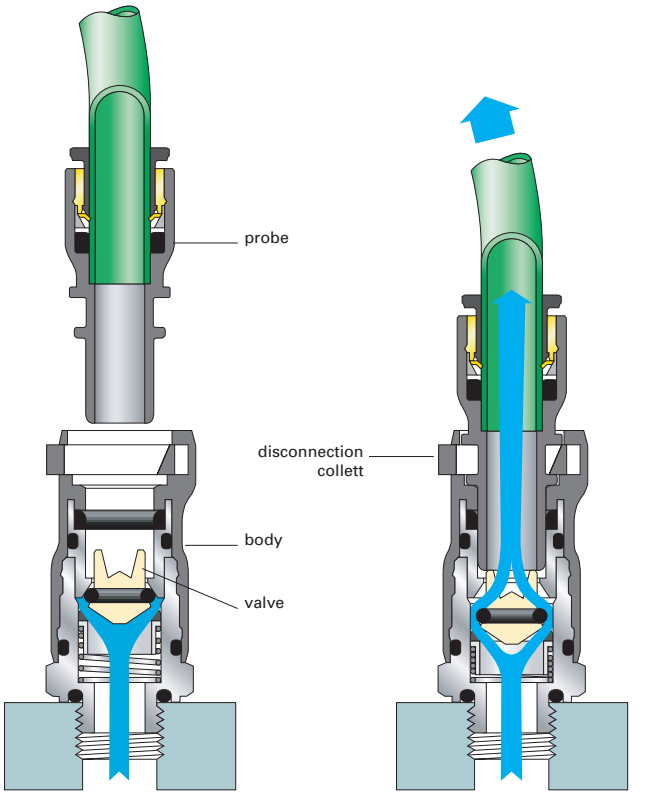
C BSPP		F mm	H min mm	H max mm	J mm	L mm	kg
G1/4	7871 13 13	22	62	55	24	31	.149
G3/8	7871 17 17	22	62	55	24	31	.141

7870 for isolated component version with LF3000® push-in fitting — metric tube to BSPP



ØD mm	C BSPP		F mm	H min mm	H max mm	J mm	L mm	kg
8	G1/4	7870 08 13	17	61	54	20	35	.068
10	G1/4	7870 10 13	22	62	55	25	41	.112
10	G3/8	7870 10 17	22	62	55	25	41	.115

principle of operation



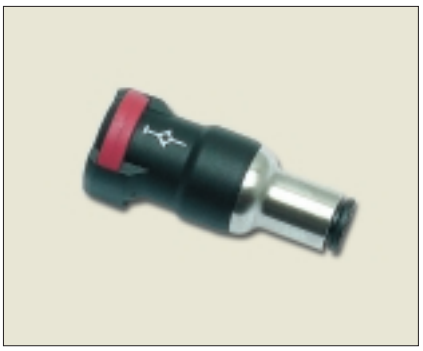
Legris snap connector fittings are used to isolate a circuit without venting the whole installation. They are designed to facilitate frequent connections/disconnections – in complete **safety**. Connection is confirmed by an **audible « click »**.

technical specifications:

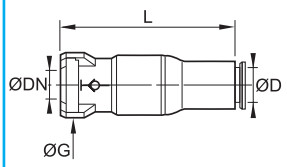
fluid	compressed air	
max pressure	145 psi	
working temperature	- 4° to + 175°F	
flow performance	**model**	**air flow at 90 psi**
	DN 5 mm	1000 Nl/min
	DN 7.3 mm	1900 Nl/min

On request, we can provide:
- other **configurations**: elbow, panel mountable.
- alternate ring colors: yellow, green.

7926 body with LF3000® connection



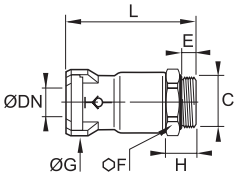
nylon body



ØD mm	DN		G mm	L mm	kg
6	5	7926 05 06	18.5	44	0.020
8	5	7926 05 08	18.5	49	0.024
10	7.3	7926 07 10	22	58.5	0.044

7925/7921 threaded body — NPT and BSPP

nylon body



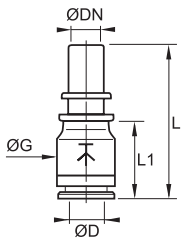
orientable model

C NPT	DN		E in	F mm	G in	H in	L in	oz
1/8	5	7925 05 11	.24	10.5	.73	.63	1.46	.78
1/4	5	7925 05 14	.22	10	.73	.63	1.42	.85

C BSPP	DN		E mm	F mm	G mm	H mm	L mm	kg
G1/8	5	7921 05 10	6	10.5	18.5	16	37	0.022
G1/4	5	7921 05 13	5.5	10	18.5	16	36	0.024
G1/4	7.3	7921 07 13	5.5	20	22	10	43	0.040
G3/8	7.3	7921 07 17	5.5	20	22	10	43	0.042

7960 plug with LF3000® connection

nylon

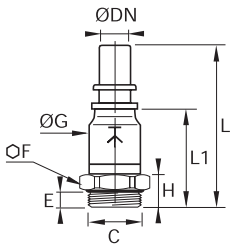


ØD in	DN		G in	L in	L1 in	oz
1/4		7960 05 56	.53	1.44	.69	.32

ØD mm	DN		G mm	L mm	L1 mm	kg
6	5	7960 05 06	13.5	36.5	17.5	0.009
8	5	7960 05 08	13.5	37	18	0.004
10	7.3	7960 07 10	16	41	20.5	0.008

7961 threaded plug — BSPP

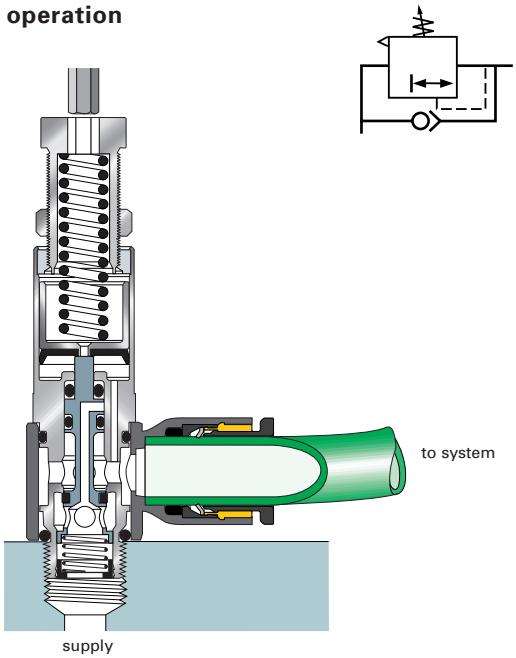
nylon body



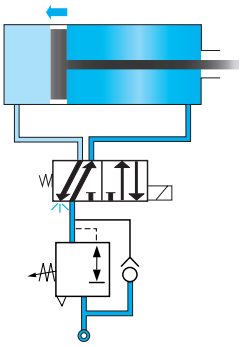
C BSPP	DN		E mm	F mm	G mm	H mm	L mm	kg
G1/8	5	7961 05 10	4.5	13	13.5	11	46	0.019
G1/4	5	7961 05 13	5.5	16	13.5	9.5	46	0.020
G1/4	7.3	7961 07 13	5.5	16	16	11.5	51.5	0.025
G3/8	7.3	7961 07 17	5.5	20	16	10.5	43	0.034

