Right Angle Flow Control Valves - BSP/METRIC Series GSCU-GMCU-GSVU GMVU-GSCO-GMCO

Swivel Design
Meter-in, Meter-Out, Needle Orifice
M5, G1/8 and G1/4
banjo flow controllers
Nominal diameters dia.
1.5 - 3.5 and 5 mm

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.

TECHNICAL SPECIFICATIONS

Construction	needle-type, right angle swivel banjo design
Valve group	unidirectional and bidirectional controller
Materials	OT58 nickel-plated brass body threads - Buna-N seals, Nylon® gaskets
Mounting	by male thread
Ports	M5 - G1/8 - G1/4
Installation	in any position
Operating temperature	from 0 to 80°C (with dry air -20°C) [32°F - 175°F (with dry air -4°F)]
Lubricant	compatible with Buna-N (3° — 10° E)

PNEUMATIC DATA

Operating pressure	1 — 10 bar [14.5 - 145 psi]
Nominal pressure	6 bar [87 psi]
Nominal flow	see graph
Nominal dia.	M5 ø1.5 mm (.059") G1/8 ø3.5 mm (.137") G1/4 ø5 mm (.196")
Fluid	filtered air

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CODING OF BANJO FLOW CONTROLLERS

GMCU 8 03 -1/8 - 3

ACTUATION
GM = manual
GS = screwdriver

ASSEMBLY
CU = on cylinders meter-out
VU = on valves meter-in
CO = needle orifice

VERSIONS
8 = needle (screwdriver operated)
9 = needle (manually operated)

FLOW CONTROL RANGE

	orifice size	ø tube OD
13 =	1.5	3
14 =	1.5	4
03 =	3.5	6
04 =	3.5	8
05 =	5	8
06 =	5	10

PORTS
M5
G1/8
G1/4

Ø TUBE OD
3
4
6
8
10

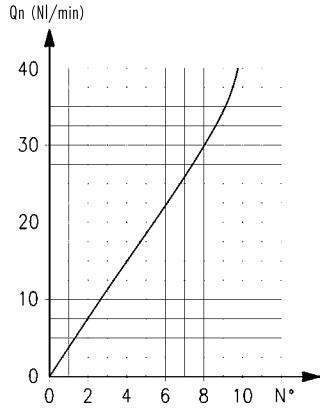
NOTE: brackets are supplied separately.

UNIDIRECTIONAL AND BIDIRECTIONAL FLOW CONTROLLERS

To ensure the right choice of unidirectional flow controller, proceed as follows: calculate the quantity of air in Nl/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.

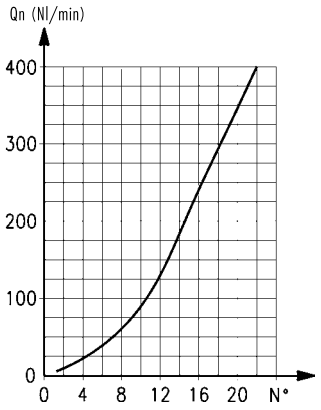
M5

Flow Qn (Nl/min.) from B → A with needle OPEN: 46.6
Flow Qn (Nl/min.) from B → A with needle CLOSED: 33.3
NB: Qn is determined with a supply pressure of 6 bar and with ΔP = 1 bar at the outlet. N° = number of screw turns



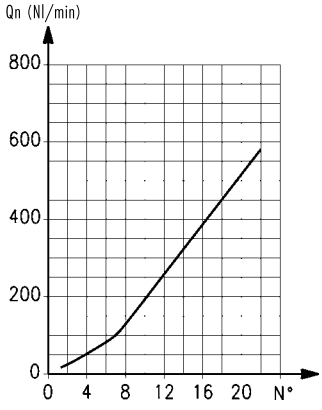
G1/8

Flow Qn (Nl/min.) from B → A with needle OPEN: 440
Flow Qn (Nl/min.) from B → A with needle CLOSED: 170
NB: Qn is determined with a supply pressure of 6 bar and with ΔP = 1 bar at the outlet. N° = number of screw turns



G1/4

Flow Qn (Nl/min.) from B → A with needle OPEN: 790
Flow Qn (Nl/min.) from B → A with needle CLOSED: 460
NB: Qn is determined with a supply pressure of 6 bar and with ΔP = 1 bar at the outlet. N° = number of screw turns



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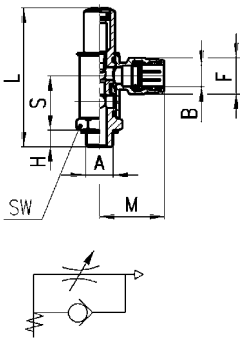
Valves Series GSCU (Meter-Out)

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

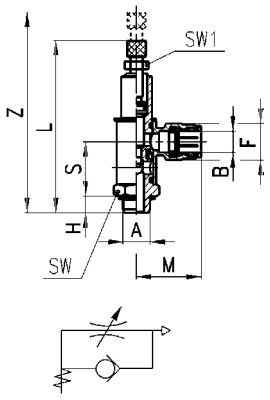


DIMENSIONS (MM)

