

Flow control valves

Series SCU, MCU, SVU, MVU, SCO, MCO

Unidirectional and bidirectional flow control valves

Banjo flow control regulators

Ports M5, G1/8, G1/4, G3/8, G1/2

2

CONTROL



These unidirectional and bidirectional flow controllers have been designed as small as possible so as to be mounted directly on valves or cylinders. The great variety of adjustable fittings makes it possible to complete the regulator with the most suitable system in relation to the available tube.

Only the G1/2 model is supplied complete with banjo flow controllers. For the other models the banjo flow controller is to be requested separately.

GENERAL DATA

Construction	needle type
Valve group	unidirectional and bidirectional controller
Materials	body and regulation screw: M5 = stainless steel; 1/8 - 1/4 - 3/8 - 1/2 = OT; seals = NBR
Mounting	by male thread
Ports	M5 - G1/8 - G1/4 - G3/8 - G1/2
Installation	in any position
Operating temperature	0°C ÷ 80°C (with dry air - 20°C)
Operating pressure	1 ÷ 10 bar
Nominal pressure	6 bar
Nominal flow	see graph
Nominal diameter	M5 = 1,5 mm - G1/8 = 2 mm - G1/4 = 4 mm - G3/8 = 7 mm - G1/2 = 12 mm
Fluid	filtered air

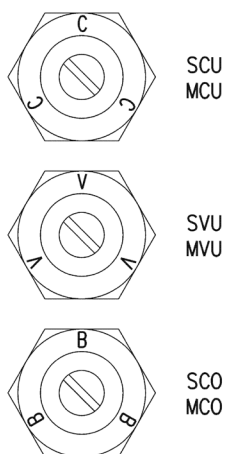
CODING EXAMPLE

M	CU	7	02	-	M5
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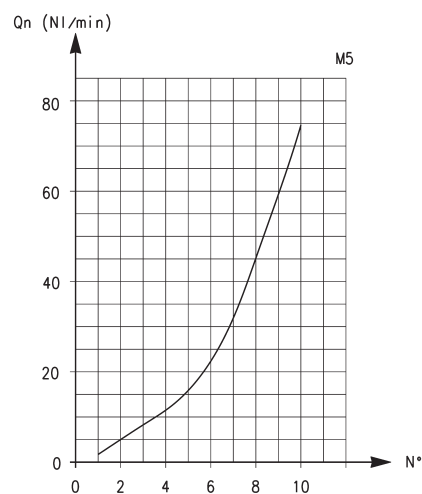
M	ACTUATION: M = Manual S = Screwdriver
CU	ASSEMBLY / VALVE TYPE: CU = directly on double-acting cylinders / unidirectional VU = directly on valves / unidirectional CO = directly on valves exhaust / bidirectional
7	VERSIONS: 6 = needle (screwdriver operated) 7 = needle (manual operated)
02	NOMINAL DIAMETER: 02 = $\varnothing$ 1,5 max 04 = $\varnothing$ 2 max 06 = $\varnothing$ 4 max 08 = $\varnothing$ 7 max 10 = $\varnothing$ 12 max
M5	PORTS: M5 = M5 1/8 = G1/8 1/4 = G1/4 3/8 = G3/8 1/2 = G1/2

To ensure the right choice of unidirectional flow controller, proceed as follows: calculate the quantity of air in NI/min (see cylinder Table); determine the stroke time of the cylinder; refer to graph to see which controller is the right type.

UNIDIRECTIONAL AND BIDIRECTIONAL FLOW CONTROLLERS

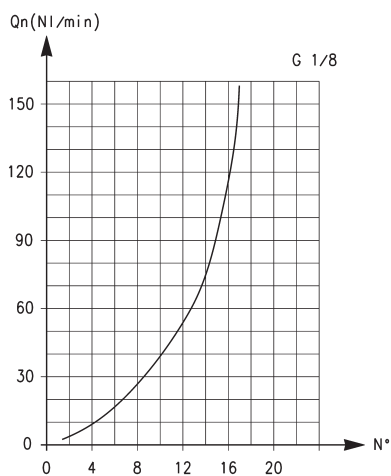


IDENTIFICATION (SEE CODING EXAMPLE)