pressure regulator fittings

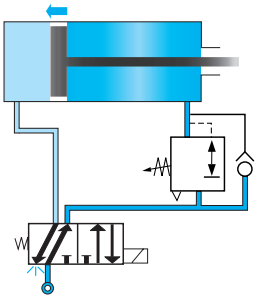
principle of operation



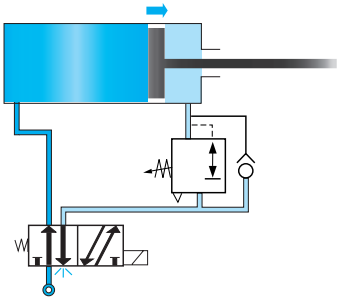
mounting on control:
valve adjustment of piston feed pressure in both directions



mounting on cylinder:
adjustment of piston feed pressure in single direction



in return direction, pressure supplied through control of valve



Legris pressure regulator fittings are used to stabilize at a given value the pressure applied to pneumatic equipment, whatever the fluctuations of pressure upstream.

The pressure outlet is fully controlled by an adjustment screw. To assist pressure selection, the screw is calibrated showing pressure setting levels.

Adjusting pressure to a sufficient value provides a saving of compressed air and therefore energy. Consequently, when mounted in series on a manifold, these fittings control the supply required for each piece of equipment, from a single supply source.

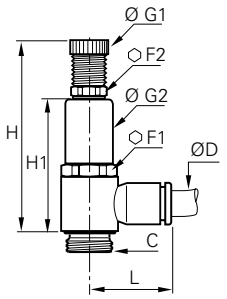
Compact, flow pressure regulators may be mounted:
- on the cylinder, for reduced pressure in one direction,
- on the control valve, for reduced pressure in both directions.

technical specification of pressure regulators fittings

working temperature	15° to 160°F			
working pressure	**P1 – input pressure**	15 to 230 psi		
	P2 – regulated pressure	15 to 115 psi		
materials of construction	**body:** polymer, nickel-plated brass **seals:** nitrile			
maximum tightening torque	parallel thread	G1/8"	G1/4"	G3/8"
	in. lb	35	40	50

7305 threaded pressure regulator — fractional inch tube to NPT

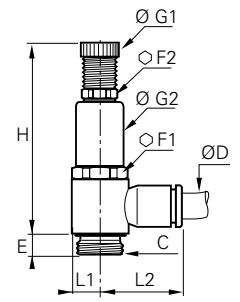
body: nylon
nickel-plated brass screw
with sealing washer



ØD in	C NPT		F1 mm	F2 mm	G1 in	G2 in	H min in	H max in	H1 in	L in	oz
5/32	1/8	7305 04 11	17	13	.55	.67	1.97	2.64	1.59	.73	1.34
1/4	1/8	7305 56 11	17	13	.55	.67	1.97	2.64	1.59	.81	1.59
1/4	1/4	7305 56 14	17	13	.55	.67	2.38	3.05	1.95	.89	1.73
3/8	1/4	7305 60 14	17	13	.55	.67	2.38	3.05	1.95	1.14	2.47

7300 threaded pressure regulator — metric tube to BSPP

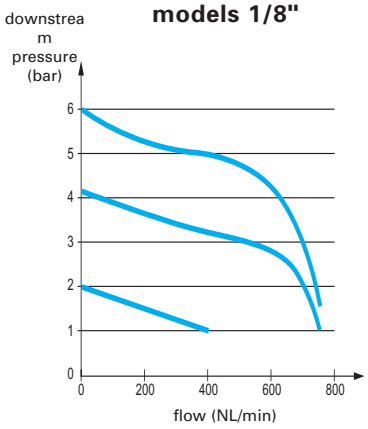
body: nylon
nickel-plated brass screw
with sealing washer



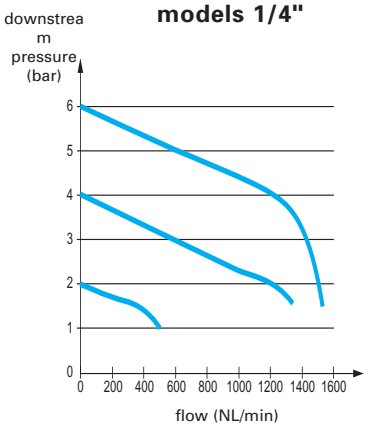
ØD mm	C BSPP		E mm	F1 mm	F2 mm	G1 mm	G2 mm	H max mm	L1 mm	L2 mm	kg
4	G1/8	7300 04 10	4.5	17	13	14	18.5	60.5	7	18.5	.038
6	G1/8	7300 06 10	4.5	17	13	14	18.5	60.5	7	20	.045
6	G1/4	7300 06 13	7.5	17	13	14	18.5	68.5	9.5	22	.049
8	G1/8	7300 08 10	4.5	17	13	14	18.5	60.5	7	25	.057
8	G1/4	7300 08 13	7.5	17	13	14	18.5	68.5	9.5	27	.060
8	G3/8	7300 08 17	8.5	22	17	18.5	23.5	77.5	11.5	28.5	.064
10	G1/4	7300 10 13	7.5	17	13	14	18.5	68.5	9.5	29	.070
10	G3/8	7300 10 17	8.5	22	17	18.5	23.5	77.5	11.5	30.5	.073

Flow characteristics for NPT & BSPP threads
Upstream pressure = 100 psi

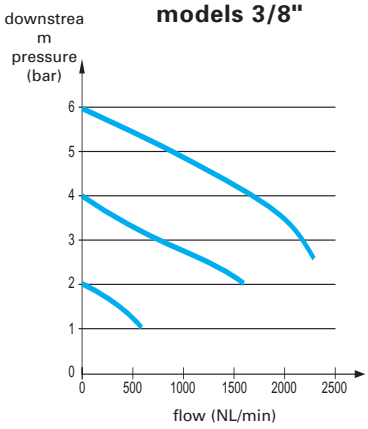
models 1/8"



models 1/4"

