

PRESSURE REGULATORS

SERIES MD

Ports with interchangeable cartridges: threaded (1/8, 1/4, 3/8) or integrated with super-rapid fitting for tube with \varnothing 6, 8 and 10 mm
 Versions: single, combined with other functions, Manifold



- Minimal pressure decreases
- Knob with position lock
- Tamper-proof system (lockable regulator)
- With or without overpressure exhaust (relieving)
- Available versions:
 - Manifold
 - With by-pass valve
 - Calibrated
 - Locked

Thanks to the flexibility given by the connection inserts, the regulator can be adjusted within a treatment group so that the regulation knob is in the front or lower position. Once the regulation is locked, it is possible to insert as many security locks through the 4 holes. The by-pass valve allows the fast exhaust of the air introduced. The different springs enable a more accurate adjustment of the pressure.

The Series MD offers multi-sector solutions that ensure saving in terms of installation time, space and costs. Thanks to the solution adopted for the pneumatic connection, it is possible to equip the same element with interchangeable cartridges that can either be threaded, or with an integrated super-rapid fitting, both types available in different sizes. Intermediate cartridges can be also integrated to join multiple functions or with derivation to draw air.

General Data

Construction	Modular, compact with pre-formed diaphragm
Ports	With interchangeable cartridges: 1/8, 1/4 and 3/8 threaded or integrated with super-rapid fitting for tube with \varnothing 6, 8 and 10 mm
Fixing	In-line Wall-mounting by means of through holes in the body or with a support bracket Panel mounting
Working temperature	-5°C ÷ 50°C up to 16 bar
Inlet pressure	0 ÷ 16 bar
Outlet pressure	0,5 ÷ 2 bar 0,5 ÷ 4 bar 0,5 ÷ 7 bar 0,5 ÷ 10 bar
Overpressure exhaust	With relieving Without relieving
Fluid	Compressed air

PRESSURE REGULATORS
SERIES MD - CODING EXAMPLES

Coding Example

MD	1	-	R	T	0	0	-	1/4
MD	SERIES							
1	SIZE 1 = 42 mm							
R	TYPE OF REGULATOR R = Pressure regulator M = Manifold pressure regulator							
T	OPERATING PRESSURE (1 bar = 14,5 psi) 0 = 0,5 ÷ 10 bar 2 = 0,5 ÷ 2 bar 4 = 0,5 ÷ 4 bar 7 = 0,5 ÷ 7 bar T = Calibrated ** B = Locked **							
0	DESIGN TYPE 0 = With relieving 1 = Without relieving 2 = With relieving and by-pass valve (only for R regulator) 3 = Without relieving, with by-pass valve (only for R regulator)							
0	PRESSURE GAUGE - PRESSURE SWITCH 0 = without pressure gauge (with G1/8 port) PRESSURE GAUGE Ø 43 1 = M043-P02,5 2 = M043-P04 3 = M043-P06 4 = M043-P10 5 = M043-P12 COMPACT PRESSURE GAUGE 6 = MD1-R34/W-P FS 4 bar 7 = MD1-R31/W-P FS 6 bar 8 = MD1-R32/W-P FS 10 bar 9 = MD1-R30/W-P FS 12 bar DIGITAL PRESSURE GAUGE B = PG010-PB-1/8 C = PG010-PB-1/8-2 D = PG010-PB-1/8-M DIGITAL PRESSURE SWITCH E = SWCN-P10-P3-2 F = SWCN-P10-P4-2 G = SWCN-P10-P4-M							
1/4	PORTS (IN - OUT) * = Without cartridges 1/8 = G1/8 1/4 = G1/4 3/8 = G3/8 6 = Tube Ø6 8 = Tube Ø8 10 = Tube Ø10							

* If the inlet (IN) cartridge is different from the outlet (OUT) cartridge, both dimensions shall be indicated
Example: MD1-R020-1/4-10.

