

Pilot Operated Check Valve in In-Line Body

IC5H

Q_{max} 80 l/min (21 GPM) • p_{max} 350 bar (5100 PSI)



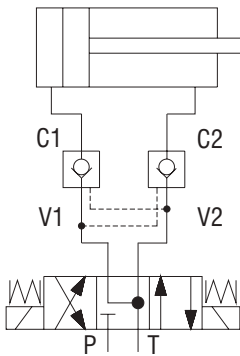
Technical Features

- › Hydraulic pilot operated check valve, poppet design, for simple in-line connection
- › Leak-free closing and long service life of built-in check valves thanks to used quality materials and hardened key components
- › High flow capacity at a low pressure drop
- › In the standard version the surface of body and valves is zinc coated for corrosion protection 240 h in NSS acc. to ISO 9227

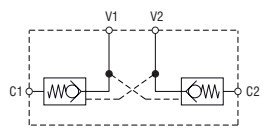
Functional Description

Check valves, built in in-line body, allow free flow from the pump to the actuator (direction V1→C1, V2→C2). In opposite direction from the consumer to the tank (direction C1→V1, C2→V2) the valves are mechanically opened by pilot pressure sensed in the second pipeline of actuator and acting on the face surface of special piston. The pilot operated check valves secure the position of loaded actuator when the pump is off, and the check valves are closed by pressure induced by load. The pilot ratio is a min. ratio of system and pilot pressure needed for opening the check valves. The basic position of valve cone is assured by weak spring.

Typical hydraulic circuit with a pilot operated check valve



Symbol



Technical Data

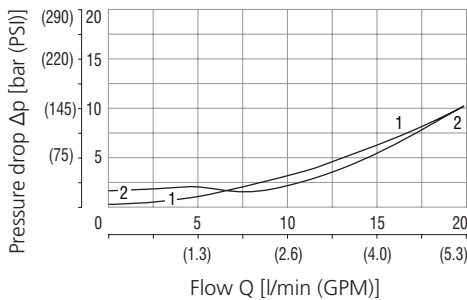
Maximal flow	l/min (GPM)	20 (5.3)	40 (11)	60 (16)	80 (21)
Connecting threads for fittings		G 1/4"	G 3/8"	G 1/2"	G 3/4"
Pilot ratio		6:1	6:1	4:1	3,5:1
Max. operating pressure	bar (PSI)	350 (5080)			
Cracking pressure of check valve	bar (PSI)	1 (14.5)			
Fluid temperature range	°C (°F)	-30 ... +80 (-22 ... +212)			
Weight (one-side valve „A“)	kg (lbs)	0.67 (1.48)	0.63 (1.39)	1.09 (2.40)	1.97 (4.34)
Weight (both-side valve „C“)	kg (lbs)	0.68 (1.50)	0.64 (1.41)	1.12 (2.47)	2.01 (4.43)

	Datasheet	Type
General information	GI_0060	Products and operating conditions

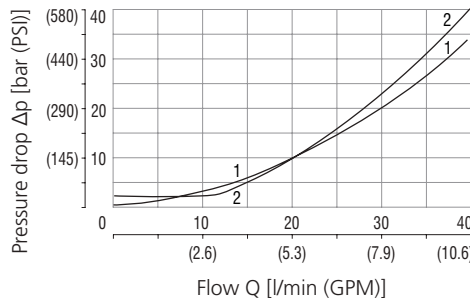
Characteristics measured at $v = 32 \text{ mm}^2/\text{s}$ (156 SUS)

Pressure drop related to flow rate

ICPH-20P/HA4-010-A

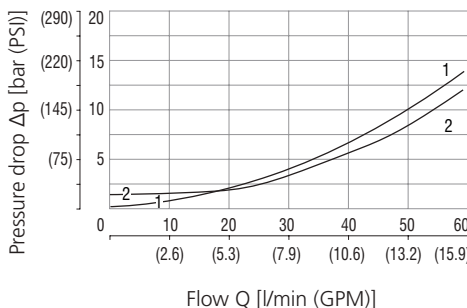


ICPH-40P/HA4-010-A

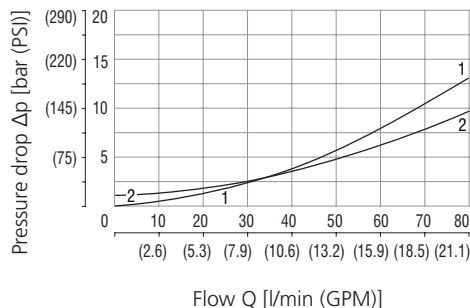


	Flow in direction
1	C1 → V1 (C2 → V2)
2	V1 → C1 (V2 → C2)