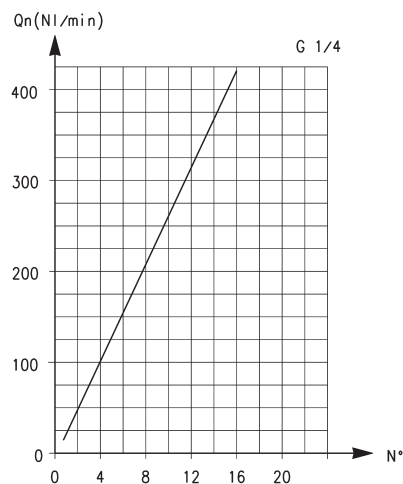
Flow Qn (NI/min.) from 2 → 1 with controller OPEN: 70
 Flow Qn (NI/min.) from 2 → 1 with controller CLOSED: 33
 Qn = supply pressure of 6 bar and with ΔP = 1 bar at the outlet
 N° = number of screw turns.

UNIDIRECTIONAL AND BIDIRECTIONAL FLOW CONTROL REGULATORS



Flow Q_n (NI/min.) from 2 → 1 with controller OPEN: 200
 Flow Q_n (NI/min.) from 2 → 1 with controller CLOSED: 70

Q_n = supply pressure of 6 bar and with $\Delta P = 1$ bar at the outlet
 N° = number of screw turns.



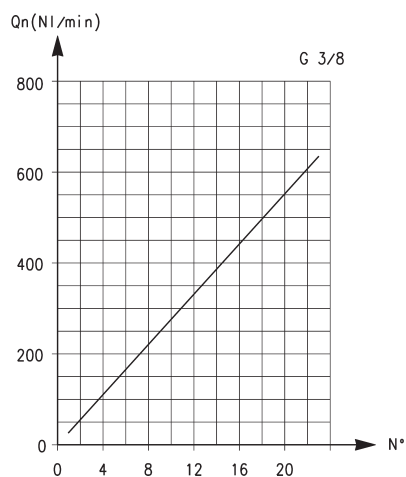
Flow Q_n (NI/min.) from 2 → 1 with controller OPEN: 530
 Flow Q_n (NI/min.) from 2 → 1 with controller CLOSED: 160

Q_n = supply pressure of 6 bar and with $\Delta P = 1$ bar at the outlet
 N° = number of screw turns.

2

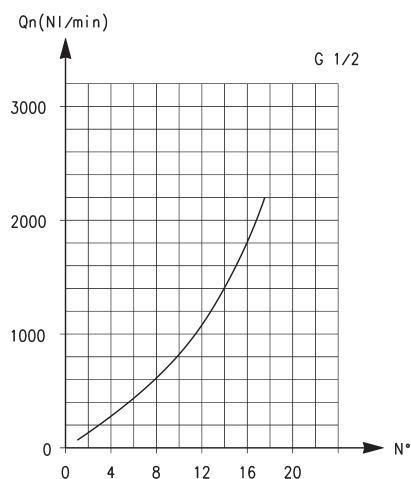
CONTROL

UNIDIRECTIONAL AND BIDIRECTIONAL FLOW CONTROL REGULATORS



Flow Q_n (NI/min.) from 2 → 1 with controller OPEN: 710
 Flow Q_n (NI/min.) from 2 → 1 with controller CLOSED: 410

Q_n = supply pressure of 6 bar and with $\Delta P = 1$ bar at the outlet
 N° = number of screw turns.



Flow Q_n (NI/min.) from 2 → 1 with controller OPEN: 2570
 Flow Q_n (NI/min.) from 2 → 1 with controller CLOSED: 1330

Q_n = supply pressure of 6 bar and with $\Delta P = 1$ bar at the outlet
 N° = number of screw turns.



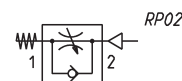
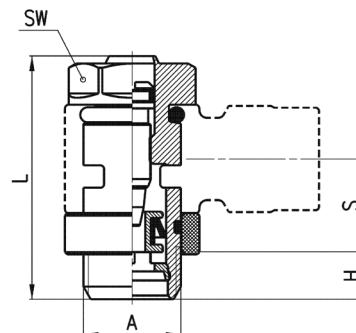
Unidirectional flow controllers Series SCU

For mounting on single-acting or double-acting cylinders.

Adjustment of setting by a screwdriver.

Ports: M5, G1/8, G1/4 and G3/8.

