



BRAND
HYDRAULICS Co.

*Made in the Heartland of America
Serving the World*

Engineering & Manufacturing Solutions

MDC Series

Marine Grade

4-Way Directional Control Valve
With Or Without Flow Control

Specifications:

- MDC rated for 0-40 gpm (0-151 lpm)
- MDCF rated for 0-30 gpm (0-114 lpm)
- Rate for 3000 PSI (207 bar)
- Port Sizes #16 SAE (1-5/16-12) all ports
- Weighs 16 lbs. (7.3 kg)
- 20 – Micron filtration recommended



MDCF16TH304H



MDC16TH404HB



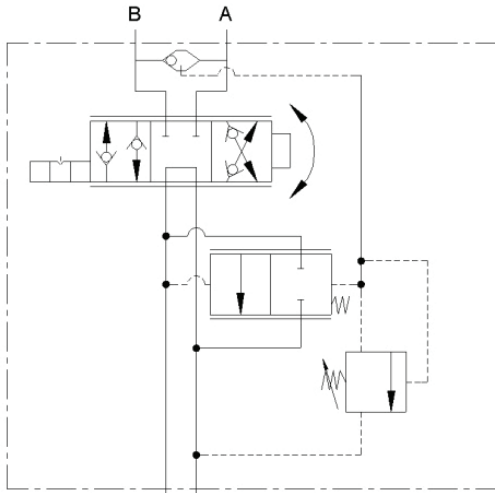
ISO 9001:2008 WITH DESIGN
Certificate #02.002.1



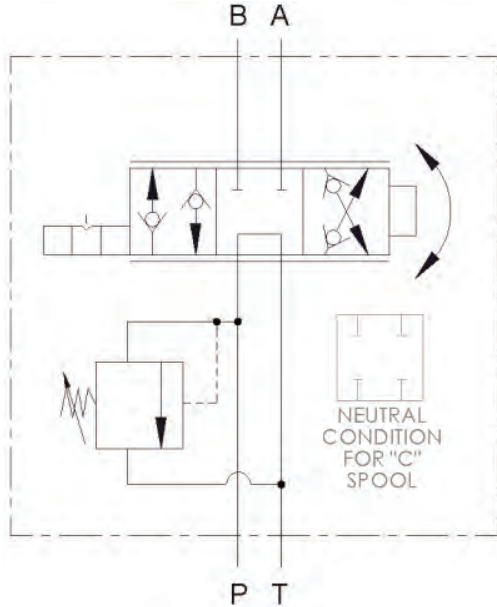
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MDC Series

Marine Grade / 4-Way Directional Control Valve
With Or Without Flow Control



MDCF16TH304H



MDC16TH404HB

MATERIALS:

- Cast Iron Body and End-Caps
- Buna N O'Rings
- 416 Stainless Steel Heat-Treated Spool Components and Handle Adapter
- 316 Stainless steel Handle
- Amerlock® 2 epoxy paint (2 coats)

FEATURES:

- PRECISION GROUND STAINLESS STEEL SPOOL to assure long life (MDC & MDCF valves).
- SEALED ENDCAPS protects internal components from corrosive environments.
- BUILT-IN SPOOL DROP-CHECKS prevents loads from dropping through the transient position.
- O'RING PORTS STANDARD to eliminate leakage.
- PAINTED after assembly to seal completed valve to minimize corrosion on exposed non stainless-steel components (salt spray tested per ASTM B-117).
- PILOT OPERATED RELIEF VALVE is standard on MDCF valves.
- FULL RANGE PRESSURE COMPENSATED by-pass type flow control valve (MDCF ONLY).
- MDCF REDUCES the number of fittings, plumbing and potential leaks in hydraulic circuits.
- FINE POSITIVE METERING in either direction with the manual handle (MDCF valve).

MDC & MDCF SERIES – GENERAL INFORMATION:

The Brand MDCF directional flow control valve combines the features of a four-way directional control valve, load-checks, a full range pressure compensated by-pass type flow control valve, and a pilot operated pressure relief valve all in one compact package. This valve reduces the number of fittings, plumbing and potential leakage points in hydraulic circuits. The manual rotary handle provides fine metering to either port. Flow to the work port is directly proportional to the movement of the lever. Flow out of each work port is constant regardless of load changes which allows the customer to maintain smooth and constant movement of a cylinder or motor. Every MDCF comes standard with a pilot operated relief. The tank port must be plumbed directly back to tank.

