

CANADA INC.

**NOPAK**

**NOPAK**  
**PE IN-LINE**  
**HEAVY DUTY**  
**BRASS VALVES**

# NOPAK

## 'PE' HEAVY DUTY 1/4" & 1/2" IN-LINE VALVES

The Nopak range of 'PE' in-line valves has been developed as a heavy duty valve suitable for use in adverse environments such as marine, mining and other heavy duty industries. These valves are also suitable for use in the chemical industry and where detergents and solvents are used for cleaning down, such as in the brewery, canning and similar environments.

This all brass bodied range of valves consists of 2 and 3 position spool valves with 1/4 in or 1/2 in NPT ports, available with 3 way or 4 way flow configuration.

The wide range of operating mechanisms available ensure that there is a 'PE' valve to meet all application requirements.

All valves in the range are fitted with Viton seals as standard making them suitable for use in temperatures up to 150°C.

All valves have two holes drilled through the body to facilitate easy mounting. As an alternative the push button, palm button and twist operated valves are suitable for panel mounting.

### Material specification

**Basic parts i.e. body, end caps, sleeves and spool-brass**

**Seals** — Viton rubber

### Technical data

**Maximum operating pressure** 150 PSI

### Minimum pilot pressure

Pressure — Pressure valves 35 PSI

Pressure — Spring valves 45 PSI

Solenoid — Solenoid/Air valves 35 PSI

Solenoid — Spring valves 45 PSI

Cylinder — Cylinder valves

1/4 in NPT valves 7 PSI

1/2 in NPT valves 10 PSI

Cylinder — Spring valves

1/4 in NPT valves 10 PSI

1/2 in NPT valves 15 PSI

**Flow rate at** Cv SCFM @ 90 PSI

1/4 in BSP valves 45

1/2 in BSP valves 150

**Working fluid** Air and inert gases

**Temperature range** — 20°C to +150°C

**Ambient temp. range of solenoid** — 15°C to +50°C

### Electrical data of solenoid —

**Voltage tolerance from nominal** — 10% to +10%

**Coil duty** continuous

### Power consumption

Inrush A.C. 26VA

Holding A.C. 16 VA

Nominal D.C. 10 watts

**Coil class** H 180°C insulation

**Electrical connection** AMP pins to DIN 46242

**Connector** To DIN 43650

Protection to IP65

Cable thread size PG9

### Alternative connectors:

1/2 conduit entry

### Lubrication

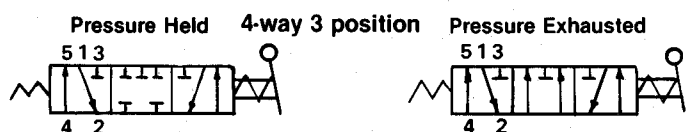
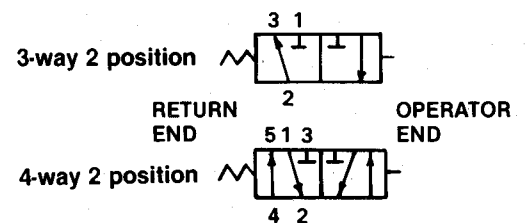
Oil to ISO 3448 grade 32, or a mineral based oil, introduced as a fine mist is recommended.