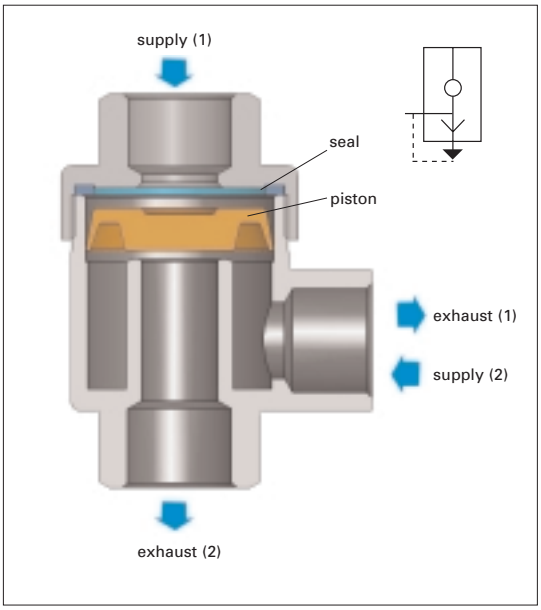


models 3/8"



To convert the flow rates, use our conversion table on page 4.

quick exhaust valve



The new **Legris Quick Exhaust Valve** can be used in all pneumatic equipment. It drastically increases **system efficiency** and the **speed of a cylinder** by purging cylinder exhaust air at the cylinder port rather than the control valve.

technical specifications

working fluid	compressed air
working pressure	10 to 150 psi
working temperature	0° to 160°F
materials of construction	
body:	nickel-plated brass
seal:	nylon
piston:	polyurethane

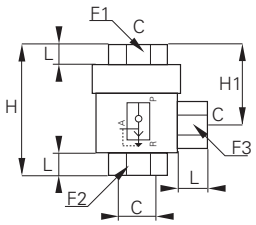
supply (1) - the system pressure is applied to the inlet port, flow is directed to the cylinder port.

supply (2) - the supply (1) is dropped, exhaust air in the cylinder is discharged directly from the exhaust (2) port of the valve.

Immediate Installation
Easy to Use
Complete Safety

7982 quick exhaust valves — threaded ports — NPT

nickel-plated brass body



C NPT		F1 mm	F2 mm	F3 mm	H1 in	L in	D in	H in	oz
1/8	7982 11 11	14	14	15	1.10	.28	.30	1.69	2.97
1/4	7982 14 14	19	19	19	1.38	.37	.41	2.11	5.18
3/8	7982 18 18	20	21	21	1.42	.35	.45	2.19	5.64
1/2	7982 22 22	26	26	26	1.77	.55	.59	2.83	11.29

legris.com's advantages

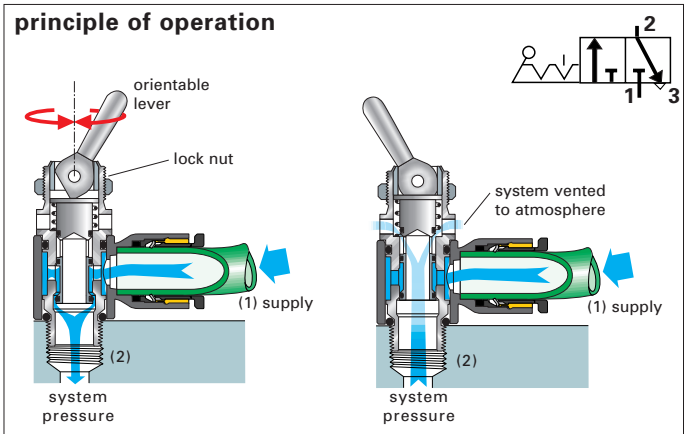
Select and download CAD drawings of pneumatic function valves easily and quickly. An optimized and free service, available to everyone on the Legris Website.

www.legris.com

manually operated 3-way venting valves

manual switch operated vent fitting

principle of operation



Example with supply (1) - series 7805 - 7800

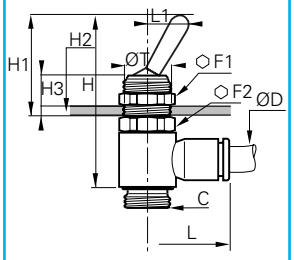
Legris manual switch operated vent fitting guarantees immediate isolation of the air line by venting the system to atmosphere by a simple manual operation of the lever. Easy to operate, it can be used whenever the system has to be frequently vented. Completely orientable, a number of valves can be mounted side by side, even in reduced spaces. The sub-base seal and push-in connection outlet allow immediate installation.

This fitting may preferably be mounted on a single-acting cylinder or directly onto a manifold, such as Legris aluminum manifolds.

suitable fluid	compressed air
direction of medium	one way
maximum working pressure	230 psi
working temperature	15° to 175°F

7805/7806 manually operated 3-way venting valve — fractional inch tube to NPT

body: nylon
nickel-plated brass bolt

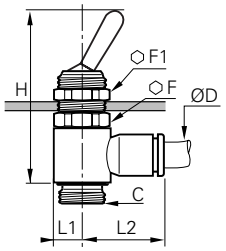


ØD in	C NPT	supply (1)	F1 mm	F2 mm	H in	H1 in	H2 in	H3 in	L in	L1 in	ØT in	oz
5/32	1/8	7805 04 11	14	14	1.69	.98	.18	.30	.75	.43	.49	.95
1/4	1/8	7805 56 11	14	14	1.69	.98	.18	.30	.85	.43	.49	1.02
1/4	1/4	7805 56 14	14	17	1.99	.98	.18	.30	.89	.43	.49	1.55
3/8	1/4	7805 60 14	14	17	1.99	.98	.18	.30	1.14	.43	.49	1.69

ØD in	C NPT	supply (2)	F1 mm	F2 mm	H in	H1 in	H2 in	H3 in	L in	L1 in	ØT in	oz
5/32	1/8	7806 04 11	14	14	1.69	.98	.18	.30	.75	.43	.49	.95
1/4	1/8	7806 56 11	14	14	1.69	.98	.18	.30	.85	.43	.49	1.02
1/4	1/4	7806 56 14	14	17	1.99	.98	.18	.30	.89	.43	.49	1.55
3/8	1/4	7806 60 14	14	17	1.99	.98	.18	.30	1.14	.43	.49	1.69

7800/7801 manually operated 3-way venting valve — metric tube to BSPP

body: nylon
nickel-plated brass bolt
with sealing ring



ØD mm	C BSPP	supply (1)	F mm	F1 mm	H mm	L1 mm	L2 mm	kg
4	M5x0.8	7800 04 19	8	-	32	5	16	.020
4	G1/8	7800 04 10	14	14	42.5	7	18.5	.027
6	M5x0.8	7800 06 19	8	-	32	5	19	.022
6	G1/8	7800 06 10	14	14	42.5	7	20	.029
6	G1/4	7800 06 13	17	17	51	9	22	.044
8	G1/8	7800 08 10	14	14	42.5	7	25	.030
8	G1/4	7800 08 13	17	17	51	9	27	.045
10	G1/4	7800 10 13	17	17	51	9	29	.048

