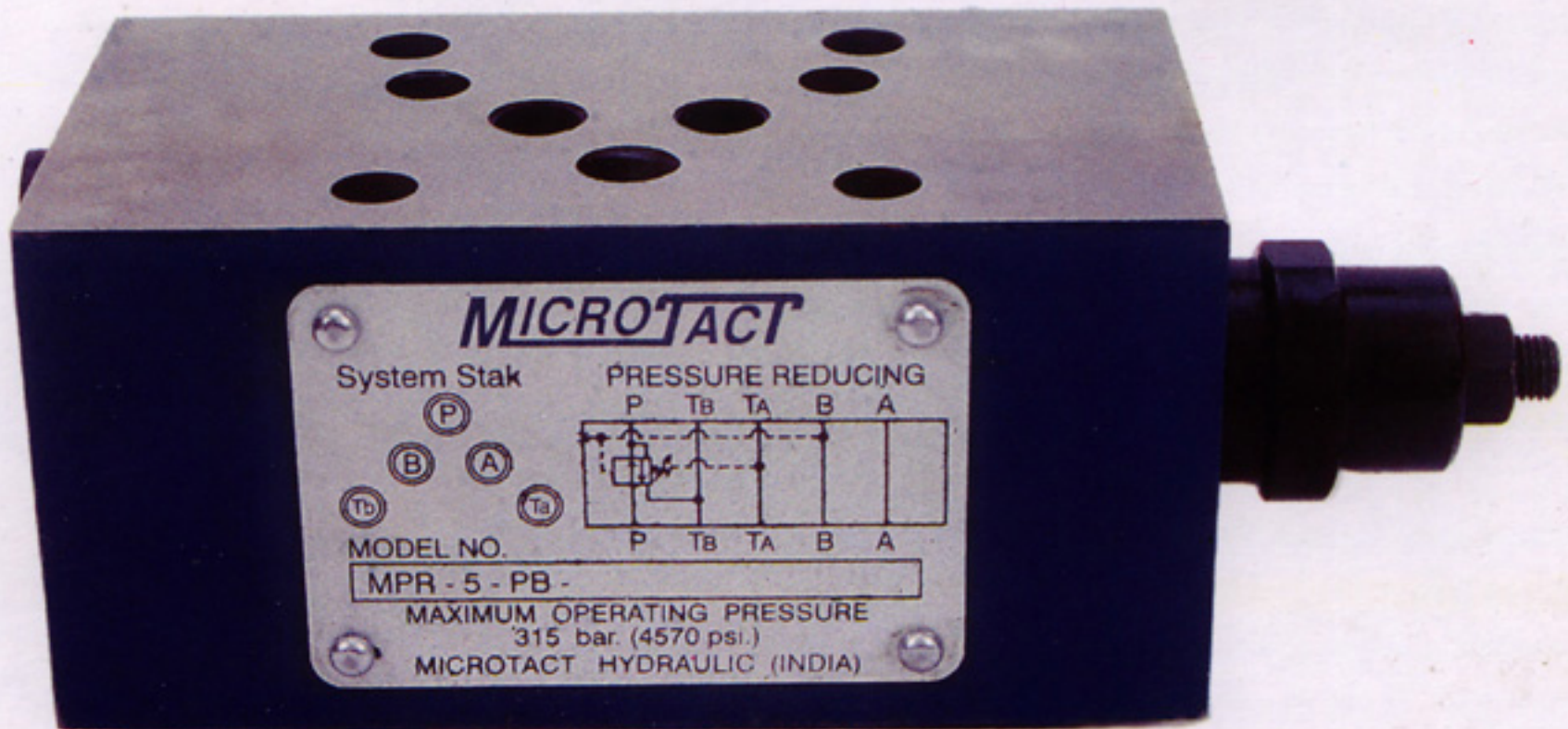


MICROTACT

MICROTACT HYDRAULIC (INDIA) PRESSURE REDUCING VALVES



Model : MPR - 5

Build a Compact, cost effective, reliable hydraulic system with MICROTACT systemStak valves

REDUCES SYSTEM SPACE REQUIREMENT :

These valves make a compact hydraulic system in which specific function valves are "Sandwich" mounted between a directional valve and a standard mounting surface.