** If the regulator is calibrated or locked, after the ports add the inlet pressure "■" and the outlet pressure "●"

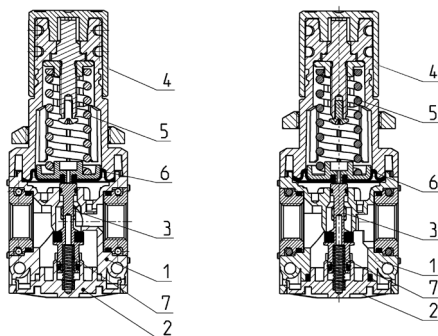
INLET PRESSURE: ■ = Enter the SUPPLY pressure value

OUTLET PRESSURE: ● = Enter the OUTLET pressure value for the LOCKED regulator or the maximum value of the ADJUSTABLE pressure for the CALIBRATED regulator

Example of a calibrated regulator with Inlet Pressure = 6,3 bar and Outlet Pressure = 4,5 bar
Complete part number: MD1-RT00-1/4-6,3-4,5.

Pressure regulators Series MD - materials

R = Pressure regulator
M = Manifold pressure regulator



R

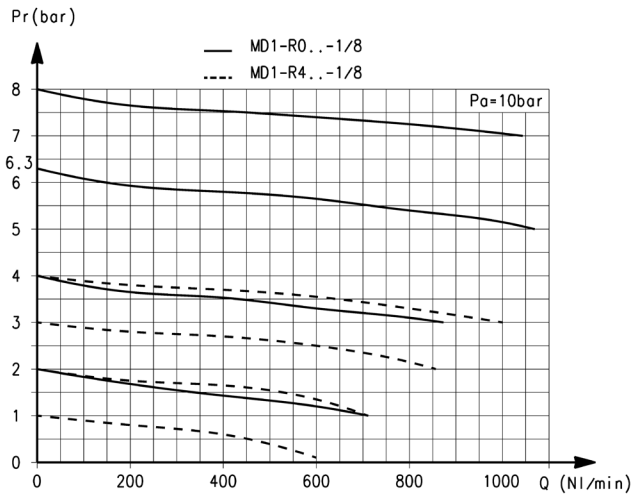
M

Parts	Materials
1 = Body	Polyamide
2 = Valve holder plug	Polyamide
3 = Poppet	Brass
4 = Knob	Polyamide
5 = Upper spring	Zinc-plated steel
6 = Diaphragm	NBR
7 = Lower spring	Stainless steel
Seals	NBR

AIR TREATMENT

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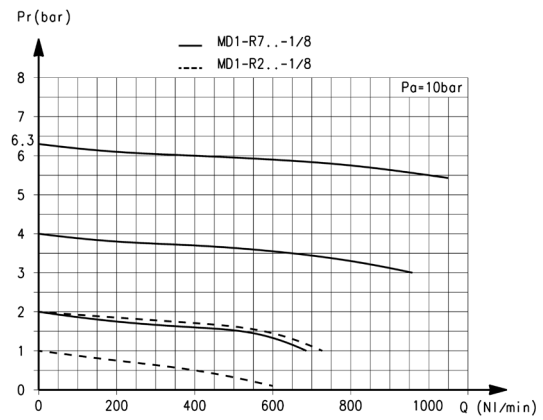
Flow diagrams for regulators with working pressures of 2, 4, 7, 10 bar



Ports with interchangeable 1/8 threaded cartridges

Pr = Regulated pressure (bar)
Q = Flow (NI/min)

Pa = Inlet pressure (bar)

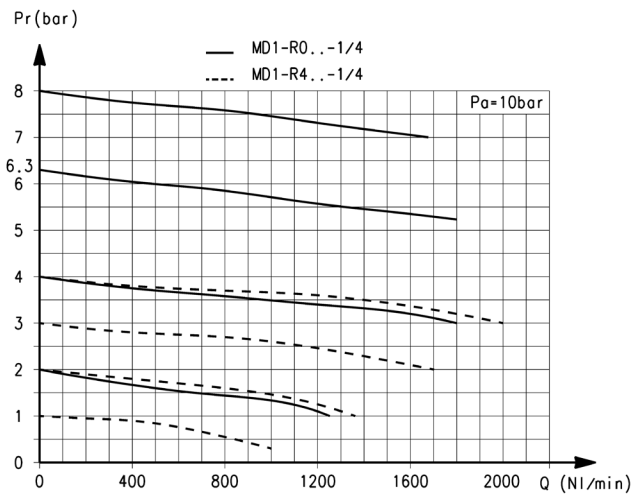


Ports with interchangeable 1/8 threaded cartridges

Pr = Regulated pressure (bar)
Q = Flow (NI/min)

Pa = Inlet pressure (bar)

