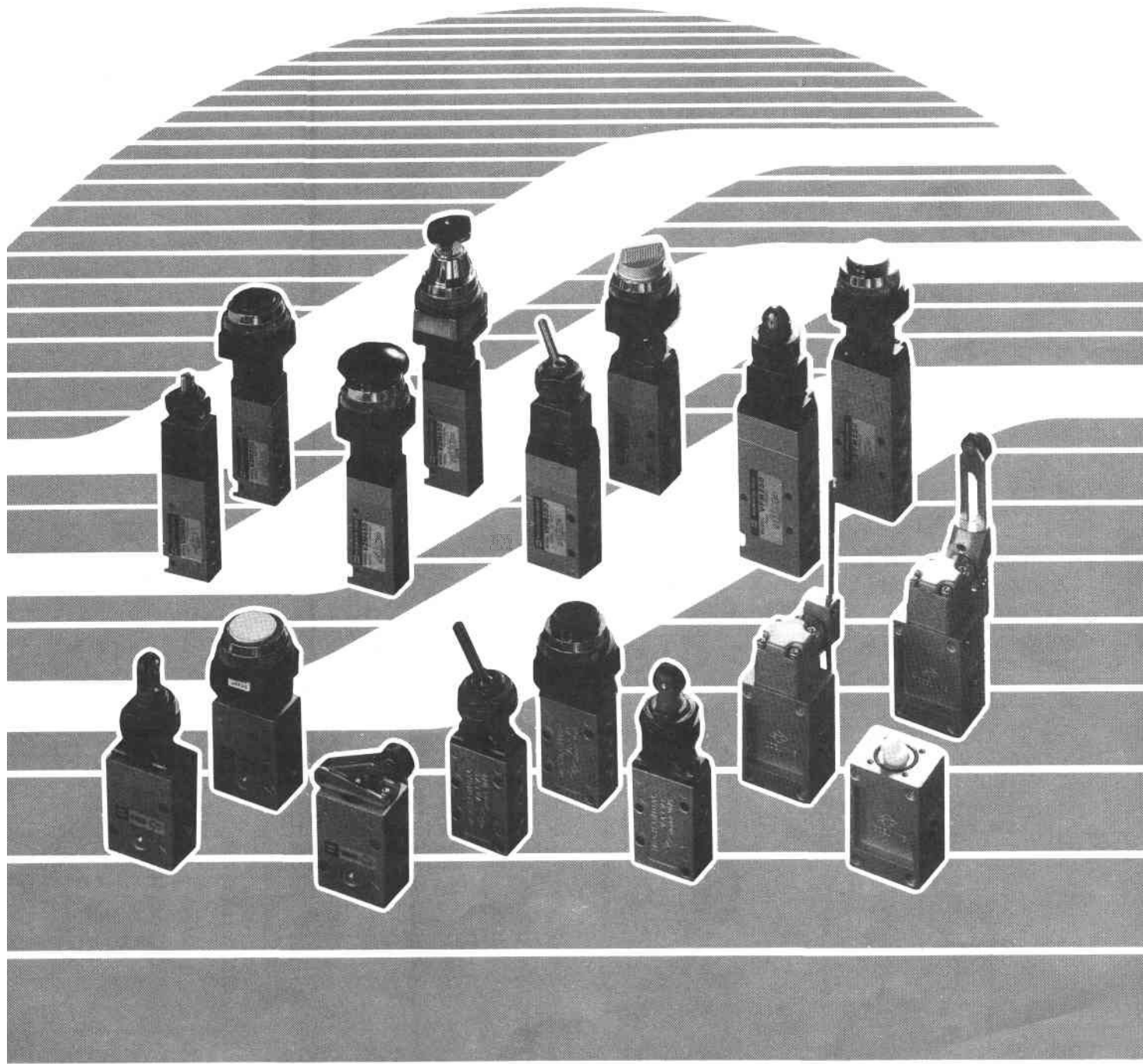


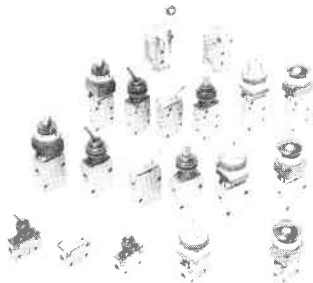


# Mechanical Valves

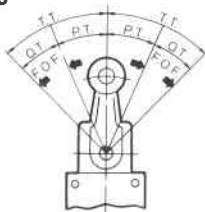
## Series NVM, NVFM, NVZM



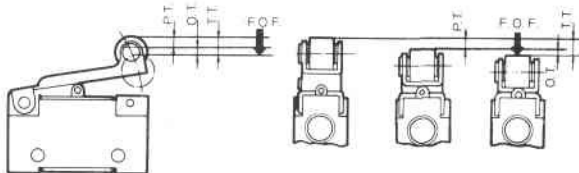
Contents	Page
NVM Mechanical Valves	
NVM 100 Cv 0.14	3-5
NVM 200 Cv 1.00	6-8
NVM 430 Cv 0.38	9-11
NVM 830 Limit Valve Cv 0.33	11-12
NVFM 250 Mech. Actuated/ Pilot Operated Cv 1.0	13-17
NVZM 450 Mech. Actuated/ Pilot Operated Cv 0.55	13; 18-20



**ACTUATOR TRAVEL INDEX  
NVM 830**



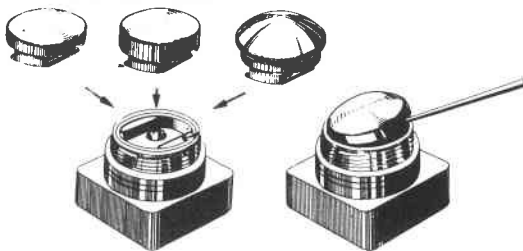
**NVM 100, 230, 400**



### TERMS

- O.P.** = *Operating Position* - Position Valve is shifted when force is applied to actuator to begin operation.
- F.O.F.** = *Whole Stroke Force* - Force required to move actuator.
- P.T.** = *Pre Travel*
- O.T.** = *Operational Travel*
- T.T.** = *Total Travel*

### CHANGING PUSH BUTTONS



Pushbuttons on actuator ass'ys #30, #32 & #33 are interchangeable. To remove lever button, use screwdriver to release from spring clip. To reassemble, push button firmly into spring clip.

### SPECIFICATIONS

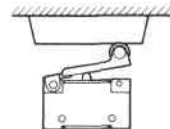
