

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



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

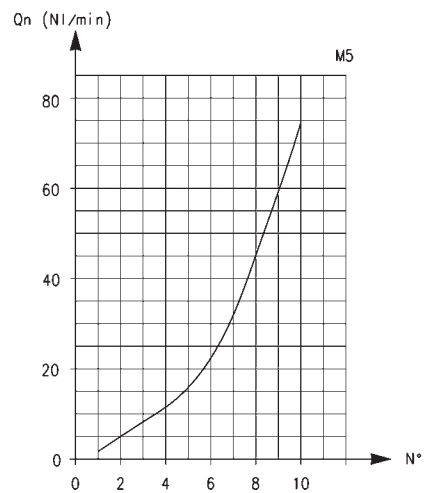
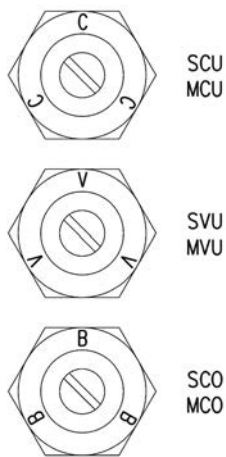
CODING EXAMPLE

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.

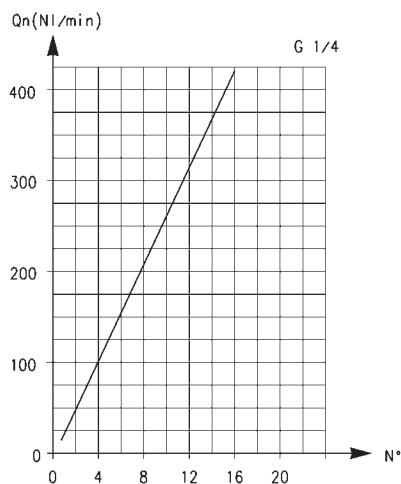
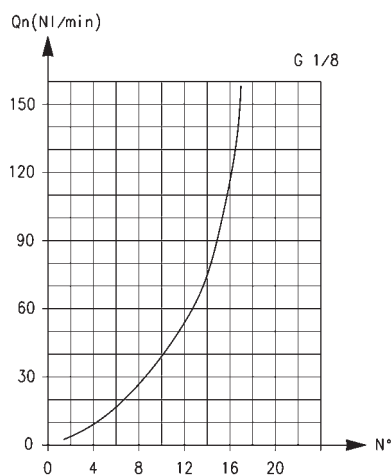
UNIDIRECTIONAL AND BIDIRECTIONAL FLOW CONTROLLERS



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 $\Delta P = 1$ bar at the outlet
 N° = number of screw turns.

UNIDIRECTIONAL AND BIDIRECTIONAL FLOW CONTROL REGULATORS



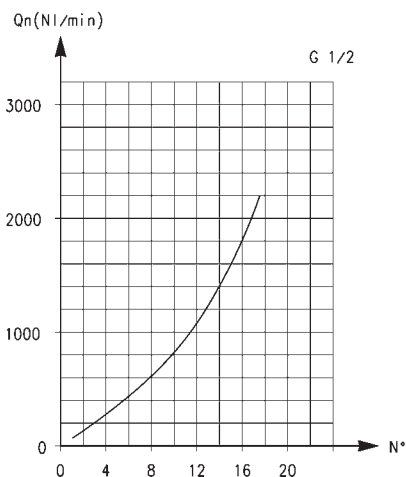
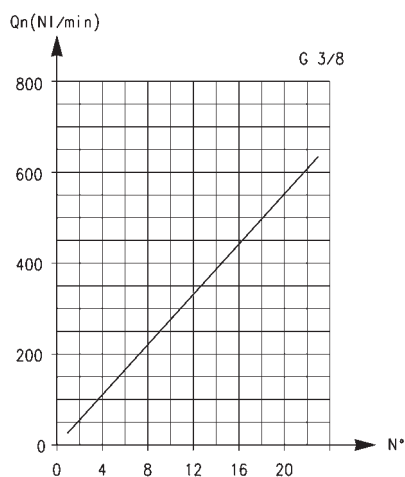
Flow Qn (NI/min.) from 2 → 1 with controller OPEN: 200
 Flow Qn (NI/min.) from 2 → 1 with controller CLOSED: 70

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

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

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

UNIDIRECTIONAL AND BIDIRECTIONAL FLOW CONTROL REGULATORS



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

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

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

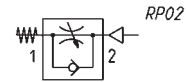
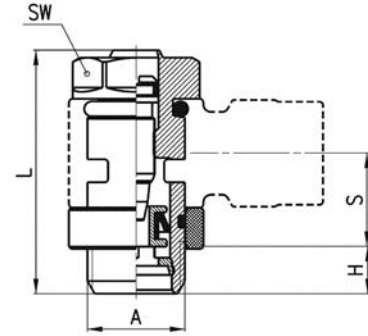
Qn = supply pressure of 6 bar and with $\Delta P = 1$ bar at the outlet
 N° = number of screw turns.

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.

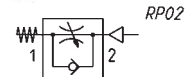
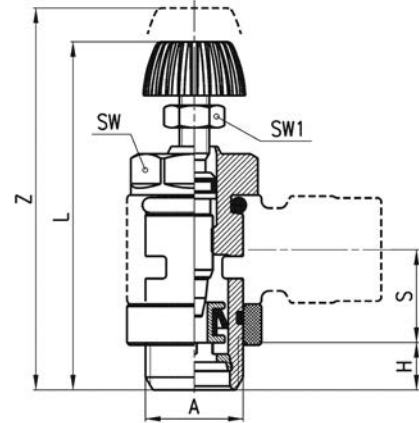
DIMENSIONS					
Mod.	A	H	L	S	SW
SCU 602-M5	M5	3,5	21,5	5,5	8
SCU 604-1/8	G1/8	5	31,5	12,5	12
SCU 606-1/4	G1/4	6	32,5	12,5	15
SCU 608-3/8	G3/8	7	40,5	12,5	18

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.

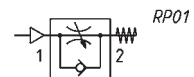
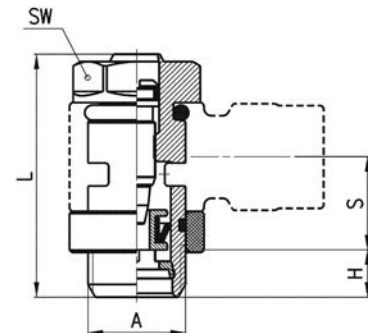
DIMENSIONS							
Mod.	A	H	L	S	SW	SW1	Z
MCU 702-M5	M5	3,5	31	5,5	8	5,5	35
MCU 704-1/8	G1/8	5	41	12,5	12	7	46
MCU 706-1/4	G1/4	6	43,5	12,5	15	7	49
MCU 708-3/8	G3/8	7	52,5	12,5	18	10	60,5

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.

