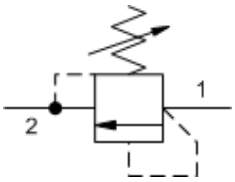
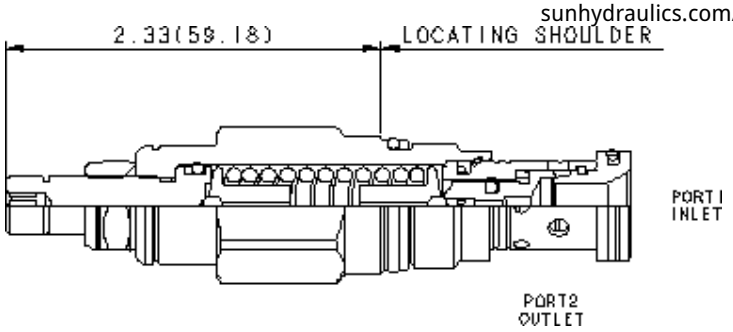
MODEL
RDDA

Direct-acting relief valve
SERIES 1 / CAPACITY: 95 L/min. / CAVITY: T-10A

sunhydraulics.com/model/RDDA





CONFIGURATION

L	Control	Standard Screw Adjustment
W	Adjustment Range	800 - 4500 psi (55 - 315 bar), 1000 psi (70 bar) Standard Setting
N	Seal Material	Buna-N
(none)	Material/Coating	

Direct-acting relief cartridges are normally closed, pressure-limiting valves used to protect hydraulic components from pressure transients. When the pressure at the inlet (port 1) reaches the valve setting, the valve starts to open to tank (port 2), throttling flow to limit the pressure rise. These valves are smooth and quiet, essentially zero leak, dirt tolerant, immune to silting and are very fast.

TECHNICAL DATA

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

Cavity	T-10A
Series	1
Capacity	95 L/min.
Maximum Operating Pressure	350 bar
Factory Pressure Settings Established at	15 L/min.
Maximum Valve Leakage at Reseat	0,7 cc/min.
Response Time - Typical	2 ms
Reseat	>90% of setting
Adjustment - No. of CW Turns from Min. to Max. setting	6
Valve Hex Size	22,2 mm
Valve Installation Torque	41 - 47 Nm
Adjustment Screw Internal Hex Size	4 mm
Locknut Hex Size	15 mm
Locknut Torque	9 - 10 Nm
Seal kit - Cartridge	Buna: 990310007
Seal kit - Cartridge	EPDM: 990310014
Seal kit - Cartridge	Viton: 990310006
Model Weight	0.17 kg.

© 2024 Sun Hydraulics

CONFIGURATION OPTIONS

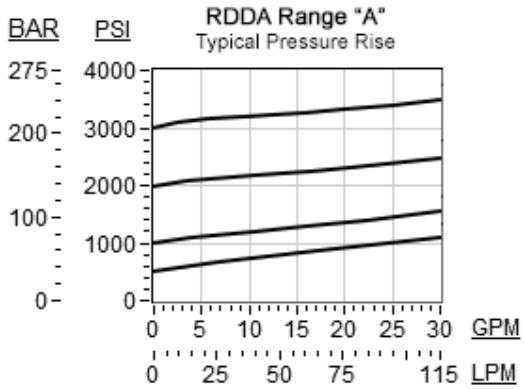
Model Code Example: RDDALWN

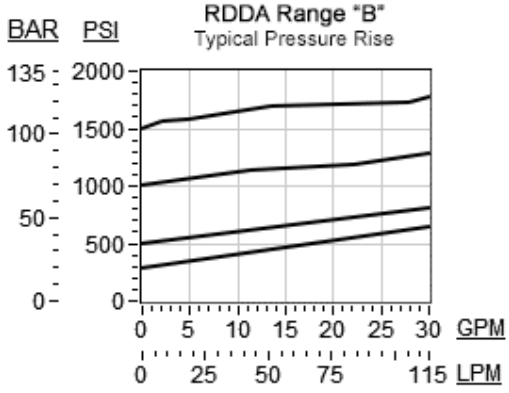
CONTROL (L)	ADJUSTMENT RANGE (W)	SEAL MATERIAL (N)	MATERIAL/COATING
L Standard Screw Adjustment	**W** 800 - 4500 psi (55 - 315 bar), 1000 psi (70 bar) Standard Setting	**N** Buna-N	Standard Material/Coating
C Tamper Resistant - Factory Set	**A** 500 - 3000 psi (35 - 210 bar), 1000 psi (70 bar) Standard Setting	**E** EPDM	**/AP** Stainless Steel, Passivated
Y Tri-Grip Handknob	**B** 300 - 1500 psi (20 - 105 bar), 1000 psi (70 bar) Standard Setting	**V** Viton	**/LH** Mild Steel, Zinc-Nickel
	C 1000 - 6000 psi (70 - 420 bar), 1000 psi (70 bar) Standard Setting		
	D 200 - 800 psi (14 - 55 bar), 400 psi (28 bar) Standard Setting		
	E 100 - 400 psi (7 - 28 bar), 200 psi (14 bar) Standard Setting		
	S 50 - 200 psi (3,5 - 14 bar), 100 psi (7 bar) Standard Setting		