Assembly with fittings Mod. 6610; 6620; 1610; 1620; 2023; 1170.



Note: M5 flow controllers must be used together with M6 adjustable fittings.

DIMENSIONS

Mod.	A	H	L	S	SW
SCU 602-M5	M5	3,5	21,5	5,5	8
SCU 604-1/8	G1/8	5	31,5	12,5	12
SCU 606-1/4	G1/4	6	32,5	12,5	15
SCU 608-3/8	G3/8	7	40,5	12,5	18



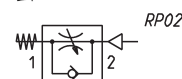
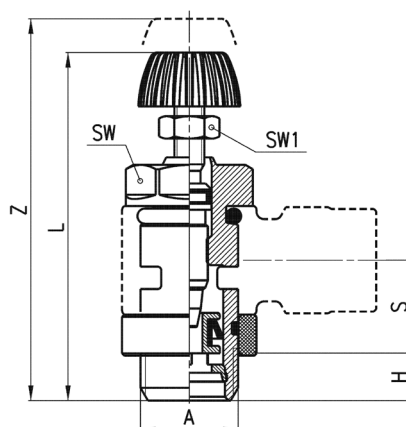
Unidirectional flow controllers Series MCU

For mounting on single-acting or double-acting cylinders.

Adjustment of setting by a manually operated knurled screw.

Ports: M5, G1/8, G1/4, G3/8.

Assembly with fittings Mod. 6610; 6620; 1610; 1620; 2023; 1170.



Note: M5 flow controllers must be used together with M6 adjustable fittings.

DIMENSIONS

Mod.	A	H	L	S	SW	SW1	Z
MCU 702-M5	M5	3,5	31	5,5	8	5,5	35
MCU 704-1/8	G1/8	5	41	12,5	12	7	46
MCU 706-1/4	G1/4	6	43,5	12,5	15	7	49
MCU 708-3/8	G3/8	7	52,5	12,5	18	10	60,5



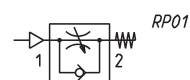
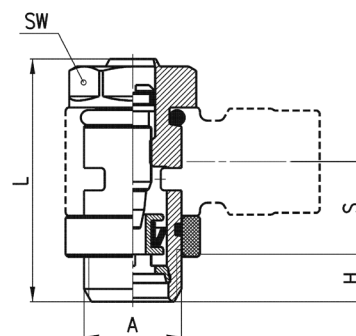
Unidirectional flow controllers Series SVU

For mounting on valves.

Adjustment of setting by a screwdriver.

Ports: M5, G1/8, G1/4.

Assembly with fittings Mod. 6610; 6620; 1610; 1620; 2023; 1170.



Note: M5 flow controllers must be used together with M6 adjustable fittings.

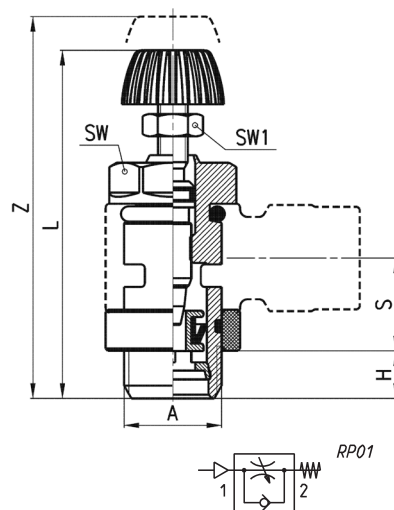
DIMENSIONS

Mod.	A	H	L	S	SW
SVU 602-M5	M5	3,5	21,5	5,5	8
SVU 604-1/8	G1/8	5	31,5	12,5	12
SVU 606-1/4	G1/4	6	32,5	12,5	15

Unidirectional flow controllers Series MVU

For mounting on valve. Adjustment of setting by a manually operated knurled screw.
Ports: M5, G1/8, G1/4.

Assembly with fittings Mod. 6610; 6620; 1610; 1620; 2023; 1170.



