

# Series SCU, MCU, SVU, MVU, SCO, MCO flow control valves

Unidirectional and bidirectional banjo flow control regulators

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



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

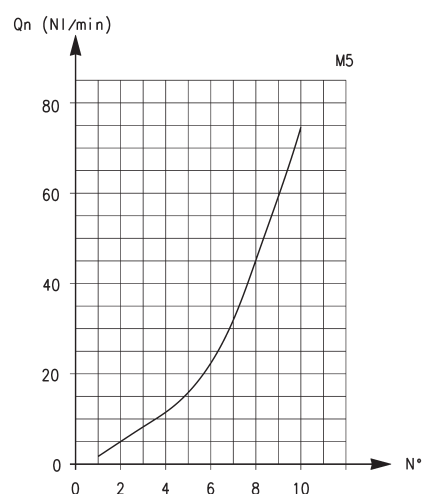
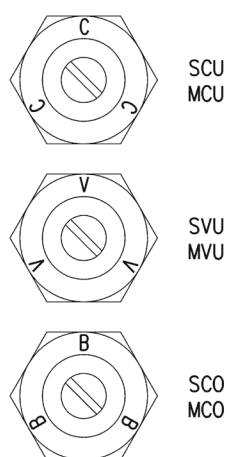
Construction	needle type
Valve group	unidirectional and bidirectional controller
Materials	body and regulation screw: M5 = stainless steel; 1/8 - 1/4 - 3/8 - 1/2 = OT; seals = NBR
Mounting	by male thread
Ports	M5 - G1/8 - G1/4 - G3/8 - G1/2
Installation	in any position
Operating temperature	0°C ÷ 80°C (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

<b>M</b>	<b>CU</b>		<b>7</b>	<b>02</b>	<b>-</b>	<b>M5</b>
<b>M</b>	<b>ACTUATION:</b> M = Manual S = Screwdriver					
<b>CU</b>	<b>ASSEMBLY:</b> CU = on cylinders unidirectional VU = on valves unidirectional CO = bidirectional					
<b>7</b>	<b>VERSIONS:</b> 6 = needle (screwdriver operated) 7 = needle (manual operated)					
<b>02</b>	<b>NOMINAL DIAMETER:</b> 02 = Ø 1,5 max 04 = Ø 2 max 06 = Ø 4 max 08 = Ø 7 max 10 = Ø 12 max					
<b>M5</b>	<b>PORTS:</b> 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 OF DIFFERENT TYPES:

SCU - MCU = assembly directly on the cylinders

SVU - MVU = assembly directly on the valves

SCO - MCO = assembly directly on the cylinders or valves

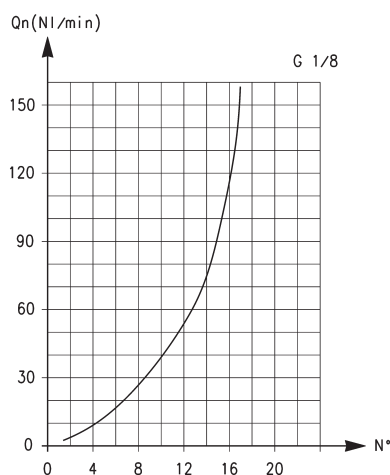
Flow Qn (NI/min.) from 2 → 1 with controller OPEN: 70

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

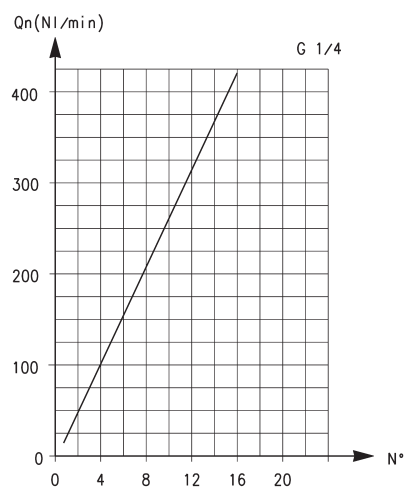
N° = number of screw turns.