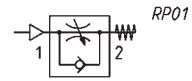
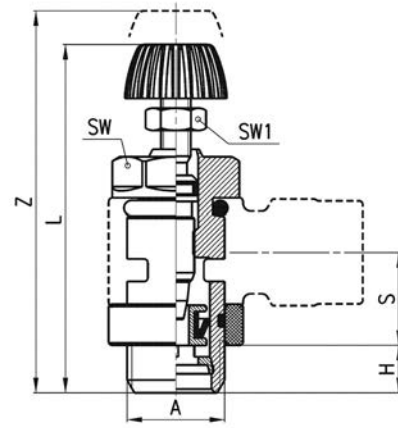
DIMENSIONS					
Mod.	A	H	L	S	SW
SVU 602-M5	M5	3,5	21,5	5,5	8
SVU 604-1/8	G1/8	5	31,5	12,5	12
SVU 606-1/4	G1/4	6	32,5	12,5	15



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.



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

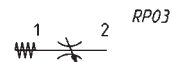
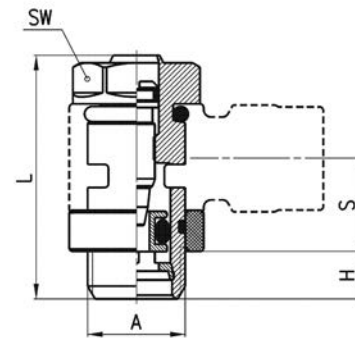
DIMENSIONS							
Mod.	A	H	L	S	SW	SW1	Z
MVU 702-M5	M5	3,5	31	5,5	8	5,5	35
MVU 704-1/8	G1/8	5	41	12,5	12	7	46
MVU 706-1/4	G1/4	6	43,5	12,5	15	7	49



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.

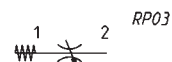
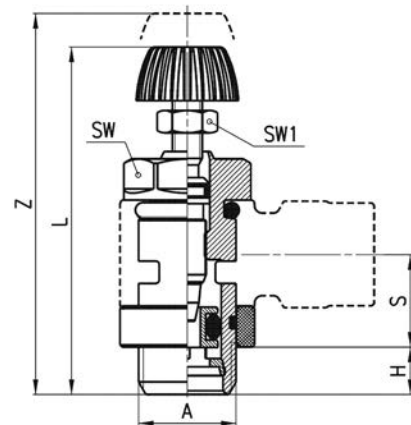
DIMENSIONS					
Mod.	A	H	L	S	SW
SCO 602-M5	M5	3,5	21,5	5,5	8
SCO 604-1/8	G1/8	5	31,5	12,5	12
SCO 606-1/4	G1/4	6	32,5	12,5	15



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.

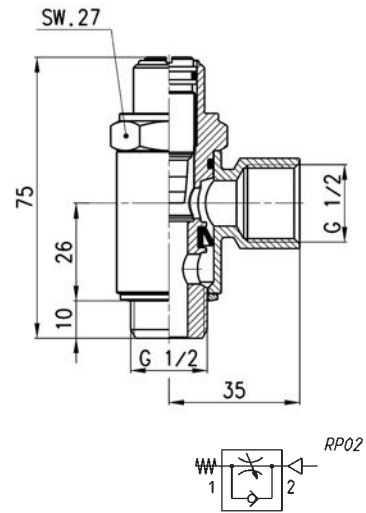


Note: M5 flow controllers must be used together with M6 adjustable fittings.

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

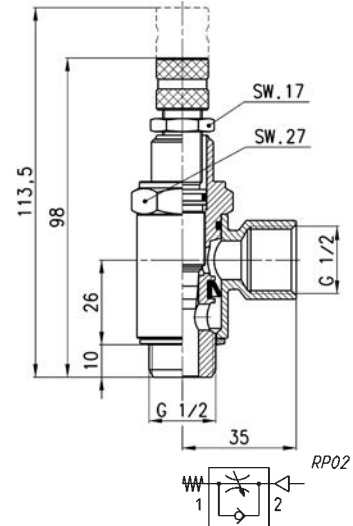
For mounting on single-acting or double-acting cylinders.
Screwdriver adjustment.



Mod.
SCU 610-1/2

Unidirectional flow controllers Series MCU

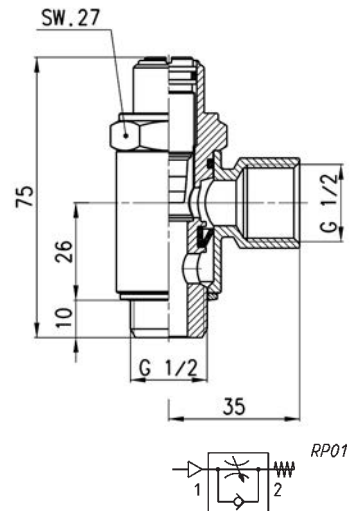
For mounting on single-acting or double-acting cylinders.
Adjustment of setting by a manually operated knurled screw.



Mod.
MCU710-1/2

Unidirectional flow controllers Series SVU

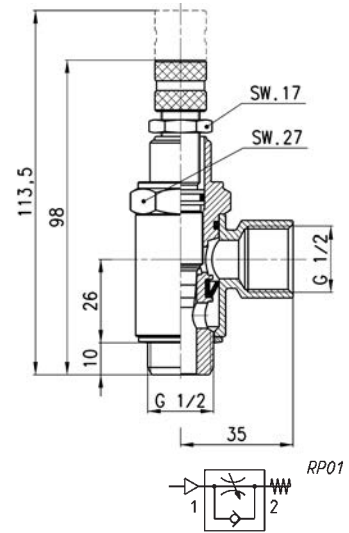
For mounting on valves.
Screwdriver adjustment.



Mod.
SVU 610-1/2


Unidirectional flow controllers Series MVU

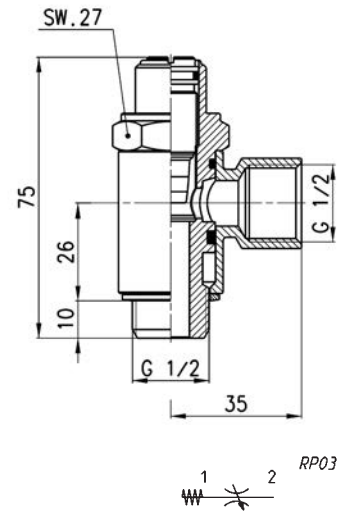
For mounting on valve.
Adjustment of setting by a manually operated knurled screw.



Mod.
MVU 710-1/2


Bidirectional flow controllers Series SCO

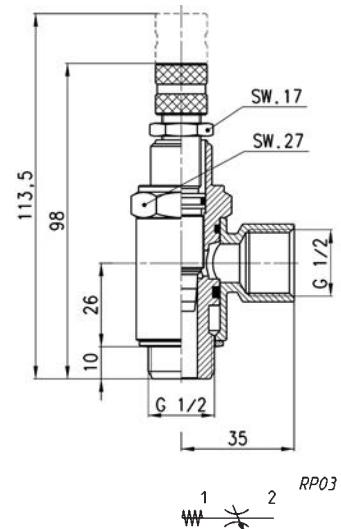
Screwdriver adjustment.



Mod.
SCO 610-1/2


Bidirectional flow controllers Series MCO

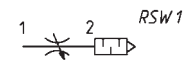
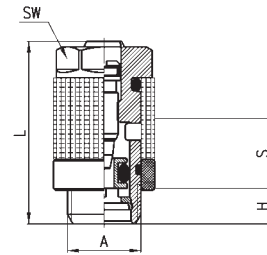
Adjustment of setting by a manually operated knurled screw.