DIMENSIONS

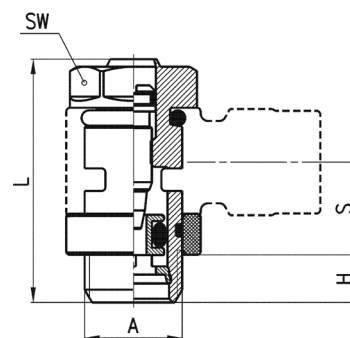
Mod.	A	H	L	S	SW	SW1	Z
MVU 702-M5	M5	3,5	31	5,5	8	5,5	35
MVU 704-1/8	G1/8	5	41	12,5	12	7	46
MVU 706-1/4	G1/4	6	43,5	12,5	15	7	49

Note: M5 flow controllers must be used together with M6 adjustable fittings.

Bidirectional flow controllers Series SCO

Adjustment of setting by a screwdriver.
Ports: M5, G1/8, G1/4.

Assembly with fittings Mod. 6610; 6620; 1610; 1620; 2023; 1170; 2905.



DIMENSIONS

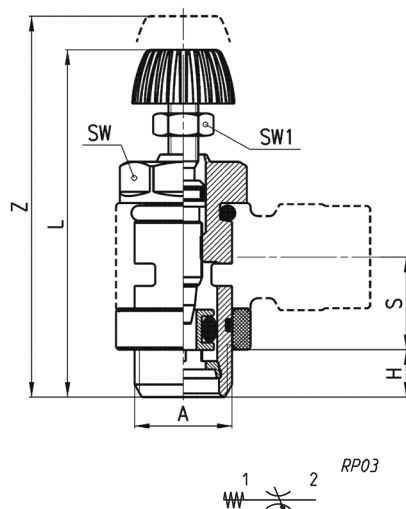
Mod.	A	H	L	S	SW
SCO 602-M5	M5	3,5	21,5	5,5	8
SCO 604-1/8	G1/8	5	31,5	12,5	12
SCO 606-1/4	G1/4	6	32,5	12,5	15

Note: M5 flow controllers must be used together with M6 adjustable fittings.

Bidirectional flow controllers Series MCO

Adjustment of setting by a manually operated knurled screw.
Ports: M5, G1/8, G1/4.

Assembly with fittings Mod. 6610; 6620; 1610; 1620; 2023; 1170; 2905.



DIMENSIONS

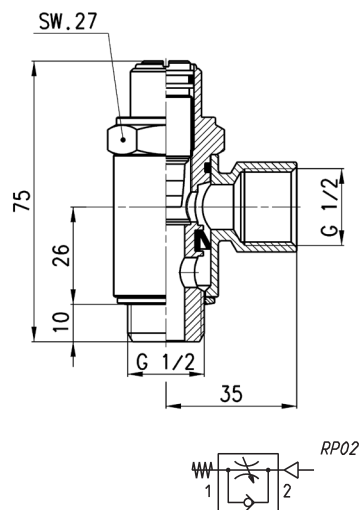
Mod.	A	H	L	S	SW	SW1	Z
MCO 702-M5	M5	3,5	31	5,5	8	5,5	35
MCO 704-1/8	G1/8	5	41	12,5	12	7	46
MCO 706-1/4	G1/4	6	43,5	12,5	15	7	49

Note: M5 flow controllers must be used together with M6 adjustable fittings.



Unidirectional flow controllers Series SCU

For mounting on single-acting or double-acting cylinders.
Screwdriver adjustment.

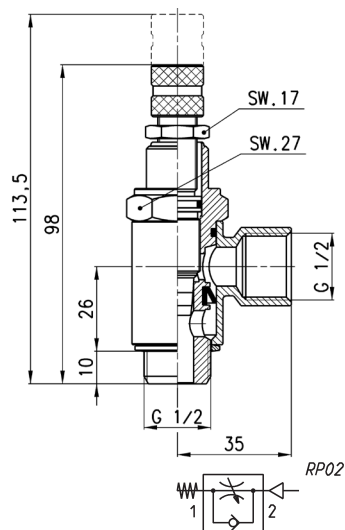


Mod.

SCU 610-1/2


Unidirectional flow controllers Series MCU

For mounting on single-acting or double-acting cylinders.
Adjustment of setting by a manually operated knurled screw.