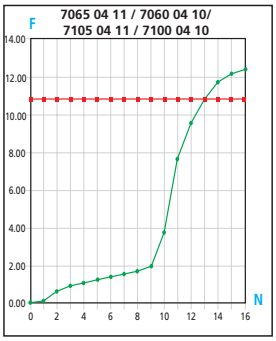
ØD mm	C BSPP	supply (2)	F mm	F1 mm	H mm	L1 mm	L2 mm	kg
4	M5x0.8	7801 04 19	8	-	32	5	16	.020
4	G1/8	7801 04 10	14	14	42.5	7	18.5	.027
6	M5x0.8	7801 06 19	8	-	32	5	19	.022
6	G1/8	7801 06 10	14	14	42.5	7	20	.029
6	G1/4	7801 06 13	17	17	51	9	22	.044
8	G1/8	7801 08 10	14	14	42.5	7	25	.030
8	G1/4	7801 08 13	17	17	51	9	27	.045
10	G1/4	7801 10 13	17	17	51	9	29	.048

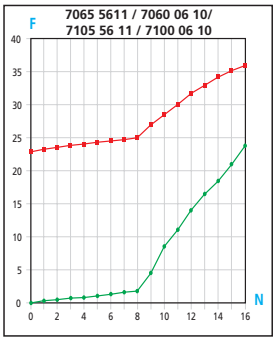
There are two models of these series valves. One model shown above (principle of operation) uses port (1) as the inlet and port (2) as the use port. The second model uses port (2) as the inlet and port (1) as the use port. Versions 7806 and 7801 are suggested to be used on manifolds with a common supply port.

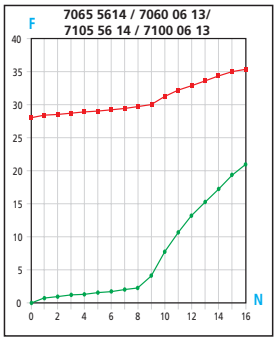
flow control performance characteristics

