

# 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.

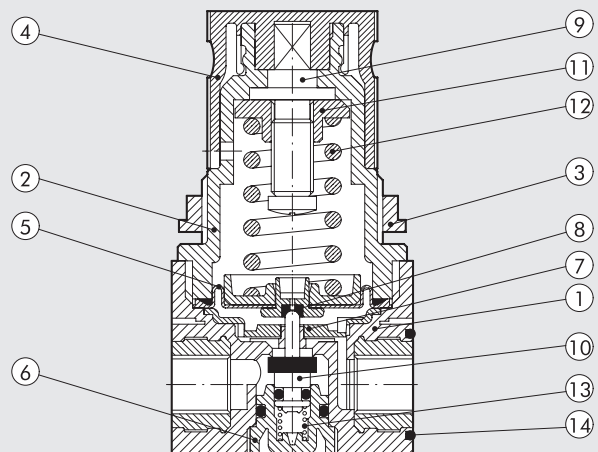


## TECHNICAL DATA

		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)	NI/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)	NI/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



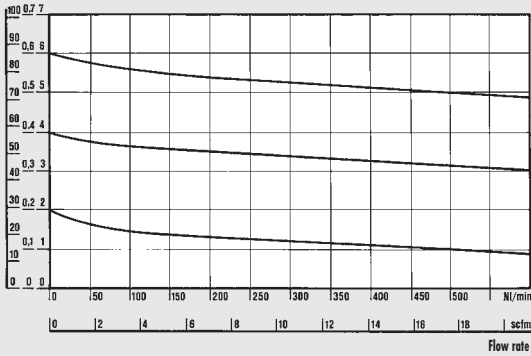
**FLOW CHARTS**

**MR**

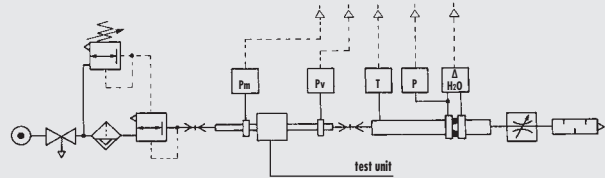
$P_{in} = 0.7 \text{ MPa}; 7 \text{ bar}; 102 \text{ psi}$

Inlet pressure

psi kPa bar

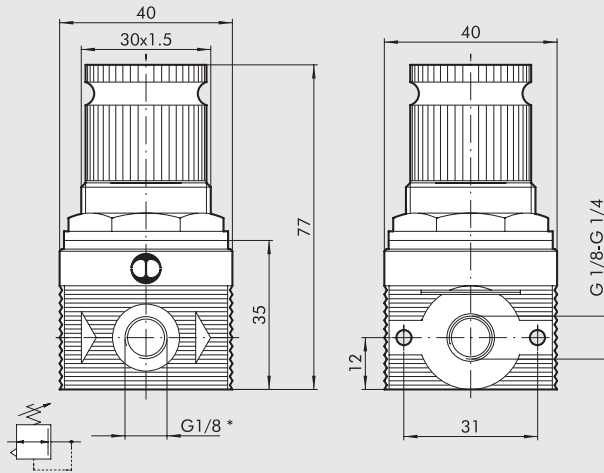


**Department of Mechanics**  
Turin Polytechnic



• 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
<b>MICROREGULATOR (MR)</b>	
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
<b>MICROREGULATOR WITH CONTROLLED RELIEF</b>	
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
<b>MICROREGULATOR WITH QUICK RELIEF</b>	
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
<b>WATER MICROREGULATOR</b>	
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 PADLOCKABLE MICROREGULATOR