## Flow Paths

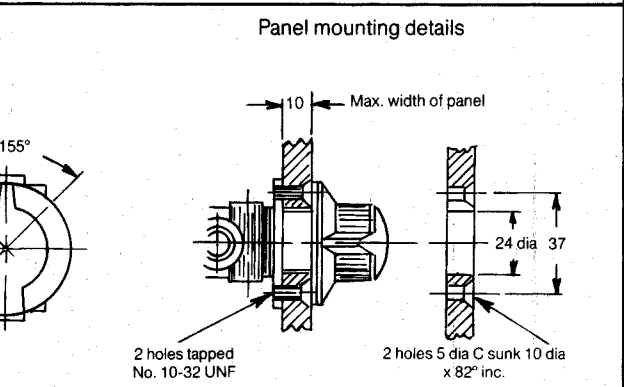
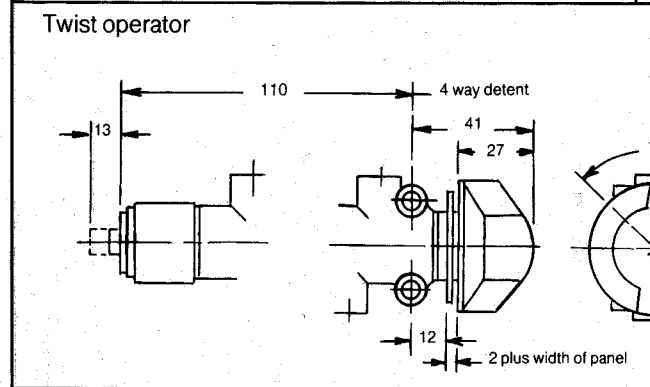
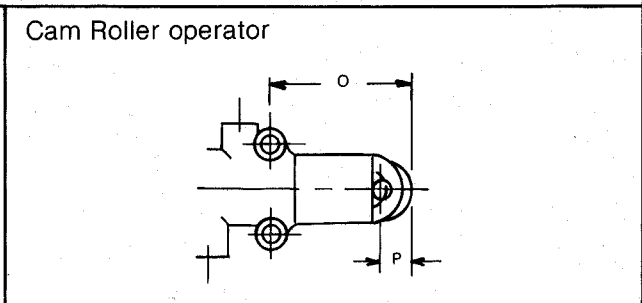
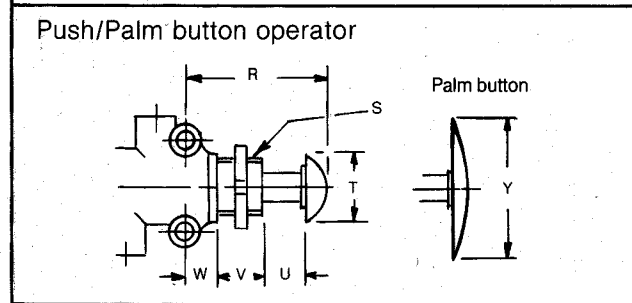
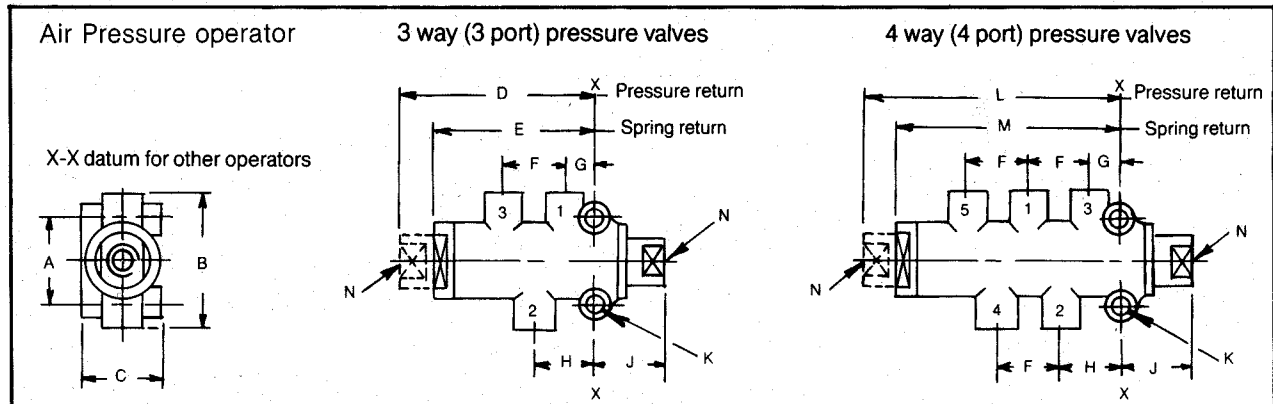
All 3 way valves including solenoid operated types can be piped normally closed or normally open and can be used as a 2 way valve with a port plugged.

All 4 way valves including solenoid operated types can be piped in any flow configuration.

All solenoid valves must be piped with the supply connected to the pilot ports of the solenoid operators as the solenoids function with external pilot supply only.