The small Stacking valve is based on the well proven Microtact M ** - 5, size 5 systemStak Valves and offers new opportunities for achieving very small compact control assemblies, especially when used with multi - point subplates.

REDUCES COST :

These MICROTACT valves eliminate all inter valve piping and leak - prone tube and pipe connections. Installation cost is less than when using conventional valves.

EASY TO UNDERSTAND AND EASY TO INSTALL :

These Pressure Reducing Valves have all the internal passages necessary to serve the directional valve mounted on top of them. Mounting surfaces and port patterns are to International standard. CETOP - 5 port pattern can be used with ISO 4401 - 5 systemStak valves.

RUGGED AND RELIABLE :

Internal working parts are produced from hardened steel and mounted in ductile (spheroidal graphite) iron bodies. Excellent reliability is ensured. Working parts on most models are accessible without removing valves from an assembled stak.

1. GENERAL DESCRIPTION :

These two-stage spool valves maintain a reduced outlet pressure against variations in inlet pressure above selected valve settings. These valves are able to act as relief valves (50% of minimum flow) to prevent excess pressure being developed when an actuator is subject to a reactive load. Relief flow is directed to the "TB" port. Therefore, for the relief function to operate, all components above this MPR module must contain the "TB" port, and the directional valve must have the "TB" bypass feature. Pilot control may be from the "P", "A", or "B" port. Pilot drain flow may be directed internally to the tank port "TA", or externally out of the valve body.

The valve pressure setting is adjustable by means of either an adjusting screw contain an internal hex, a hand-adjust knob, or a micrometer knob with keylock. Different spring ratings cover an overall pressure range from 2 to 315 bar (30-4500 psi).

The metering spool element in this design is always positioned in the "P" line (see symbols). The connection of the pilot control line determines at which port the reduced pressure is obtained, that is :

- Pilot for "P" for reduced pressure "P",
- Pilot for "A" for reduced pressure "A",
- Pilot for "B" for reduced pressure "B".

The "A" and "B" line models provide for reduced pressure when "P" is connected to "A" or "B" respectively, and allow free flow through the service port when it is connected to "T" (all via a four-way directional valve).

2. MODEL CODE FOR PRESSURE REDUCING VALVES :

MPR - 5 - P - ★ - ★ - ★ - E

1 2 3 4 5

1 PORT OPERATED UPON

P = Pressure Port

2 PILOT CONTROL :

A = Cylinder port "A"

B = Cylinder port "B"

P = Pressure port

3 PRESSURE RANGE :

A = 2.0 - 50 bar (30 -725 psi)

B = 8.5 - 100 bar (125 - 1450 psi)

F = 8.5 - 200 bar (125 - 2900 psi)

G = 8.5 - 315 bar (125 - 4500 psi)

4 ADJUSTMENT DEVICE :

H = Hand - adjust knob

K = Micrometer knob with keylock

W = Screw with locknut

5 EXTERNAL DRAIN :

Omit for internal drain models.

3. OPERATING DATA :

- Maximum Flow Rate 120 l/min.
- Max. Pilot flow rate at 49° C & 315 bar..... 420 ml./min.
- Max. Leakage flow rate at 49° C & 315 bar..... 200 ml./min.
- Mounting optional.

■ VISCOSITY RANGE :

- Minimum 8 cSt.
- Maximum 51 cSt.

■ OPERATING TEMPERATURE :

- Minimum 0° C.
- Maximum 82° C.

■ MASS :