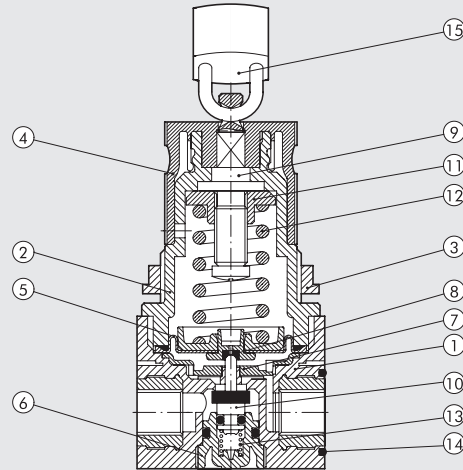
The padlockable microregulator has a pin with a hole in it that projects from the top of the knob. When the knob is in the push-lock position, the padlock can be inserted in the hole, preventing the knob from being operated. A padlock and two keys are supplied with the regulator.

Refer to the bit microregulator for technical data and flow curves.

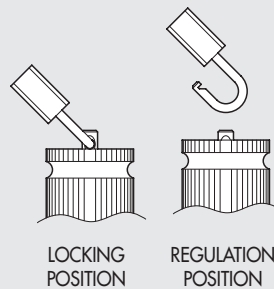
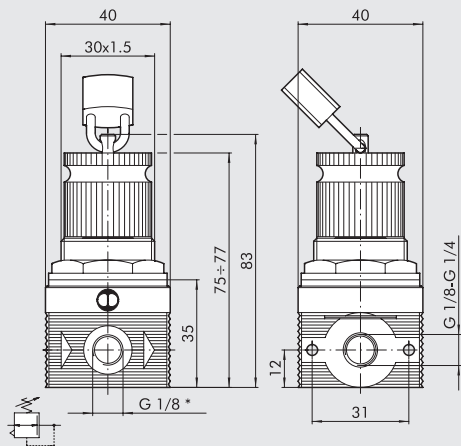


## COMPONENTS

- 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 Nickel-plated brass OT58 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
- ⑮ Padlock



## DIMENSIONS



\* Pressure gauge port

## ORDERING CODES

Code	Description
5110001	MR BIT KEY 1/8 02
5110002	MR BIT KEY 1/8 04
5110003	MR BIT KEY 1/8 08
5110004	MR BIT KEY 1/8 012
5210001	MR BIT KEY 1/4 02
5210002	MR BIT KEY 1/4 04
5210003	MR BIT KEY 1/4 08
5210004	MR BIT KEY 1/4 012

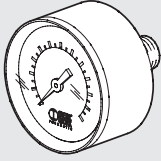
## SYNOPTIC, SIZES AND VERSIONS

MR ELEMENT	BIT SIZE	KEY TYPE	1/8 THREADED PORT	02 SETTING RANGE
MR	BIT	Padlockable	1/8 1/4	02 = 0 to 2 bar 04 = 0 to 4 bar 08 = 0 to 8 bar 012 = 0 to 12 bar

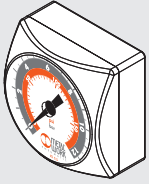
# bit ACCESSORIES

## ACCESSORIES FOR STANDARD bit AND SERIES F bit FOR WATER

### PRESSURE GAUGE



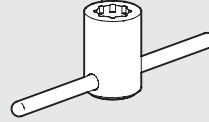
Code	Description
9700102 *	M 40 1/8 04
9700101 *	M 40 1/8 012



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

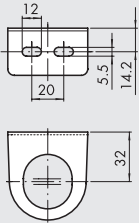
\* Cannot be used with water

### DOME DISASSEMBLY SPANNER



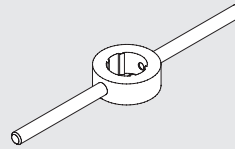
Code	Description
9220701	Cover LUB spanner

### R/FR FIXING BRACKET



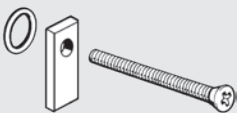
Code	Description
9200701	SF100 - BIT - ND 1/4 - SY1

