

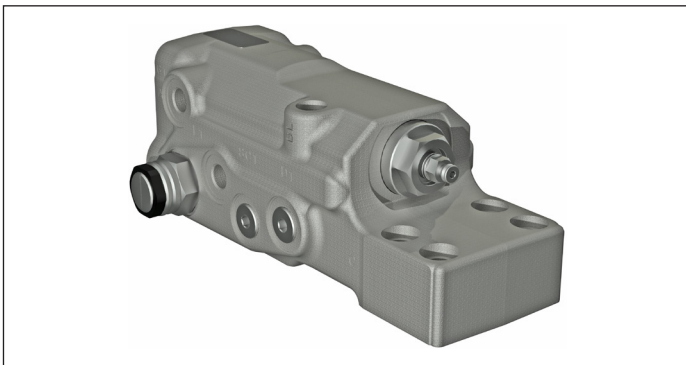
## Check and Metering H-valve

H-valve 2.5

**RE 18309-26**

Edition: 04.2022

Replaces: 05.2021



Size 2.5

Series H-valve

Maximum operative pressure: 460 bar (6672 psi)

Max. flow: 250 lpm (66 gpm)

### Description

The Check and Metering H-valve for excavators prevents uncontrolled lowering of the actuator in case of hose failure and provides the load holding when the joystick is released in neutral position.

Lifting operations are performed with very limited pressure losses across the valve.

The valve includes also a pressure relief stage (1) which prevents any overloads into the cylinder.

The actuation of the valve is performed by operating the hydraulic pilot stage (2) with a low pilot pressure.

Based on the two stages opening principle (2, 3), the valve provides flow metering from the cylinder to the main control valve.

For safety reasons, the valve is directly mounted on the cylinder flange and provides a compact installation with the positioning of all hydraulic ports on the back surface.

The valve is also equipped with a by-pass function (4) which can be used for emergency boom lowering in case of pilot pressure failure.

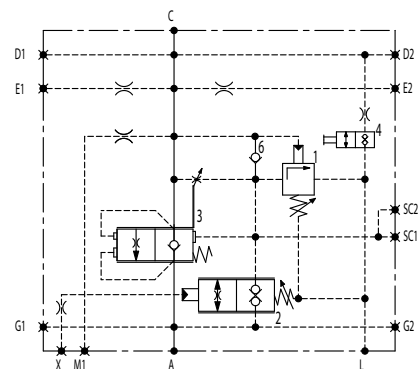
### Main Field of Application

Excavators

Material Handlers

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### Note

Ports D2, E1, E2, SC2, G1, G2, M1 to be drilled on request.

Port identified with D1 and SC1 are not protected with calibrated orifice but in direct connection with pressure channels.

### Technical data

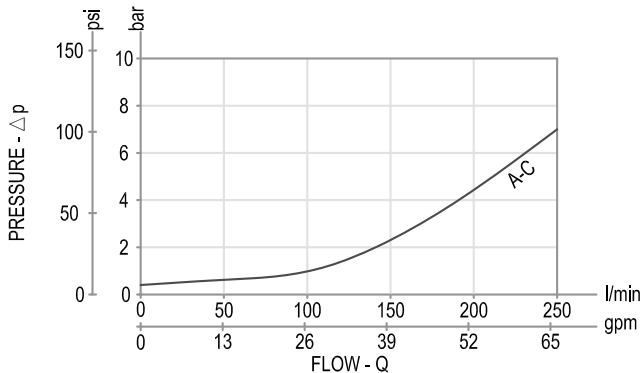
General		
Weight	kg (lbs)	6.70 (14.77)
Manifold material		Zinc plated cast iron
Ambient temperature range	°C (°F)	-30....+110 (-22....+230)
Salt spray test	h	500
Hydraulic		
Max. operating pressure	bar (psi)	460 (6672)
Max. pressure at C-A ports	bar (psi)	460 (6672)
Max. pressure at L port	bar (psi)	25 (362.6)
Max. flow	l/min. (gpm)	250 (66)
Opening pressure range	bar (psi)	7 ÷ 13 (101.5 ÷ 188.5)
Setting		Cracking pressure of main stage (3) with 100 bar load pressure.
Fluid		Mineral oil (HL, HLP) according DIN 51524
Fluid temperature range	°C (°F)	-30....+100 (-22....+212)
Viscosity range	mm²/s	15....380
Permissible degree of fluid contamination		Class 19/17/14 according to ISO 4406
Other technical data		see data sheet 18350-50

Note

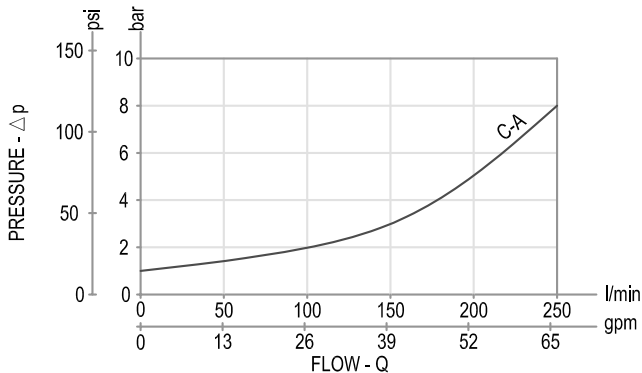
for applications outside these parameters, please consult us.

