



“HC3BBHR1”
HYDRAULIC CONTROLLER
Pneumatic / Hydraulic Over Hydraulic
Block Before Bleed

OPERATION

The HC3BBHR1 is a 3 way, normally closed, block before bleed, pilot operated, automatic hydraulic controller. It is normally installed in a control panel. It receives instrument pressure from a safety system component such as a master relay and hydraulic supply pressure from a pump.

During normal operation, instrument pressure holds the controller in the open position. The supply pressure passes through the outlet and the hydraulic system will maintain the required working pressure. *Instrument Pressure is proportionate to Supply Pressure*

When the master relay is actuated, it will bleed instrument pressure from the controller and the spring will push the controller into the closed position. The supply pressure becomes blocked, the outlet is exhausted and returned to the reservoir; thus closing the SCSSV or actuator.

Should hydraulic working pressure be required to open the SCSSV or system before instrument pressure (Port P) is returned, the manual override may be used. The override handle is manually screwed in; this allows supply pressure (Port B) to pass through the outlet (Port C) and the hydraulic system to maintain its working pressure. When instrument pressure (Port P) is returned, the manual override must be manually released for the controller to resume normal operating conditions.

ORDERING INFORMATION**HC3BBHR1 (NO MANUAL OVER-RIDE)****WEIGHTS**

HC3BBHR1 (NO MANUAL OVER-RIDE) – 7.75 POUNDS
HCT3BBHR1 (WITH MANUAL OVER-RIDE) – 8.25 POUNDS

HCT3BBHR1 (WITH MANUAL OVER-RIDE)**PANEL MOUNT FOR MANUAL OVER-RIDE**

1 - 5/16" Diameter Hole (33 MM)
Maximum Panel Thickness, 0.25 Inches (6 MM)
Panel Nut Thickness; 0.25 inches (6 MM)



INSTALLATION



PORT 'A'

Exhaust Port
(VENT) - 1/4" FNPT
Orifice - .187" (4.75mm)



PORT 'B'

Supply Pressure Inlet
1/4" FNPT Hydraulic
500 – 10,000 PSI
(34.47 – 689.48 bars)
Orifice - .187" (4.75mm)



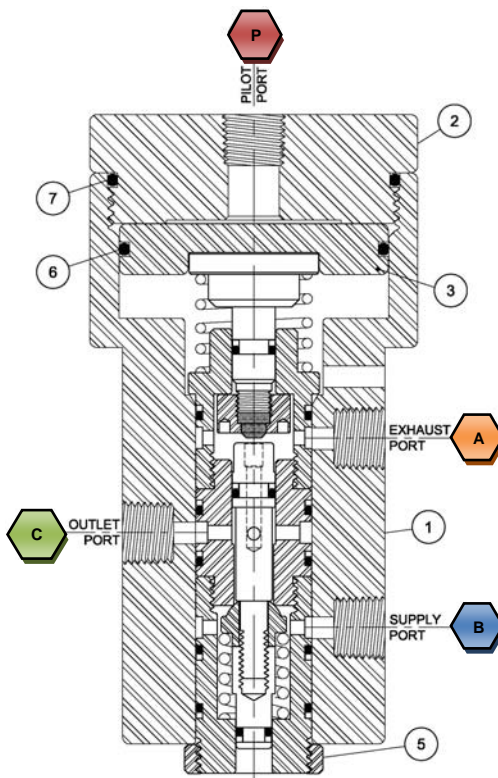
PORT 'C'

Supply Pressure Outlet
1/4" FNPT
Orifice - .187" (4.75mm)



PORT 'P'

Instrument Pressure Inlet
1/4" FNPT Pneumatic
(PILOT) - 30 - 250 PSI
(2.07 – 17.23 bars)
Orifice - .437" (11.10mm)



ITEM	DESCRIPTION
1	BODY
2	CAP
3	UPPER PISTON
4	CARTRIDGE ASSY SEE BELOW
5	NUT
6	ORING
7	ORING

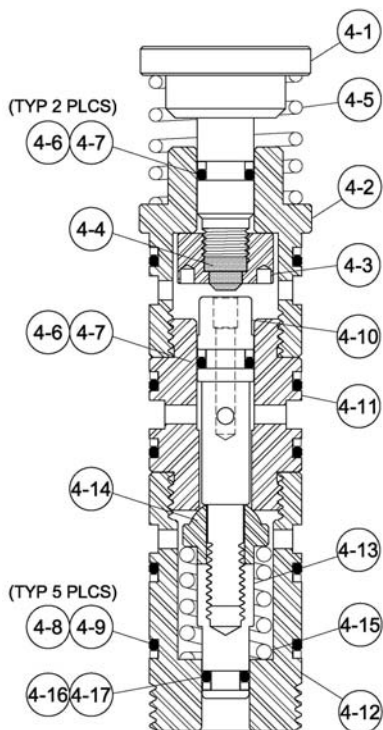
REPAIR KIT(S):