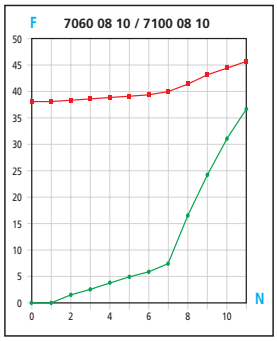
compact and metal flow controls

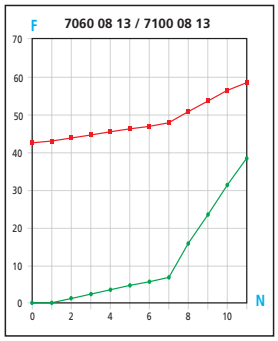
7060/7065 – 7100/7105

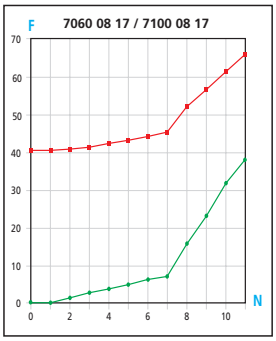


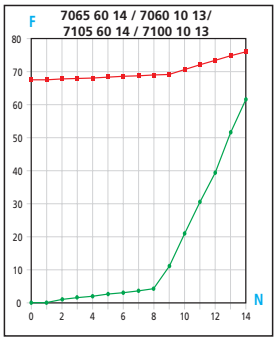


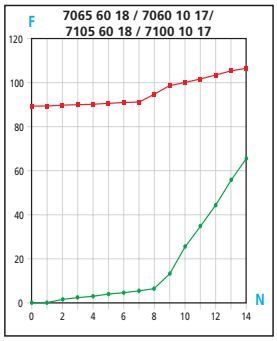


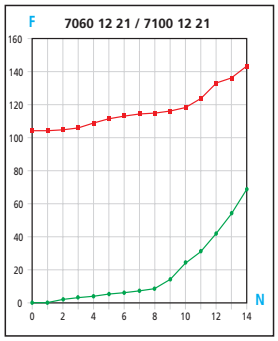


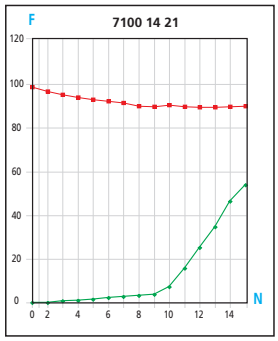




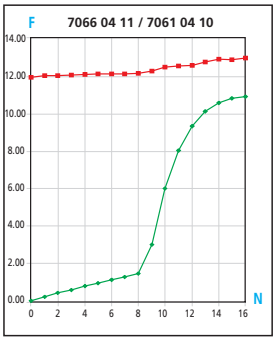


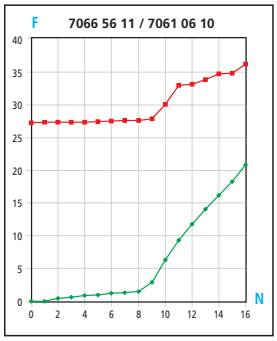


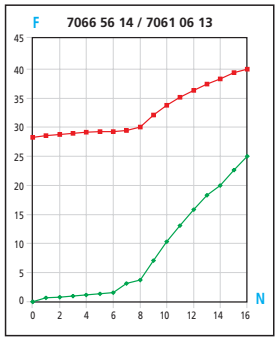


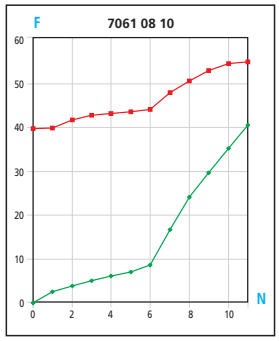


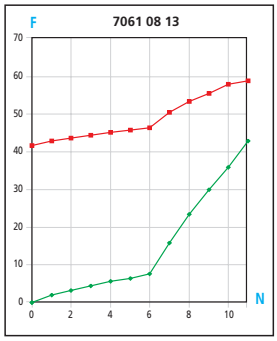
7066/7061

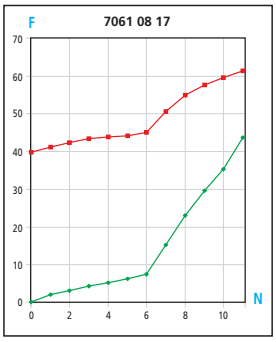


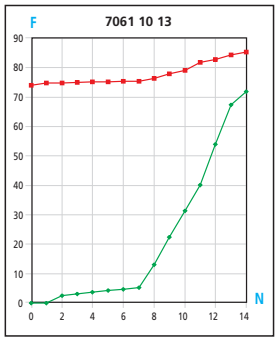


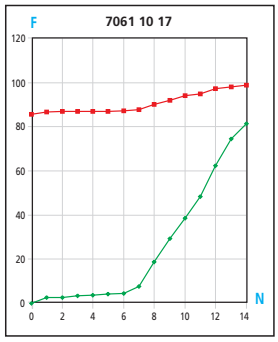


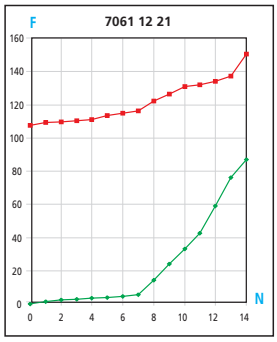












87 psi

= return direction

= controlled direction

N = number of turns

F = flow in SCFM

7067/7062

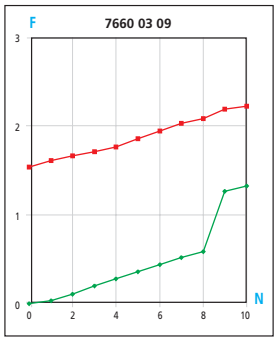
Flow characteristics of models 7067/7062:

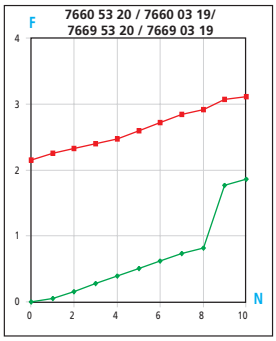
– **meter out version:** see model 7065/7060 controlled direction

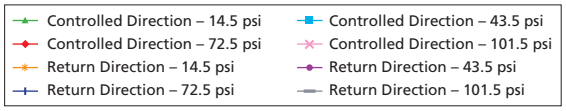
– **meter in version:** see model 7066/7061 controlled direction

