

DESCRIPTION

The R-K NLR series no lube pressure relief valve is a 2-port valve, ideal for applications where no lubrication is required or permitted, to relieve excess pressure that may occur in the line or system. Adjust the threaded stem to obtain selected line or tank relief pressure. An outlet (tee) may be required on the downstream side. The valve starts to open as line pressure approaches set pressure until it is fully open. The valve can be set to relieve excess pressure between 10-80 P.S.I. The 1/4" valve is also available with a relief range of 60-125 PSI. It's designed so there is no metal contact with the fluid and top entry makes in-line maintenance easy.

Suitable for harsh chemicals. Ideal for DI water and other high purity applications. Controlled pressure settings up to 100 PSI available upon request. This valve is not designed to be used in systems with back pressure on the downstream side.

R-K NLR SERIES NO LUBE PRESSURE RELIEF VALVE



KEY FEATURES

- No-Lube Design
- Designed for applications where lubrication is not allowed or required.
- Prevents contamination — ideal for high-purity systems.
- Standard range: 10–80 PSI.
- 1/4" valve option: 60–125 PSI.
- Custom settings up to 100 PSI available on request.
- 2-Port Configuration
- Simple 2-port design for line or tank pressure relief.
- Progressive Opening
- Valve begins to open as line pressure approaches the set point.
- Fully opens under excess pressure (not a "pop-off" type).

VALVE BODY MATERIALS:

- PVC (Type 1 – Grade 1)
- Polypropylene (PP)
- PVDF
- Teflon

Seal Options

EPDM or Viton O-rings (standard).
Optional: Kalrez® or Teflon-encapsulated O-rings for aggressive chemicals
All include Teflon sleeves; no metal contacts fluid

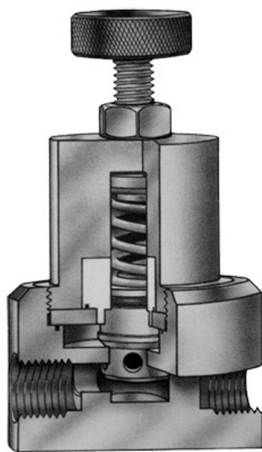
SIZES & PORTING

Valve Sizes: 1/4", 1/2", 3/4", 1", 1 1/2", 2", 3", 4"

Port Types:

1/4" to 1": Female NPT (FPT)
1 1/2" and 4": Male NPT (MPT)

Mounting: Four 1/4" - 20 tapped holes standard for easy panel or base mounting (1/4" to 1")



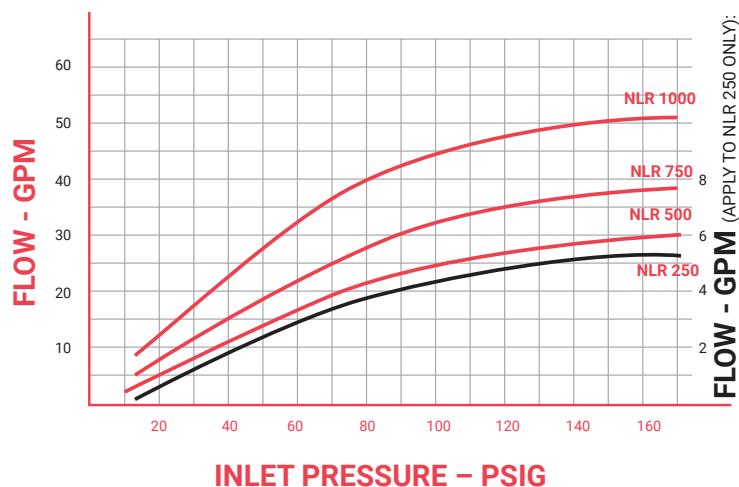
PRESSURE & TEMPERATURE RATINGS:

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

25 = 1/4"
 50 = 1/2"
 75 = 3/4"
 100 = 1.0"
 150 = 1.5"
 200 = 2.0"

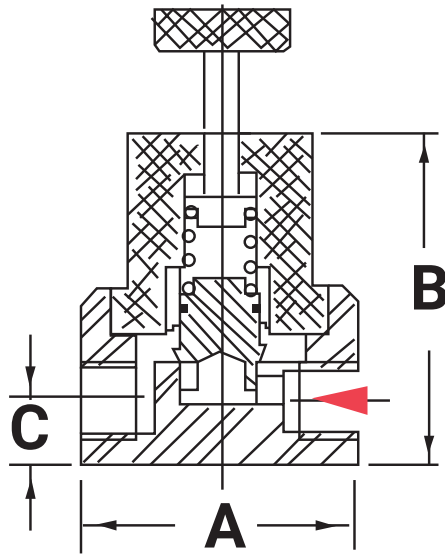
MATERIAL

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

SEALS

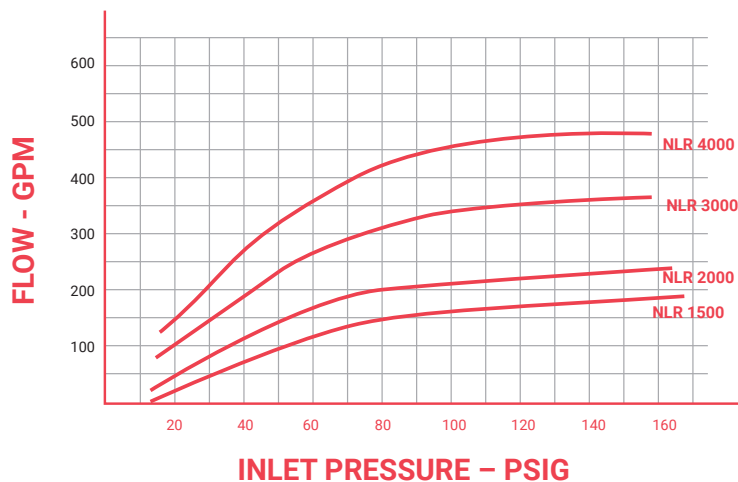
E = EPDM
 V = VITON
 K = KALREZ
 O = OTHER (Please specify)

ENGINEERING & PERFORMANCE DATA



NOTES

- The performance curves show the flow rate of nlr valves with the valve fully open and 100% flow thru the valve. These curves will change depending on the flow through the system at each different set point.
- During the assembly process, a small amount of dupont krytox is applied to assist in the break-in of moving parts, then carefully wiped off prior to final assembly and testing.
- Test data was performed with 68°F water, and 160 PSIG maximum pressure.
- These performance curves will be changed with higher viscosity liquid and/or higher temperature.
- Consult your local sales rep or manufacturer directly for custom products or special applications.



DIMENSIONAL DATA

DIMENSIONS IN INCHES

Valve Size	Ports	A	B	C	Cv
1/4"	FNPT	2	1.8	0.5	0.58
1/2"	FNPT	3	2.5	0.7	2.87
3/4"	FNPT	3.5	3	0.9	3.31
1"	FNPT	4	3.5	1.1	4.32
1.5"	MPT	5	4.7	1.5	16.4*
2"	MPT	6	5.5	1.7	21.6*
3"	MPT	11	10	3.75	30.7*
4"	MPT	13	12.5	4	35.0*

(*) Cv value @ 150 GPM