

bit MICRO-REGULATOR

Micro-regulator with rolling diaphragm.

- Preset pressure stability as the upstream pressure varies.
- High flow rates with reduced pressure drops
- Quick overpressure exhaust

Versions available

bit FC: controlled relief to allow greater accuracy in regulation by means of slight continuous air relief.

bit for water: used to regulate the pressure in water circuits; without blowoff valve

bit SR: for use when the downstream circuit needs to be relieved quickly as the upstream pressure drops. Mount the SR regulator between the power supply valve and the point of use.

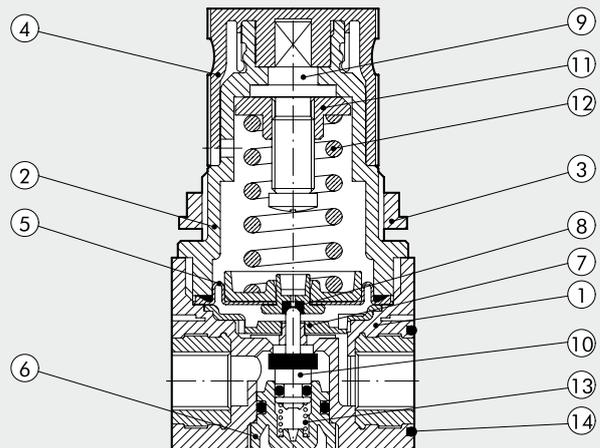


TECHNICAL DATA

		MR BIT 1/8"	MR BIT 1/4"
Threaded port		1/8"	1/4"
Setting range		0 to 2 - 0 to 4 - 0 to 8 - 0 to 12	
Max. inlet pressure	MPa		1.3
	bar		13
	psi		188
Flow rate at 6.3 bar (0.63 MPa to 91 psi) ΔP 0.5 bar (0.05 MPa to 7 psi)	Nl/min		340
	scfm		12
Flow rate at 6.3 bar (0.63 MPa to 91 psi) ΔP 1 bar (0.1 MPa to 14 psi)	Nl/min		600
	scfm		21
Max temperature at 1 MPa; 10 bar; 145 psi	°C		50
	°F		122
Weight	g		80
Wall fixing screws		M4 by means of the bracket provided	
Gauge port		G 1/8"	
Mounting position		In any position	
Fluid		Filtered, lubricated or unlubricated compressed air. Lubrication, if used, must be continuous.	
Notes		The regulator pressure must always be set upwards. For increased sensitivity, use a pressure regulator with a rated pressure as close as possible to the required value.	

COMPONENTS

- ① Technopolymer body with OT58 threaded element
- ② Technopolymer bell
- ③ Technopolymer fixing ring nut
- ④ Technopolymer knob
- ⑤ Rolling diaphragm
- ⑥ Technopolymer plug
- ⑦ Technopolymer anti-vibration screen
- ⑧ NBR relieving gasket
- ⑨ OT58 brass adjusting screws
- ⑩ OT58 valve with NBR vulcanized gasket
- ⑪ OT58 brass nut
- ⑫ Steel adjusting spring
- ⑬ Stainless steel valve compression spring
- ⑭ NBR gaskets



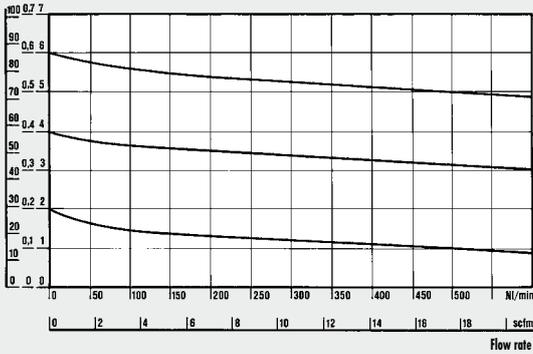
FLOW CHARTS

MR

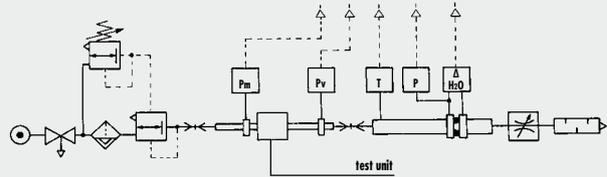
$P_{in} = 0.7 \text{ MPa}; 7 \text{ bar}; 102 \text{ psi}$