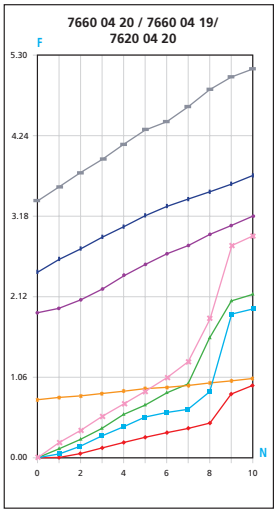
mini flow controls

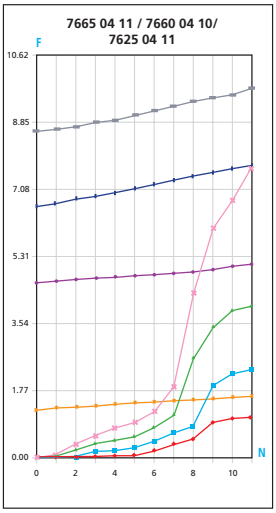
7660/7665 – 7620/7625 – 7669

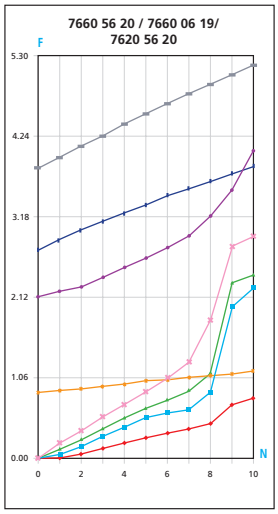


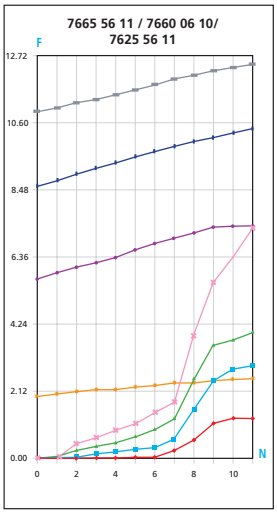


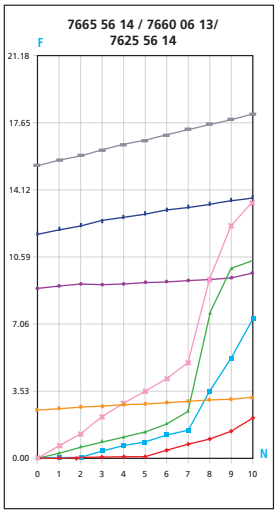


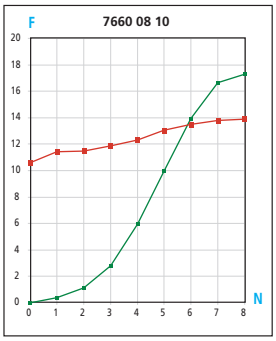


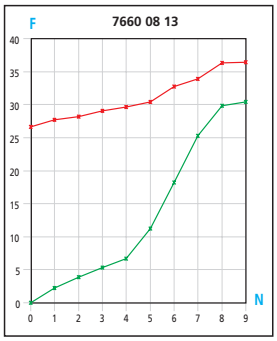


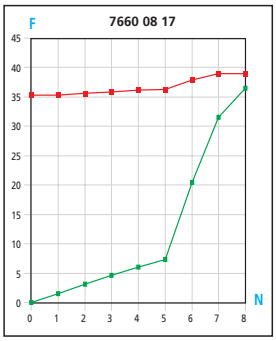


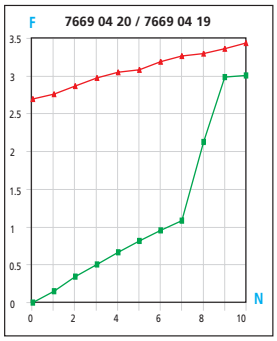


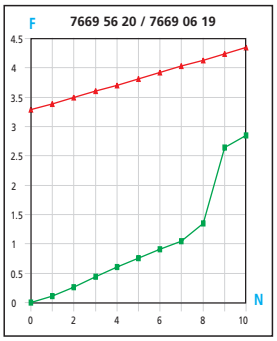


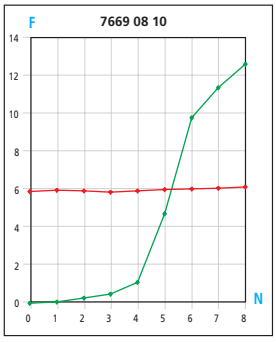


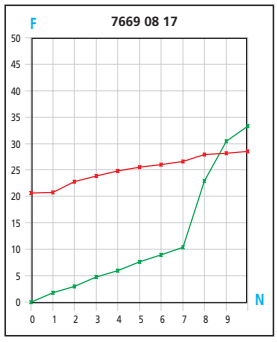




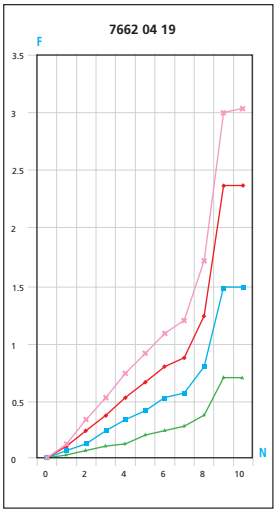


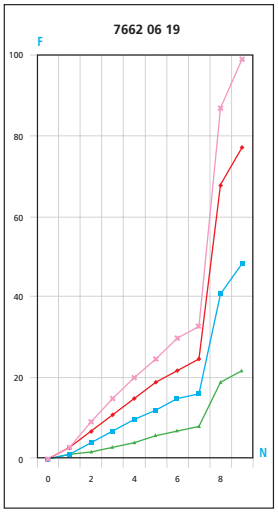






7662





87 psi

= return direction

= controlled direction

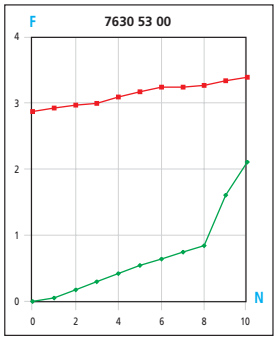
N = number of turns

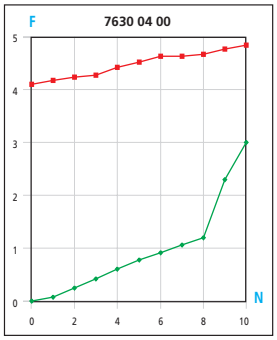
F = flow in SCFM

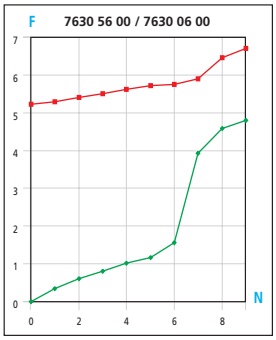
flow control performance characteristics

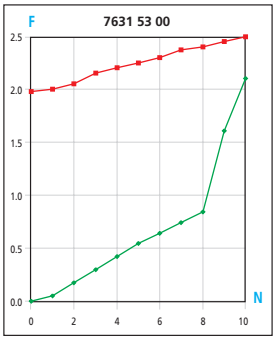
plug-in flow controls

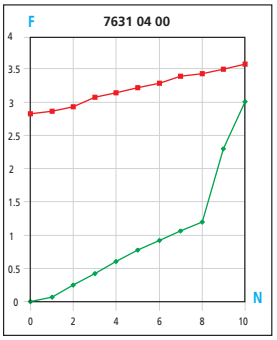
7630/7631/7030

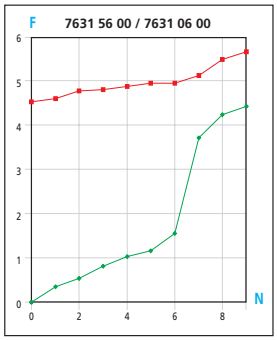


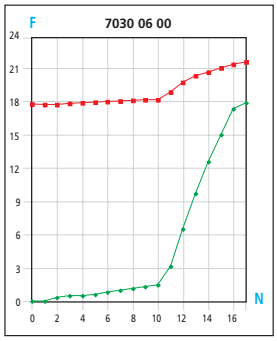


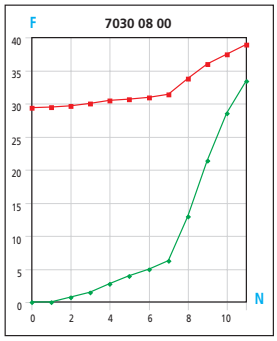


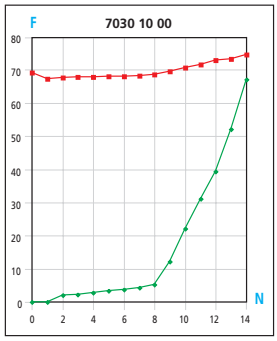


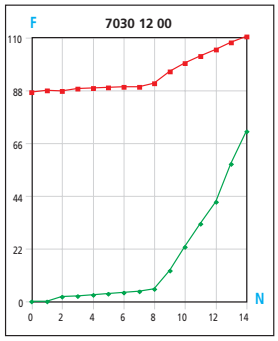












87 psi

= return direction

= controlled direction

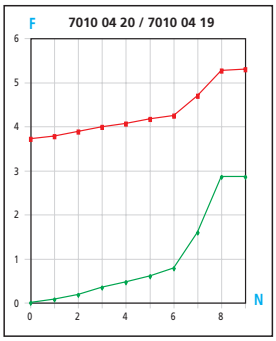
N = number of turns

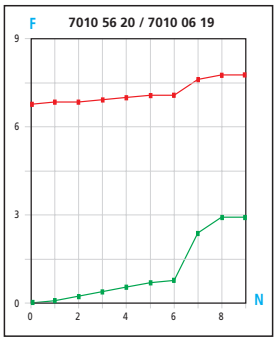
F = flow in SCFM

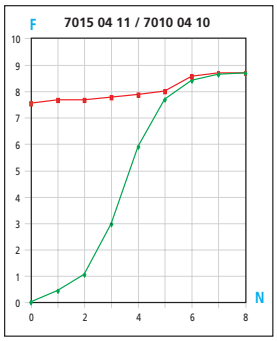
flow control performance characteristics