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.

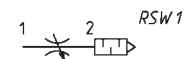
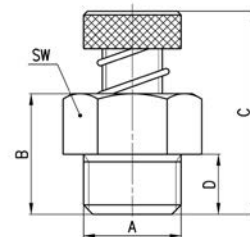


DIMENSIONS

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* (NI/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.

Flow control valves

Series GSCU, GMCU, GSVU, GMVU, GSCO, GMCO

Unidirectional and bidirectional flow control valves
Banjo flow controllers nominal diameters 1,5 - 3,5 - 5 mm
Ports M5, G1/8 and G1/4



These unidirectional and bidirectional flow controllers have been designed as small as possible to enable mounting directly on valves or cylinders. The flow regulation range is wide and gradual, allowing the regulation to be very accurate either at minimum or maximum flow.

GENERAL DATA

Construction	needle - type
Valve group	unidirectional and bidirectional controller
Materials	body and screws M5 inox; 1/8 - 1/4 - 3/8 - 1/2 OT58 seals NBR
Mounting	by male threaded
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

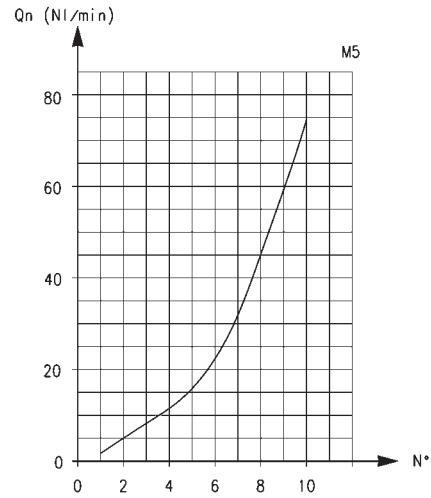
CODING EXAMPLE

GM	CU	9	03	-	1/8	-	6
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GM	ACTUATION: GM = manual GS = screwdriver																					
CU	ASSEMBLY: CU = on cylinders unidirectional VU = on valves unidirectional CO = bidirectional																					
9	VERSIONS: 8 = needle (screwdriver operated) 9 = needle (manually operated)																					
03	FLOW CONTROL RANGE: <table border="1"> <thead> <tr> <th></th> <th>size</th> <th>∅ tube</th> </tr> </thead> <tbody> <tr> <td>13 =</td> <td>1.5</td> <td>3</td> </tr> <tr> <td>14 =</td> <td>1.5</td> <td>4</td> </tr> <tr> <td>03 =</td> <td>3.5</td> <td>6</td> </tr> <tr> <td>04 =</td> <td>3.5</td> <td>8</td> </tr> <tr> <td>05 =</td> <td>5</td> <td>8</td> </tr> <tr> <td>06 =</td> <td>5</td> <td>10</td> </tr> </tbody> </table>		size	∅ tube	13 =	1.5	3	14 =	1.5	4	03 =	3.5	6	04 =	3.5	8	05 =	5	8	06 =	5	10
	size	∅ tube																				
13 =	1.5	3																				
14 =	1.5	4																				
03 =	3.5	6																				
04 =	3.5	8																				
05 =	5	8																				
06 =	5	10																				
1/8	PORTS: M5 1/8 1/4																					
6	∅ TUBE: 3 4 6 8 10																					

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 CONTROL REGULATORS

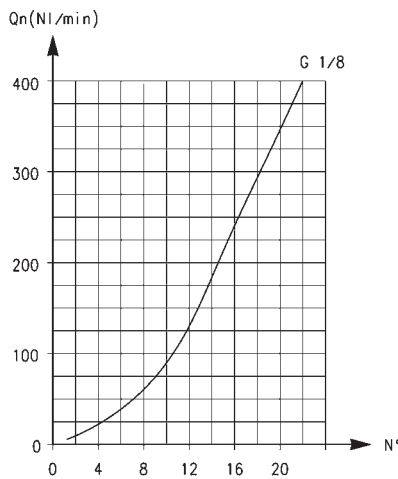


To ensure the right choice of unidirectional flow controller, proceed as follows: calculate the quantity of air in NI/min (see cylinder Table); determine the stroke time of the cylinder; refer to graph to see which controller is the right type. In the case of bidirectional regulators, refer to the graph and check whether the flow control range is suitable for the work required.

M5
 Flow Qn (NI/min.) from 2 → 1 with controller OPEN: 70
 Flow Qn (NI/min.) from 2 → 1 with controller CLOSED: 33

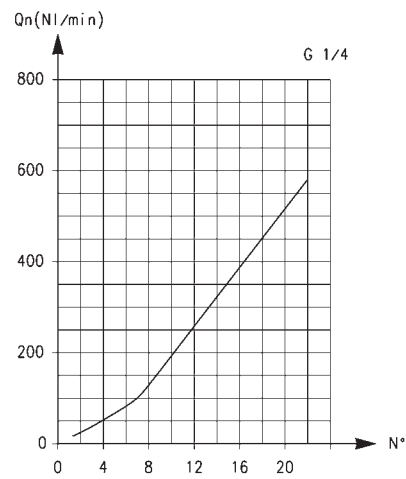
N° = number of screw turns
 NB: Qn is determined with a supply pressure of 6 bar and with ΔP = 1 bar at the outlet.

UNIDIRECTIONAL AND BIDIRECTIONAL FLOW CONTROL REGULATORS



G1/8
 Flow Qn (NI/min.) from 2 → 1 with controller OPEN: 440
 Flow Qn (NI/min.) from 2 → 1 with controller CLOSED: 170

N° = number of screw turns
 NB: Qn is determined with a supply pressure of 6 bar and with ΔP = 1 bar at the outlet.



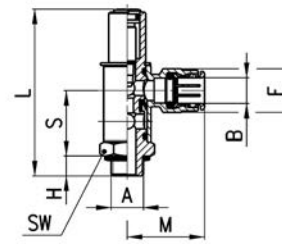
G1/4
 Flow Qn (NI/min.) from 2 → 1 with controller OPEN: 790
 Flow Qn (NI/min.) from 2 → 1 with controller CLOSED: 460

N° = number of screw turns
 NB: Qn is determined with a supply pressure of 6 bar and with ΔP = 1 bar at the outlet.

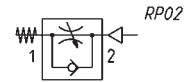


Valves Series GSCU

Unidirectional flow controller for mounting on single-acting or double-acting cylinders.
Screwdriver adjustment.
Ports: M5, G1/8, G1/4 .

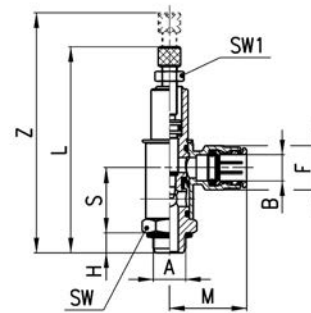


DIMENSIONS								
Mod.	A	B	S	H	L	M	F	SW
GSCU 813-M5-3	M5	3	12	3	27,5	12,5	6,5	8
GSCU 814-M5-4	M5	4	12	3	27,5	19	8,8	8
GSCU 803-1/8-6	G1/8	6	22,5	5	50	26,5	13	14
GSCU 804-1/8-8	G1/8	8	22,5	5	50	28	15	14
GSCU 805-1/4-8	G1/4	8	27	7	67,5	28,5	15	19
GSCU 806-1/4-10	G1/4	10	27	7	67,5	31	17,5	19

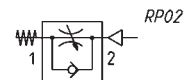


Valves Series GMCU

Unidirectional flow controller for mounting on single-acting or double-acting cylinders.
Knurled screw adjustment.
Ports: M5, G1/8, G1/4.