CHARACTERISTICS		NVM100	NVM200	NVM430	NVM830
Port Size (NPT)		1/8"	1/4"	1/8"	1/8"
Cv		0.14	1.00	0.38	0.33
Max. Supply Pressure		220 PSIG (15 Kgf/cm <sup>2</sup> )			
Operating Pressure		0-150 PSIG (0-9.9 Kgf/cm <sup>2</sup> )			
Operating Temperature		40-140°F (5-60°C)			
Media		Air*	Air*	Air/Liq.*	Air/Liq.*
Materials	Body	Aluminum Die Cast			
	Spool, Stem, Spring	Stainless Steel			
	Seals & Poppets	Buna N			
Weight oz. (g)		3.10 (88)	4.56 (130)	3.88 (110)	6.35 (180)

\*Air (Lubricated) - Any non-flammable, non-toxic, non-corrosive gases except oxygen. Liquid - Oil or non-corrosive liquids within specified pressures.

SMC Mechanical Valves have been designed to meet general industrial standards and are capable of long, trouble-free life under stringent operating conditions. The simple construction, utilizing corrosion resistant aluminum Die Cast bodies with optional heavy duty actuators and Buna N seal design, ensure positive operation and media control. Available in two and three way flow configurations, four different body sizes and the capability of mounting a variety of interchangeable actuator assemblies to meet system requirements.

