ASP INDUSTRIES

miniBOOSTER™

HC3 INTENSIFIER
OPERATIONS MANUAL

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ASP INDUSTRIES
51 BEACH AVE.
LANCASTER, NY 14086

TEL: 716-683-0435
FAX: 716-683-7128

e-mail: info@airsyspro.com

web: www.airsyspro.com

BASIC DESCRIPTION

Description

The HC3 Hydraulic Intensifier is a version of the miniBOOSTER HC2 designed for use in NG6 (D03) stacking manifold systems. It has a pilot operated dump incorporated as a standard feature. Maximum outlet pressure is 500 BAR (7,250 PSI) in standard versions.

Intensification Ratio	Maximum Inlet Flow -IN (gal/min)	Maximum Outlet Flow -H (gal/min)	Maximum Inlet Pressure BAR(psi)	Maximum Outlet Pressure BAR(psi)
1.2	2.11	0.32	200 (2,900)	240 (3,480)
1.5	2.11	0.27	200 (2,900)	300 (4,350)
2.0	2.11	0.21	200 (2,900)	400 (5,800)
2.8	2.11	0.16	180 (2,610)	500 (7,250)
3.2	3.96	0.67	160 (2,320)	500 (7,250)
4.0	3.70	0.53	125 (1,812)	500 (7,250)
5.0	3.70	0.43	100 (1,450)	500 (7,250)
6.6	3.43	0.35	75 (1,090)	500 (7,250)
9.0	3.43	0.24	55 (800)	500 (7,250)
13.0	3.17	0.16	40 (580)	500 (7,250)
20.0	3.17	0.08	25 (360)	500 (7,250)

➲ CAUTION

In order to prevent damage to the HC3, the values shown for inlet flow must not be exceeded. If the design of the hydraulic system is such that inlet flow can exceed the value shown, a means to limit inlet flow must be installed upstream of the HC3. The preferred method is to install a fixed orifice.

➲ CAUTION

Inlet pressure must never exceed 200 BAR (2,900 psi). Maximum outlet pressure for each intensification ratio is shown on the table above.

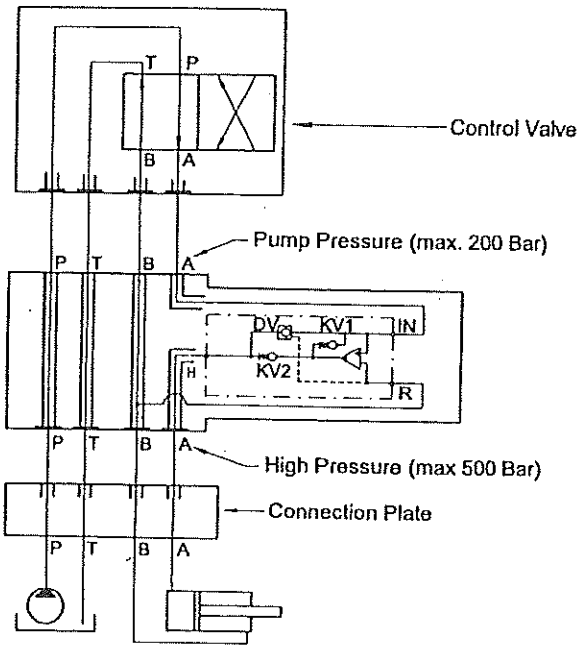
➲ CAUTION

The minimum inlet pressure required to operate the HC3 is 20 BAR (300 psi).

DESCRIPTION OF OPERATION

The basic operation is illustrated in the function diagram to the right. The oil is fed through the connecting plate to the control valve to the IN port of the HC3 flowing freely through check valves KV1, KV2 and DV to the high pressure side H.

From the high pressure side H oil is fed to port A on the connecting plate. In this condition maximum flow through the booster is achieved giving a fast forward function. When pump pressure is reached on the high pressure side H, valves KV1, KV2 and DV will close. The end pressure will be achieved by the oscillating pump unit OP. The unit will automatically stall when end pressure on high pressure side is reached. If there is a pressure drop on the high pressure side due to consumption or leakage, the OP valve will automatically operate to maintain the end pressure.



Warranty

The HC3 is warranted to be free from defects in materials or workmanship for one (1) year from date of shipment.

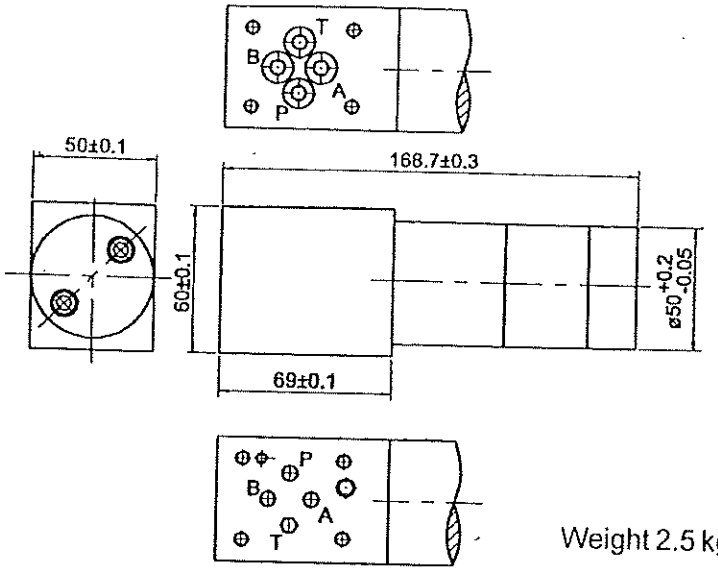
It is our policy to replace the unit subject to inspection as to the cause of failure. If it is determined to be defective under the terms of our warranty, the replacement will be free of charge. If the defect is caused by user abuse or misuse, an invoice will be issued. ***Failure due to contamination caused by inadequate filtration is not covered by warranty.***

Maintenance

With proper installation, filtration of the hydraulic fluid per recommendations, and by following the operation recommendations in this manual, the HC3 should provide long term trouble free operation.

The HC3 requires no routine maintenance. It is not field serviceable. If you experience trouble with the unit, please contact A.S.P. Industries for replacement or repair.

SPECIFICATIONS



Weight 2.5 kg (5.5 lbs)

System Design

1. Filtration of fluid upstream of the HC3 is required to a minimum of 10 micron nominal, max. (ISO 19/1€
2. Make sure that there are no restrictions downstream of the Return port (R) which would cause back pressure on the unit. Because the Outlet (H) pressure of the HC3 is based on the differential between Inlet (IN) an Return (R), any back pressure on R will proportionately reduce outlet pressure.
3. Inlet pressure must be maintained to the HC3 at all times when high pressure is required at the outlet. The HC3 is designed to automatically compensate for downstream losses, but sufficient inlet pressure and flow is required to maintain this capability.
4. Make sure that the system fluid is compatible with the O-ring seals per the unit specifications.
5. The HC3 is rated at a maximum outlet pressure of 500 BAR (7,250 PSI). It is the responsibility of the user to insure the proper use of hydraulic fittings in the system. **A.S.P. INDUSTRIES will not accept responsibility for the incorrect use of hydraulic fittings.**

System Preparation

1. Prior to installation of the HC3 the system should be flushed to remove any debris which may have entered piping during fabrication.
2. Bleed all air from the system prior to use.