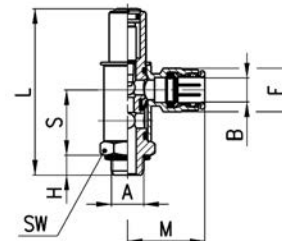


DIMENSIONS										
Mod.	A	B	S	H	L	Z	M	F	SW	SW1
GMCU 913-M5-3	M5	3	12	3	37	42,5	12,5	6,5	8	5,5
GMCU 914-M5-4	M5	4	12	3	37	42,5	19	8,8	8	5,5
GMCU 903-1/8-6	G1/8	6	22,5	5	65,5	72,5	26,5	13	14	7
GMCU 904-1/8-8	G1/8	8	22,5	5	65,5	72,5	28	15	14	7
GMCU 905-1/4-8	G1/4	8	27	7	85	97,5	28,5	15	19	10
GMCU 906-1/4-10	G1/4	10	27	7	85	97,5	31	17,5	19	10

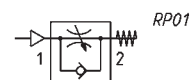


Valves Series GSVU

Unidirectional flow controller for mounting on valves.
Screwdriver adjustment.
Ports: M5, G1/8, G1/4.

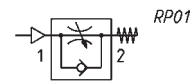
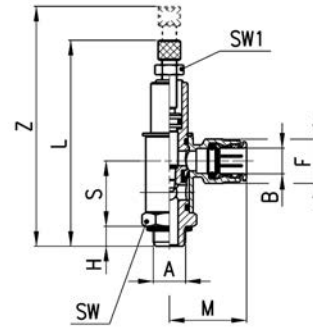


DIMENSIONS									
Mod.	A	B	S	H	L	M	F	SW	
GSVU 813-M5-3	M5	3	12	3	27,5	12,5	6,5	8	
GSVU 814-M5-4	M5	4	12	3	27,5	19	8,8	8	
GSVU 803-1/8-6	G1/8	6	22,5	5	50	26,5	13	14	
GSVU 804-1/8-8	G1/8	8	22,5	5	50	28	15	14	
GSVU 805-1/4-8	G1/4	8	27	7	67,5	28,5	15	19	
GSVU 806-1/4-10	G1/4	10	27	7	67,5	31	17,5	19	



Valves Series GMVU

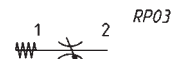
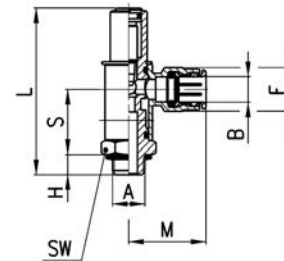
Unidirectional flow controller for mounting on valve.
Adjustment of setting by a manually operated knurled screw.
Ports: M5, G1/8, G1/4.



DIMENSIONS										
Mod.	A	B	S	H	L	Z	M	F	SW	SW1
GMVU 913-M5-3	M5	3	12	3	37	42,5	12,5	6,5	8	5,5
GMVU 914-M5-4	M5	4	12	3	37	42,5	19	8,8	8	5,5
GMVU 903-1/8-6	G1/8	6	22,5	5	50	72,5	26	13	14	7
GMVU 904-1/8-8	G1/8	8	22,5	5	50	72,5	28	15	14	7
GMVU 905-1/4-8	G1/4	8	27	7	67,5	97,5	29	15	19	10
GMVU 906-1/4-10	G1/4	10	27	7	67,5	97,5	31	17,5	19	10

Valves Series GSCO

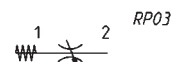
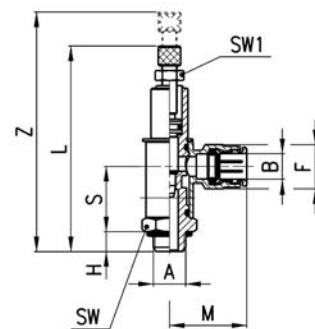
Bidirectional flow controller.
Screwdriver adjustment.
Ports: M5, G1/8, G1/4.



DIMENSIONS									
Mod.	A	B	S	H	L	M	F	SW	
GSCO 813-M5-3	M5	3	12	3	27,5	12,5	6,5	8	
GSCO 814-M5-4	M5	4	12	3	27,5	19	8,8	8	
GSCO 803-1/8-6	G1/8	6	22,5	5	50	26,5	13	14	
GSCO 804-1/8-8	G1/8	8	22,5	5	50	28	15	14	
GSCO 805-1/4-8	G1/4	8	27	7	67,5	28,5	15	19	
GSCO 806-1/4-10	G1/4	10	27	7	67,5	31	17,5	19	

Valves Series GMCO

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



DIMENSIONS										
Mod.	A	B	S	H	L	Z	M	F	SW	SW1
GMCO 913-M5-3	M5	3	12	3	37	42,5	12,5	6,5	8	5,5
GMCO 914-M5-4	M5	4	12	3	37	42,5	19	8,8	8	5,5
GMCO 903-1/8-6	G1/8	6	22,5	5	65,5	72,5	26,5	13	14	7
GMCO 904-1/8-8	G1/8	8	22,5	5	65,5	72,5	28	15	14	7
GMCO 905-1/4-8	G1/4	8	27	7	85	97,5	28,5	15	19	10
GMCO 906-1/4-10	G1/4	10	27	7	85	97,5	31	17,5	19	10

Flow control valves

Series PSCU, PMCU, PSVU, PMVU, PSCO, PMCO

New port M5

Unidirectional and bidirectional flow regulators with ports M5, G1/8, G1/4, G3/8 and with banjo in brass (port M5) or in technopolymer (ports G1/8, G1/4, G3/8)

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.

All models are supplied complete with banjo flow controllers.

GENERAL DATA

Construction	needle type
Valve group	unidirectional and bidirectional controller
Materials	body, regulation screw: stainless steel (M5), brass (G1/8 - G1/4 - G3/8) collet and insert = brass banjo: brass (M5), technopolymer (G1/8 - G1/4 - G3/8) controller = technopolymer - seals = NBR
Mounting	by male thread
Ports	M5 - G1/8 - G1/4 - G3/8
Installation	in any position
Operating temperature	0°C + 60°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
Fluid	filtered air

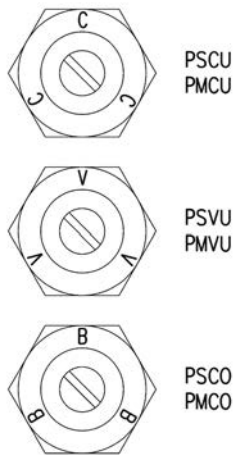
CODING EXAMPLE

P	M	CU	7	04	-	1/8	-	4
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P	SERIES
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)
04	NOMINAL DIAMETER: 02 = Ø1.5 MAX 04 = Ø2 MAX 06 = Ø4 MAX 08 = Ø7 MAX
1/8	PORTS: M5 = M5 1/8 = G1/8 1/4 = G1/4 3/8 = G3/8
4	TUBE: 4 = Ø 4 6 = Ø 6 8 = Ø 8 10 = Ø 10 12 = Ø 12