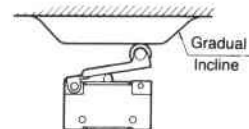
### MOUNTING METHOD

#### Not Recommended

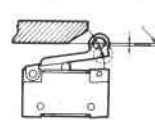


Avoid Sudden Movement of Cam & Lever

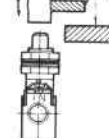
#### Recommended



Room for limit to operate



Protect Actuators with Stop



### OPERATION REQUIREMENTS (NVM)

Actuator (Suffix #)	Lever Angle	Speed ft./sec. (m/sec.)
Cam Lever (-01)	30°	2.29 (0.7)
	45°	0.98 (0.3)
One-Way Cam Lever (-02)	30°	2.29 (0.7)
	45°	0.98 (0.3)
Plunger (-05)	—	0.65 (0.2)
Roller Plunger, Inline (-06)	30°	0.98 (0.3)
Roller Plunger, Set 90° (-07)	30°	0.98 (0.3)
Roller Adjusting (-01) (NVM800)	30°	1.64 (0.5)
	45°	0.65 (0.2)
Roller Adjusting Lever (-13) (NVM800)	30°	0.65 (0.2)
	45°	0.33 (0.1)
Rod Adjusting Lever (-14) (NVM800)	—	0.65 (0.2)

**VM 100**



**HOW TO ORDER**

NVM 120 - N01 - 06S

**Valve Series**  
120 = 2-way; 2 ports  
130 = 3-way; 2 ports

**Port Size**  
01 = 1/8" NPT

**Roller Material (06 & 07 Only)**  
— = Nylon (Standard)  
S = Steel

**Actuator**  
00 = Valve Body Only  
05 = Plunger  
06 = Roller Plunger, Inline  
07 = Roller Plunger, Set 90°  
08 = Toggle  
30 = Push Button-Mushroom\*  
32 = Push Button-Extended\*  
33 = Push Button-Flush\*  
34 = Selector - 90° Turn\*  
36 = Selector Key  
\*Specify Color  
- B = Black  
- G = Green  
- R = Red

**HOW TO ORDER**

**NON-EXCHANGEABLE ACTUATORS**

- #121-N01-01 = 2-way; 2 port-1/8" NPT w/Std. Cam Lever
  - #121-N01-02 = 2-way; 2 port-1/8" NPT w/One Way Cam Lever
  - #131-N01-01 = 3-way; 2 port-1/8" NPT w/Std. Cam Lever
  - #131-N01-02 = 3-way; 2 port-1/8" NPT w/One Way Cam Lever
  - #131-N01-35 = Dual Valve-1/8" NPT, 3 position, closed center 45°-0-45° Selector\*
  - #151-N01-35 = Dual Valve-1/8" NPT, 3 position, exhaust center 45°-0-45° Selector\*
- Specify Color (black, green, red)  
Note: For steel roller, add suffix S to product number. EX: NVM121-N01-01S



NVM121-01-01  
NVM131-01-01

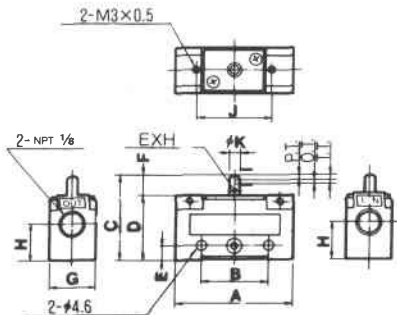


NVM121-01-02  
NVM131-01-02



NVM151-01-35  
NVM151-01-35

**VM120-N01-00  
130-N01-00**



<b>F.O.F.*lbs. (kg)</b>	4.41 (2)
<b>P.T. In (mm)</b>	0.06 (1.5)
<b>O.T. In (mm)</b>	0.06 (1.5)
<b>T.T. In (mm)</b>	0.12 (3)

\*75 PSIG (5 Kgf/cm<sup>2</sup>)

**DIMENSIONS**

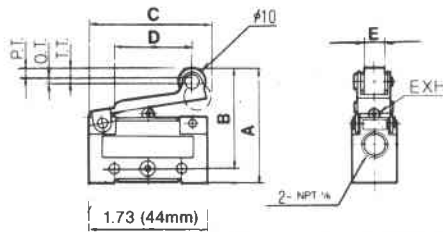
Model #	A	B	C	D	E	F	G	H	J	K
<b>NVM 120/130</b>	1.73 (44)	1.00 (25.4)	1.28 (32.5)	0.98 (25)	0.22 (5.5)	0.30 (7.5)	0.67 (17)	0.57 (14.5)	1.06 (27)	0.16 (4)
<b>NVM 121/131</b>	1.73 (44)	1.00 (25.4)	1.12 (28.5)	0.98 (25)	0.22 (5.5)	0.14 (3.5)	0.67 (17)	0.57 (14.5)	1.06 (27)	0.16 (4)