The Brand MDC directional control valve does not have the flow control feature of the MDCF. The MDC can be used in series but the spool is difficult to shift when there is tank pressure. The MDC offers an optional high lift ball spring relief. The manual rotary handle provides metering to either port.

SPOOL TYPE –

Two spool types are available: closed center 4-way (DC only) and tandem metering 4-way (**TM**).

HANDLE OPTIONS –

Rotary handle (**H**) is used to rotate spool in or out of valve body. Rotate clockwise to open P-A and B-T, and counter clockwise to open P-B and A-T (Note: “**A**” port is closest to the handle). The adjustable handle allows the center neutral position to be adjusted in 30 degree increments.

SPOOL ATTACHMENTS –

Rotary friction detent (**E**) applies friction to the spool as it is rotated so that the spool does not rotate when the handle is released either side of neutral, a detent groove clearly indicates neutral position.

MDC SERIES – MODEL CODES AVAILABLE:

MDC16TM404H.....Four-way directional valve, #16 SAE port size, 40gpm (0-151 lpm), tandem metering spool, rotary actuator, and work-port load checks.

MDC16TM404HB.....Four-way directional valve, #16 SAE port size, 40gpm (0-151 lpm), tandem metering spool, rotary actuator, 1500psi high lift ball spring relief and work-port load checks.

MDC16C404H.....Four-way directional valve, #16 SAE port size, 40gpm (0-151 lpm), closed center spool, rotary actuator, and work-port load checks.

MDCF SERIES – MODEL CODES AVAILABLE:

MDCF16TM304H.....Four-way directional flow control, #16 SAE port size, tandem metering spool, 0-30 gpm (0-113 lpm) metering capability, four-way, rotary actuator, 1500 psi adjustable relief.

MDC Series

Marine Grade / 4-Way Directional Control Valve
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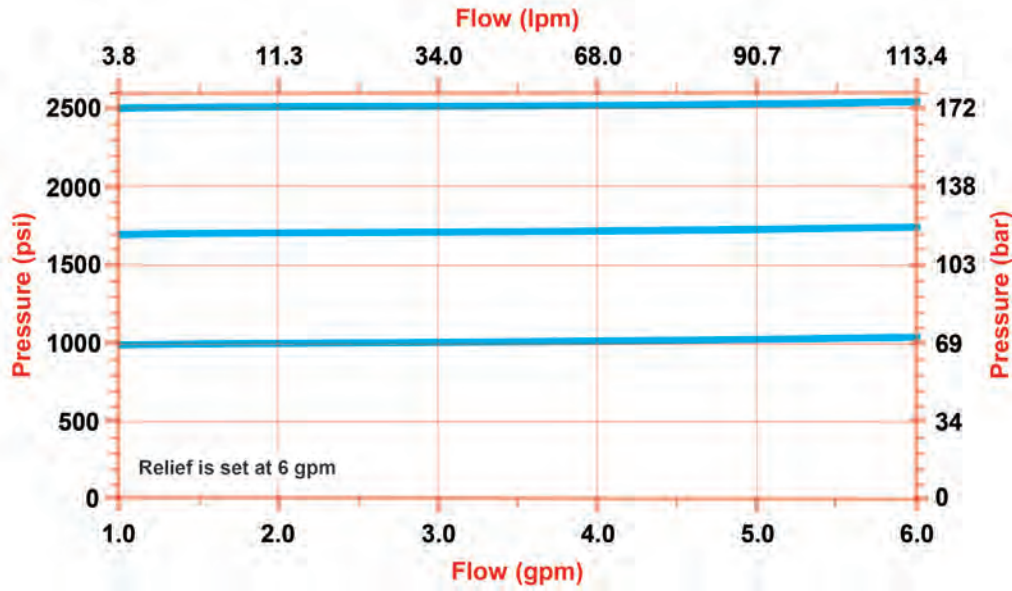
MDC & MD CF SERIES – COMPLETE LIST OF OPTIONS AND ACCESSORIES:

- DC-K**..... Seal kit for MDC.
- DC-KU**..... Seal kit for MDC with urethane polypac seal.
- DCF-K**..... Seal kit for MD CF.
- DCF-KU**..... Seal kit for MD CF w/ Urethane POLYPAC Seal.
- DCF-CART-N**..... Pilot operated pressure relief valve for MD CF.
- TS-B**..... High lift ball spring relief for MDC.
- MDC-HA**..... Handle kit for MDC & MD CF.
- MDC-R**..... Rotary friction detent kit for MDC & MD CF.