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

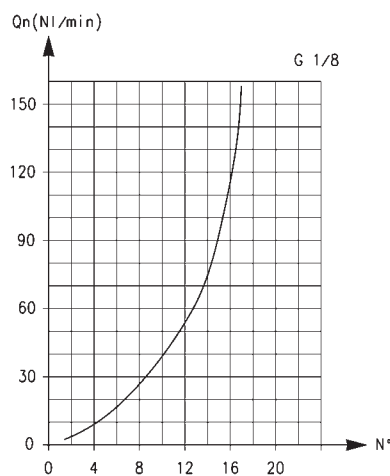
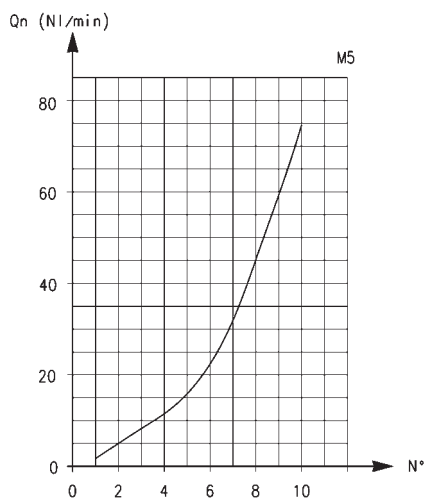
UNIDIRECTIONAL AND BIDIRECTIONAL FLOW CONTROLLERS



IDENTIFICATION OF DIFFERENT TYPES:
 PSCU - PMCU = assembly directly on the cylinders
 PSVU - PMVU = assembly directly on the valves
 PSCO - PMCO = assembly directly on the cylinders or valves

UNIDIRECTIONAL AND BIDIRECTIONAL FLOW CONTROL REGULATORS

New port M5



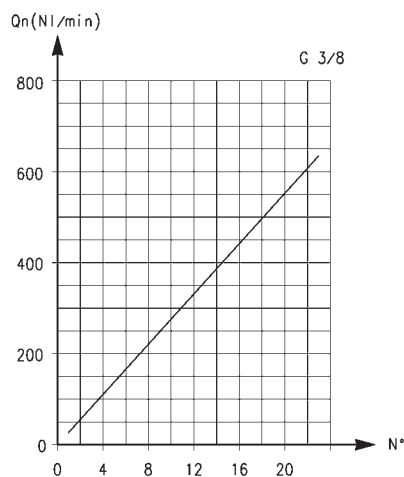
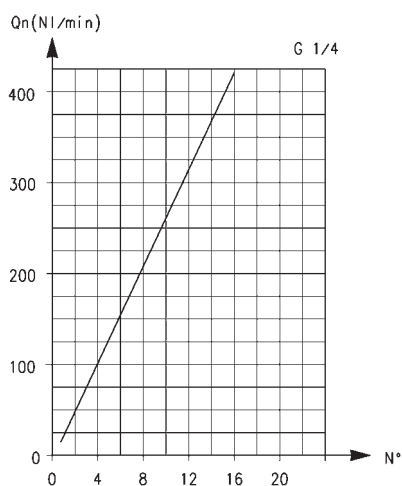
Flow Qn (NI/min.) from 2 → 1 with controller OPEN: 70
 Flow Qn (NI/min.) from 2 → 1 with controller CLOSED: 33

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

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

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

UNIDIRECTIONAL AND BIDIRECTIONAL FLOW CONTROL REGULATORS



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

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

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

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

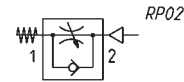
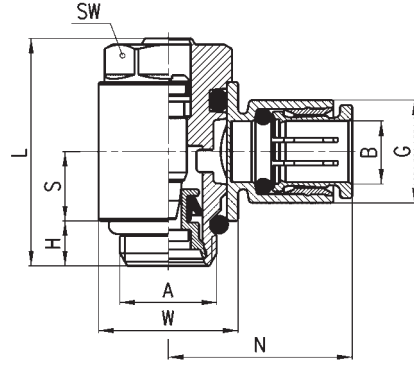
Unidirectional flow controllers Series PSCU

New port M5



For mounting on single-acting or double-acting cylinders.
A screwdriver must be used to adjust the registration setting.
Ports: M5, G1/8, G1/4 and G3/8.

Port M5: banjo in brass



DIMENSIONS									
Mod.	A	B	G	H	L	N	S	W	SW
PSCU 602-M5-4	M5	4	8.6	3.5	21.5	18	5.7	8	8
PSCU 602-M5-6	M5	6	10.4	3.5	21.5	19	5.7	8	8
PSCU 604-1/8-4	G1/8	4	11.6	5	27	21	7.75	14	12
PSCU 604-1/8-6	G1/8	6	11.6	5	27	21	7.75	14	12
PSCU 604-1/8-8	G1/8	8	13.9	5	27	22.5	7.75	14	12
PSCU 606-1/4-6	G1/4	6	13.9	6	30.5	24.5	9.25	18.6	15
PSCU 606-1/4-8	G1/4	8	13.9	6	30.5	24.5	9.25	18.6	15
PSCU 606-1/4-10	G1/4	10	16.1	6	30.5	27	9.25	18.6	15
PSCU 608-3/8-10	G3/8	10	20.2	7	36.5	29	11	22	18
PSCU 608-3/8-12	G3/8	12	20.2	7	36.5	29	11	22	18

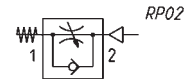
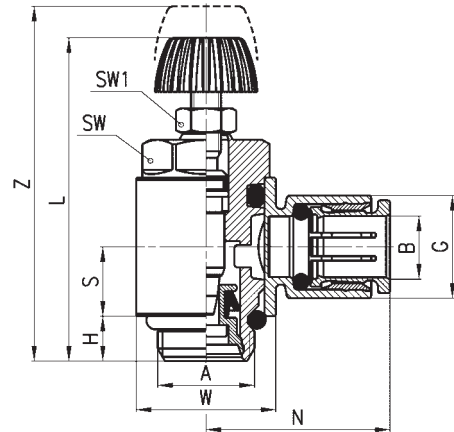
Unidirectional flow controllers Series PMCU

New port M5



For mounting on single-acting or double-acting cylinders.
A manually operated knurled screw must be used to adjust the registration setting.
Ports: M5, G1/8, G1/4 and G3/8.