### Characteristic curves

**$\Delta p = f(Q)$  Pressure drop - Flow rate characteristic**  
**Lifting (A->C)**



**$\Delta p = f(Q)$  Pressure drop - Flow rate characteristic**  
**Lowering (C->A), main stage (3) completely open.**



Measured with hydraulic fluid ISO-VG46 at 36° ±2 °C (97° ±36 °F); ambient temperature 23 °C (73 °F).

Technical drawing of the 3000 series solenoid valve, showing five views: top, front, side, rear, and bottom. The drawing includes dimensions in millimeters and inches, and labels for various ports and components.

**Top View:** Dimensions include 23.8 (0.94), 11.9 (0.47), 25.4 (1), 50.8 (2), and 50.8 (2). Port labels include A, B, C, D, E, L, M, N, O, P, Q, R, S, T, U, V, W, X, Y, Z.

**Front View:** Dimensions include 66.5 (2.62), 50 (1.97), 20, 10.5 (0.41), 4, 16.5 (0.65), 30 (1.18), 29 (1.14), 120.5 (4.74), 91.5 (3.6), 67 (2.64), 29 (1.14), 58.5 (2.3), 31 (1.22), 24.5 (0.96), 17 (0.67), 123 (4.84), 36, 82 (3.23), 25 (0.98), 190 (7.48), 215 (8.46).

**Side View:** Dimensions include 120.5 (4.74), 17 (0.67), 28 (1.1), 36.5 (1.44), 36.5 (1.44), 28 (1.1), 17 (0.67), 10 (0.39), 4 (x), 31 (1.22), 24.5 (0.96), 19 (0.75), 17 (0.67), 35 (1.38), 29 (1.14), 32 (1.26), 24.5 (0.96), 29 (1.14), 123 (4.84).

**Rear View:** Dimensions include 23.8 (0.94), 11.9 (0.47), 25.4 (1), 50.8 (2), 50.8 (2), 19 (0.75), 28 (1.1), 14.5 (0.57), 56 (2.2), 190 (7.48), 215 (8.46).

**Bottom View:** Dimensions include 58.5 (2.3), 31 (1.22), 24.5 (0.96), 19 (0.75), 17 (0.67), 35 (1.38), 29 (1.14), 32 (1.26), 24.5 (0.96), 29 (1.14), 123 (4.84).

Ports	Std. size
L, X	G1/4 - BSPP ISO 1179-1
Optional ports: D2, E1, E2, SC2, G1, G2, M1 - to be drilled on request	G1/4 - BSPP ISO 1179-1



## Ordering details

01	02	03	04	05	06	07
<b>0G.H2</b>	-	--	-	<b>0</b>	<b>0</b>	--

### Family

01	Check and Metering H-valve 2.5	<b>0G.H2</b>
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### A-C Flange

02	1/2 SAE 6000	<b>2</b>
	3/4 SAE 6000	<b>3</b>

### Application

03	Single Operation. D2, E1, E2, SC2, G1, G2, M1 ports not drilled.	<b>00</b>
	Parallel operation. Left version. D2, E2, SC2, G1, G2, M1 ports not drilled.	<b>01</b>
	Parallel operation. Right version. D2, E1, SC2, G1, G2, M1 ports not drilled.	<b>02</b>

### Ports

04	G1/4 - BSPP ISO 1179-1	<b>G</b>
	G1/4 - JIS B 2351-90	<b>J</b>
	9/16-18 - SAE UNF 2B ISO 11926-1	<b>U</b>

### Main stage

05	Spool Type	<b>0</b>
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### Pilot stage

06	N/A	<b>0</b>
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Valve 1	Adj. pressure range bar (psi)	Pres. increase bar/turn (psi/turn)	Std. setting bar (psi) 5 l/min	
07	300-460 (4350-6700)	168 (2436)	350 (5000)	<b>35</b>
	300-460 (4350-6700)	168 (2436)	420 (6090)	<b>42</b>
	300-460 (4350-6700)	168 (2436)	460 (6672)	<b>46</b>

## Flange seal kit

E00000000000001 (R930004531) C flange 1/2 SAE 6000
E00000000000002 (R930004532) C flange 3/4 SAE 6000

Type	Material number
0GH2200G0042000	R930083554
0GH2201G0042000	R930083555
0GH2202G0042000	R930083556

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