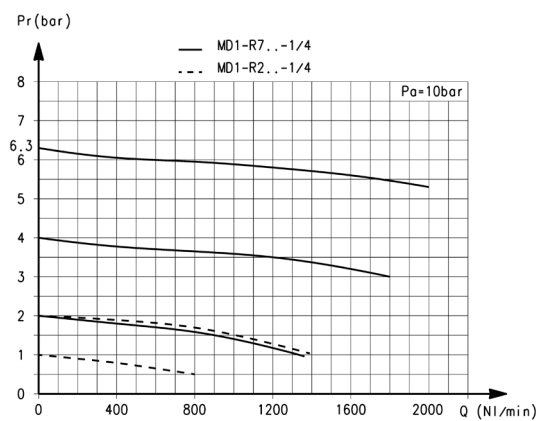
Flow diagrams for regulators with working pressures of 2, 4, 7, 10 bar



Ports with interchangeable 1/4 threaded cartridges

Pr = Regulated pressure
Q = Flow

Pa = Inlet pressure

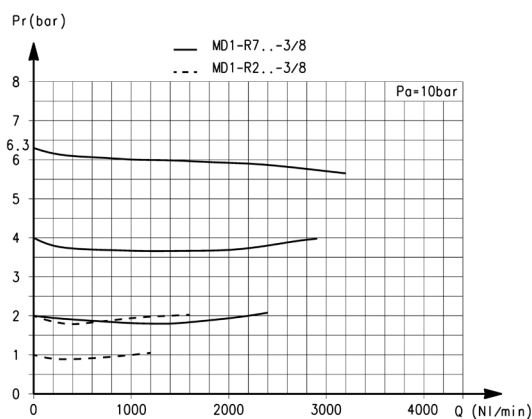
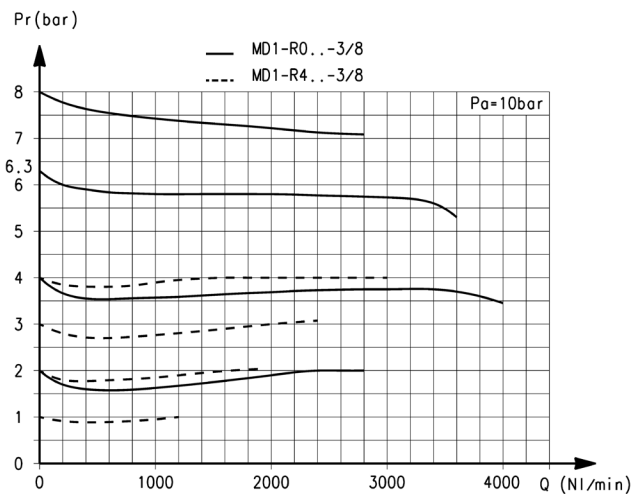


Ports with interchangeable 1/4 threaded cartridges

Pr = Regulated pressure
Q = Flow

Pa = Inlet pressure

Flow diagrams for regulators with working pressures of 2, 4, 7, 10 bar



Ports with interchangeable 3/8 threaded cartridges

Pr = Regulated pressure (bar)
Q = Flow (NI/min)

Pa = Inlet pressure (bar)

Ports with interchangeable 3/8 threaded cartridges

Pr = Regulated pressure (bar)
Q = Flow (NI/min)

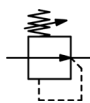
Pa = Inlet pressure (bar)

AIR TREATMENT

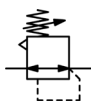
Series MD pressure regulators - dimensions



- PR01 = Regulator without relieving
- PR02 = Regulator with relieving
- PR03 = Regulator with relieving and by-pass valve
- PR04 = Regulator without relieving and with by-pass valve