TECHNICAL FEATURES

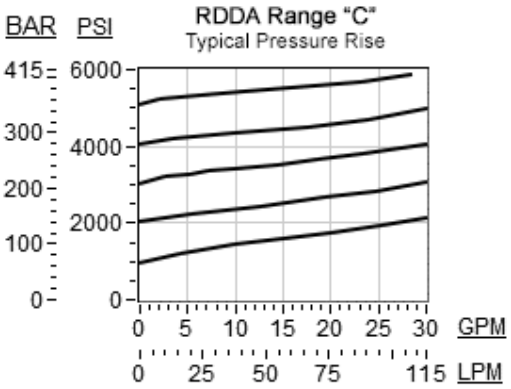
- All 2-port relief cartridges (except pilot reliefs) are physically and functionally interchangeable (same flow path, same cavity for a given frame size).
- Will accept maximum pressure at port 2; suitable for use in cross port relief circuits.
- The seals on the adjust screw are exposed to system pressure which means this valve can only be adjusted when the pressure is removed. The setting procedure is; check the setting, remove the pressure, adjust the valve, check the new setting.
- Valve is relatively insensitive to varying oil temperatures and oil borne contamination.
- Select a spring range where the desired relief setting is approximately mid-range to high between the minimum and maximum pressure to ensure maximum valve repeatability.
- Suitable for use in load holding applications.
- Back pressure on the tank port (port 2) is directly additive to the valve setting at a 1:1 ratio.
- Cartridges configured with EPDM seals are for use in systems with phosphate ester fluids. Exposure to petroleum based fluids, greases and lubricants will damage the seals.
- Test pressure for each range is as follows: A range - 2000 psi (138 bar), B range - 1000 psi (69 bar), C range - 4000 psi (276 bar), D range - 800 psi (55 bar), E range - 400 psi (28 bar), S range - 150 psi (10 bar), W range - 3000 psi (207 bar).
- Reseat meets or exceeds 90% of crack pressure at test setting. Settings lower than the test pressure may result in lower reseat percentages.
- 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.

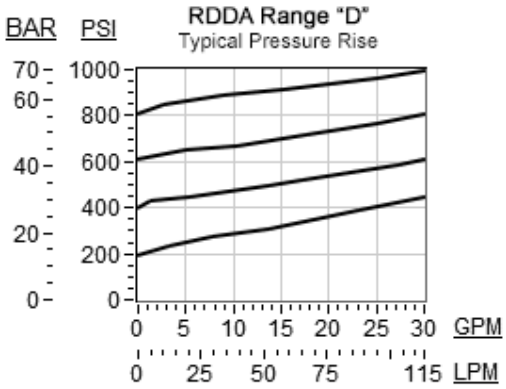
PERFORMANCE CURVES

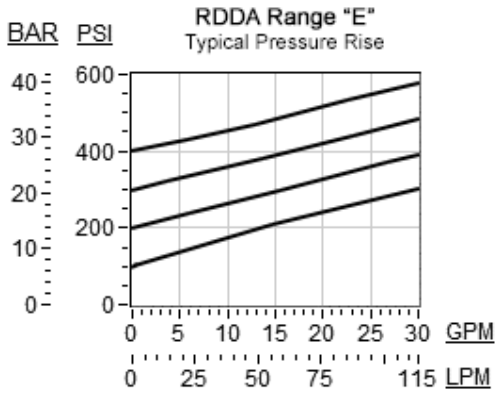


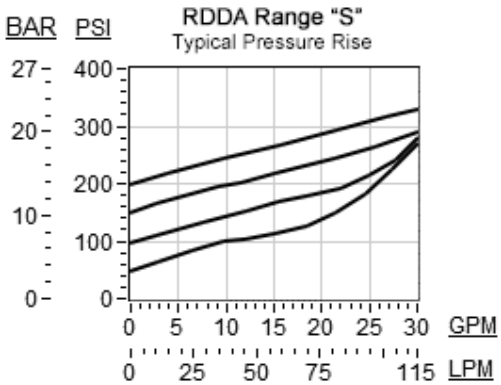


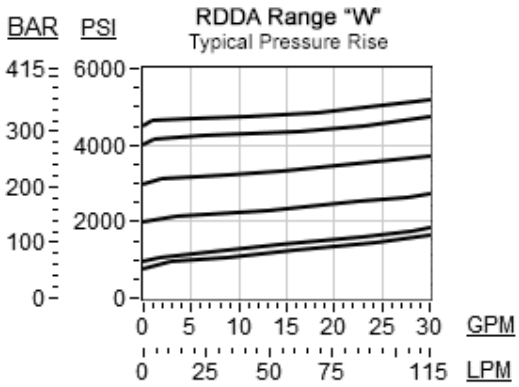
© 2024 Sun Hydraulics











RELATED MODELS

- RDDA3 Non-adjustable direct-acting relief valve

© 2024 Sun Hydraulics