



Non-adjustable 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-3A
Series	2
Capacity	50 gpm
Maximum Operating Pressure	5000 psi
Factory Pressure Settings Established at	4 gpm
Maximum Valve Leakage at Reseat	10 drops/min.
Response Time - Typical	2 ms
Reseat	>90% of setting
Valve Hex Size	1 1/8 in.
Valve Installation Torque	45 - 50 lbf ft
Model Weight	0.62 lb.
Seal kit - Cartridge	Buna: 990-303-007
Seal kit - Cartridge	EPDM: 990-303-014
Seal kit - Cartridge	Polyurethane: 990-303-002
Seal kit - Cartridge	Viton: 990-303-006

## OPTION SELECTION EXAMPLE: RDFA3AN

ADJUSTMENT RANGE	(A)	SEAL MATERIAL	(N)
A 500 - 3000 psi (35 - 210 bar)		N Buna-N	
C 1000 - 6000 psi (70 - 420 bar)		V Viton	
D 200 - 800 psi (14 - 55 bar)			

### TECHNICAL FEATURES

- Customer must specify setting. The valve will be factory set and is tamper proof.
- 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.
- 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.
- 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.
- 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

