

# 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

<b>Construction</b>	needle type
<b>Valve group</b>	unidirectional and bidirectional controller
<b>Materials</b>	body and regulation screw: M5 = stainless steel; 1/8 - 1/4 - 3/8 - 1/2 = OT; seals = NBR
<b>Mounting</b>	by male thread
<b>Ports</b>	M5 - G1/8 - G1/4 - G3/8 - G1/2
<b>Installation</b>	in any position
<b>Operating temperature</b>	0°C ÷ 80°C (with dry air - 20°C)
<b>Operating pressure</b>	1 ÷ 10 bar
<b>Nominal pressure</b>	6 bar
<b>Nominal flow</b>	see graph
<b>Nominal diameter</b>	M5 = 1,5 mm - G1/8 = 2 mm - G1/4 = 4 mm - G3/8 = 7 mm - G1/2 = 12 mm
<b>Fluid</b>	filtered air. If lubricated air is used, it is recommended to use ISOVG 32 oil. Once applied the lubrication should never be interrupted.

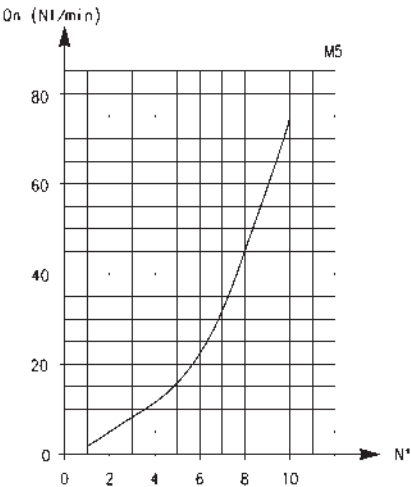
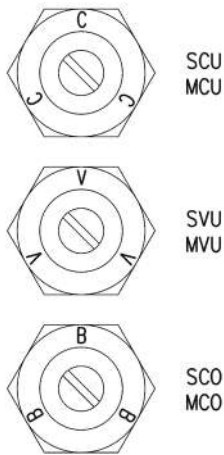
CODING EXAMPLE

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

SERIES SCU, MCU, SVU, MVU, SCO, MCO VALVES

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

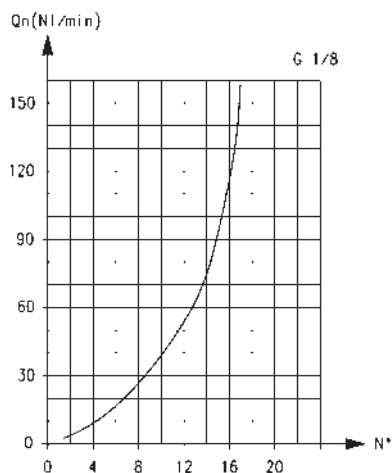


IDENTIFICATION OF DIFFERENT TYPES:  
SCU - MCU = assembly directly on the cylinders  
SVU - MVU = assembly directly on the valves  
SCO - MCO = assembly directly on the cylinders or valves

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.

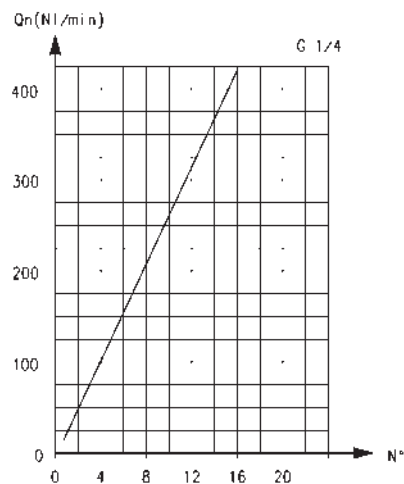
## UNIDIRECTIONAL AND BIDIRECTIONAL FLOW CONTROL REGULATORS

SERIES SCU, MCU, SVU, MVU, SCO, MCO VALVES



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

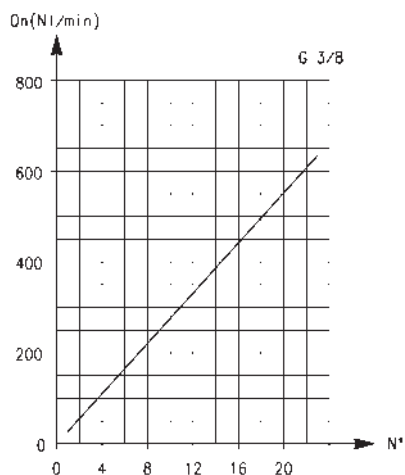
$Q_n$  = supply pressure of 6 bar and with  $\Delta P = 1$  bar at the outlet  
 $N^\circ$  = number of screw turns.