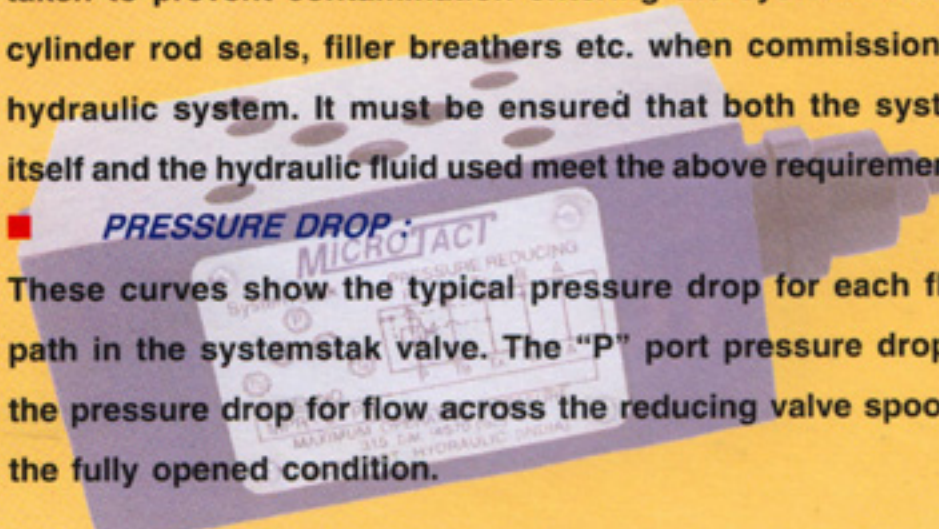
- Approximate 3.0 kg

■ FILTRATION :

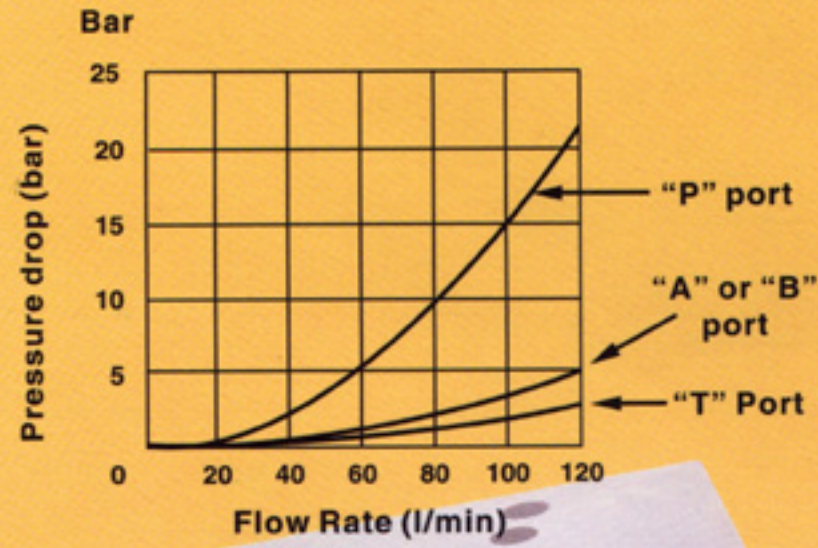
It is recommended to use a 25 µm filter. The choice of filter for hydraulic systems depends on the working pressure and environment under which they are used. Also on the measures taken to prevent contamination entering the system through cylinder rod seals, filler breathers etc. when commissioning hydraulic system. It must be ensured that both the system itself and the hydraulic fluid used meet the above requirements.

■ PRESSURE DROP :

These curves show the typical pressure drop for each flow path in the systemstak valve. The "P" port pressure drop is the pressure drop for flow across the reducing valve spool in the fully opened condition.