Mod.	A	B	S	H	L	M	F	SW
		OD						
GSCU 813-M5-3	M5	3	12	3	27.5	12	6.5	8
GSCU 814-M5-4	M5	4	12	3	27.5	12	6.5	8
GSCU 803-1/8-6	G1/8	6	21.3	6	48.5	26,5	13	14
GSCU 804-1/8-8	G1/8	8	21.3	6	48.5	28	15	14
GSCU 805-1/4-8	G1/4	8	26	8	66.5	28,5	15	19
GSCU 806-1/4-10	G1/4	10	26	8	66.5	31	17.5	19

Valves Series GMCU (Meter Out)

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

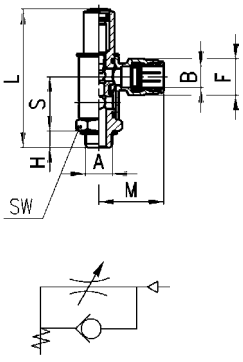


DIMENSIONS (MM)

Mod.	A	B	S	H	L	Z	M	F	SW	SW1
		OD								
GMCU 913-M5-3	M5	3	12	3	37	40.5	12	6.5	8	5.5
GMCU 914-M5-4	M5	4	12	3	37	40.5	12	6.5	8	5.5
GMCU 903-1/8-6	G1/8	6	21.3	6	62.5	72	26.5	13	14	7
GMCU 904-1/8-8	G1/8	8	21.3	6	62.5	72	28	15	14	7
GMCU 905-1/4-8	G1/4	8	26	8	82.5	96.5	28.5	15	19	10
GMCU 906-1/4-10	G1/4	10	26	8	82.5	96.5	31	17.5	19	10

Valves Series GSVU (Meter-In)

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



DIMENSIONS (MM)

Mod.	A	B	S	H	L	M	F	SW
		OD						
GSVU 813-M5-3	M5	3	12	3	27.5	12	6.5	8
GSVU 814-M5-4	M5	4	12	3	27.5	12	6.5	8
GSVU 803-1/8-6	G1/8	6	21.3	6	48.5	26.5	13	14
GSVU 804-1/8-8	G1/8	8	21.3	6	48.5	28	15	14
GSVU 805-1/4-8	G1/4	8	26	8	66.5	28.5	15	19
GSVU 806-1/4-10	G1/4	10	26	8	66.5	31	17.5	19

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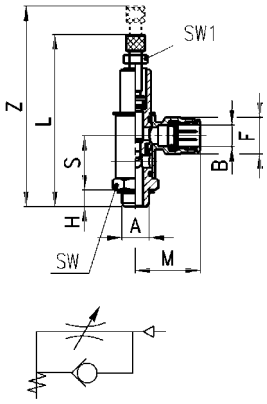
Valves Series GMVU (Meter-In)

Unidirectional flow controller for mounting on valves and cylinders.
Knurled screw adjustment.
Ports: M5, G1/8, G1/4

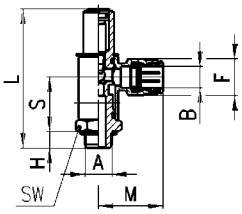


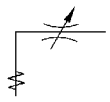
DIMENSIONS (MM)

Mod.	A	B	S	H	L	Z	M	F	SW	SW1
		OD								
GMVU 913-M5-3	M5	3	12	3	37	40.5	12	6.5	8	5.5
GMVU 914-M5-4	M5	4	12	3	37	40.5	12	6.5	8	5.5
GMVU 903-1/8-6	G1/8	6	21.3	6	62.5	72	26	13	14	7
GMVU 904-1/8-8	G1/8	8	21.3	6	62.5	72	28	15	14	7
GMVU 905-1/4-8	G1/4	8	26	8	82.5	96.5	29	15	19	10
GMVU 906-1/4-10	G1/4	10	26	8	82.5	96.5	31	17.5	19	10

Valves Series GSCO (Needle Orifice)

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



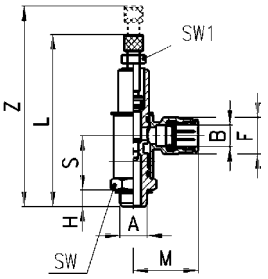


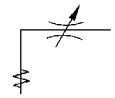
DIMENSIONS (MM)

Mod.	A	B	S	H	L	M	F	SW
		OD						
GSCO 813-M5-3	M5	3	12	3	27.5	12	6.5	8
GSCO 814-M5-4	M5	4	12	3	27.5	12	6.5	8
GSCO 803-1/8-6	G1/8	6	21.3	6	48.5	26,5	13	14
GSCO 804-1/8-8	G1/8	8	21.3	6	48.5	28	15	14
GSCO 805-1/4-8	G1/4	8	26	8	66.5	28,5	15	19
GSCO 806-1/4-10	G1/4	10	26	8	66.5	31	17.5	19

Valves Series GMCO (Needle Orifice)

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





DIMENSIONS (MM)

Mod.	A	B	S	H	L	Z	M	F	SW	SW1
		OD								
GMCO 913-M5-3	M5	3	12	3	37	40.5	12	6.5	8	5.5
GMCO 914-M5-4	M5	4	12	3	37	40.5	12	6.5	8	5.5
GMCO 903-1/8-6	G1/8	6	21.3	6	62.5	72	26,5	13	14	7
GMCO 904-1/8-8	G1/8	8	21.3	6	62.5	72	28	15	14	7
GMCO 905-1/4-8	G1/4	8	26	8	82.5	96.5	28,5	15	19	10
GMCO 906-1/4-10	G1/4	10	26	8	82.5	96.5	31	17.5	19	10

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