Millimeters in Parentheses

# Series NVM

# MECHANICAL VALVES DIMENSIONS

NVM121-N01-01  
131-N01-01

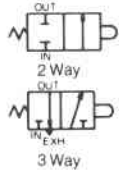


F.O.F.*	2.2 lbs. (1 kg.)
P.T.	0.125 in. (3.2mm)
O.T.	0.091 in. (2.3mm)
T.T.	0.216 in. (5.5mm)

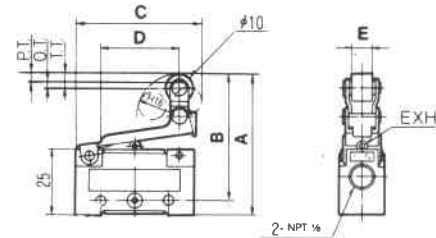
\*75 PSIG (5 Kgf/cm<sup>2</sup>)

A	B	C	D	E
1.68 (42.6)	1.46 (37.1)	1.79 (45.5)	1.14 (29)	0.31 (8)

Millimeters in Parentheses



NVM121-N01-02  
131-N01-02

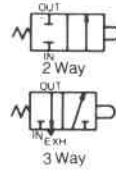


F.O.F.*	2.2 lbs. (1 kg.)
P.T.	0.125 in. (3.2mm)
O.T.	0.091 in. (2.3mm)
T.T.	0.216 in. (5.5mm)

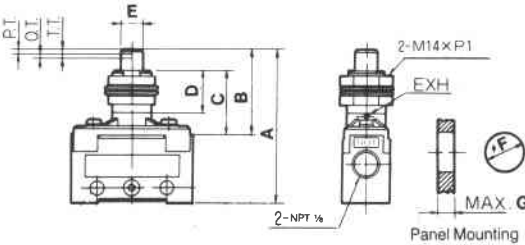
\*75 PSIG (5 Kgf/cm<sup>2</sup>)

A	B	C	D	E
2.11 (53.5)	1.89 (48)	1.83 (46.5)	1.14 (29)	0.31 (8)

Millimeters in Parentheses



NVM120-N01-05  
130-N01-05

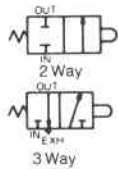


F.O.F.*	5.07 lbs. (2.3 kg.)
P.T.	0.079 in. (2mm)
O.T.	0.059 in. (1.5mm)
T.T.	0.138 in. (3.5mm)

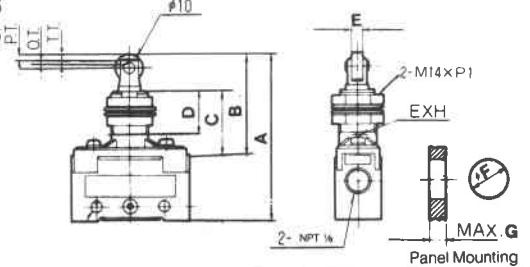
\*75 PSIG (5 Kgf/cm<sup>2</sup>)

A	B	C	D	E	F	G
2.24 (57)	1.26 (32)	0.94 (24)	0.63 (16)	0.31 (8)	0.57 (14.5)	0.24 (6)

Millimeters in Parentheses



NVM120-N01-06  
130-N01-06

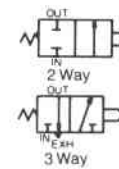


F.O.F.*	5.07 lbs. (2.3 kg.)
P.T.	0.079 in. (2mm)
O.T.	0.059 in. (1.5mm)
T.T.	0.138 in. (3.5mm)

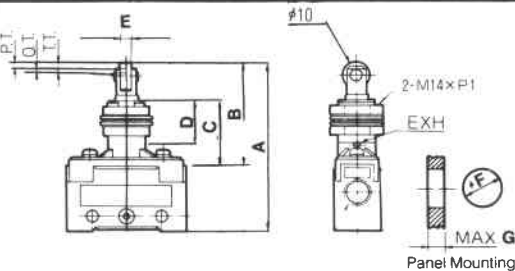
\*75 PSIG (5 Kgf/cm<sup>2</sup>)

A	B	C	D	E	F	G
2.48 (63)	1.50 (38)	0.94 (24)	0.63 (16)	0.16 (4)	0.57 (14.5)	0.24 (6)