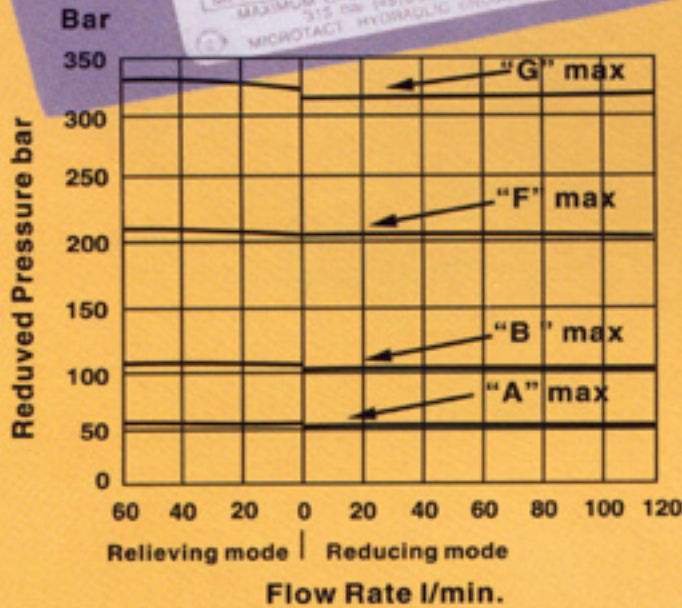


4. FUNCTIONAL SYMBOL :



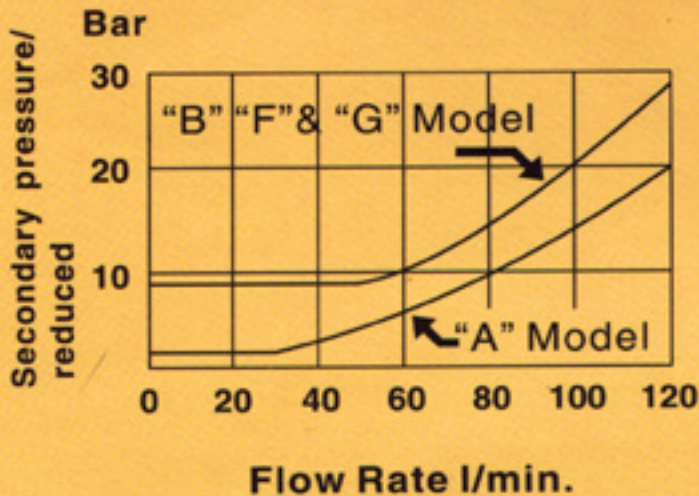
PRESSURE OVERRIDE :

These curves show typical override of the different pressure ranges at maximum settings. Also shown is the typical Override of the relieving feature which prevents undesirable pressure rise in the reduced pressure port.

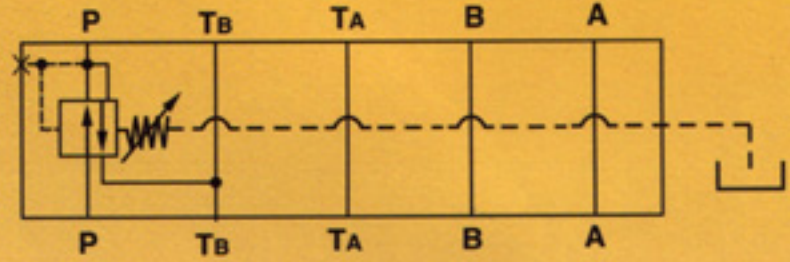


MINIMUM REDUCED PRESSURE :

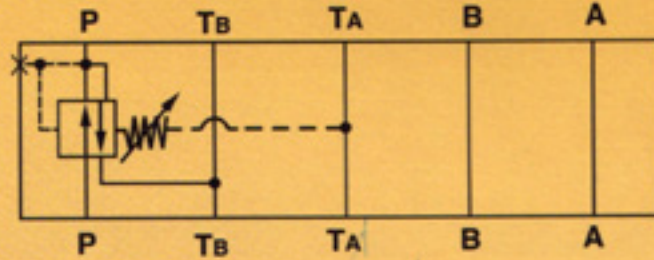
These curves show the minimum reduced pressure settings allowable for a given flow rate. The minimum pressure settings applies regardless of inlet pressure. Operation of the valve below minimum settings may cause erratic valve operation due to insufficient spring force to counter flow forces acting on the spool.