CONTAINS ALL SEALS

FEATURES

Viton O-Rings -15 to 250°F
316 Stainless Steel Materials
10,000 psi (689.48 bar) MAWP
1/4" FNPT Control Ports

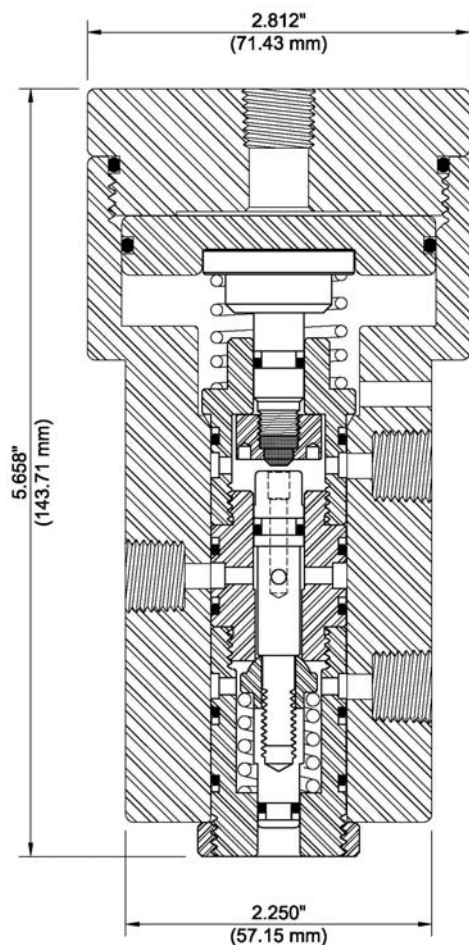
CARTRIDGE ASSEMBLY



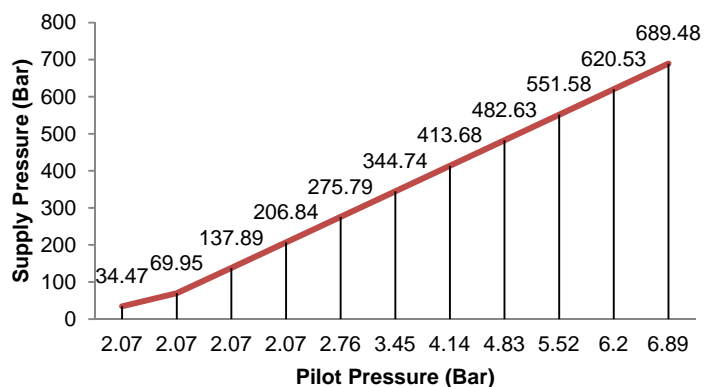
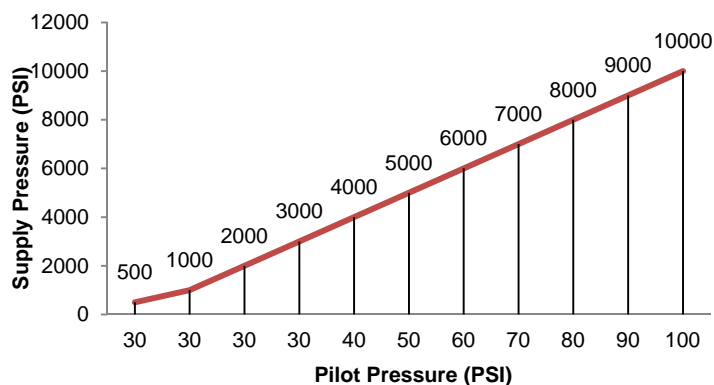
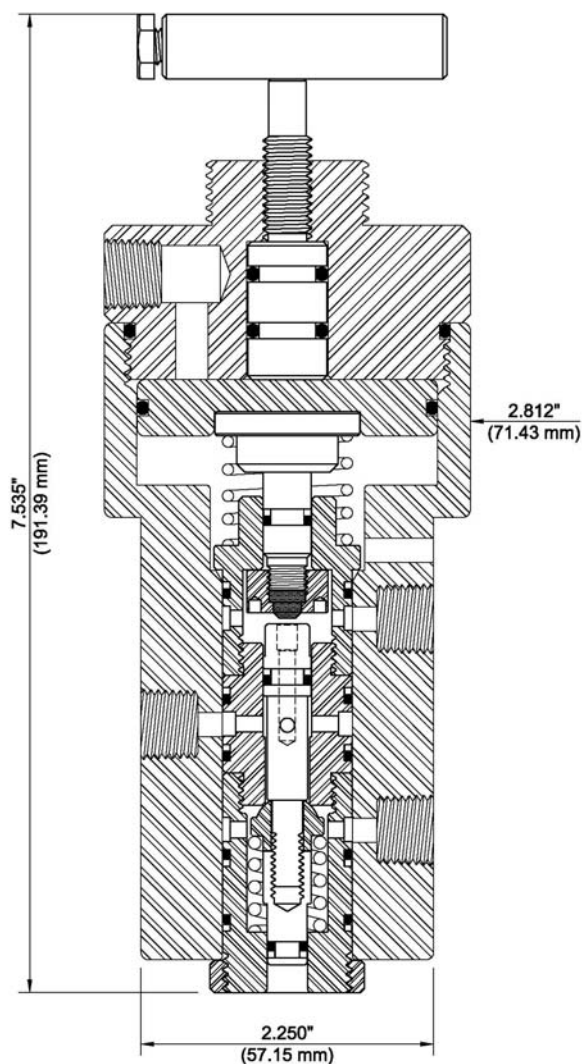
ITEM	DESCRIPTION
4-1	- SPOOL, UPPER
4-2	- SLEEVE, UPPER
4-3	- RETAINER, SEAT
4-4	- SEAT, EXHAUST
4-5	- SPRING
4-6	- ORING
4-7	- BACKUP RING
4-8	- ORING
4-9	- BACKUP RING
4-10	- SPOOL, MIDDLE
4-11	- SLEEVE, MIDDLE
4-12	- SLEEVE, LOWER
4-13	- SPOOL, LOWER
4-14	- SEAT, SUPPLY
4-15	- SPRING
4-16	- ORING
4-17	- BACKUP RING

