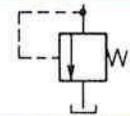


# **CROSS** HYDRAULIC RELIEF VALVES

**DIFFERENTIAL TYPE  
RD SERIES  
Specification Sheet**



The CROSS series RD differential-poppet type relief valves have been designed to give long life and smooth performance at an economical price. The hydraulically dampened poppet uses differential areas to provide minimum variation between opening and full flow pressures.

## **GENERAL SPECIFICATIONS**

Pressure range.....	500 psi (34 bar) to 3000 psi (207 bar) (maximum 2500 psi (207 bar) with NPTF ports)
Maximum flow capacity .....	30 gpm (114 l/m)
Weight.....	2.5 lbs. (1.1 Kg)

## **MATERIAL SPECIFICATIONS**

Housing.....	High tensile gray iron
Poppet.....	Hardened and ground steel
Seals .....	Buna N

## **STANDARD FEATURES (See CROSS Full Line catalog)**

- 1 1/16-12 (3/4" SAE #12) straight thread o-ring ports or 3/4" NPTF dry seal pipe thread ports
- Adjustable type, screw adjustment with acorn nut  
Two ranges: 500 to 1499 psi  
1500 to 3000 psi
- Non-Adjustable type, factory pre-set
- Bodied, "in-line" mounting, with mounting holes for 1/4" diameter bolts

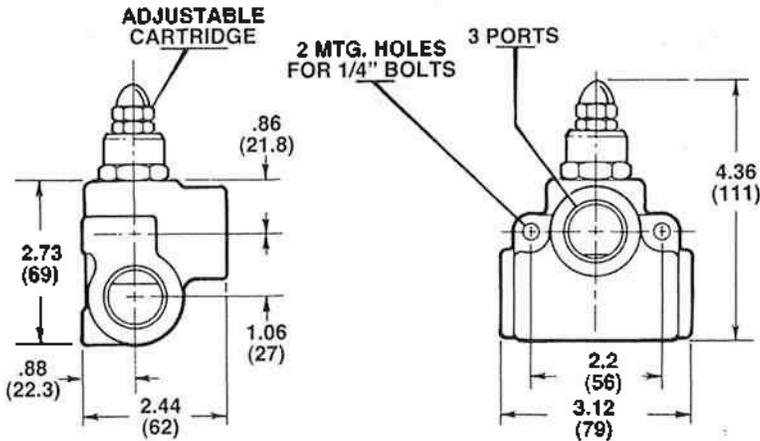
## **OPTIONAL FEATURES**

- 3/4-16 (1/2" SAE #8) straight thread o-ring ports
- 7/8-14 (5/8" SAE #10) straight thread o-ring ports
- 1/2" NPTF dry seal pipe thread ports
- Cartridge style, for installation in machined housing

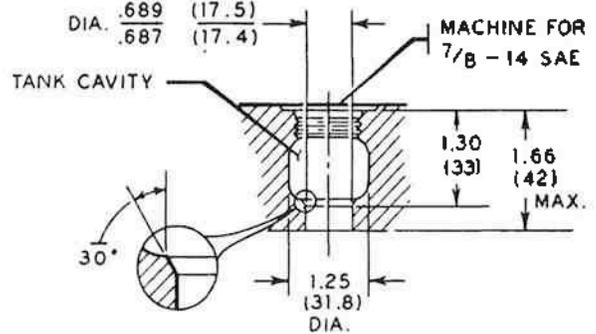
## **STYLES AVAILABLE**

- RD1: RD series, with body, adjustable (500 to 1499 or 1500 to 3000 psi)
- RD2: RD series, with body, non-adjustable (500 to 1499 or 1500 to 3000 psi)
- 1R0016: RD series, cartridge only, adjustable (500 to 1499 psi)
- 1R0017: RD series, cartridge only, adjustable (1500 to 3000 psi)
- 1R0021: RD series, cartridge only, non-adjustable (500 to 1499 psi)
- 1R0037: RD series, cartridge only, non-adjustable (1500 to 3000 psi)

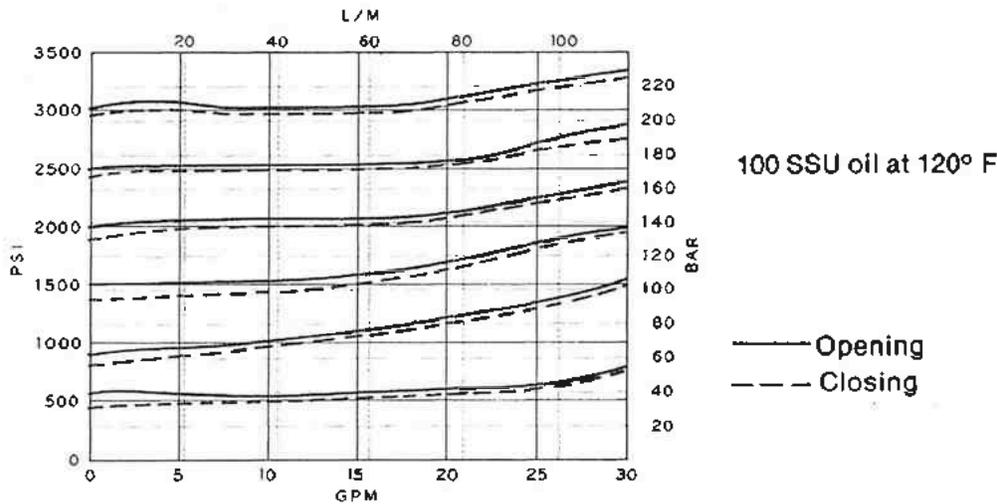
**DIMENSIONAL DATA** in inches and (millimeters)



**MACHINING DIMENSIONS FOR CARTRIDGE UNIT**



**TYPICAL PERFORMANCE DATA**



**ORDERING DATA**

SERIES	ADJUSTMENT	PORT SIZE & TYPE	PRESSURE SETTING (psi) (at 10 gpm)
RD	1 Adjustable	1 - 1/2" NPTF 2 - 3/4" NPTF 3 - 1/2" SAE #8 3/4-16	A - 500 psi B - 1000 psi (1) C - 1500 psi
	2 Non-Adjustable	4 - 5/8" SAE #10 7/8-14 5 - 3/4" SAE#12 1 1/16-12	D - 2000 psi (2) E - 2500 psi F - 3000 psi G - Other psi

- (1) Standard setting for 500 - 1500 psi Adjustable units
- (2) Standard setting for 1500 - 3000 psi Adjustable units



**CROSS MANUFACTURING, INC.**  
100 James H. Cross Blvd.  
Lewis, Kansas 67552  
Phone 620/324-5525; FAX 620/324-5737; e-mail: info@crossmfg.com