



This manually operated, 2-position, 3-way directional cartridge is a direct-acting, balanced spool valve used to control the direction of flow in a hydraulic circuit. Manual operation is achieved via Sun's Twist/Lock manual override mechanism and is designed for intermittent (infrequent) use only.

**TECHNICAL DATA** NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Cavity	T-11A
Series	1
Capacity	12 gpm
Maximum Operating Pressure	5000 psi
Maximum Valve Leakage at 110 SUS (24 cSt)	5 in <sup>3</sup> /min. @3000 psi
Operating Torque	10 lbf in.
Valve Hex Size	7/8 in.
Valve Installation Torque	30 - 35 lbf ft
Seal kit - Cartridge	Buna: 990-411-007
Seal kit - Cartridge	Viton: 990-411-006

## OPTION SELECTION EXAMPLE: DMDMAN

### SPOOL CONFIGURATION

### (A) SEAL MATERIAL

(N)

<b>A</b> Normally Open 1 to 2, Closed 2 to 3	<b>N</b> Buna-N
<b>B</b> Normally Open 1 to 2, Closed 2 to 3, Closed Transition	<b>V</b> Viton
<b>N</b> Normally Open 2 to 3, Closed 1 to 2	
<b>P</b> Normally Open 1 to 3, Closed 1 to 2	
<b>R</b> Normally Open 2 to 3, Closed 1 to 2, Closed Transition	

## TECHNICAL FEATURES

- This valve is designed for intermittent use such as a manual override. The manual control assembly has a mechanical life expectancy of approximately 7,000 cycles.
- The momentary/twist control option "T" allows the operator to momentarily shift the valve by twisting the knob clockwise and releasing. Once released, the valve returns to its normal position.
- The detent/lock control option "L" allows the operator to shift the valve into a mechanically detented position by twisting the knob counter-clockwise. This detented position will be maintained until the operator twists the knob clockwise and allows the valve to return to its normal position. Please note that the detented position is for temporary shifting only and not intended to be a permanent detent.
- The dual-operation control option "D" allows the operator to either shift the valve momentarily by twisting the knob clockwise or shift it into a mechanically detented position by twisting counter-clockwise. Please note that the detented position is for temporary shifting only and not intended to be a permanent detent.
- The control on this valve is meant to be operated by a person's hand. The control should not be modified, for instance fastening a lever to the knob. Under no circumstances should the control be operated by other mechanical devices.
- Incorporates the Sun floating-style construction to minimize the possibility of internal parts binding due to excessive installation torque and/or cavity/cartridge machining variations.

## PERFORMANCE CURVES



