rexroth
A Bosch Company

Check and Metering H-valve

H-valve 5.0

RE 18309-27
Edition: 10.2023
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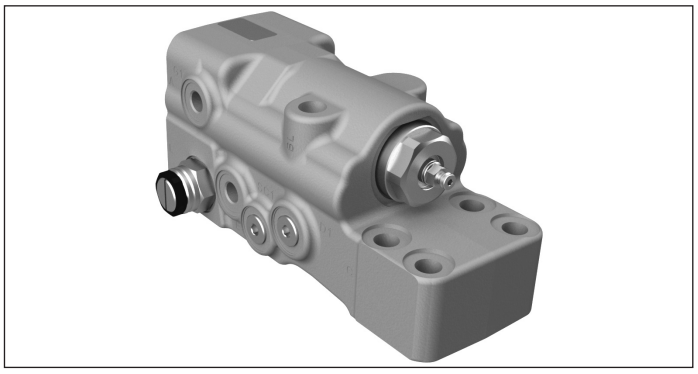


Size 5.0
Series H-valve
Maximum operative pressure: 460 bar (6672 psi)
Max. flow: 500 lpm (132 gpm)

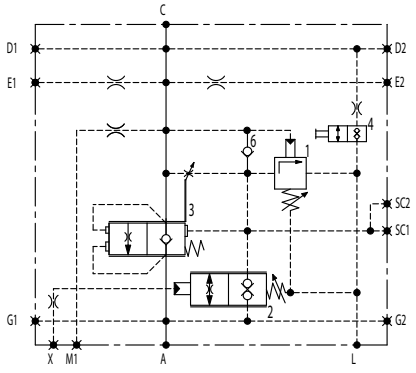
Description

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

Contents



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.

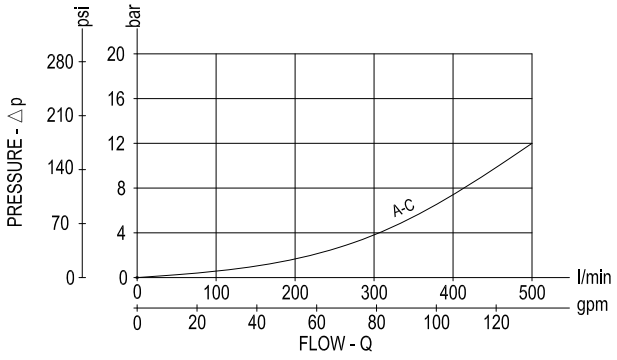
Technical data

General		
Weight	kg (lbs)	9.05 (14.95)
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)	500 (132)
Opening pressure range	bar (psi)	7 ÷ 13 (101.5 ÷ 188.5)
Setting		Setting is done at 5 l/min (C->A) with a pilot pressure which determines a load pressure reduction from 100 bar to 80 bar. Standard setting is 8,5 (0/+0,5) bar pilot pressure.
Fluid		Mineral oil (HL, HLP) according DIN 51524
Fluid temperature range	°C (°F)	-30....+100 (-22....+212)
Viscosity range	mm^2/s	15....380
Permissible degree of fluid contamination		Class 19/17/14 according to ISO 4406
MTTFD		150 years see RE 18350-51
Other technical data		see data sheet 18350-50

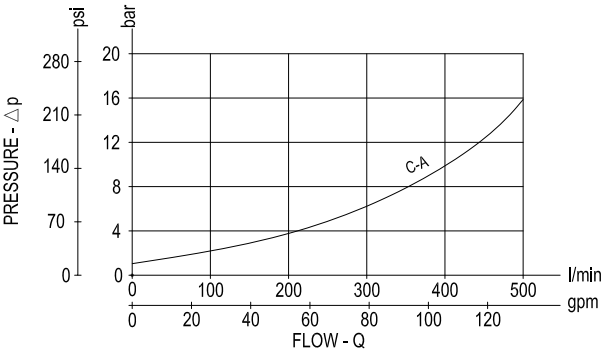
Note
for applications outside these parameters, please consult us.