## UNIDIRECTIONAL AND BIDIRECTIONAL FLOW CONTROL REGULATORS



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

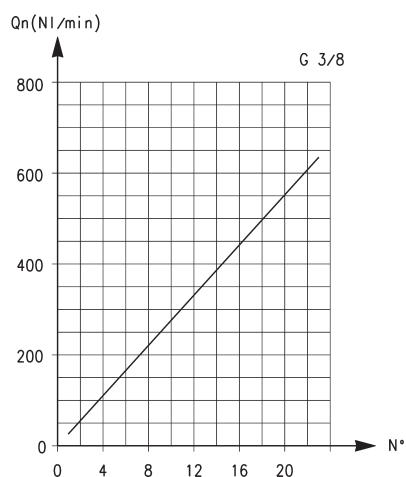
$Q_n$  = supply pressure of 6 bar and with  $\Delta P = 1$  bar at the outlet  
 $N^\circ$  = number of screw turns.



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

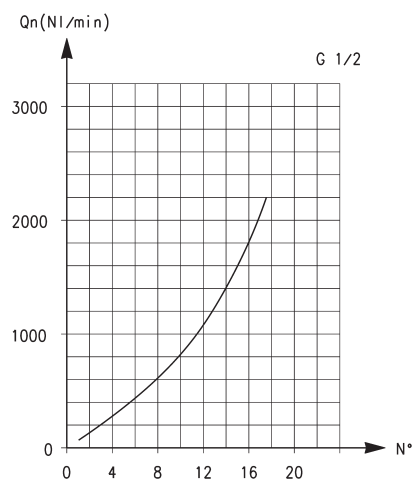
$Q_n$  = supply pressure of 6 bar and with  $\Delta P = 1$  bar at the outlet  
 $N^\circ$  = number of screw turns.

## UNIDIRECTIONAL AND BIDIRECTIONAL FLOW CONTROL REGULATORS



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

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



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

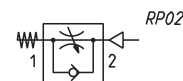
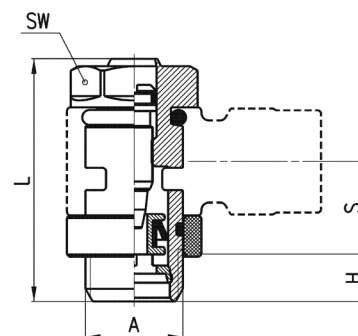
$Q_n$  = supply pressure of 6 bar and with  $\Delta P = 1$  bar at the outlet  
 $N^\circ$  = number of screw turns.

## 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.

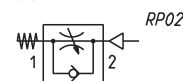
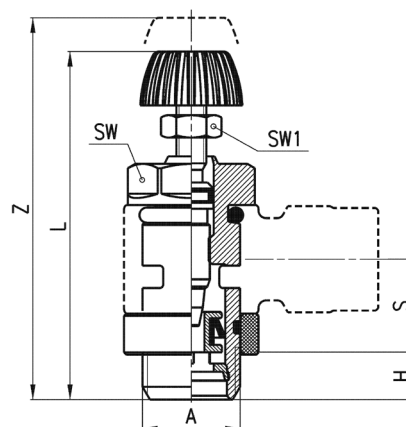
DIMENSIONS					
Mod.	A	H	L	S	SW
SCU 602-M5	M5	3,5	21,5	5,5	8
SCU 604-1/8	G1/8	5	31,5	12,5	12
SCU 606-1/4	G1/4	6	32,5	12,5	15
SCU 608-3/8	G3/8	7	40,5	12,5	18

## 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.

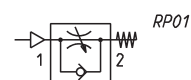
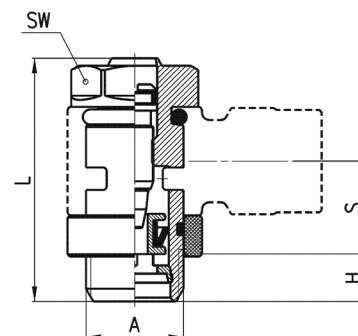
DIMENSIONS							
Mod.	A	H	L	S	SW	SW1	Z
MCU 702-M5	M5	3,5	31	5,5	8	5,5	35
MCU 704-1/8	G1/8	5	41	12,5	12	7	46
MCU 706-1/4	G1/4	6	43,5	12,5	15	7	49
MCU 708-3/8	G3/8	7	52,5	12,5	18	10	60,5