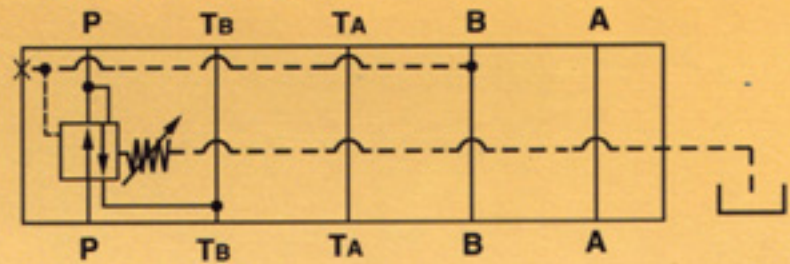
MPR - 5 - PP - ★★ - E - ★



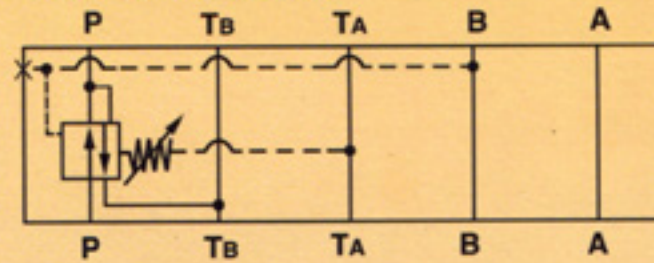
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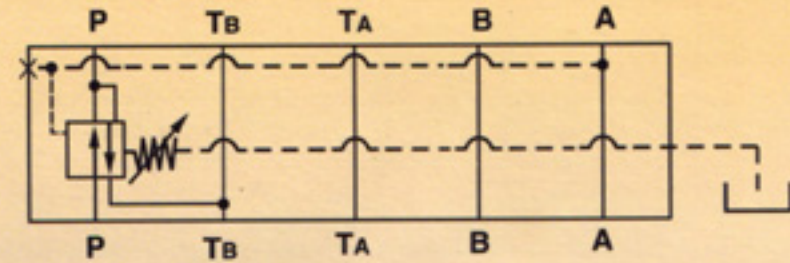
MPR - 5 - PB - ★★ - E



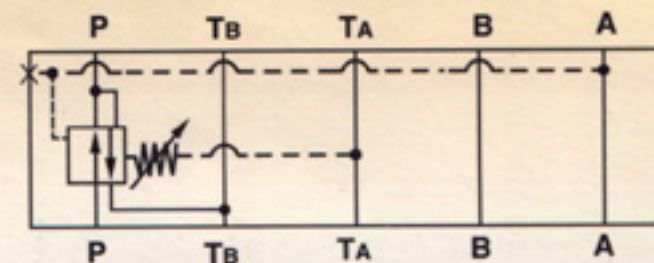
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MPR - 5 - PA - ★★ - E

