

DESCRIPTION

The R-K NLB series no lube pressure bypass valve is a 3-port valve designed to control excess fluid pressure in piping systems where no lubrication is required or permitted in the valve. When mounted in-line, the valve will permit fluid to pass through the system. Adjust the stem to get desired outlet pressure and tighten the lock nut to hold that setting. When the fluid pressure approaches the valve setting, the excess fluid is vented through the bottom port. Pressure settings for the valve outlet can be set to relieve from 10-80 PSI.

The valve is designed so there is no metal contact with the fluid. The compact valve features top entry for easy maintenance and can be factory pre-set upon request.

Note: This valve is not designed for use in piping systems with back pressure on the downstream side.

R-K NLB SERIES NO LUBE PRESSURE BYPASS VALVE



KEY FEATURES

- 3-port design: Specifically engineered to relieve excess fluid pressure within piping systems.
- No lubrication required: Ideal for high-purity applications where lubrication is not permitted.
- In-line functionality: When installed in-line, it allows fluid to pass through the system, and redirects excess fluid through the bottom port when pressure reaches the valve setting.
- Adjustable relief pressure: Equipped with an adjustable screw and lock-nut for precise pre-setting of relief pressure.
- Wide working pressure range: Operates effectively from 10 to 80 PSIG.
- Top entry design: Facilitates easy in-line maintenance.

VALVE BODY MATERIALS:

- PVC Type 1, Grade 1
- Polypropylene
- PVDF
- Teflon

Seal:

- EPDM
- VITON
- KALREZ

SIZES & PORTING

Valve Sizes: ¼", ½", ¾", 1.0", 1.5", 2.0"

Port Types:

¼" to 1" valves: FNPT
1.5" to 2" valves: MPT
All valves are fully ported.

Mounting:

(4) ¼"-20 tapped holes for standard machined valve body (applies to ¼" to 1.00" sizes).



PRESSURE & TEMPERATURE RATINGS:

Upstream Pressure: Vacuum to 150 PSIG

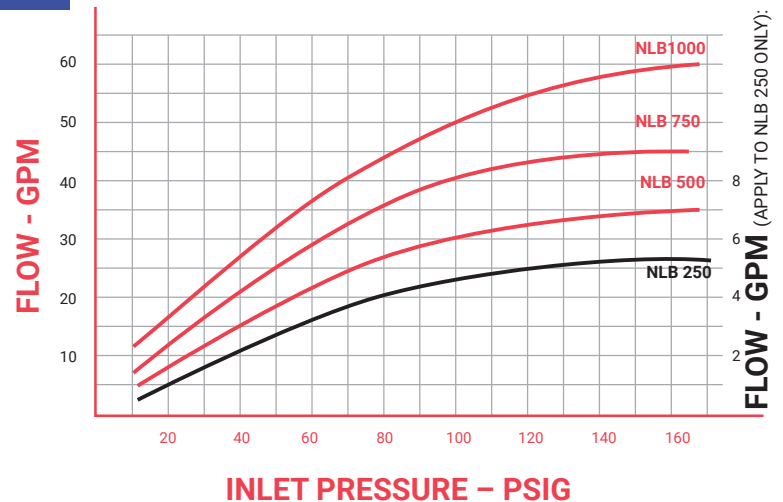
Relief Pressure: 10 to 80 PSIG

Pressure differential: plus or minus 5 PSIG from any pre-set pressure relief point

Temperature Range

- PVC: 0°F to 140°F
- POLYPRO: 0°F to 180°F
- PVDF: 0°F to 280°F
- Teflon: 0°F to 340°F

ENGINEERING & PERFORMANCE DATA



The chart below will specify R - K standard valves regarding valve size, valve material, and seal material.
For special orders, please consult the factory for pricing and delivery information.

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VALVE SIZE

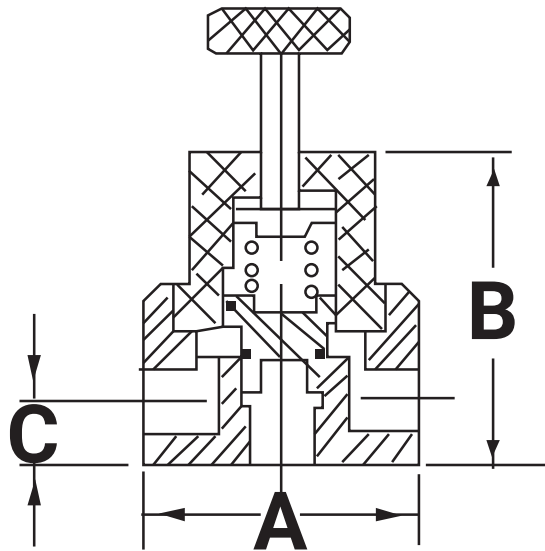
50 = 1t2"
75 = 3t4"
100 = 1.0"

MATERIAL

1 = PVC
2 = POLYPRO
3 = PVDF
4 = TEFLON
5 = OTHER (Please specify)

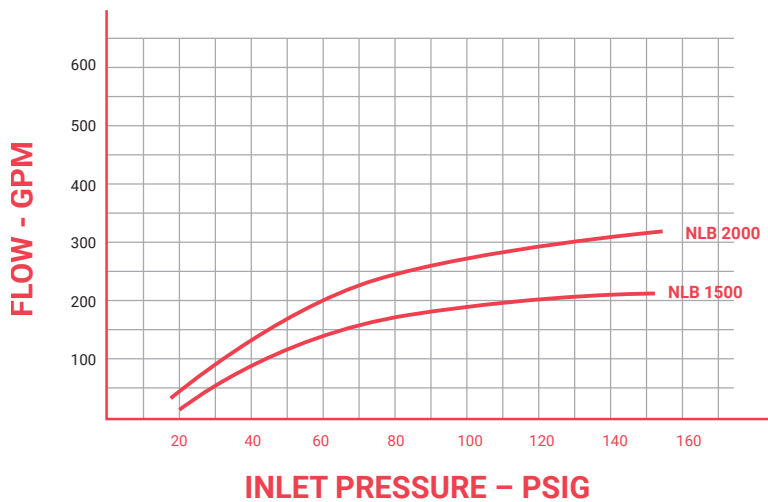
X - MOLDED BODY

ENGINEERING & PERFORMANCE DATA



NOTES

- Performance curves illustrate the flow rate of NLB valves when the piston seals are fully open and 100% of the fluid flows through the valve.
- These curves will vary depending on the system's flow and at each different pressure setting point.
- During assembly, a small amount of DuPont Krytox is applied to aid in the break-in of moving parts, then carefully wiped off before final assembly and testing.
- Test data was gathered using 68°F water and a maximum pressure of 160 PSIG.
- Performance curves will change with higher viscosity liquids and/or higher temperatures.
- For custom products or special applications, it is recommended to consult a local sales representative or the manufacturer directly.



DIMENSIONAL DATA

DIMENSIONS IN INCHES

Valve size	Ports	A	B	C	Cv
1/4"	FNPT	2	2.7	0.5	0.58
1/2"	FNPT	3	3.4	0.7	2.87
3/4"	FNPT	3.5	4.3	0.9	3.31
1.0"	FNPT	4	4.7	1.1	4.32
1.5"	MPT	5.5	6.5	1.5	16.4*
2.0"	MPT	6	7.5	1.7	21.6*

(*) Cv value @ 150 GPM