Inlet pressure

psi kPa bar

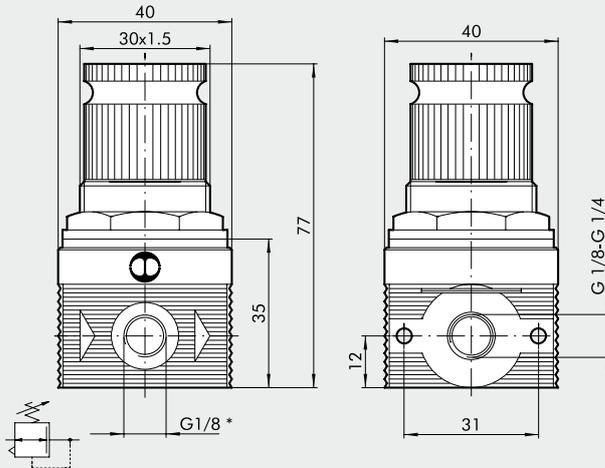


Department of Mechanics
Turin Polytechnic



• Flow tests carried out at the Department of Mechanics, Turin Polytechnic, using the computerized test bench following CETOP RP50R recommendations (ISO DIS 6358-2-approved) with ISO 5167 diaphragm gauge.

DIMENSIONS



* Pressure gauge port

SYNOPTIC, SIZES AND VERSIONS

MR ELEMENT	BIT SIZE	FC VERSION	1/8 THREADED PORT	02 CONDENSATE DRAIN
MR	BIT	FC = Controlled relief SR = Quickly relieved = Standard	1/8" 1/4"	02 = 0 to 2 bar 04 = 0 to 4 bar 08 = 0 to 8 bar 012 = 0 to 12 bar
MRA		Without relief (for WATER)		

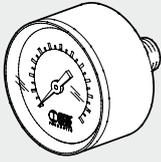
ORDERING CODES

Code	Description
MICROREGULATOR (MR)	
5107004	MR BIT 1/8 012
5107001	MR BIT 1/8 02
5107002	MR BIT 1/8 04
5107003	MR BIT 1/8 08
5207004	MR BIT 1/4 012
5207001	MR BIT 1/4 02
5207002	MR BIT 1/4 04
5207003	MR BIT 1/4 08
MICROREGULATOR WITH CONTROLLED RELIEF	
5111001	MR BIT FC 1/8 02
5111002	MR BIT FC 1/8 04
5211001	MR BIT FC 1/4 02
5211002	MR BIT FC 1/4 04
MICROREGULATOR WITH QUICK RELIEF	
5102001	MR BIT SR 1/8 02
5102002	MR BIT SR 1/8 04
5102003	MR BIT SR 1/8 08
5102004	MR BIT SR 1/8 012
5202001	MR BIT SR 1/4 02
5202002	MR BIT SR 1/4 04
5202003	MR BIT SR 1/4 08
5202004	MR BIT SR 1/4 012
WATER MICROREGULATOR	
5108001	MRA BIT 1/8 02
5108002	MRA BIT 1/8 04
5108003	MRA BIT 1/8 08
5108004	MRA BIT 1/8 012
5208001	MRA BIT 1/4 02
5208002	MRA BIT 1/4 04
5208003	MRA BIT 1/4 08
5208004	MRA BIT 1/4 012

bit ACCESSORIES

ACCESSORIES FOR STANDARD bit AND SERIES F bit FOR WATER

PRESSURE GAUGE



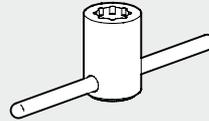
Code	Description
9700102 *	M 40 1/8 04
9700101 *	M 40 1/8 012



9700109 *	M 40x40 1/8 04
9700110 *	M 40x40 1/8 012

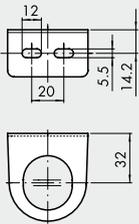
* Cannot be used with water

DOME DISASSEMBLY SPANNER



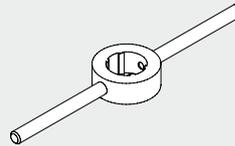
Code	Description
9220701	Cover LUB spanner