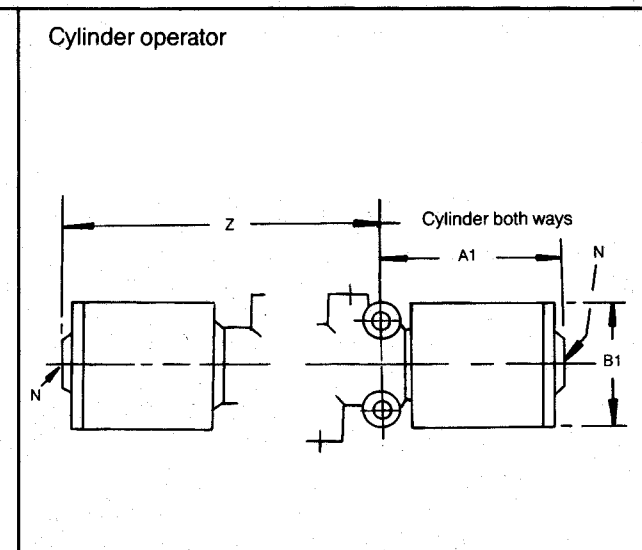
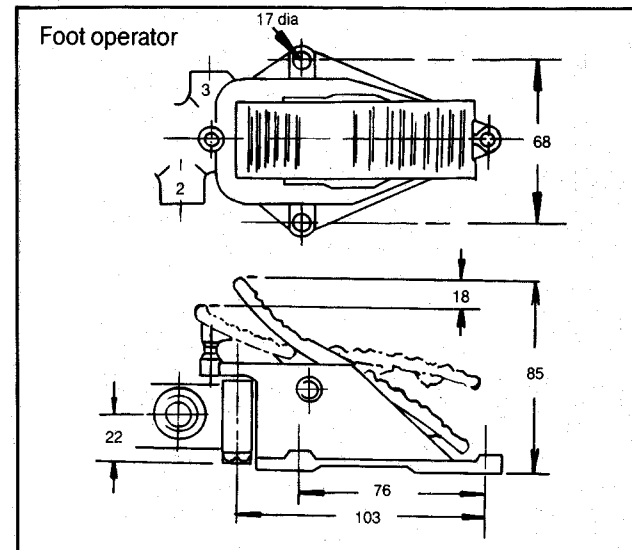


# 'PE' Heavy Duty In-Line Valves – dimensions (mm)

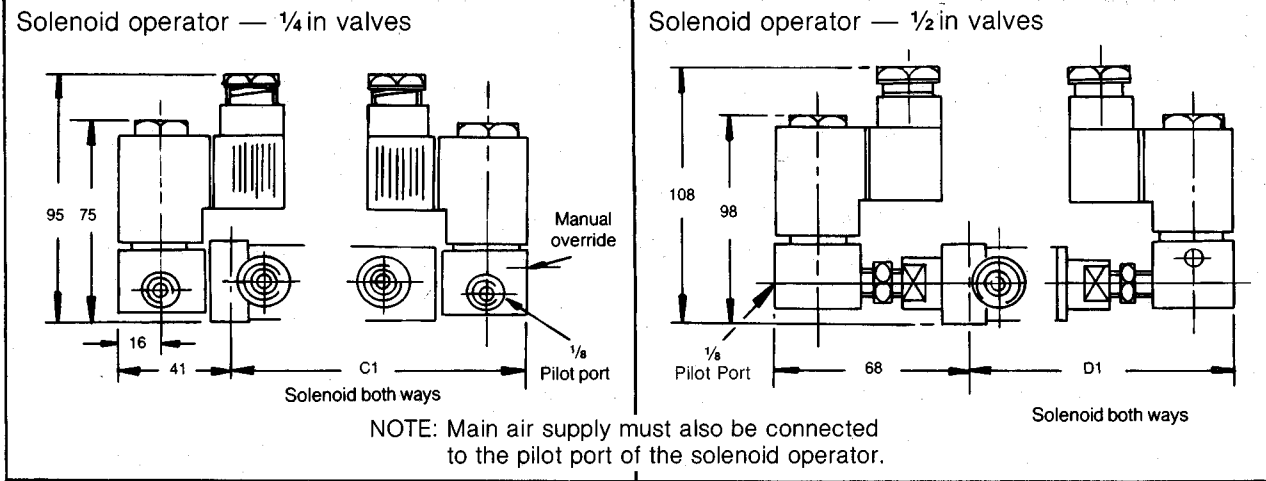


Valve size	A	B	C	D	E	F	G	H	J	K (dia 2 mtg. holes)	L
1/4 in NPT	35	56	29	74	64	25	11	24	26	6.4	99
1/2 in NPT	31	83	48	104	99	48	16	40	24	8	152