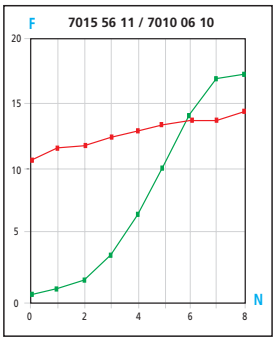
knobless flow controls

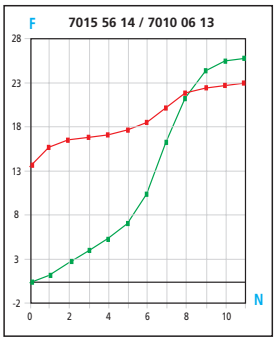
7010/7015

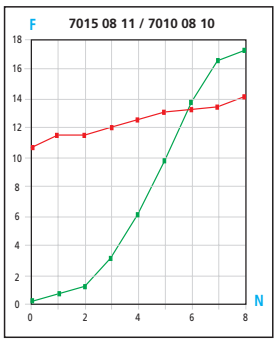


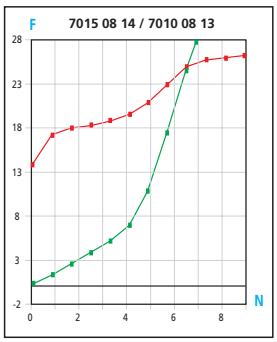


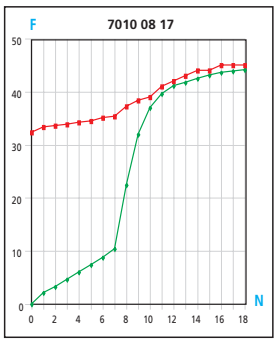


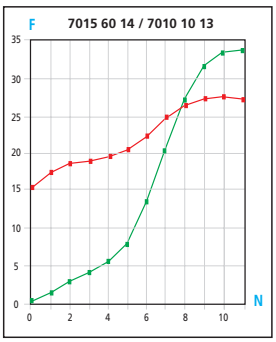


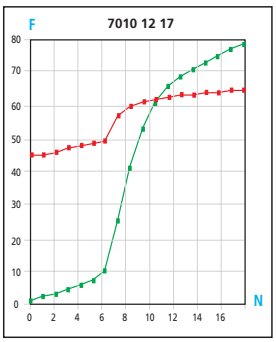




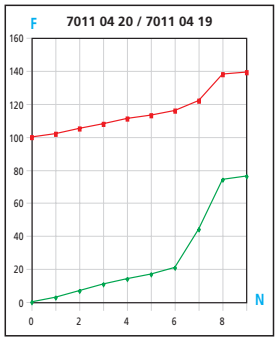


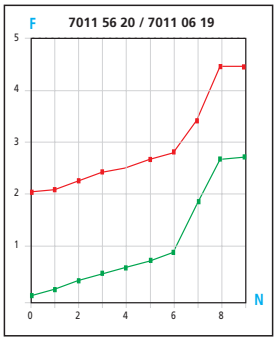


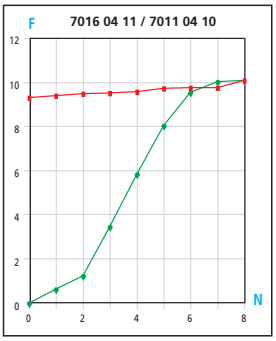


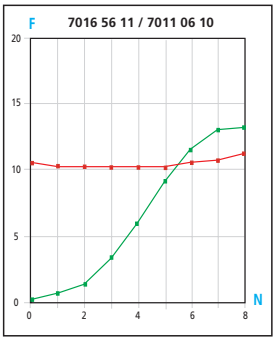


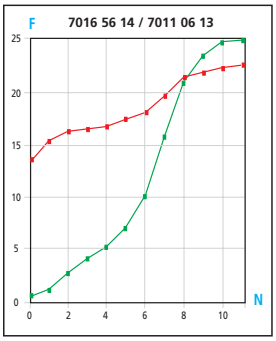
7011/7016

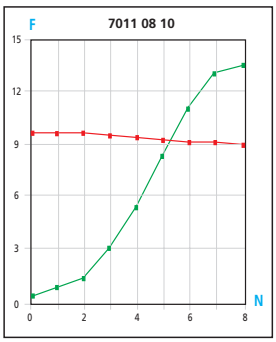


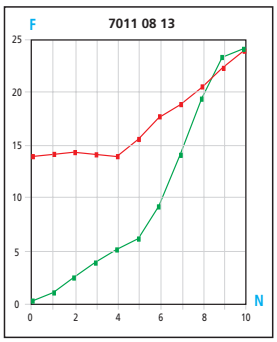


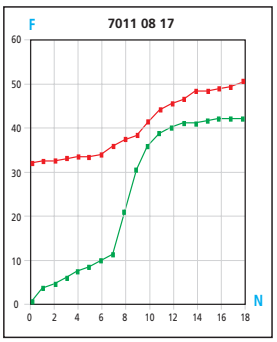


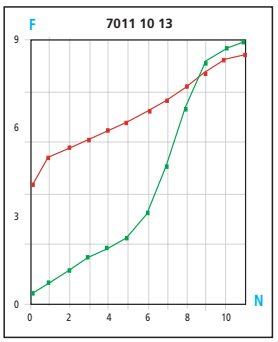


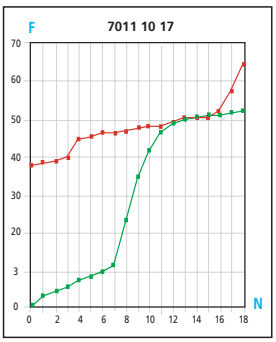












87 psi

= return direction

= controlled direction

N = number of turns

F = flow in SCFM

7012

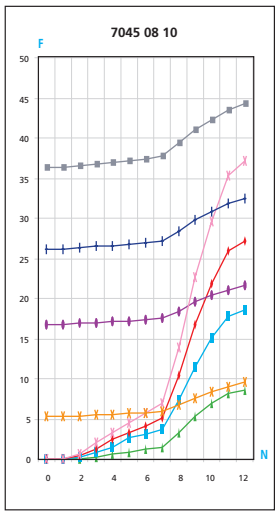
Flow characteristics of model 7012:

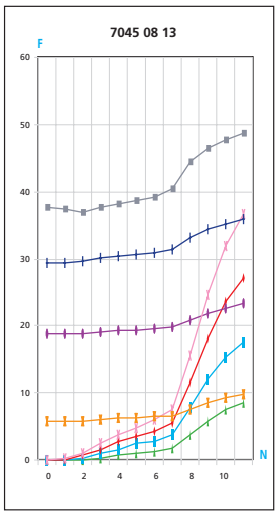
- **meter out version:** see model 7010 controlled direction
- **meter in version:** see model 7011 controlled direction

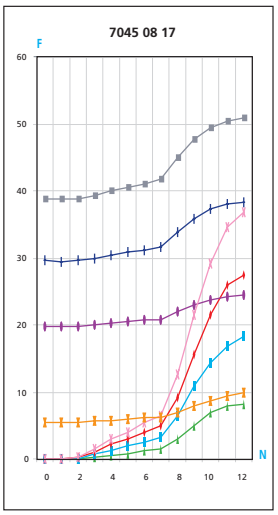
flow control performance characteristics