PR01



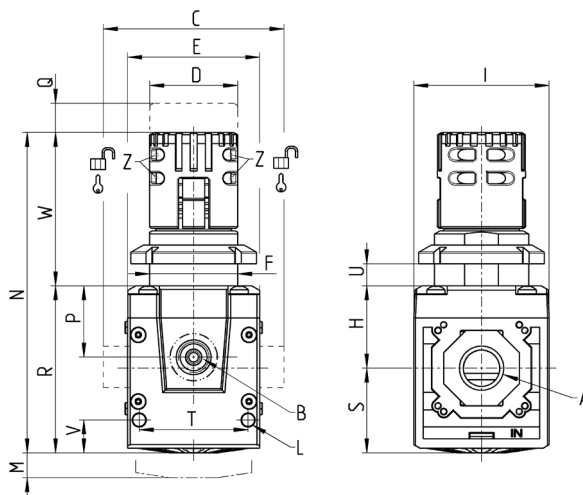
PR02



PR03

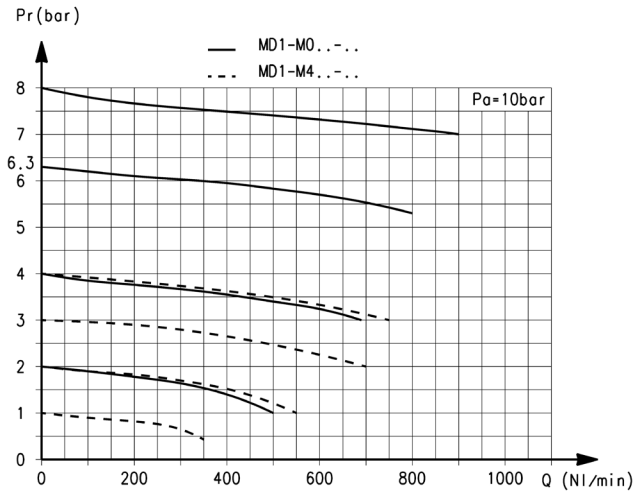


PR04

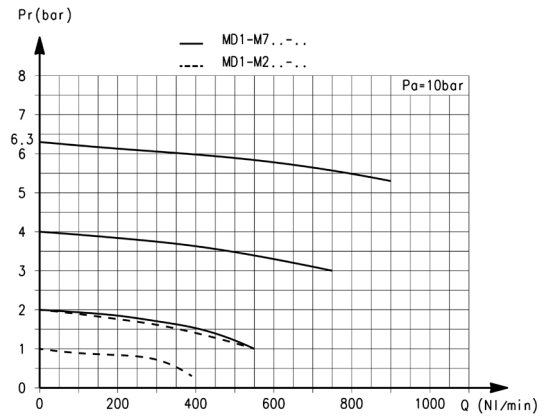


Mod.	A	B	C	D	E	F	H	I	L	M	N	P	Q	R	S	T	U	V	W	Weight [kg]	Weight [kg]
MD1-R000	-	G1/8	42	Ø28	42	M30x1,5	26,2	43	Ø4	16	102	22,7	4	53,2	27	34,6	0 ÷ 11	10,5	48,8	0,2	0,2
MD1-R000-1/8	G1/8	G1/8	42	Ø28	42	M30x1,5	26,2	43	Ø4	16	102	22,7	4	53,2	27	34,6	0 ÷ 11	10,5	48,8	0,2	0,2
MD1-R000-1/4	G1/4	G1/8	42	Ø28	42	M30x1,5	26,2	43	Ø4	16	102	22,7	4	53,2	27	34,6	0 ÷ 11	10,5	48,8	0,2	0,2
MD1-R000-3/8	G3/8	G1/8	42	Ø28	42	M30x1,5	26,2	43	Ø4	16	102	22,7	4	53,2	27	34,6	0 ÷ 11	10,5	48,8	0,2	0,2
MD1-R000-6	Ø6	G1/8	47	Ø28	42	M30x1,5	26,2	43	Ø4	16	102	22,7	4	53,2	27	34,6	0 ÷ 11	10,5	48,8	0,2	0,2
MD1-R000-8	Ø8	G1/8	62	Ø28	42	M30x1,5	26,2	43	Ø4	16	102	22,7	4	53,2	27	34,6	0 ÷ 11	10,5	48,8	0,2	0,2
MD1-R000-10	Ø10	G1/8	62	Ø28	42	M30x1,5	26,2	43	Ø4	16	102	22,7	4	53,2	27	34,6	0 ÷ 11	10,5	48,8	0,2	0,2

Flow diagrams for Manifold regulators with working pressures of 2, 4, 7, 10 bar



Pr = Regulated pressure (bar)
Q = Flow (NI/min)
Pa = Inlet pressure (bar)



Pr = Regulated pressure (bar)
Q = Flow (NI/min)
Pa = Inlet pressure (bar)