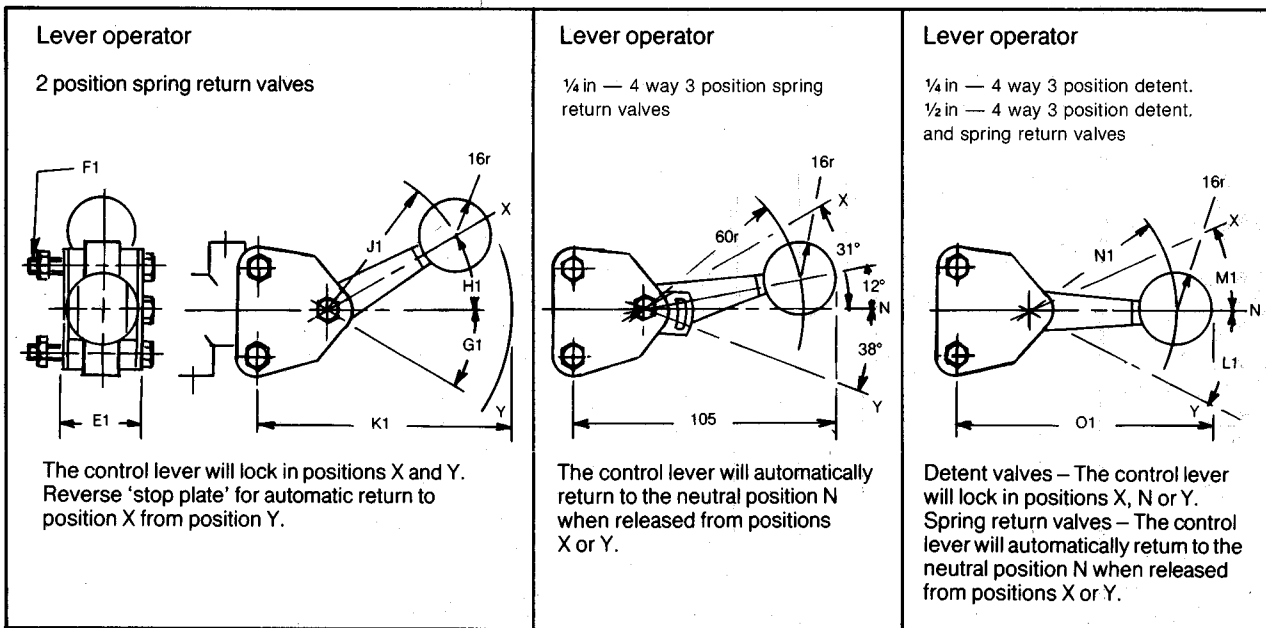
Valve size	M	N (Pilot port)	O	P (Total stroke)	R	S	T (dia)	U	V	W	Y (dia)
1/4 in NPT	89	1/4 in NPT	48	10	51	1/2 in NPT	29	14	16	11	51
1/2 in NPT	147	1/4 in NPT	64	15	—	—	—	—	—	—	—