DIMENSIONS

HC3BBHR1
(No Manual Over-Ride)



HCT3BBHR1
(With Manual Over-Ride)





“HC3BBHR2” HYDRAULIC CONTROLLER Pneumatic / Hydraulic Over Hydraulic Block Before Bleed

OPERATION

The HC3BBHR2 is a 3 way, normally closed, block before bleed, pilot operated, automatic hydraulic controller. It is normally installed in a control panel. It receives instrument pressure from a safety system component such as a master relay and hydraulic supply pressure from a pump.

During normal operation, instrument pressure holds the controller in the open position. The supply pressure passes through the outlet and the hydraulic system will maintain the required working pressure. *Instrument Pressure is proportionate to Supply Pressure*

When the master relay is actuated, it will bleed instrument pressure from the controller and the spring will push the controller into the closed position. The supply pressure becomes blocked, the outlet is exhausted and returned to the reservoir; thus closing the SCSSV or actuator.

Should hydraulic working pressure be required to open the SCSSV or system before instrument pressure (Port P) is returned, the manual override may be used. The override handle is manually screwed in; this allows supply pressure (Port B) to pass through the outlet (Port C) and the hydraulic system to maintain its working pressure. When instrument pressure (Port P) is returned, the manual override must be manually released for the controller to resume normal operating conditions.

ORDERING INFORMATION

HC3BBHR2 (NO MANUAL OVER-RIDE)



WEIGHTS

HC3BBHR2 (NO MANUAL OVER-RIDE) – 11.00 POUNDS

HCT3BBHR2 (WITH MANUAL OVER-RIDE) – 11.8 POUNDS

HCT3BBHR2 (WITH MANUAL OVER-RIDE)



PANEL MOUNT FOR MANUAL OVER-RIDE

1 - 3/16" Diameter Hole (33 MM)
Maximum Panel Thickness, 0.25 Inches (6 MM)
Panel Nut Thickness; 0.25 inches (6 MM)



INSTALLATION



PORT 'A'

Exhaust Port
(VENT) - 1/4" FNPT
Orifice - .187" (4.75mm)



PORT 'B'

Supply Pressure Inlet
1/4" FNPT Hydraulic
500 – 10,000 PSI
(34.47 – 689.48 bars)
Orifice - .187" (4.75mm)



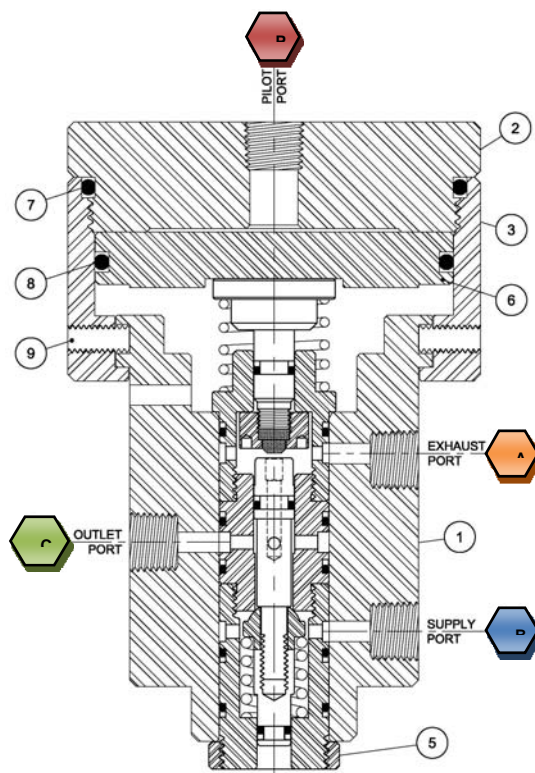
PORT 'C'