Manifold regulator - pneumatic symbols

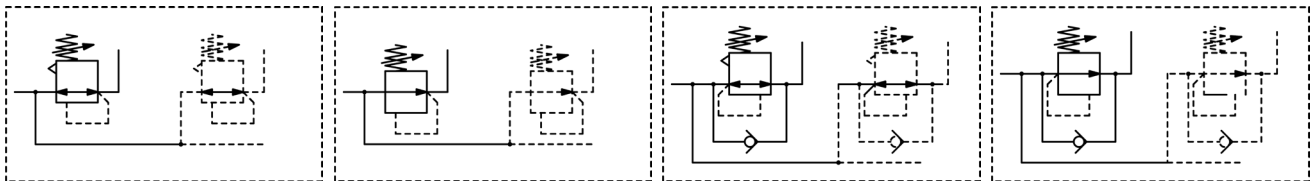
- RM01 = Manifold regulator with relieving
- RM02 = Manifold regulator without relieving
- RM03 = Manifold regulator with relieving and by-pass valve
- RM04 = Manifold regulator without relieving, with by-pass valve

RM01

RM02

RM03

RM04



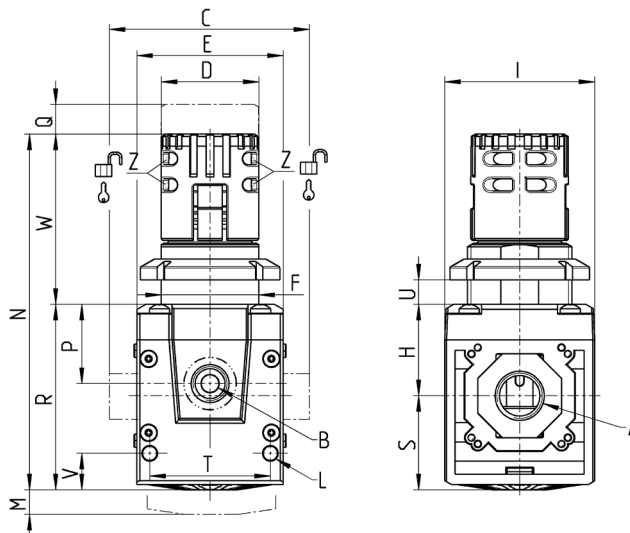
PRESSURE REGULATORS
SERIES MD - DIMENSIONS

Series MD pressure regulators - dimensions



With the Manifold version it is possible to realize a battery of regulators which are fed by a single source of inlet pressure. Each regulator can be set up at any pressure (lower than the inlet pressure). The front or rear connection of each regulator allows to draw air at the pressure value set on the regulator itself.

There is no limit to the number of regulators that can be connected.



Mod.	A	B	C	D	E	F	H	I	L	M	N	P	Q	R	S	T	U	V	W	Weight [kg]	Weight [kg]
MD1-M000	-	G1/8	42	Ø28	42	M30x1,5	26,2	43	Ø4	16	102	22,7	4	53,2	27	34,6	0 ÷ 11	10,5	48,8	0,2	0,2

AIR TREATMENT

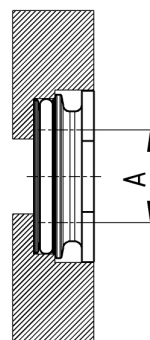
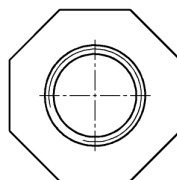
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Threaded cartridges



Supplied with:

2x nickel-plated threaded cartridges
4x special white zinc-plated screws Ø4,5 TC/RC



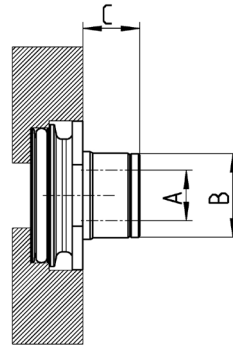
Mod.	A
MD1-A-1/8	G1/8
MD1-A-1/4	G1/4
MD1-A-3/8	G3/8
MD1-A-1/8TF	1/8 NPTF
MD1-A-1/4TF	1/4 NPTF
MD1-A-3/8TF	3/8 NPTF

Integrated cartridges with super-rapid fitting



Supplied with:

2x integrated nickel-plated cartridges with super-rapid fitting
 4x special white zinc-plated screws $\varnothing 4,5$ TC/RC