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

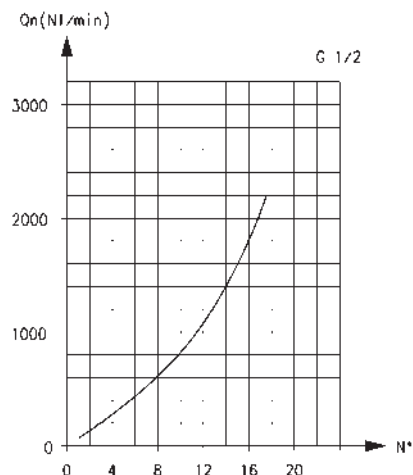
$Q_n$  = supply pressure of 6 bar and with  $\Delta P = 1$  bar at the outlet  
 $N^\circ$  = number of screw turns.

## 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.



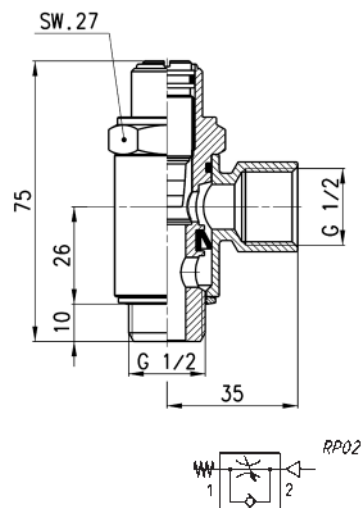
Flow  $Q_n$  (NL/min.) from 2 → 1 with controller OPEN: 2570  
Flow  $Q_n$  (NL/min.) from 2 → 1 with controller CLOSED: 1330

$Q_n$  = 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.  
Screwdriver adjustment.



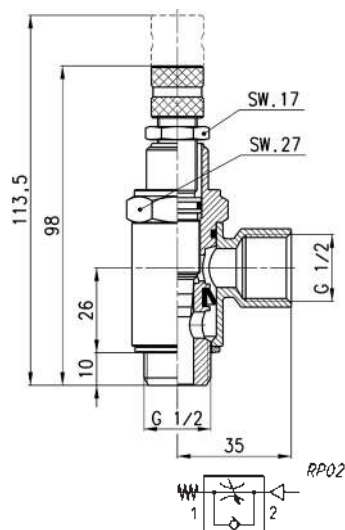
Mod.

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.



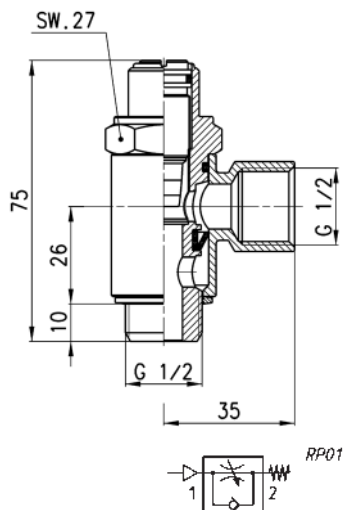
Mod.

MCU 710-1/2

### Unidirectional flow controllers Series SVU



For mounting on valves.  
Screwdriver adjustment.



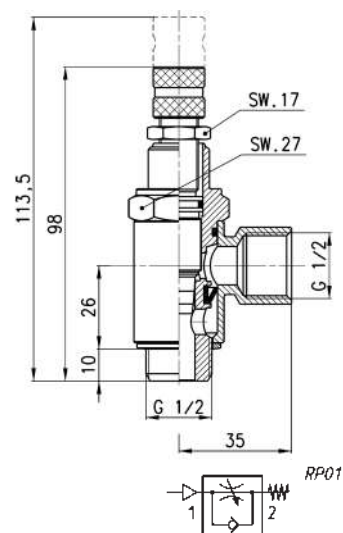
Mod.

SVU 610-1/2

## Unidirectional flow controllers Series MVU



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



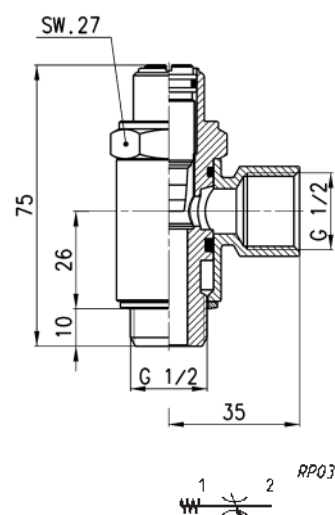
Mod.

MVU 710-1/2

## Bidirectional flow controllers Series SCO



Screwdriver adjustment.



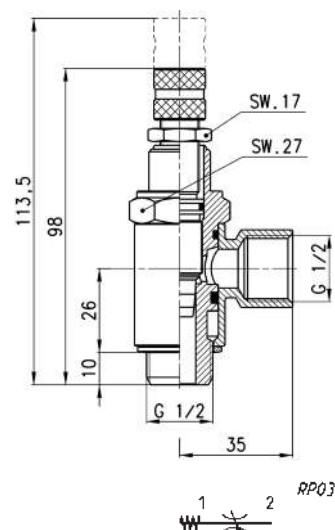
Mod.

SCO 610-1/2

## Bidirectional flow controllers Series MCO



Adjustment of setting by a manually operated knurled screw.



Mod.

MCO 710-1/2