## 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.

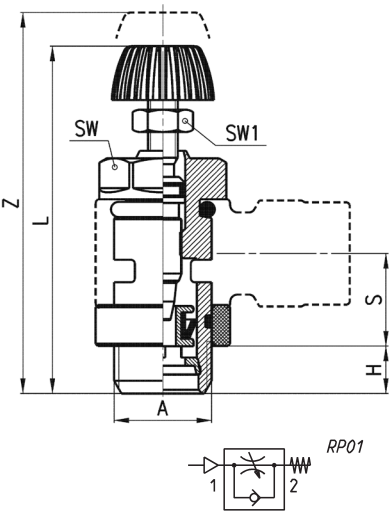
DIMENSIONS					
Mod.	A	H	L	S	SW
SVU 602-M5	M5	3,5	21,5	5,5	8
SVU 604-1/8	G1/8	5	31,5	12,5	12
SVU 606-1/4	G1/4	6	32,5	12,5	15

**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.



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

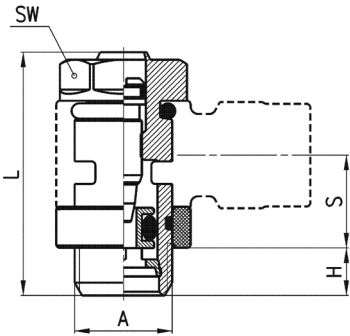
DIMENSIONS							
Mod.	A	H	L	S	SW	SW1	Z
MVU 702-M5	M5	3,5	31	5,5	8	5,5	35
MVU 704-1/8	G1/8	5	41	12,5	12	7	46
MVU 706-1/4	G1/4	6	43,5	12,5	15	7	49

**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.



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

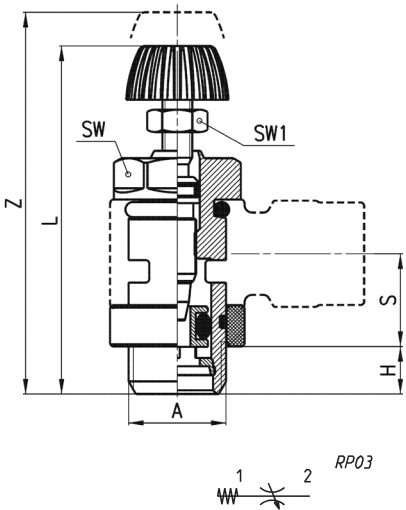
DIMENSIONS					
Mod.	A	H	L	S	SW
SCO 602-M5	M5	3,5	21,5	5,5	8
SCO 604-1/8	G1/8	5	31,5	12,5	12
SCO 606-1/4	G1/4	6	32,5	12,5	15

**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.



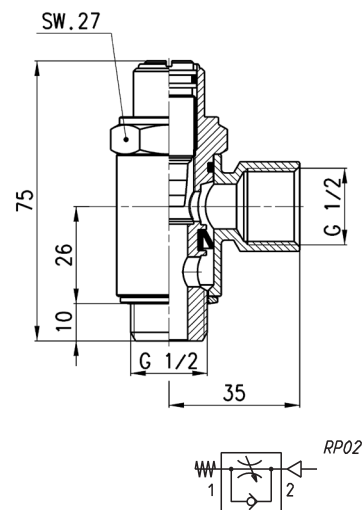
Note: M5 flow controllers must be used together with M6 adjustable fittings.