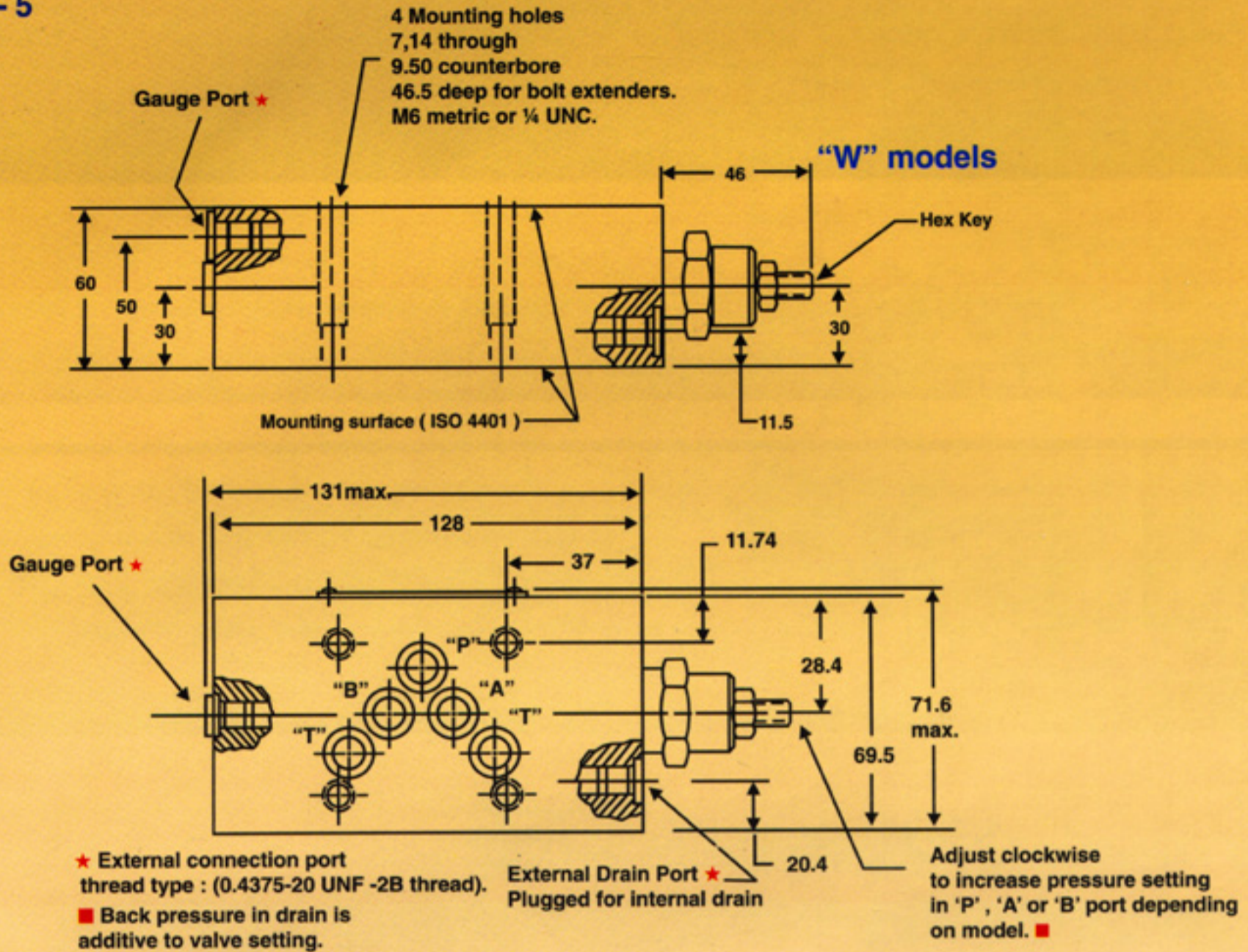


MPR - 5 - PA - ★★ - ★

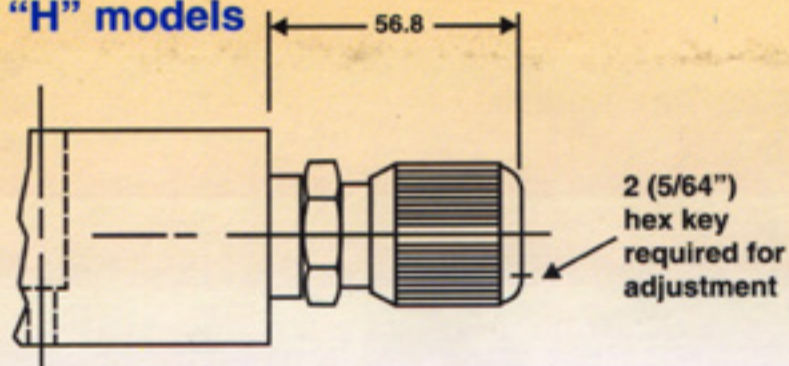


5. ALL INSTALLATION DIMENSIONS ARE IN MM :

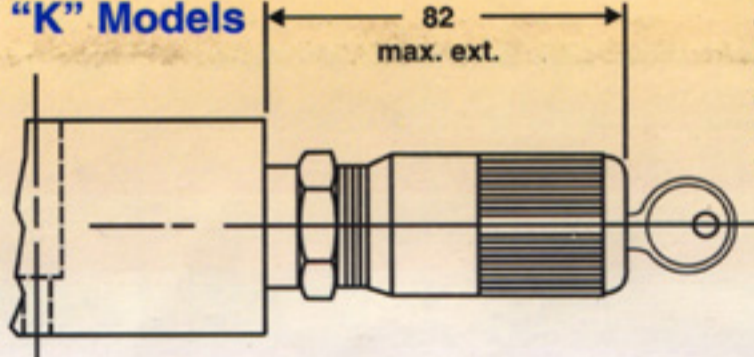
MPR - 5



“H” models



“K” Models



Adjustment of valve setting is only possible while key is inserted and turned to engage driving pin. When key is removed, adjuster knob can be freely spun and doesn't engage with setting mechanism.

Mfrs : **MICROTACT HYDRAULIC (INDIA)**

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