R/FR FIXING BRACKET



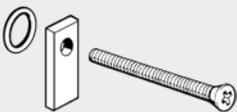
Code	Description
9200701	SF100 - BIT - ND 1/4 - SY1

COVER DISASSEMBLY SPANNER



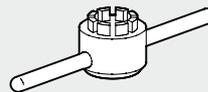
Code	Description
9170401	CS CS BIT

ASSEMBLY PLATE (PAIR)



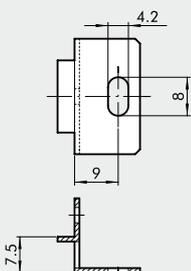
Code	Description
9170201	PAB 1/8 - 1/4 BIT

REDUCER PLUG DISASSEMBLY SPANNER



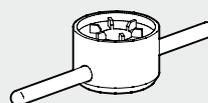
Code	Description
9170501	CS OTR BIT

WALL MOUNTING BRACKET (PAIR)



Code	Description
9170301	SFB 1/8 - 1/4 BIT

BOWL DISASSEMBLY SPANNER



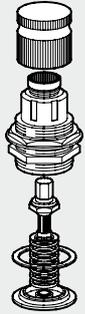
Code	Description
9170601	CS TF - TL BIT - SY1

bit SPARE PARTS



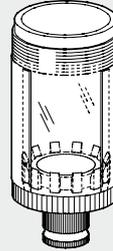
SPARE PARTS FOR STANDARD bit

UPPER COVER FOR MR



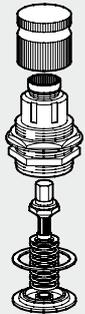
Code	Description
9250805	Spares CS 1/8 1/4 BIT 02
9250806	Spares CS 1/8 1/4 BIT 04
9250807	Spares CS 1/8 1/4 BIT 08
9250808	Spares CS 1/8 1/4 BIT 012

FILTER AND FILTER-REGULATOR BOWL



Code	Description
9255001	Spares TF 1/8 1/4 BIT RMSA
9255101	Spares TF 1/8 1/4 BIT SAC

UPPER COVER FOR MR FC



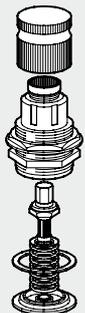
Code	Description
9250817	Spares CS FC 1/8 1/4 BIT 02
9250818	Spares CS FC 1/8 1/4 BIT 04

AUTOMATIC DRAIN (SAC)



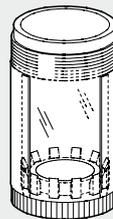
Code	Description
9000803	Spares SAC automatic drain

UPPER COVER FOR MRA



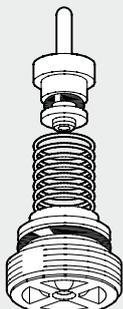
Code	Description
9250809	Spares CSA 1/8 - 1/4 BIT 02
9250814	Spares CSA 1/8 - 1/4 BIT 04
9250815	Spares CSA 1/8 - 1/4 BIT 08
9250816	Spares CSA 1/8 - 1/4 BIT 012

LUBRICATOR BOWL



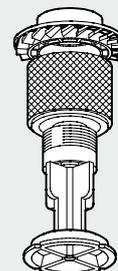
Code	Description
9251402	Spares TL 1/8 1/4 BIT

COMPLETE POPPET FOR MR AND MRA



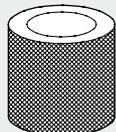
Code	Description
9250705	Spares poppet for MR
9250706	Spares poppet for MR-SR (rapid drain)
9250708	Spares poppet for MRA

FILTER ELEMENT



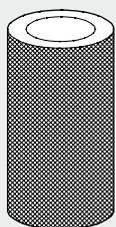
Code	Description
9251708	Spares FP 1/8-1/4 BIT 5 (yellow)
9251709	Spares FP 1/8-1/4 BIT 20 (white)
9251710	Spares FP 1/8-1/4 BIT 50 (blue)

FILTER CARTRIDGE



Code	Description
9251808	Spares filter cartridge BIT 5 (yellow)
9251809	Spares filter cartridge BIT 20 (white)
9251810	Spares filter cartridge BIT 50 (blue)

