

# NLB

## DESIGN FEATURES

The R-K NLB series pressure bypass valve is a 3-port valve designed to relieve excess fluid pressure in high purity applications where lubrication is not permitted. When mounted in-line, the pressure by-pass valve will permit fluid to pass through the system. When the fluid pressure approaches the valve setting, the excess fluid is vented through the bottom port.

Adjustable screw and lock-nut makes it easy to accurately pre-set relief pressure.

Wide working pressure range (10 to 80 PSIG)

Top entry for easy in-line maintenance and can be factory pre-set upon request. No metal contact with fluid.

It is ideal for DI water and other high purity piping systems as well as most harsh chemicals and corrosives.

**Note:** This valve is not designed to be used in piping systems with back-pressure on the downstream side.

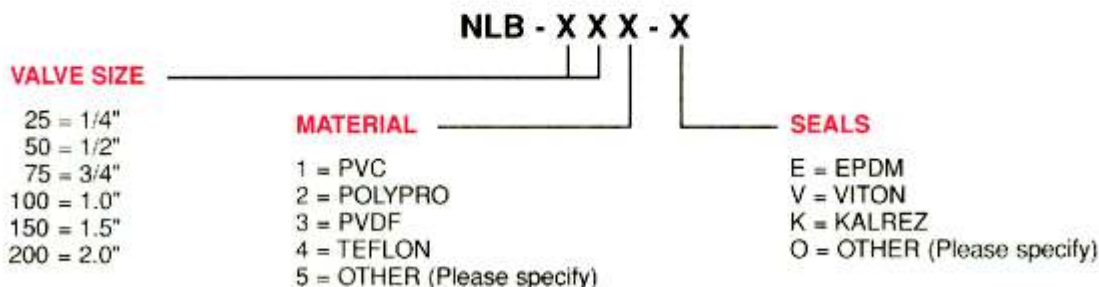
## NO LUBE PRESSURE BYPASS VALVE

### SPECIFICATIONS

Upstream Pressure	Vacuum to 150 PSIG	Temperature Range	0 F to 140 F for PVC 0 F to 180 F for POLYPRO 0 F to 280 F for PVDF 0 F to 340 F for Teflon
Relief Pressure	10 to 80 PSIG	Valve ports	1/4" to 1" Valve FNPT 1.5" to 2" Valve MPT All valves are fully ported
Pressure differential	Plus or Minus 5 PSIG from any pre-set pressure relief point.	Mounting method	(4) 1/4" -20 tapped holes for standard machined valve body (1/4" to 1.00")
Material	Valve Body PVC Type 1, Grade 1 Polypropylene PVDF Teflon		
Seal	EPDM VITON KALREZ		

### ORDER INFORMATION

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.



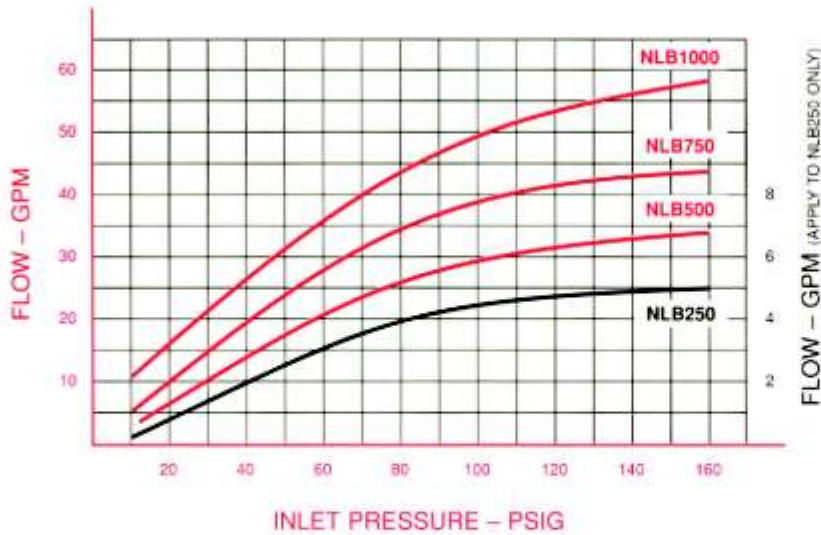
**R-K INDUSTRIES**



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ONTARIO, CA 91761

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# ENGINEERING & PERFORMANCE DATA



## NOTES

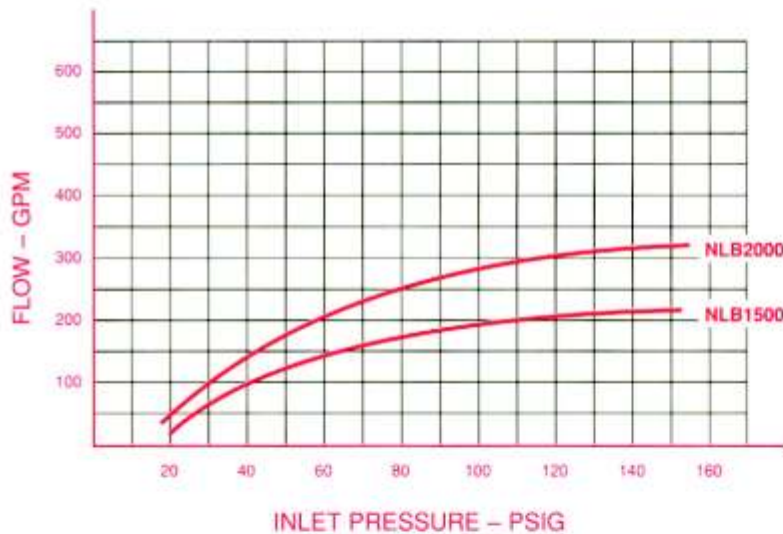
PERFORMANCE CURVES SHOW THE FLOW RATE OF NLB VALVES WITH PISTON SEALS FULLY OPEN, AND 100% OF THE FLUID FLOW THRU THE VALVE. THESE CURVES WILL BE CHANGED DEPENDING UPON THE FLOW OF THE SYSTEM AND AT EACH DIFFERENT PRESSURE SETTING POINT.

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 DEGREE 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.

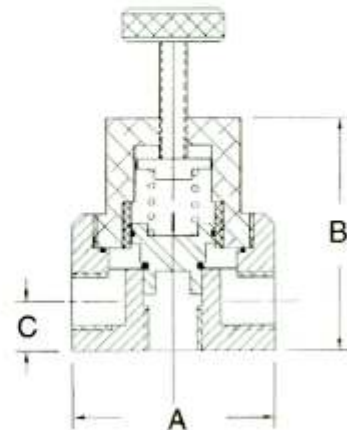


## DIMENSIONAL DATA

DIMENSIONS IN INCHES

Valve size	Ports	A	B	C	Cv
1/4"	FNPT	2.0	2.7	.5	.58
1/2"	FNPT	3.0	3.4	.7	2.87
3/4"	FNPT	3.5	4.3	.9	3.31
1.0"	FNPT	4.0	4.7	1.1	4.32
1.5"	MPT	5.5	6.5	1.5	16.4*
2.0"	MPT	6.0	7.5	1.7	21.6*

(\* ) Cv value @ 150 GPM



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