# 'PE' Heavy Duty In-Line Valves – dimensions (mm)

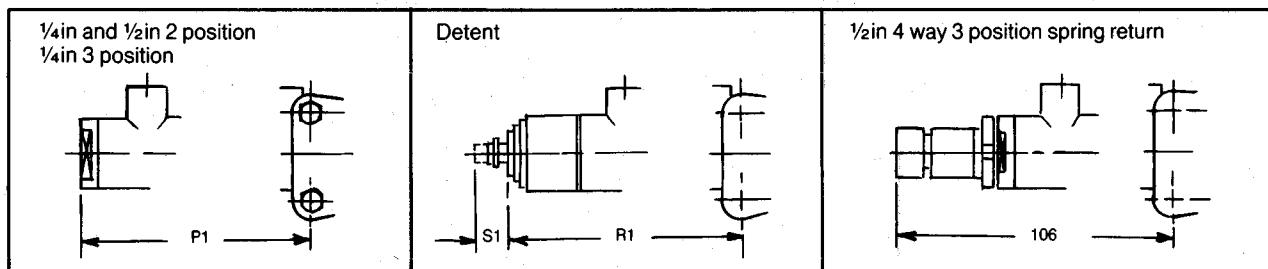


Valve size	N Pilot port	Z		A1	B1 dia	3 way	C1		D1	
		3 way	4 way				4 way	3 way	4 way	
1/4 in NPT	1/4 in NPT	115	140	68	45	89	114	—	—	
1/2 in NPT	1/4 in NPT	187	—	108	64	—	—	148	196	



Valve size	E1	F1	G1	H1	J1 (rad)	K1	L1	M1	N1 (rad)	O1
1/4 in NPT	36	1/4 in UNFx50	26°	29°	60	105	24°	24°	60	105
1/2 in NPT	55	3/16 in UNFx76	42°	36°	78	135	20°	20°	78	146

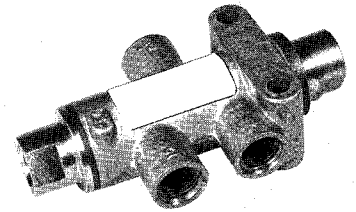
## Lever reset ends



Valve size	Valve type	P1	R1	S1
1/4 in NPT	3 way	64	—	13
	4 way	89	110	13
1/2 in NPT	3 way	99	—	19
	4 way	147	180	19

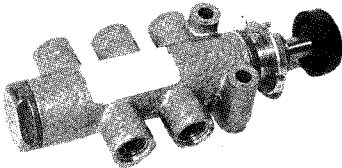
### AIR PRESSURE OPERATED VALVES

Pressure applied and pressure release version available in 1/4" and 1/2" sizes designed for remote pilot operation. The balanced spool arrangement allows these valves to be piped in any flow configuration, i.e. a 5 port valve can be piped as 4 way, 5 way or 2 x 3 way.



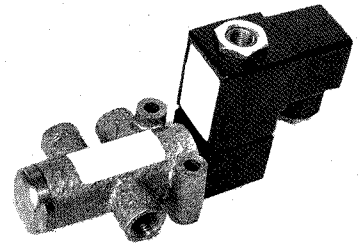
### PUSH BUTTON & PALM BUTTON OPERATED VALVES

Manually operated valves with interchangeable moulded buttons available in different colours. A lock ring is supplied to allow the valves to be panel mounted. Removal of the button exposes a tapped hole to which custom built operators can be attached.



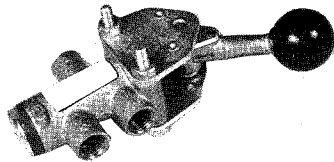
### SOLENOID OPERATED VALVES

These valves are fitted with pilot solenoid operators which accept external pilot air supply only and are fitted with manual override as standard. Both the coil and plug can be indexed through increments of 90°. The pilot solenoids are designed for external pilot supply only. NOTE: Main air supply must also be connected to the pilot port of the solenoid operator.



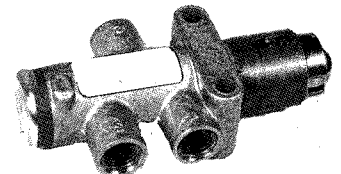
### LEVER OPERATED VALVES

A wide range of robust 2 and 3 position lever valves to suit any application. The lever on 2 position detent valves can be easily changed to spring return by reversal of the stop plate. 3 position valves are available in both pressure held and pressure release versions.



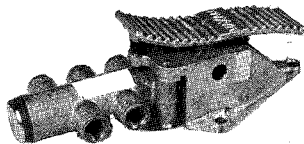
### CAM ROLLER OPERATED VALVES

Fitted with heavy duty, sealed for life, roller bearings and a plunger assembly with a long bearing surface, these valves give prolonged trouble free service under arduous conditions.