DEPURATOR FILTER ELEMENT



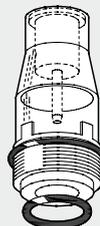
Code	Description
9251712	Spares FP DEP. 1/8 1/4 BIT

COMPLETE POPPET FOR FR



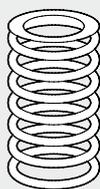
Code	Description
9250905	Spares OTFR 1/8 1/4 BIT 5 (yellow)
9250906	Spares OTFR 1/8 1/4 BIT 20 (white)
9250907	Spares OTFR 1/8 1/4 BIT 50 (blue)

TRANSPARENT LUBRICATOR COVER



Code	Description
9251302	Spares CVL 100-200-300-400 BIT

SPRING FOR MR, FR



Code	Description
9250610	Spares MO 02 BIT
9250611	Spares MO 04 BIT
9250612	Spares MO 08 BIT
9250613	Spares MO 012 BIT

NOTES

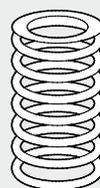
SPARE PARTS FOR SERIES F bit FOR WATER

FILTER ELEMENT



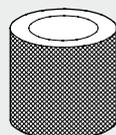
Code	Description
9251709	Spares FP 1/8-1/4 BIT 20 (white)

SPRING FOR REG F, FR F



Code	Description
9250610	Spares MO 02 BIT
9250611	Spares MO 04 BIT
9250612	Spares MO 08 BIT
9250613	Spares MO 012 BIT

FILTER CARTRIDGE



Code	Description
9251809	Spares filter cartridge BIT 20 (white)

NOTES

GENERAL TECHNICAL DATA **bit**

The units in the **bit** range feature:

- reduced dimensions
- negligible load loss
- long life
- excellent quality-to-price ratio

Thanks to its technical features the **bit** air treatment range is particularly suitable for de-centralized use near the final actuators.



TECHNICAL DATA

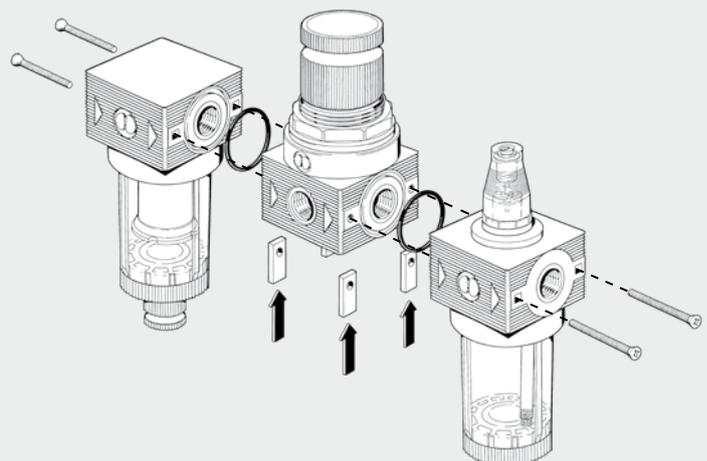
		BIT 1/8"	BIT 1/4"
Threaded port		1/8"	1/4"
Degree of filtration	µm	5 (yellow) 20 (white) 50 (blue)	
Degree of purification		99.97% α 0.01 µm	
Setting range	bar	0 to 2 - 0 to 4 - 0 to 8 - 0 to 12	
Max. inlet pressure	MPa	1.3	
	bar	13	
	psi	188	
Flow rate at 6.3 bar (0.63 MPa to 91 psi) ΔP 0.5 bar (0.05 MPa to 7 psi)	Nl/min	350	
	scfm	12	
Max temperature at 1 MPa; 10 bar; 145 psi	°C	- 10° to + 50°	
	°F	14° to 122°	
Elements		Filter - Regulator - Lubricator - Filter-regulator - Depurator Units: FRL, FR + L, F + L, F + D	
Mounting		By means of the bracket provided	
Fluid		Compressed air	
Compatibility with oils		See chapter Z1	

ASSEMBLY

Use ASSEMBLY PLATES (code 9170201) to assemble the **bit** elements correctly.