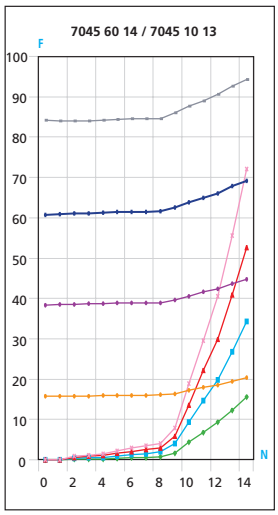
swivel outlet

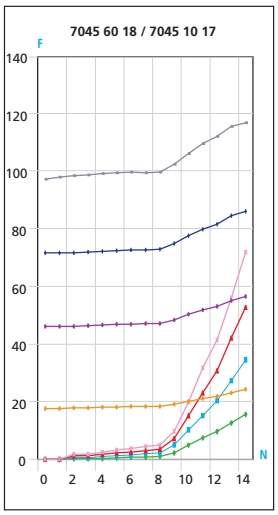
7045



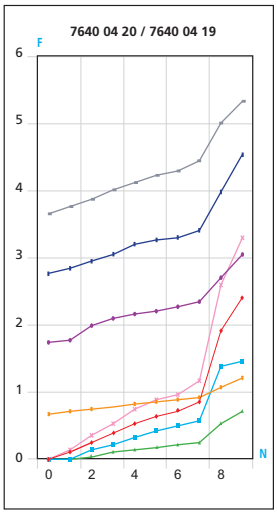


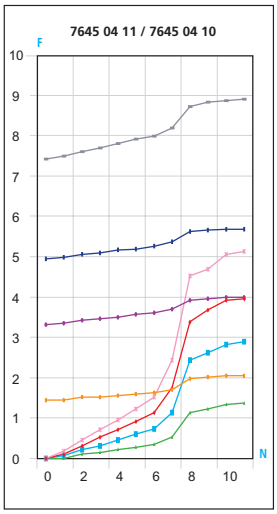


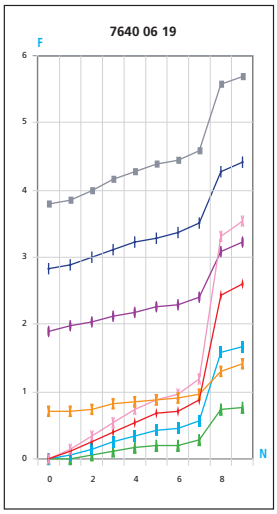


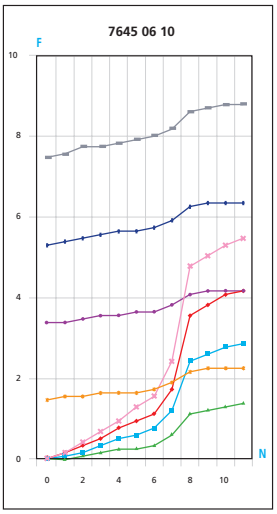


7640/7645

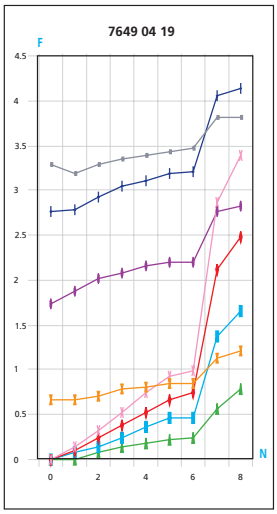


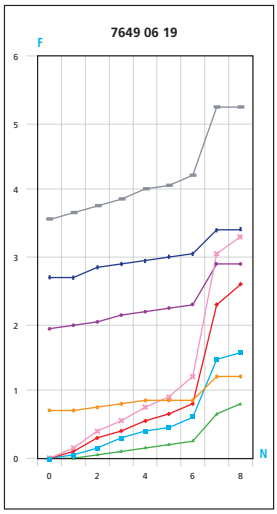






7649

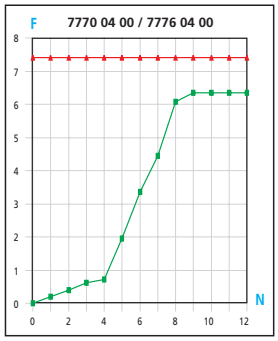


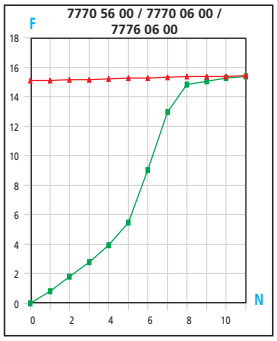


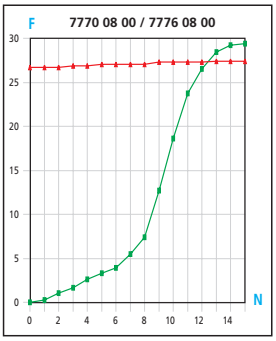
- Controlled Direction – 14.5 psi
- Controlled Direction – 43.5 psi
- Controlled Direction – 72.5 psi
- Controlled Direction – 101.5 psi
- Return Direction – 14.5 psi
- Return Direction – 43.5 psi
- Return Direction – 72.5 psi
- Return Direction – 101.5 psi

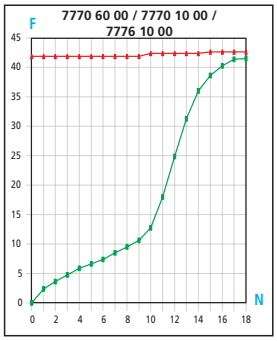
in-line flow controls

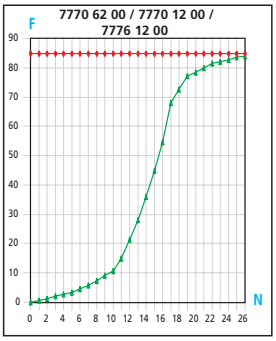
7770/7776











87 psi

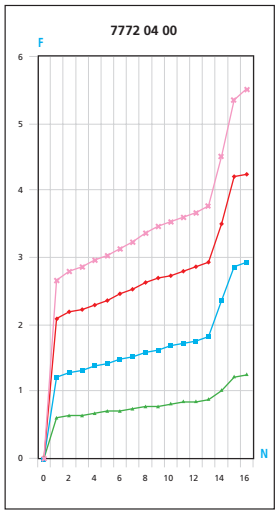
= return direction

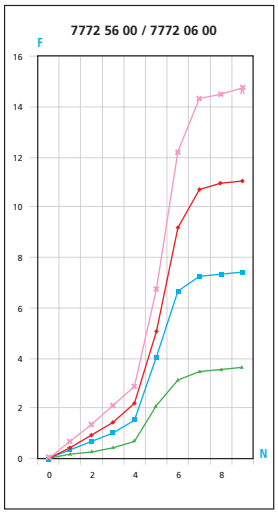
= controlled direction

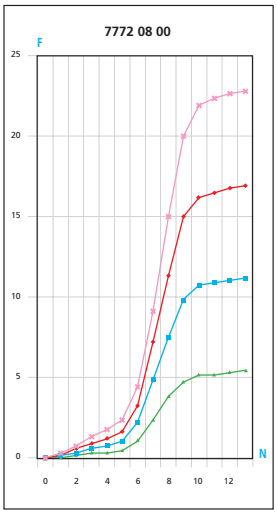
N = number of turns

F = flow in SCFM

7772







- Controlled Direction – 14.5 psi
- Controlled Direction – 43.5 psi
- Controlled Direction – 72.5 psi
- Controlled Direction – 101.5 psi
- Return Direction – 14.5 psi
- Return Direction – 43.5 psi
- Return Direction – 72.5 psi
- Return Direction – 101.5 psi