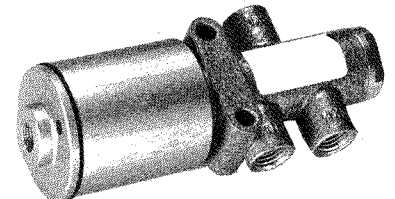
### FOOT OPERATED VALVES

The robust foot operator is attached directly to the valve spool for reliable operation. The operator can be changed from spring return to treadle operation by removing the return spring fitted to the spool. A protection foot guard Pt. no. 8920 is available (1/4" valves only.)



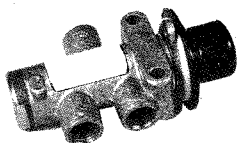
### CYLINDER OPERATED VALVES

The cylinder operator allows the valve to be piloted with air signals as low as 7 PSI (11 PSI on spring return). The heavy duty construction of the cylinder allows a cylinder operated x air return valve to be used as a differential valve.



### TWIST OPERATED VALVES

A pointer is moulded into the twist operator to identify the valve position — open or closed. The knob can be removed to allow the valve to be panel mounted. Available in 1/4" ported body size only.



ORDERING INFORMATION  
'PE' HEAVY DUTY IN-LINE VALVES

# NOPAK

OPERATOR		POSITIONS	CENTRE POSITION	1/4 NPT		1/2 NPT	
OPERATOR	RETURN			3 WAY	4 WAY	3 WAY	4 WAY
Air	Air	2	—	7N302-101	7N502-101	7N304-101	7N504-101
Air	Spring	2	—	7N302-102	7N502-102	7N304-102	7N504-102
Pressure Release	Pressure Release	2	—	—	705225120A	—	—
Solenoid	Solenoid	2	—	7N302-*30	7N502-*30	7N304-*30	7N504-*30
Solenoid	Air	2	—	7N302-*31	7N502-*31	7N304-*31	7N504-*31
Solenoid	Spring	2	—	7N302-*32	7N502-*32	7N304-*32	7N504-*32
Cylinder	Air	2	—	7N302-141	7N502-141	7N304-141	7N504-141
Cylinder	Spring	2	—	7N302-142	7N502-142	7N304-142	7N504-142
Cam	Air	2	—	7N302-371	7N502-371	7N304-371	7N504-371
Cam	Spring	2	—	7N302-372	7N502-372	7N304-372	7N504-372
Push Button	Air	2	—	7N302-301	7N502-301	7N304-301	7N504-301
Push Button	Spring	2	—	7N302-302	7N502-302	NOTE: For Push/Pull Operation Remove Return Spring	
Palm Button	Spring	2	—	7N302-312	7N502-312	7N304-312	7N504-312
Foot	Spring	2	—	7N302-382	7N502-382	NOTE: For Foot/Detent Operation Remove Return Spring	
Lever	Detent <sup>+</sup>	2	—	7N302-204	7N502-204	7N304-204	7N504-204
Lever	Spring Ctr.	3	Held	—	7N502-225	—	7N504-225
Lever	Spring Ctr.	3	Exhaust	—	7N502-215	—	7N504-215
Lever	Detent	3	Held	—	7N502-224	—	7N504-224
Lever	Detent	3	Exhaust	—	7N502-214	—	7N504-214
Twist	Detent	2	—	7N302-254	7N502-254	—	—
Twist	Detent	3	Held	—	7N502-264	—	—
Twist	Detent	3	Exhaust	—	7N502-274	—	—

+ For Lever/Spring Operation - Reverse Stop Plate

\* Add Coil Reference Number For Voltage Desired

### ACCESSORIES

Foot Guard B920 (not shown)  
Replacement Coil 90\*  
Plug 9N STDO with cable gland  
9N STDC with conduit entry

### COIL VOLTAGE REFERENCE

Reference Letter	J	L	M	N	P	U	V	Z	H	K	T	B	C	E	X
Voltage	6	12	24	48	110	230	12	24	48	110	220	12	24	110	240
Frequency	DC	DC	DC	DC	DC	DC	60 HZ	60 HZ	60 HZ	60 HZ	60 HZ	50 HZ	50 HZ	50 HZ	50 HZ

OTHER OPERATOR COMBINATIONS AVAILABLE. CONSULT FACTORY FOR SPECIAL APPLICATION.



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