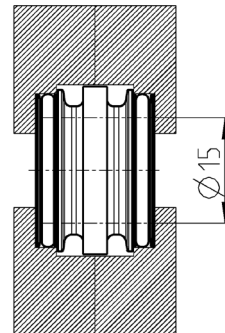
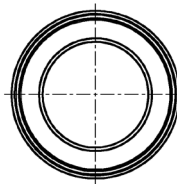
Mod.	A	B	C
MD1-A-6	$\varnothing 6$	12,7	8,5
MD1-A-8	$\varnothing 8$	14,2	10
MD1-A-10	$\varnothing 10$	16,5	12,5
MD1-A04TF	$\varnothing 1/4''$	12,7	8,5
MD1-A-05TF	$\varnothing 5/16''$	14,2	10
MD1-A-06TF	$\varnothing 3/8''$	16,5	12,5

Intermediate joining cartridge



Supplied with:

1x intermediate joining cartridge
 4x special white zinc-plated screws $\varnothing 4,5$ TC/RC



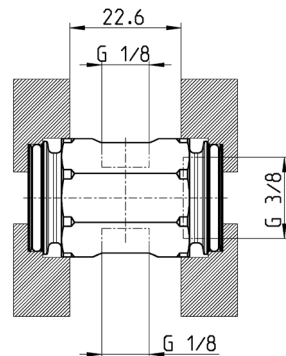
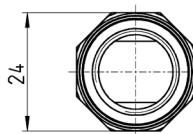
Mod.
MD1-C

Screws for wall mounting



Supplied with:

2x white zinc-plated screws
 M4x50



Mod.
MD1-D

AIR TREATMENT

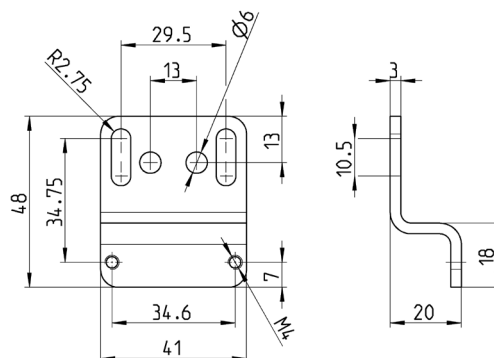
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Rear bracket



Supplied with:

- 1x zinc-plated bracket
- 2x white zinc-plated screws
M4x50

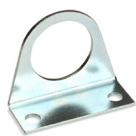


Mod.
MD1-ST/1

Mounting bracket Mod. C114-ST

For regulators and filter-regulators (G1/4 - G1/8)

AIR TREATMENT

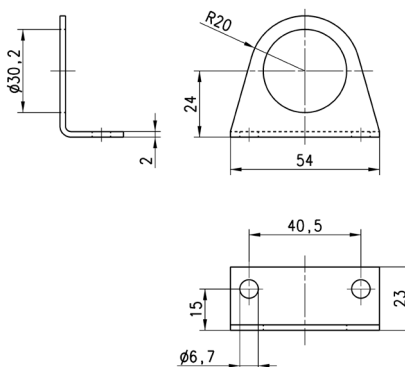


Material:

zinc-plated steel

Supplied with:

1x bracket



Mod.
C114-ST

Mounting bracket Mod. C114-ST/1

For regulators and filter-regulators (G1/4 - G1/8)

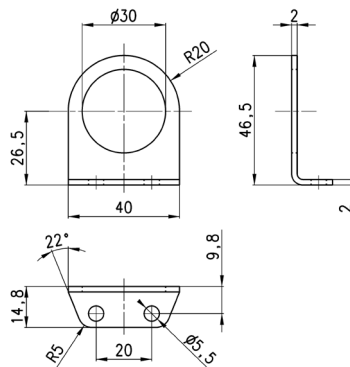


Material:

zinc-plated steel

Supplied with:

1x bracket



Mod.
C114-ST/1

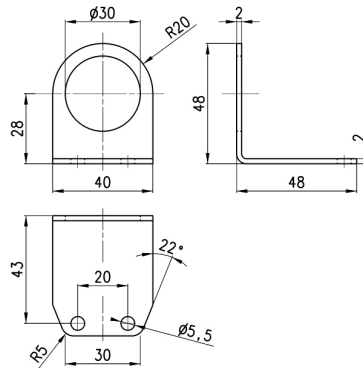
Mounting bracket Mod. C114-ST/2

For regulators and filter-regulators (G1/4 - G1/8)



