

Flow control valves

Pressure compensated partially adjustable flow regulators, with male-female sleeve

VCDC-H-MF (G1/4 - G3/8)

OE.22.03-X-Y-Z



Description

This valve is composed by a sleeve with an inserted pressure compensated flow regulator cartridge (VCD1); it controls the oil flow from B to A, and prevents it from exceeding the adjusted value regardless of working pressure, while establishing a minimum pressure differential between 3 bar and 8 bar (45 psi and 115 psi) approximately between the two ports. The inserted cartridge is available in different sizes (as well as the sleeve), and each size is available with different orifices, each one for a specific flow range (see Performance Diagram and Flow Range "Z" table). For each selected size and flow range, the pressure compensated flow can be tuned finely by changing the spring load (see table of Dimensions).

In the reverse direction, A to B, the valve behaves as a fixed restriction, and it allows free flow depending from the pressure available (see Performance diagram).

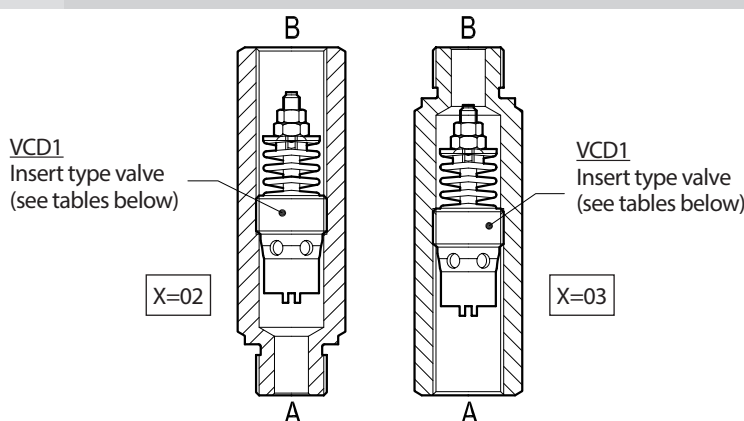
The valve can be ordered with MALE "A" port (X = 02), or FEMALE "A" port (X = 03).

Technical data

VCD1 Code	Ports A-B	Pressure P max bar (psi)	Flow Q max l/min (gpm)	Weight kg (lbs)
0T.F3.01.02.09...	G 1/4	315 (4500)	10 (3)	0.01 (0.02)
0T.F3.01.02.02...	G 3/8	315 (4500)	25 (7)	0.03 (0.07)

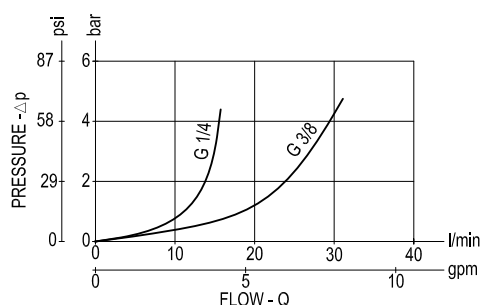
Steel body, zinc plated

Special ports available on request.



X	Male or female regulated port
02	female regulated port B
03	male regulated port B

Performance

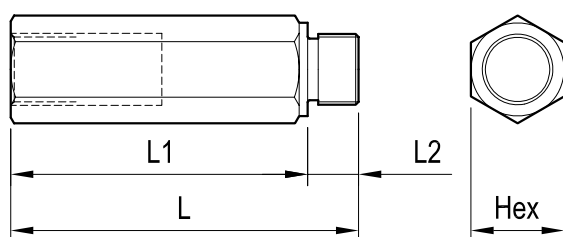


Note: the inserted flow regulator cartridge is available with a number of different orifices for different flow ranges, as specified by the "Z" table: when ordering please specify the needed Flow Range ("Z" table), as well as the needed Port Size ("Y" table). Customer tailored flow adjustments are available on request: for details, please consult us.

Advantages

- Compact design and inline mounting for space saving.
- Mounting position is unrestricted
- The inserted flow regulator cartridge can be purchased separately for easy service or for modifications to the original flow adjustment (see data sheet RE 18329-80).

Dimensions



Ports size / Dimensions

Y	Ports	L mm (inches)	L1 mm (inches)	L2 mm (inches)	Hex mm (inches)	Sleeve code
09	G 1/4	78 (3.07)	66 (2.60)	12 (0.47)	19 (0.75)	OC.51.01.025
02	G 3/8	82 (3.23)	70 (2.76)	12 (0.47)	22 (0.87)	OC.51.01.026

Z	REGULATED FLOW RANGE l/min (gpm)			
	G 1/4	G 3/8	G 1/2	G 3/4
01	-	2.5-4.0 (0.66-1.06)	16-21 (4.23-5.55)	37-50 (9.78-13.21)
02	1-1.6 (0.26-0.42)	4.0-6.3 (1.06-1.67)	21-28 (5.55-7.40)	50-67 (13.21-17.7)
03	1.6-2.5 (0.42-0.66)	6.3-10 (1.67-2.64)	28-37 (7.40-9.78)	67-90 (17.7-23.78)
04	2.5-4.0 (0.66-1.06)	10-16 (2.64-4.23)	37-50 (9.78-13.21)	90-120 (23.78-31.7)
05	4.0-6.3 (1.06-1.66)	16-25 (4.23-6.61)	50-67 (13.21-17.7)	120-150 (31.7-39.63)
06	6.3-10 (1.66-2.64)	-	-	-

Applications

Typical applications are the control of the maximum speed of an actuator (double or single acting cylinder, or motor), which is generally achieved by regulating the maximum flow out from the actuator (or meter-OUT). The flow, and consequently the maximum actuator speed, will vary slightly with changes in fluid viscosity, but will be largely independent from the load and from the working pressure.

Ordering code

OE.22.03	X	Y	Z
Pressure Compensated partially adjustable flow regulators, with male-female sleeve			
	Male or female regulated port see table "X"		Regulated flow range see table "Z"
		Ports size / Dimensions see table "Y"	

Type	Material number	Type	Material number	Type	Material number
OE2203020201	R934003432				
OE2203020203	R932007288				
OE2203020204	R932007289				
OE2203020205	R932007290				
OE2203020903	R932007282				
OE2203020906	R932007284				
OE2203030201	R931000446				
OE2203030204	R931000450				
OE2203030902	R932007285				
OE2203030906	R932007286				