Port M5: banjo in brass



DIMENSIONS											
Mod.	A	B	G	H	L	N	S	W	SW	SW1	Z
PMCU 702-M5-4	M5	4	8.6	3.5	31	18	5.7	8	8	5.5	35
PMCU 702-M5-6	M5	6	10.4	3.5	31	19	5.7	8	8	5.5	35
PMCU 704-1/8-4	G1/8	4	11.6	5	36.5	21	7.75	14	12	7	42.5
PMCU 704-1/8-6	G1/8	6	11.6	5	36.5	21	7.75	14	12	7	42.5
PMCU 704-1/8-8	G1/8	8	13.9	5	36.5	22.5	7.75	14	12	7	42.5
PMCU 706-1/4-6	G1/4	6	13.9	6	42	24.5	9.25	18.6	15	7	48
PMCU 706-1/4-8	G1/4	8	13.9	6	42	24.5	9.25	18.6	15	7	48
PMCU 706-1/4-10	G1/4	10	16.1	6	42	27	9.25	18.6	15	7	48
PMCU 708-3/8-10	G3/8	10	20.2	7	48.5	29	11	22	18	10	56.5
PMCU 708-3/8-12	G3/8	12	20.2	7	48.5	29	11	22	18	10	56.5

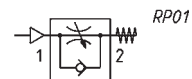
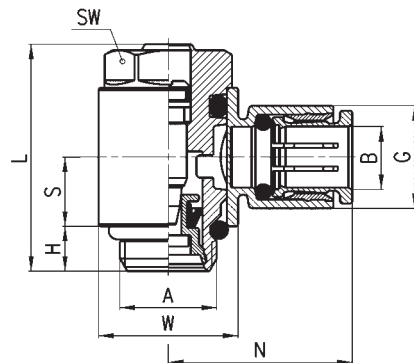
Unidirectional flow controllers Series PSVU

New port M5



For mounting on valves.
A screwdriver must be used to adjust the registration setting.
Ports: M5, G1/8, G1/4 and G3/8.

Port M5: banjo in brass



DIMENSIONS									
Mod.	A	B	G	H	L	N	S	W	SW
PSVU 602-M5-4	M5	4	8.6	3.5	21.5	18	5.7	8	8
PSVU 602-M5-6	M5	6	10.4	3.5	21.5	19	5.7	8	8
PSVU 604-1/8-4	G1/8	4	11.6	5	27	21	7.75	14	12
PSVU 604-1/8-6	G1/8	6	11.6	5	27	21	7.75	14	12
PSVU 604-1/8-8	G1/8	8	13.9	5	27	22.5	7.75	14	12
PSVU 606-1/4-6	G1/4	6	13.9	6	30.5	24.5	9.25	18.6	15
PSVU 606-1/4-8	G1/4	8	13.9	6	30.5	24.5	9.25	18.6	15
PSVU 606-1/4-10	G1/4	10	16.1	6	30.5	27	9.25	18.6	15
PSVU 608-3/8-10	G3/8	10	20.2	7	36.5	29	11	22	18
PSVU 608-3/8-12	G3/8	12	20.2	7	36.5	29	11	22	18

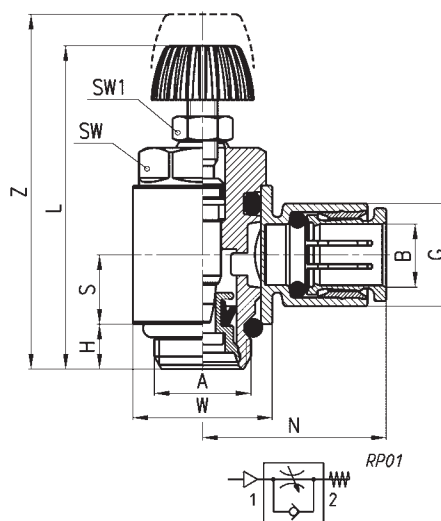


Unidirectional flow controllers Series PMVU

For mounting on valve.
A manually operated knurled screw must be used to adjust the registration setting.
Ports: M5, G1/8, G1/4 and G3/8.

Port M5: banjo in brass

New port M5



DIMENSIONS											
Mod.	A	B	G	H	L	N	S	W	SW	SW1	Z
PMVU 702-M5-4	M5	4	8.6	3.5	31	18	5.7	8	8	5.5	35
PMVU 702-M5-6	M5	6	10.4	3.5	31	19	5.7	8	8	5.5	35
PMVU 704-1/8-4	G1/8	4	11.6	5	36.5	21	7.75	14	12	7	42.5
PMVU 704-1/8-6	G1/8	6	11.6	5	36.5	21	7.75	14	12	7	42.5
PMVU 704-1/8-8	G1/8	8	13.9	5	36.5	22.5	7.75	14	12	7	42.5
PMVU 706-1/4-6	G1/4	6	13.9	6	42	24.5	9.25	18.6	15	7	48
PMVU 706-1/4-8	G1/4	8	13.9	6	42	24.5	9.25	18.6	15	7	48
PMVU 706-1/4-10	G1/4	10	16.1	6	42	27	9.25	18.6	15	7	48
PMVU 708-3/8-10	G3/8	10	20.2	7	48.5	29	11	22	18	10	56.5
PMVU 708-3/8-12	G3/8	12	20.2	7	48.5	29	11	22	18	10	56.5

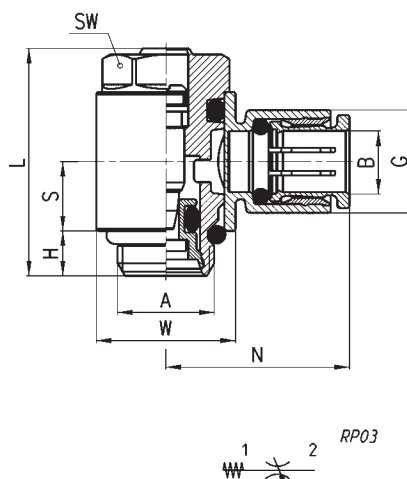


Bidirectional flow controllers Series PSCU

A screwdriver must be used to adjust the registration setting.
Ports: M5, G1/8, G1/4 and G3/8.

Port M5: banjo in brass

New port M5



DIMENSIONS									
Mod.	A	B	G	H	L	N	S	W	SW
PSCU 602-M5-4	M5	4	8.6	3.5	21.5	18	5.7	8	8
PSCU 602-M5-6	M5	6	10.4	3.5	21.5	19	5.7	8	8
PSCU 604-1/8-4	G1/8	4	11.6	5	27	21	7.75	14	12
PSCU 604-1/8-6	G1/8	6	11.6	5	27	21	7.75	14	12
PSCU 604-1/8-8	G1/8	8	13.9	5	27	22.5	7.75	14	12
PSCU 606-1/4-6	G1/4	6	13.9	6	30.5	24.5	9.25	18.6	15
PSCU 606-1/4-8	G1/4	8	13.9	6	30.5	24.5	9.25	18.6	15
PSCU 606-1/4-10	G1/4	10	16.1	6	30.5	27	9.25	18.6	15
PSCU 608-3/8-10	G3/8	10	20.2	7	36.5	29	11	22	18
PSCU 608-3/8-12	G3/8	12	20.2	7	36.5	29	11	22	18

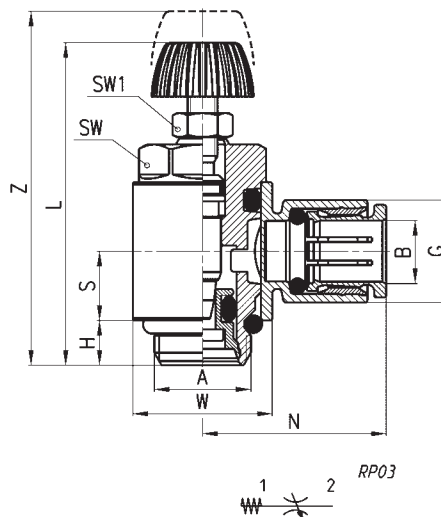


Bidirectional flow controllers Series PMCO

A manually operated knurled screw must be used to adjust the registration setting.
Ports: M5, G1/8, G1/4 and G3/8.