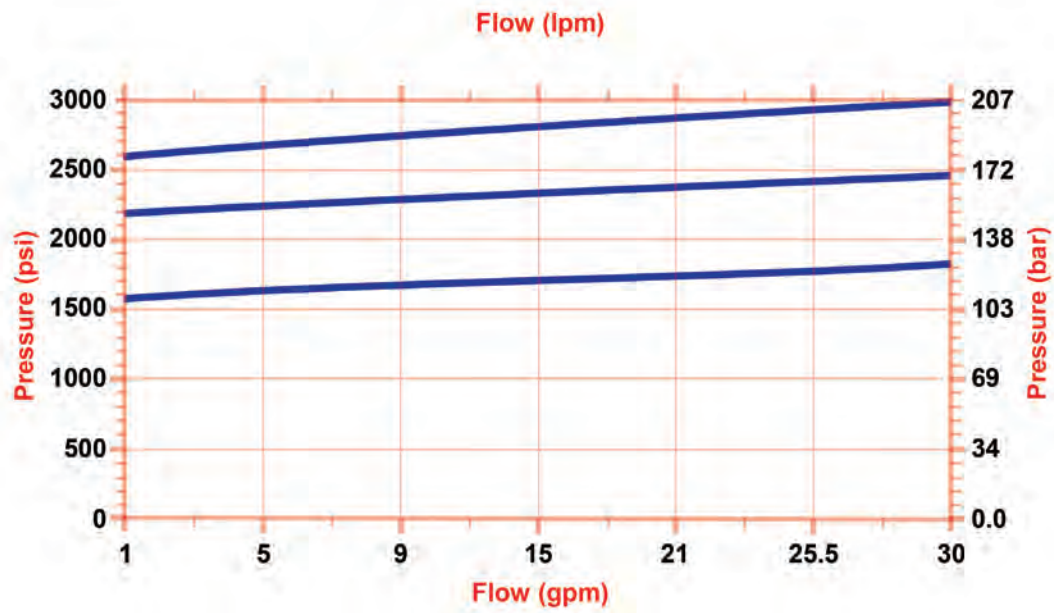
NOTE: Corrosion may occur in corrosive environments if the paint seal is broken while servicing the valve. Consider cleaning and repainting the affected areas to reduce further corrosion.

DC SERIES – FLOW AND PRESSURE INFO:

Pressure VS. Flow for Pilot Relief (MDCF)



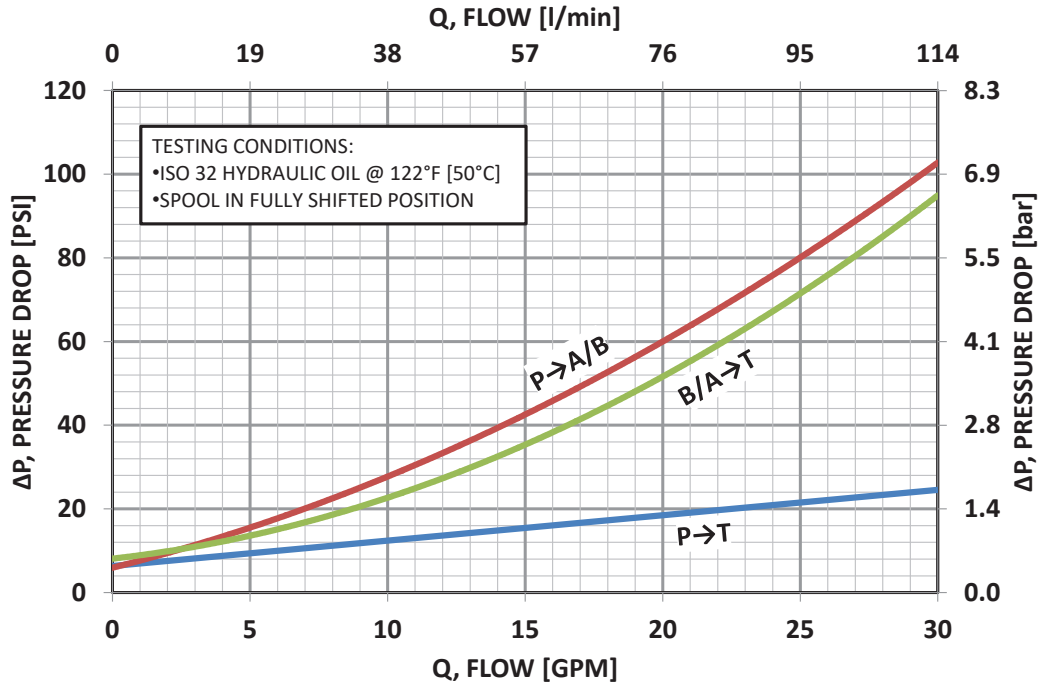
Pressure VS. Flow for B Relief (MDC)