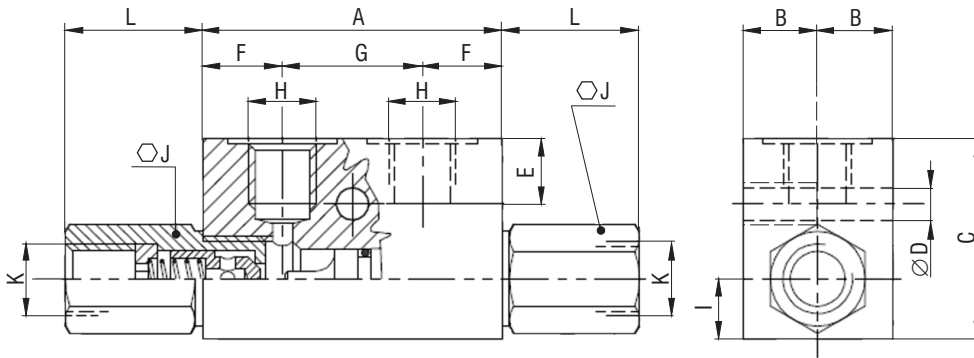
ICPH-60P/HA4-010-A



ICPH-80P/HA3-010-A



Dimensions in millimeters (in)

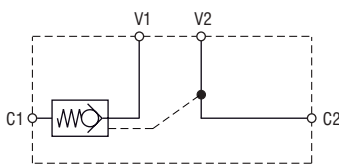


Dimension	IC5H-20P/H	IC5H-40P/H	IC5H-60P/H	IC5H-80P/H
A	64	64	80	100
B	15	15	17.5	20
C	40	40	50	60
ØD*	M8 x 1.25 – 15	M8 x 1.25 - 15	6.5	8.5
E	8	8	15	15
F	14	14	21	25
G	36	36	38	50
H	G 1/4"	G 3/8"	G 1/2"	G 3/4"
I	13	13	16	21
HEX J	22 (tightening torque 50 Nm)	22 (tightening torque 50 Nm)	27 (tightening torque 70 Nm)	38 (tightening torque 120 Nm)
K	G 1/4"	G 3/8"	G 1/2"	G 3/4"
L	27	27	32 / 26	41

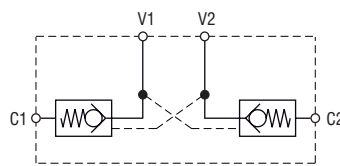
*Connecting thread M8 x 1.25 – 15 is machined only at the type IC5H-20P/H and IC5H-40P/H.
Other types are only provided with a through-going hole for fixing screw (ØD 6.5 / ØD 8.5 mm [0.26 / 0.34 in]).

Functional Symbols

IC5H-xxP/HA



ICPH-xxP/HC



Note: Thanks to symmetrical design the in-line body with a pilot operated check valve in 1-channel (IC5H-xxP/HA) can be used by exchanging 1 / 2 ports as the in-line body with pilot operated check valve in 2-channel (IC5H-xxP/HB)

Ordering Code

IC5H - [] P/H [] [] - 010 [] - A

<p>Pilot operated check valve in in-line body</p> <p>Maximal flow range 20 l/min (5 GPM) 20 40 l/min (11 GPM) 40 60 l/min (16 GPM) 60 80 l/min (21 GPM) 80</p> <p>Body connection rectangular</p> <p>Model High performance</p>	<p>Surface treatment zinc-coated (ZnCr-3), ISO 9227 (240 h)</p> <p>Seals NBR</p> <p>Cracking pressure of check valve 1 bar (14.5 PSI)</p> <p>Pilot ratio 3.5:1 4:1 6:1</p> <p>Valve design check valve built in 1-channel check valve built in 1 and 2-channel</p>
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List of manufactured types:

IC5H-20P/HA6-010-A
IC5H-20P/HC6-010-A
IC5H-40P/HA6-010-A
IC5H-40P/HC6-010-A
IC5H-60P/HA4-010-A
IC5H-60P/HC4-010-A
IC5H-80P/HA3-010-A
IC5H-80P/HC3-010-A

A
C