Assembly procedure:

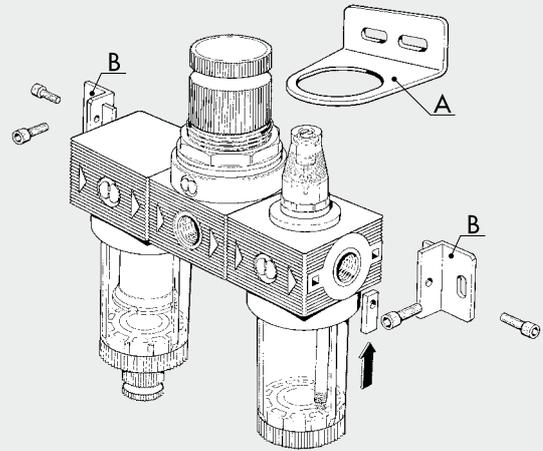
- Fit the plates right into the slots under the body of the **bit** element
- Check that there O-rings round the threaded outlet
- Assemble the elements, making sure that the flow run in the direction of the arrows marked on the body.



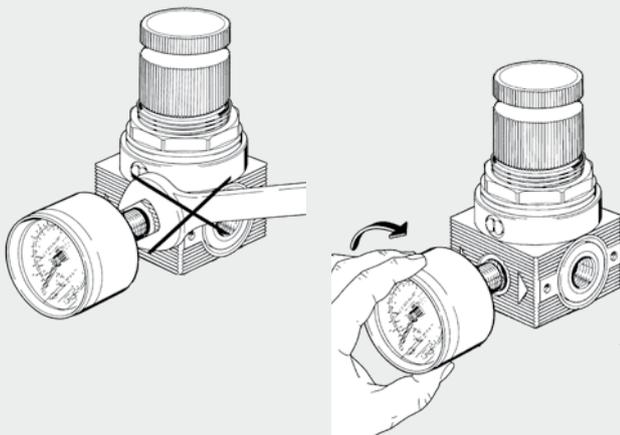
WALL MOUNTING

The wall fixing of a bit unit can be made through:

- Fixing bracket R/FR code 9200701 (A)
- Wall fixing plates code 9170301 (B)

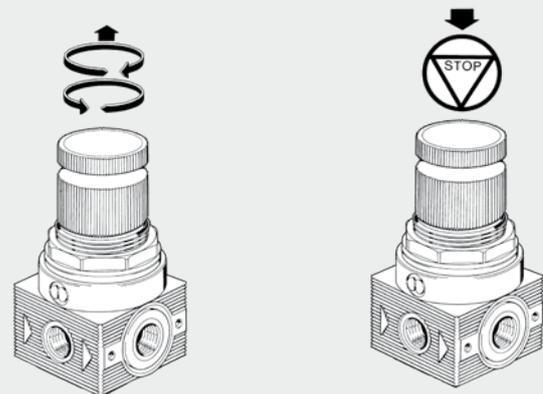


GENERAL RULES - USE AND MAINTENANCE



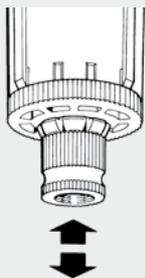
MOUNTING THE GAUGE

The gauge must be mounted by hand without using a spanner. Use fluid sealants to provide a good seal. N.B. Do not use Teflon.

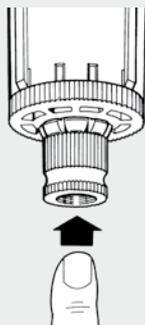


SETTING THE PRESSURE

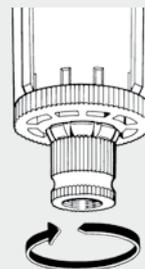
The air pressure must always be set upwards. The knob can be locked so that the set pressure cannot be altered.



With the knob in the centre position, the drain is semi-automatic. The drain operates when the bowl is not pressurized and closes when it is.



Press the button to drain condensate when the bowl is pressurized.



Turn the knob anticlockwise to close the valve with bowl pressurized or not pressurized.



To clean or replace the filter element unscrew the screen of the centrifuge assembly. Use a no. 3 compass spanner to unscrew the bowl.