### COVER DISASSEMBLY SPANNER



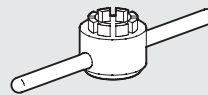
Code	Description
9170401	CS CS BIT

### ASSEMBLY PLATE (PAIR)



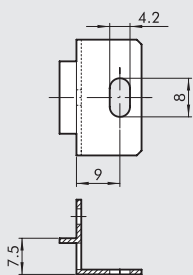
Code	Description
9170201	PAB 1/8 - 1/4 BIT

### REDUCER PLUG DISASSEMBLY SPANNER



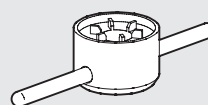
Code	Description
9170501	CS OTR BIT

### WALL MOUNTING BRACKET (PAIR)



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

### BOWL DISASSEMBLY SPANNER

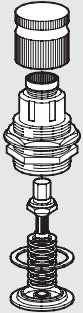


Code	Description
9170601	CS TF - TL BIT - SY1

# bit SPARE PARTS

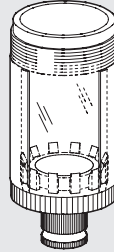
## SPARE PARTS FOR STANDARD bit

### UPPER COVER FOR MR



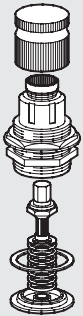
Code	Description
9250805	Spares CS 1/8 1/4 BIT 02
9250806	Spares CS 1/8 1/4 BIT 04
9250807	Spares CS 1/8 1/4 BIT 08
9250808	Spares CS 1/8 1/4 BIT 012

### 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



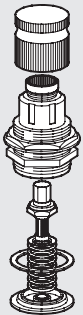
Code	Description
9250817	Spares CS FC 1/8 1/4 BIT 02
9250818	Spares CS FC 1/8 1/4 BIT 04

### AUTOMATIC DRAIN (SAC)



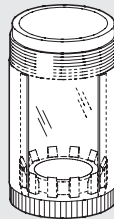
Code	Description
9000803	Spares SAC automatic drain

### UPPER COVER FOR MRA



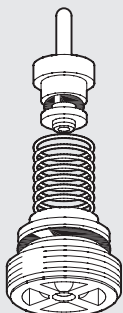
Code	Description
9250809	Spares CSA 1/8 - 1/4 BIT 02
9250814	Spares CSA 1/8 - 1/4 BIT 04
9250815	Spares CSA 1/8 - 1/4 BIT 08
9250816	Spares CSA 1/8 - 1/4 BIT 012

### LUBRICATOR BOWL



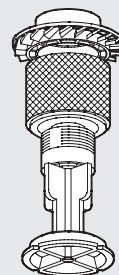
Code	Description
9251402	Spares TL 1/8 1/4 BIT

### COMPLETE POPPET FOR MR AND MRA



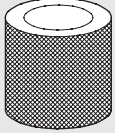
Code	Description
9250705	Spares poppet for MR
9250706	Spares poppet for MR-SR (rapid drain)
9250708	Spares poppet for MRA

### FILTER ELEMENT



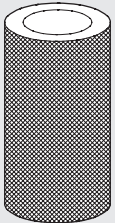
Code	Description
9251708	Spares FP 1/8-1/4 BIT 5 (yellow)
9251709	Spares FP 1/8-1/4 BIT 20 (white)
9251710	Spares FP 1/8-1/4 BIT 50 (blue)

**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**



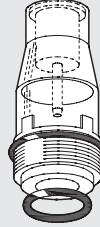
Code	Description
9251712	Spares FP DEP. 1/8 1/4 BIT

**COMPLETE POPPET FOR FR**



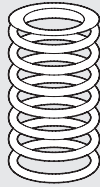
Code	Description
9250905	Spares OTFR 1/8 1/4 BIT 5 (yellow)
9250906	Spares OTFR 1/8 1/4 BIT 20 (white)
9250907	Spares OTFR 1/8 1/4 BIT 50 (blue)

**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**



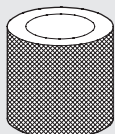
Code	Description
9251709	Spares FP 1/8-1/4 BIT 20 (white)

**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**