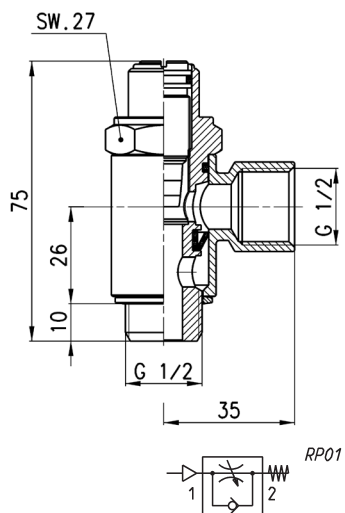


Mod.

MCU 710-1/2


Unidirectional flow controllers Series SVU

For mounting on valves.
Screwdriver adjustment.

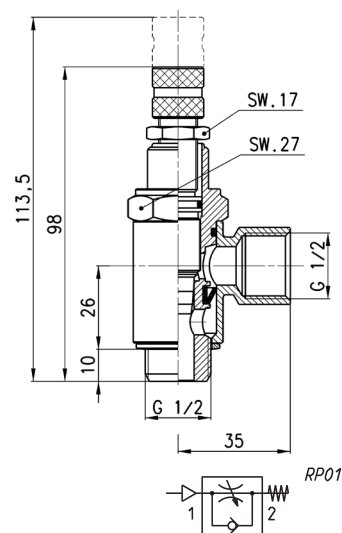


Mod.

SVU 610-1/2

Unidirectional flow controllers Series MVU

For mounting on valve.
Adjustment of setting by a manually operated knurled screw.

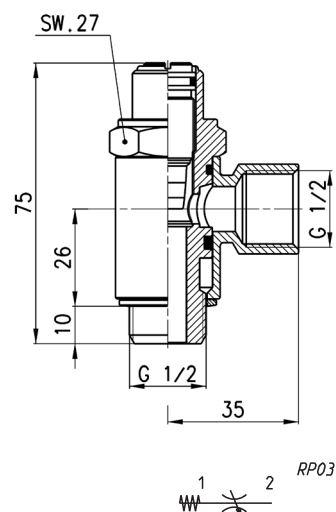


Mod.

MVU 710-1/2

Bidirectional flow controllers Series SCO

Screwdriver adjustment.

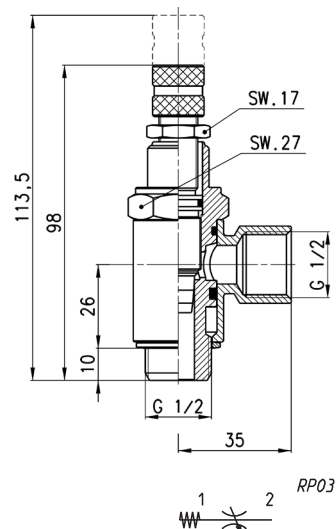


Mod.

SCO 610-1/2

Bidirectional flow controllers Series MCO

Adjustment of setting by a manually operated knurled screw.



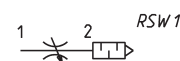
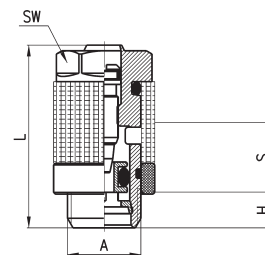
Mod.

MCO 710-1/2



Silenced exhaust controller Mod. SCO + 2905

The flow control valve Mod. 2905 and the silencer Mod. 2905 are supplied separately.
For further information about the silencer see page 2/9.05.04.



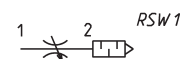
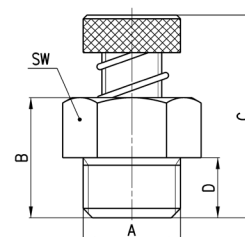
DIMENSIONS

Mod.	A	H	L	S	SW
SCO 602-M5+2905 M5	M5	3.5	21.5	5.5	8
SCO 604-1/8+2905 1/8	G1/8	5	31.5	12.5	12
SCO 606-1/4+2905 1/4	G1/4	6	32.5	12.5	15



Flow control valves with silencer Series RSW

Flow control valves with silencer.
Ports: G1/8, G1/4, G1/2.



DIMENSIONS

Mod.	A	B	C	D	SW	Q* (Nl/min)
RSW 1/8	G1/8	13	22	6	12	410
RSW 1/4	G1/4	16	27	8	16	650
RSW 1/2	G1/2	26	35	11	26	1590

*determined with supply pressure
6 bar with free flow; ensuring
screw is open to maximum output.