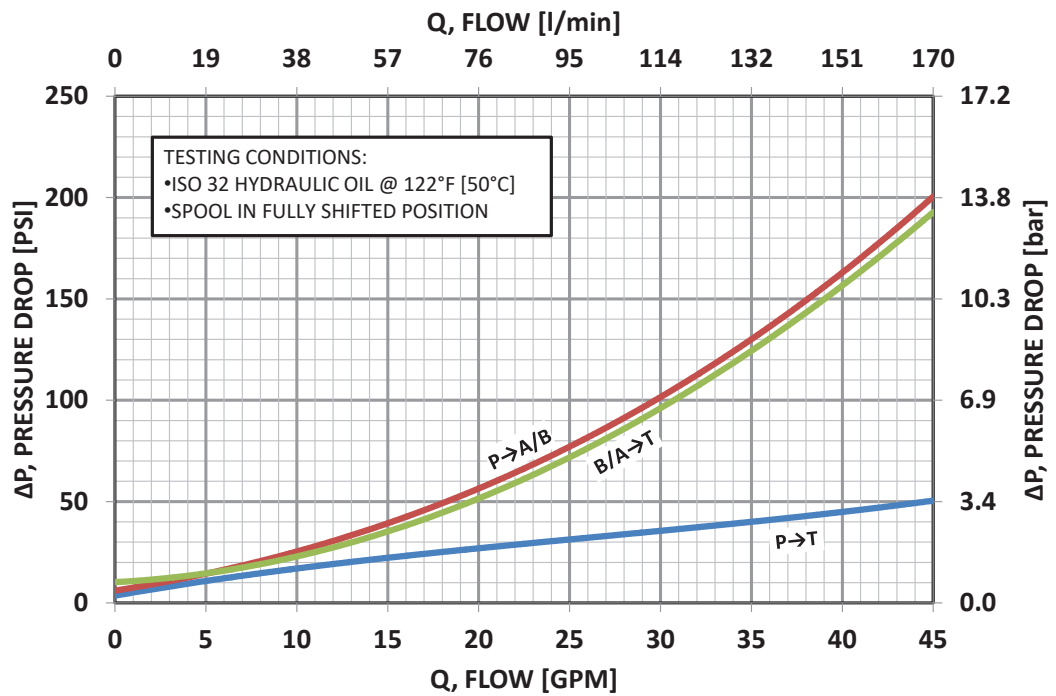
MDC Series Marine Grade / 4-Way Directional Control Valve With Or Without Flow Control

DC SERIES – FLOW AND PRESSURE INFO:

MDCF Flow VS. Pressure Drop

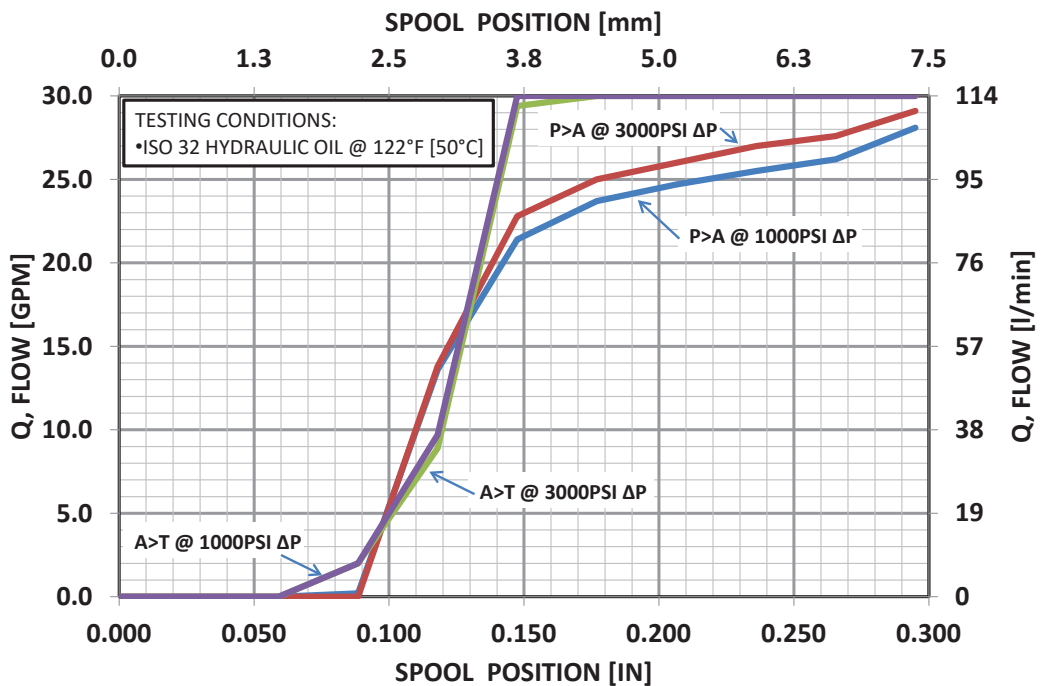


MDC Flow VS. Pressure Drop

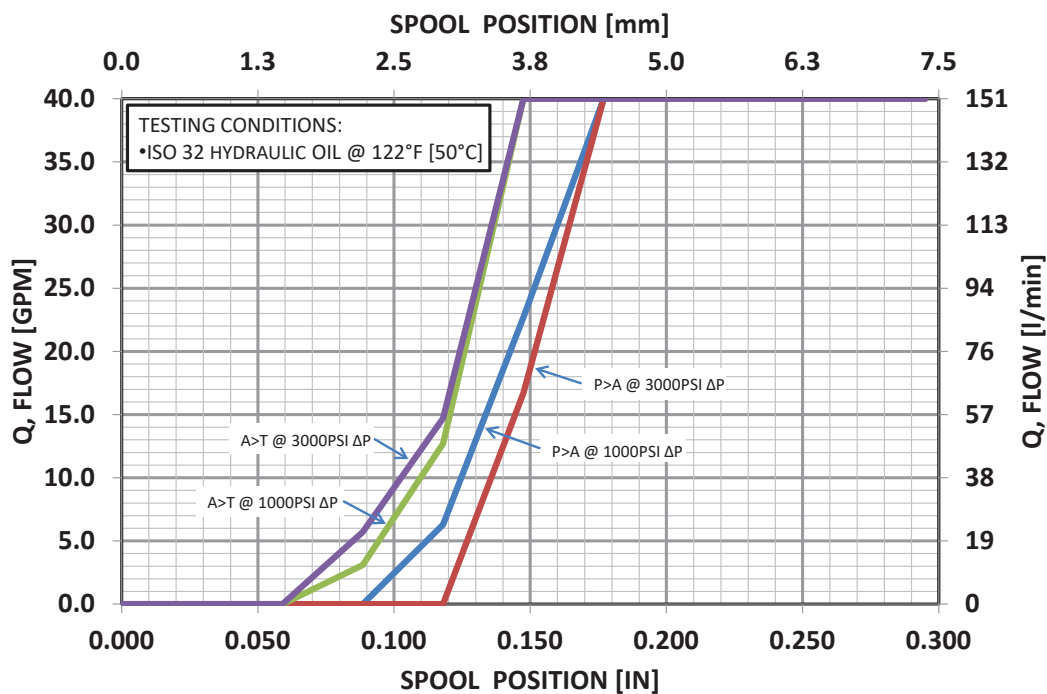


DC SERIES – FLOW AND PRESSURE INFO:

MDCF Spool Position VS. Flow



MDC Spool Position VS. Flow



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DIMENSIONAL DATA: inches & [millimeters]