Material:
zinc-plated steel

Supplied with:
1x bracket



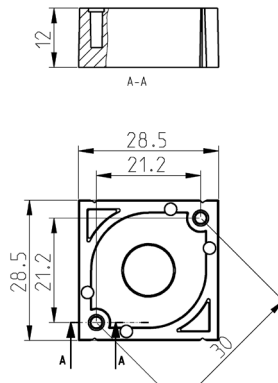
Mod.	
C114-ST/2	

Built in for series MD and MC



Precision class CL4,0

Supplied with:
1 pressure gauge
2 seal
2 self-tapping screws (da 0,3 a 0,4 Nm)
1 base in polymer
1 fixing fitting G1/8 (from 0,5 to 1,5 Nm with a 3 mm hex key)

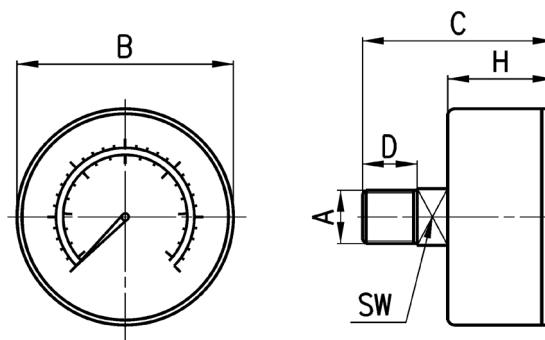


Mod.	Range
MD1-R34/W-P	0 ÷ 4 bar
MD1-R31/W-P	0 ÷ 6 bar
MD1-R32/W-P	0 ÷ 10 bar
MD1-R30/W-P	0 ÷ 12 bar

Pressure gauges with rear connection

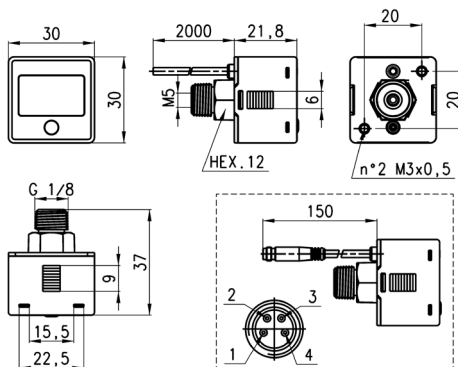


Precision class CL2,5
* Not compatible with oxygen.



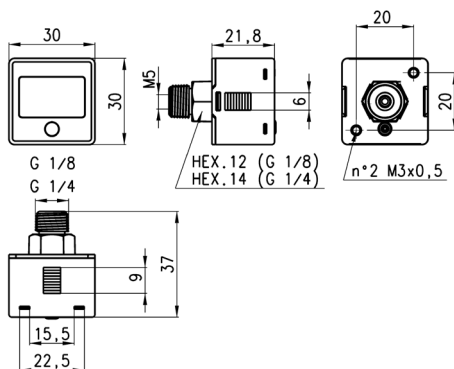
Mod.	A	B	C	D	H	SW	Range
M043-P02,5	R1/8	Ø 38,8	41	10	25	14	0 ÷ 2,5 bar
M043-P04	R1/8	Ø 38,8	41	10	25	14	0 ÷ 4 bar
M043-P06	R1/8	Ø 38,8	41	10	25	14	0 ÷ 6 bar
M043-P10	R1/8	Ø 38,8	41	10	25	14	0 ÷ 10 bar
M043-P12	R1/8	Ø 38,8	41	10	25	14	0 ÷ 12 bar

Digital pressure gauges - with cable



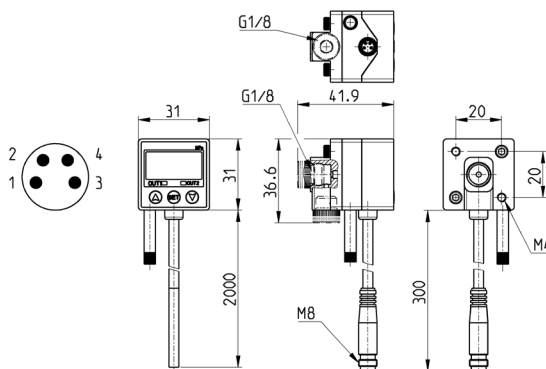
Mod.
PG010-PB-1/8-2
PG010-PB-1/8-M

Digital pressure gauges - battery-powered



Mod.
PG010-PB-1/8

Vacuum/Pressure switch



Mod.
SWCN-P10-P3-2
SWCN-P10-P4-2
SWCN-P10-P4-M