Supply Pressure Outlet
1/4" FNPT
Orifice - .187" (4.75mm)



PORT 'P'

Instrument Pressure Inlet
1/4" FNPT Pneumatic
(PILOT) - 30 - 100 PSI
(2.07 – 6.89 bars)
Orifice - .437" (11.10mm)



ITEM	DESCRIPTION
1	LOWER BODY
2	CAP
3	UPPER BODY
4	CARTRIDGE ASSY SEE BELOW
5	NUT
6	PISTON
7	ORING
8	ORING
9	SET SCREW

REPAIR KIT(S):

CONTAINS ALL SEALS

FEATURES

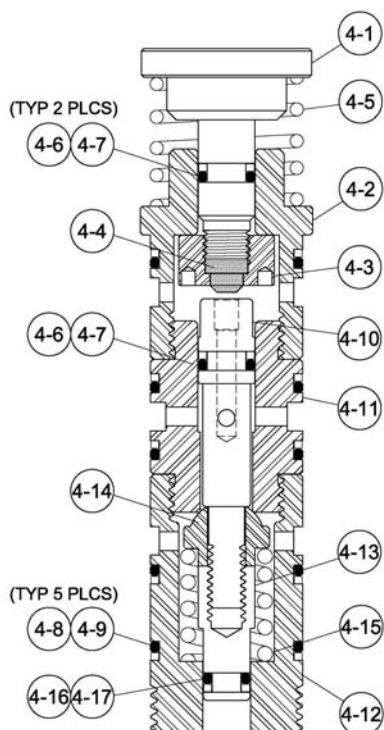
VITON O-Rings

316 Stainless Steel Materials

10000 psi (689.48 bar) MAWP

1/4" FNPT Control Ports

CARTRIDGE ASSEMBLY

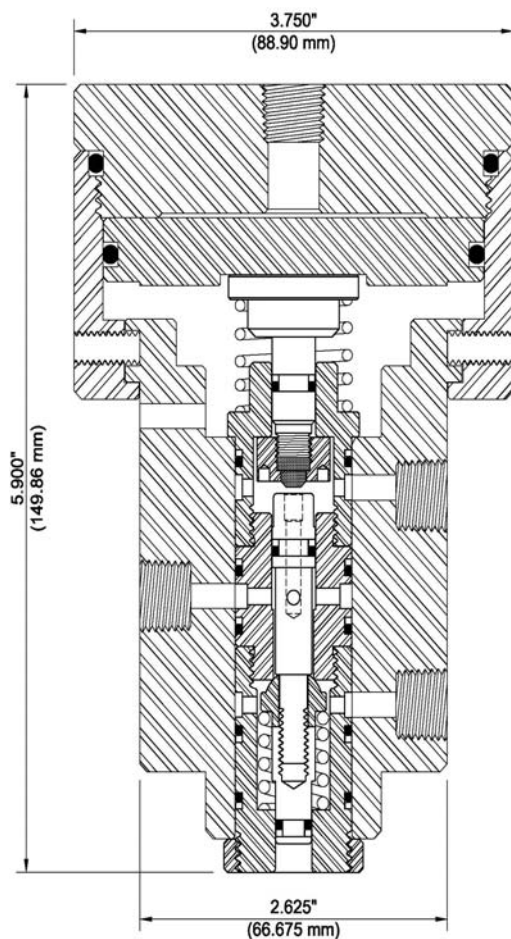


ITEM	DESCRIPTION
4-1	- SPOOL, UPPER
4-2	- SLEEVE, UPPER
4-3	- RETAINER, SEAT
4-4	- SEAT, EXHAUST
4-5	- SPRING
4-6	- ORING
4-7	- BACKUP RING
4-8	- ORING
4-9	- BACKUP RING
4-10	- SPOOL, MIDDLE
4-11	- SLEEVE, MIDDLE
4-12	- SLEEVE, LOWER
4-13	- SPOOL, LOWER
4-14	- SEAT, SUPPLY
4-15	- SPRING
4-16	- ORING
4-17	- BACKUP RING



DIMENSIONS

HC3BBHR2
(No Manual Over-Ride)



HCT3BBHR2
(With Manual Over-Ride)