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

## Unidirectional flow controllers Series SCU



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

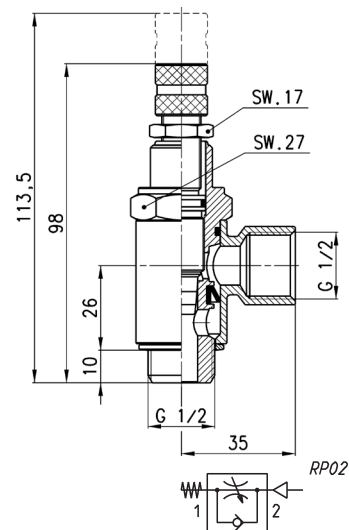


Mod.  
SCU 610-1/2

## Unidirectional flow controllers Series MCU



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

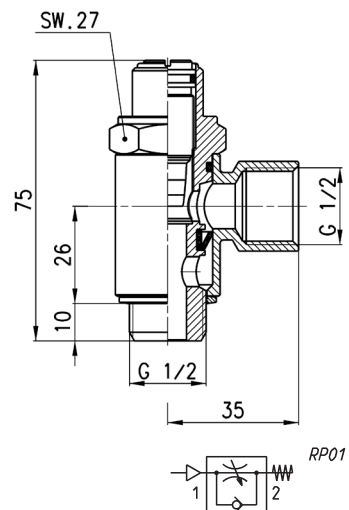


Mod.  
MCU 710-1/2

## Unidirectional flow controllers Series SVU



For mounting on valves.  
Screwdriver adjustment.

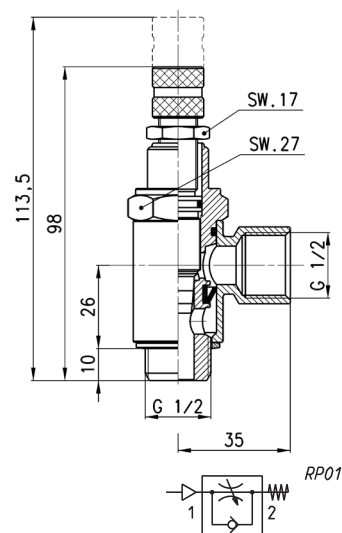


Mod.  
SVU 610-1/2

## Unidirectional flow controllers Series MVU



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



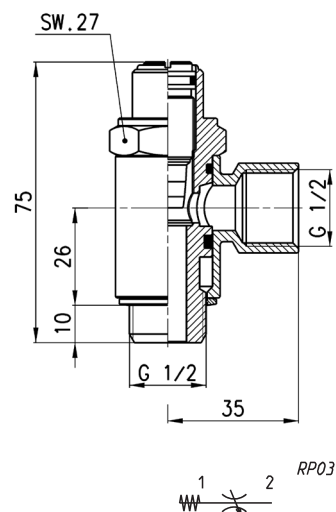
Mod.

MVU 710-1/2

## Bidirectional flow controllers Series SCO



Screwdriver adjustment.



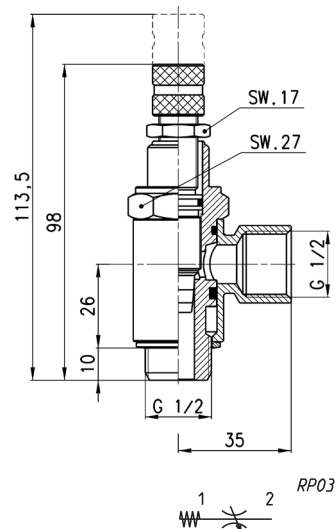
Mod.

SCO 610-1/2

## Bidirectional flow controllers Series MCO



Adjustment of setting by a manually operated knurled screw.



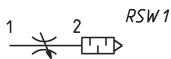
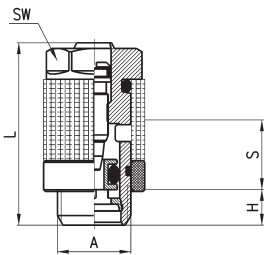
Mod.

MCO 710-1/2

## Silenced exhaust controllers Mod. SCO + 2905



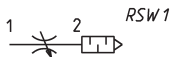
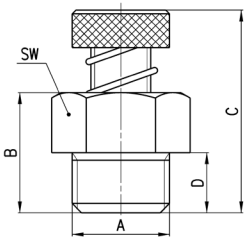
The flow control valve Mod. SCO and the silencer Mod. 2905 are supplied separately.



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

## 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	10.5	22	6	13	410
RSW 1/4	G1/4	13	27	7.5	16	650
RSW 3/8	G3/8	16	30	9.5	20	1100
RSW 1/2	G1/2	18	40	10.5	26	1700

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