Characteristic curves

Δp = f (Q) Pressure drop - Flow rate characteristic Lifting (A->C)

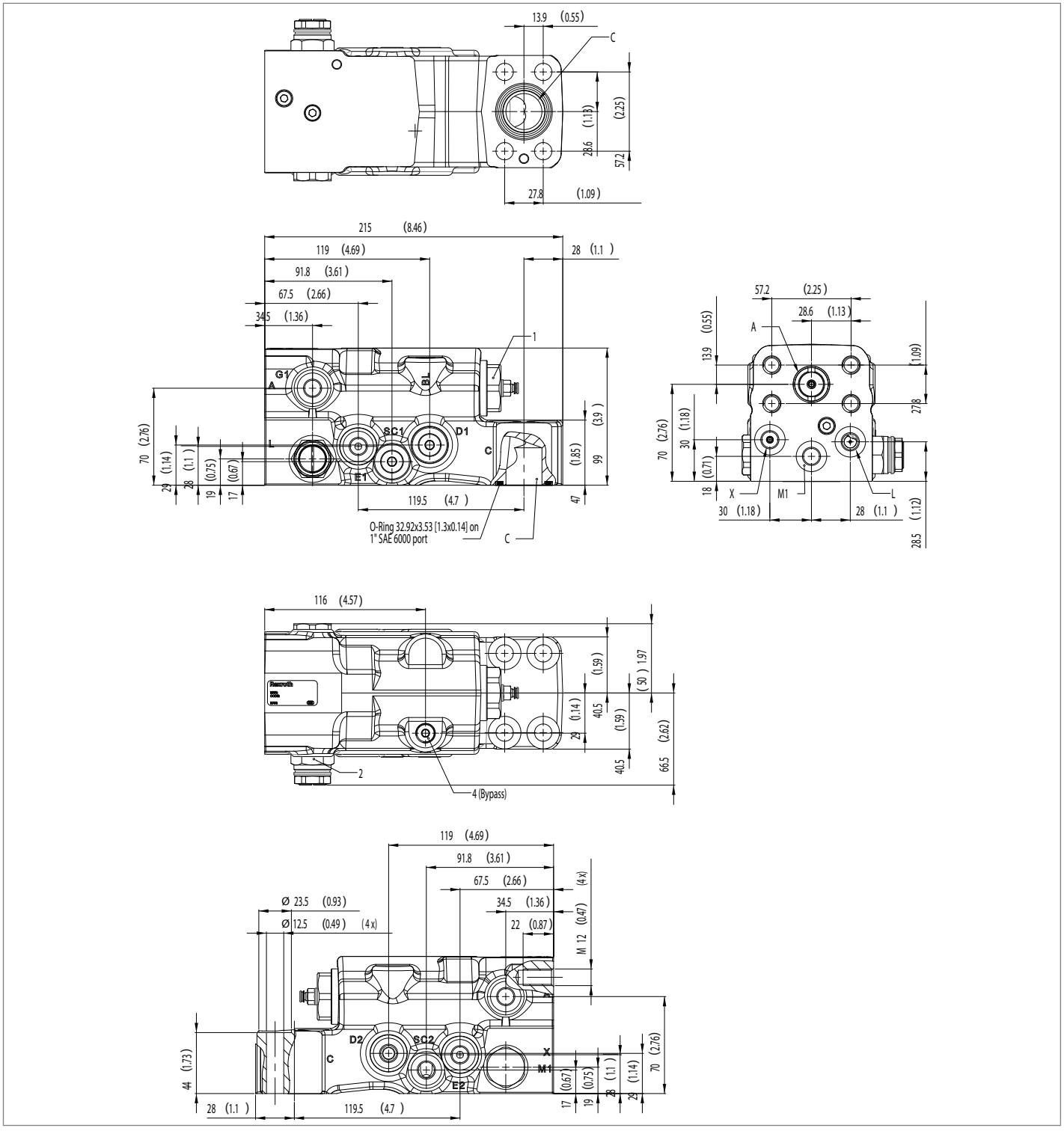


Δp = f (Q) Pressure drop - Flow rate characteristic Lowering (C->A), main stage (3) completely open.