Port M5: banjo in brass

New port M5



DIMENSIONS											
Mod.	A	B	G	H	L	N	S	W	SW	SW1	Z
PMCO 702-M5-4	M5	4	8.6	3.5	31	18	5.7	8	8	5.5	35
PMCO 702-M5-6	M5	6	10.4	3.5	31	19	5.7	8	8	5.5	35
PMCO 704-1/8-4	G1/8	4	11.6	5	36.5	21	7.75	14	12	7	42.5
PMCO 704-1/8-6	G1/8	6	11.6	5	36.5	21	7.75	14	12	7	42.5
PMCO 704-1/8-8	G1/8	8	13.9	5	36.5	22.5	7.75	14	12	7	42.5
PMCO 706-1/4-6	G1/4	6	13.9	6	42	24.5	9.25	18.6	15	7	48
PMCO 706-1/4-8	G1/4	8	13.9	6	42	24.5	9.25	18.6	15	7	48
PMCO 706-1/4-10	G1/4	10	16.1	6	42	27	9.25	18.6	15	7	48
PMCO 708-3/8-10	G3/8	10	20.2	7	48.5	29	11	22	18	10	56.5
PMCO 708-3/8-12	G3/8	12	20.2	7	48.5	29	11	22	18	10	56.5

Flow control valves

Series TMCU, TMVU, TMCO

Unidirectional and bidirectional flow control valves
 Banjo flow controllers nominal diameters \varnothing 2 - 3,8 - 5,8 - 8 mm
 Ports G1/8, G1/4, G3/8, G1/2



The unidirectional and bidirectional flow controllers, series TMCU, TMVU, TMCO have been revised in order to decrease their dimensions and improve their flow rate characteristics. Their construction allows for easy assembly to cylinders and valves and allows the regulation adjustment to be precise and gradual.

GENERAL DATA

Construction	needle - type
Valve group	unidirectional and bidirectional controller
Materials	brass - technopolymer - NBR
Mounting	by male threaded
Threaded ports	G1/8 - G1/4 - G3/8 - G1/2
Installation	in any position
Operating temperature	0°C ÷ 60°C (with dry air -20°C)
Operating pressure	0,5 ÷ 10 bar
Nominal pressure	6 bar
Nominal flow	see graph
Nominal dia.	Tube 4 \varnothing 2 - Tube 6 \varnothing 3,8 - Tube 8 \varnothing 5,8 - Tube 10 and 12 \varnothing 8
Fluid	filtered air If lubricated air is used, it is recommended to use ISOVG 32 oil. Once applied the lubrication should never be interrupted.

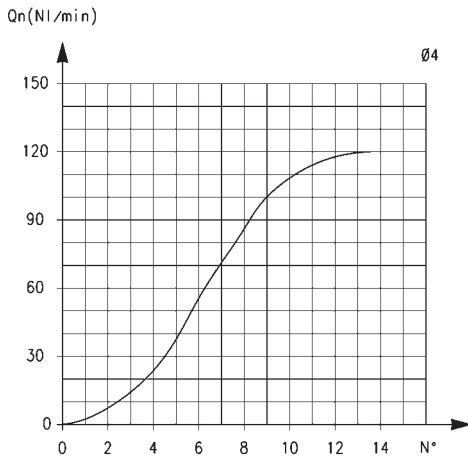
CODING EXAMPLE

TM	CU	9	74	-	1/8	-	6
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TM	ACTUATION: TM = manual																				
CU	ASSEMBLY: CU = on cylinders unidirectional VU = on valves unidirectional CO = bidirectional																				
9	VERSIONS: 9 = manual needle																				
74	REGULATION: <table border="1"> <thead> <tr> <th></th> <th>step</th> <th>-</th> <th>ø tube</th> </tr> </thead> <tbody> <tr> <td>72 =</td> <td>2</td> <td></td> <td>4</td> </tr> <tr> <td>74 =</td> <td>3.8</td> <td></td> <td>6</td> </tr> <tr> <td>76 =</td> <td>5.8</td> <td></td> <td>8</td> </tr> <tr> <td>78 =</td> <td>8</td> <td></td> <td>10</td> </tr> </tbody> </table>		step	-	ø tube	72 =	2		4	74 =	3.8		6	76 =	5.8		8	78 =	8		10
	step	-	ø tube																		
72 =	2		4																		
74 =	3.8		6																		
76 =	5.8		8																		
78 =	8		10																		
1/8	PORTS: 1/8 1/4 3/8 1/2																				
6	Ø TUBE: 4 6 8 10																				

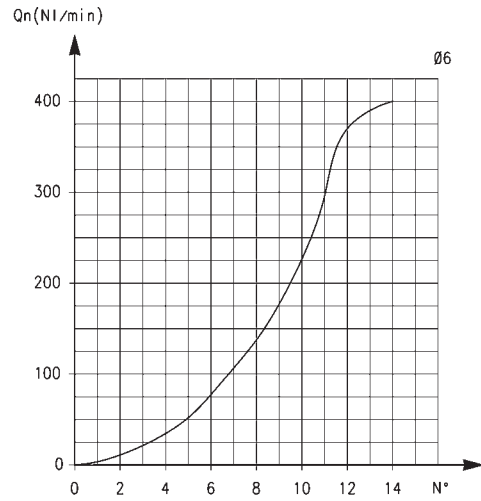
To ensure the right choice of unidirectional flow controller, proceed as follows: calculate the quantity of air in NI/min (see cylinder Table); determine the stroke time of the cylinder; refer to graph to see which controller is the right type.

UNIDIRECTIONAL AND BIDIRECTIONAL FLOW CONTROL REGULATORS



TUBE Ø4

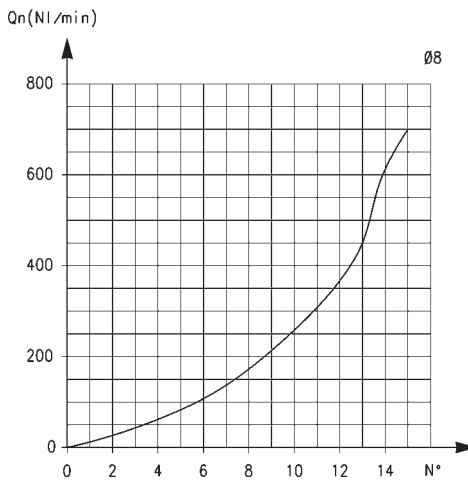
Flow Qn (NI/min.) from 2 → 1 with controller OPEN: 400
 Flow Qn (NI/min.) from 2 → 1 with controller CLOSED: 280
 Qn is determined with a supply pressure of 6 bar and with $\Delta P = 1$ bar at the outlet
 N° = number of screw turns.



TUBE Ø6

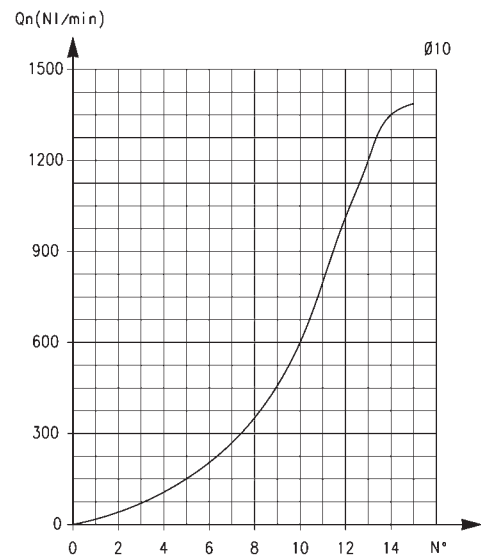
Flow Qn (NI/min.) from 2 → 1 with controller OPEN: 550
 Flow Qn (NI/min.) from 2 → 1 with controller CLOSED: 280
 Qn is determined with a supply pressure of 6 bar and with $\Delta P = 1$ bar at the outlet
 N° = number of screw turns.

UNIDIRECTIONAL AND BIDIRECTIONAL FLOW CONTROL REGULATORS



TUBE Ø8

Flow Qn (NI/min.) from 2 → 1 with controller OPEN: 890
 Flow Qn (NI/min.) from 2 → 1 with controller CLOSED: 460
 Qn is determined with a supply pressure of 6 bar and with $\Delta P = 1$ bar at the outlet
 N° = number of screw turns.

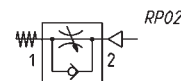
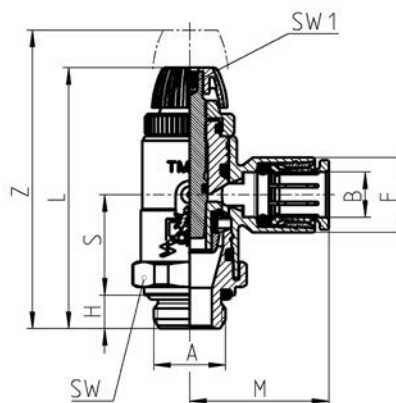


TUBE Ø10

Flow Qn (NI/min.) from 2 → 1 with controller OPEN: Ø 10-1200/Ø12-1250
 Flow Qn (NI/min.) from 2 → 1 with controller CLOSED: Ø 10-600/Ø12-600
 Qn is determined with a supply pressure of 6 bar and with $\Delta P = 1$ bar at the outlet
 N° = number of screw turns.

Valves Series TMCU

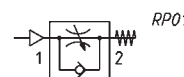
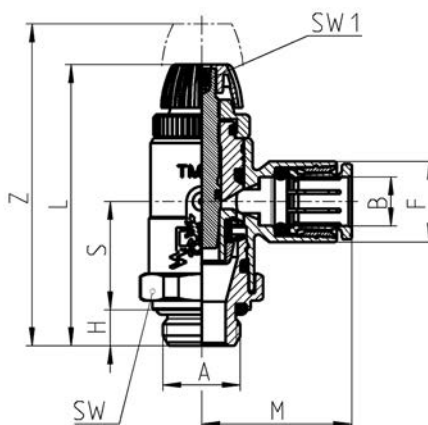
Unidirectional flow controller for mounting on single-acting or double-acting cylinders.
Adjustment of setting by a hexagonal male key or a manually operated knurled screw.
Ports: G1/8, G1/4, G3/8, G1/2



DIMENSIONS										
Mod.	A	B	F	H	L	M	S	SW	SW1	Z
TMCU 972-1/8-4	G1/8	4	11,5	5	43	21,5	16,5	16	1,5	50
TMCU 974-1/8-6	G1/8	6	11,5	5	43	21,5	16,5	16	1,5	50
TMCU 974-1/4-6	G1/4	6	11,5	6	44	21,5	16,5	17	1,5	51
TMCU 976-1/8-8	G1/8	8	13,5	5	47	25	17,5	19	2,5	54
TMCU 976-1/4-8	G1/4	8	13,5	6	48,5	25	18	19	2,5	55,5
TMCU 976-3/8-8	G3/8	8	13,5	7	49,5	25	18	20	2,5	56,5
TMCU 978-3/8-10	G3/8	10	16	7	51	29	17	25	2,5	59,5
TMCU 978-1/2-10	G1/2	10	16	8	52	29	17	25	2,5	60,5

Valves Series TMVU

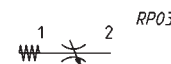
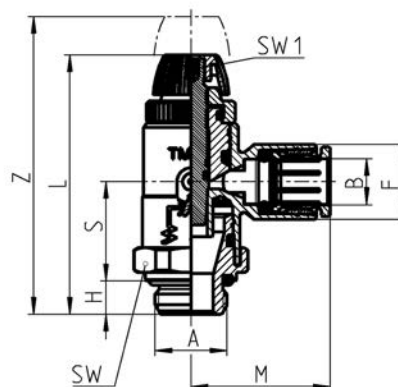
Unidirectional flow controller for mounting on valves.
Adjustment of setting by a hexagonal male key or a manually operated knurled screw.
Ports: G1/8, G1/4, G3/8, G1/2



DIMENSIONS										
Mod.	A	B	F	H	L	M	S	SW	SW1	Z
TMVU 972-1/8-4	G1/8	4	11,5	5	43	21,5	16,5	16	1,5	50
TMVU 974-1/8-6	G1/8	6	11,5	5	43	21,5	16,5	16	1,5	50
TMVU 974-1/4-6	G1/4	6	11,5	6	44	21,5	16,5	17	1,5	51
TMVU 976-1/8-8	G1/8	8	13,5	5	47	25	17,5	19	2,5	54
TMVU 976-1/4-8	G1/4	8	13,5	6	48,5	25	18	19	2,5	55,5
TMVU 976-3/8-8	G3/8	8	13,5	7	49,5	25	18	20	2,5	56,5
TMVU 978-3/8-10	G3/8	10	16	7	51	29	17	25	2,5	59,5
TMVU 978-1/2-10	G1/2	10	18	8	52	29	17	25	2,5	60,5

Valves Series TMCO

Bidirectional flow controller.
Adjustment of setting by a hexagonal male key or a manually operated knurled screw.
Ports: G1/8, G1/4, G3/8, G1/2



DIMENSIONS										
Mod.	A	B	F	H	L	M	S	SW	SW1	Z
TMCO 972-1/8-4	G1/8	4	11,5	5	43	21,5	16,5	16	1,5	50
TMCO 974-1/8-6	G1/8	6	11,5	5	43	21,5	16,5	16	1,5	50
TMCO 974-1/4-6	G1/4	6	11,5	6	44	21,5	16,5	17	1,5	51
TMCO 976-1/8-8	G1/8	8	13,5	5	47	25	17,5	19	2,5	54
TMCO 976-1/4-8	G1/4	8	13,5	6	48,5	25	18	19	2,5	55,5
TMCO 976-3/8-8	G3/8	8	13,5	7	49,5	25	18	20	2,5	56,5
TMCO 978-3/8-10	G3/8	10	16	7	51	29	17	25	2,5	59,5
TMCO 978-1/2-10	G1/2	10	16	8	52	29	17	25	2,5	60,5