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

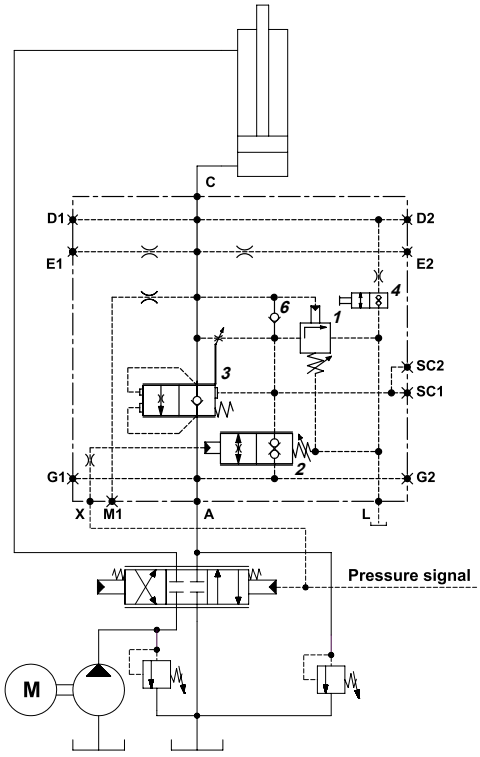
External dimensions and fittings



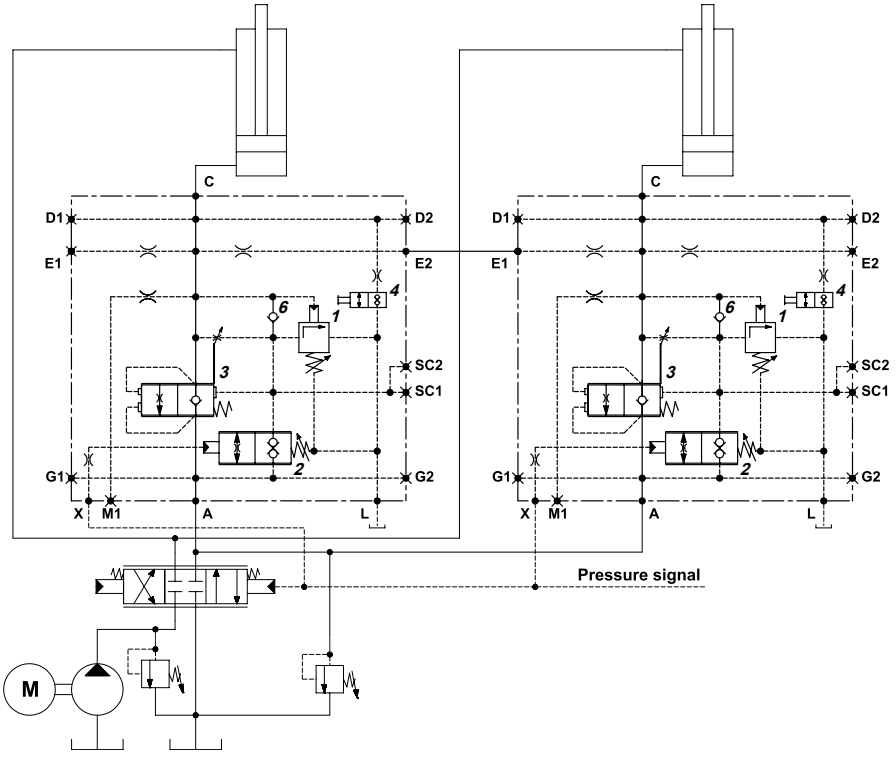
Ports	Std. size
L, X	G1/4 - BSPP ISO 1179-1
Optional ports: D2, E1, E2, SC2, G1, G2, M1 - to be drilled on request	G1/4 - BSPP ISO 1179-1

Application examples

Single Operation



Parallel Operation



Ordering details

01	02	03	04	05	06	07
0G.H5	**_**	**_ _**	**_**	**0**	**0**	**_ _**

Family

01	Check and Metering H-valve 5.0	**0G.H5**

A-C Flange

02	3/4 SAE 6000	**2**
	1 SAE 6000	**3**

Application

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

Ports

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

Main stage

05	Spool Type	**0**

Pilot stage

06	N/A	**0**

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)	**35**
	300-460 (4350-6700)	168 (2436)	420 (6090)	**42**
	300-460 (4350-6700)	168 (2436)	460 (6672)	**46**

Flange seal kit

E00000000000002 (R930004532) C flange 3/4 SAE 6000
E00000000000003 (R930004533) C flange 1 SAE 6000

Type	Material number
0GH5300G0042000	R930083560
0GH5301G0042000	R930083561
0GH5302G0042000	R930083562

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