Millimeters in Parentheses



NVM120-N01-07  
130-N01-07

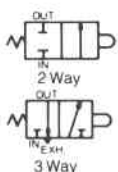


F.O.F.*	5.07 lbs. (2.3 kg.)
P.T.	0.079 in. (2mm)
O.T.	0.059 in. (1.5mm)
T.T.	0.138 in. (3.5mm)

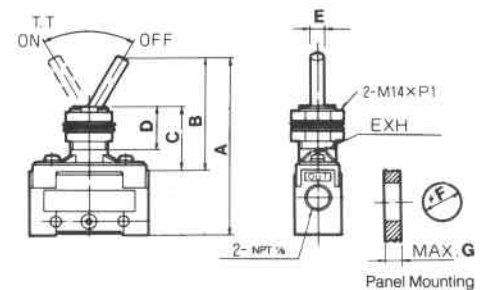
\*75 PSIG (5 Kgf/cm<sup>2</sup>)

A	B	C	D	E	F	G
2.48 (63)	1.50 (38)	0.94 (24)	0.63 (16)	0.16 (4)	0.57 (14.5)	0.24 (6)

Millimeters in Parentheses



NVM120-N01-08  
130-N01-08

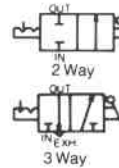


F.O.F.*	2.20 lbs. (1 kg.)
T.T.	60°

\*75 PSIG (5 Kgf/cm<sup>2</sup>)

A	B	C	D	E	F	G
2.66 (67.5)	1.67 (42.5)	0.94 (24)	0.63 (16)	0.20 (5)	0.57 (14.5)	0.24 (6)

Millimeters in Parentheses



**VM120-N01-30**  
**130-N01-30**

F.O.F.*	4.63 lbs. (2.1 kg.)
P.T.	0.216 in. (5.5mm)
O.T.	0.039 in. (1mm)
T.T.	0.256 in. (6.5mm)

\*75 PSIG (5 Kgf/cm<sup>2</sup>)

A	B	C	D	E	F	G	H	J
3.23 (82)	1.28 (32.5)	0.96 (24.5)	0.06 (15)	0.12 (3)	1.54 (39)	1.95 (49.5)	1.20 (30.5)	0.24 (6)

Millimeters in Parentheses

**NVM120-N01-32**  
**130-N01-32**

F.O.F.*	4.63 lbs. (2.1 kg.)
P.T.	0.216 in. (5.5mm)
O.T.	0.039 in. (1mm)
T.T.	0.256 in. (6.5mm)

\*75 PSIG (5 Kgf/cm<sup>2</sup>)

A	B	C	D	E	F	G	H	J	K
2.81 (71.5)	1.95 (49.5)	0.96 (24.5)	0.87 (22)	0.06 (1.5)	0.12 (3)	1.57 (40)	0.96 (24.5)	1.20 (30.5)	0.24 (6)

Millimeters in Parentheses

**VM120-N01-33**  
**130-N01-33**

F.O.F.*	4.63 lbs. (2.1 kg.)
P.T.	0.216 in. (5.5mm)
O.T.	0.039 in. (1mm)
T.T.	0.256 in. (6.5mm)

\*75 PSIG (5 Kgf/cm<sup>2</sup>)

A	B	C	D	E	F	G	H	J	K
2.64 (67)	1.95 (49.5)	0.96 (24.5)	0.69 (17.5)	0.06 (1.5)	0.12 (3)	1.57 (40)	0.96 (24.5)	1.20 (30.5)	0.24 (6)

Millimeters in Parentheses

**NVM120-N01-34**  
**130-N01-34**

F.O.F.*	3.31 lbs. (1.5 kg.)
T.T.	90°

\*75 PSIG (5 Kgf/cm<sup>2</sup>)

A	B	C	D	E	F	G	H	J	K	M	N
3.31 (84)	2.09 (53)	1.10 (28)	1.22 (31)	0.06 (1.5)	0.12 (3)	1.57 (40)	1.06 (27)	1.42 (36)	1.26 (32)	1.20 (30.5)	0.24 (6)

Millimeters in Parentheses

**VM120-N01-36**  
**130-N01-36**

F.O.F.*	3.31 lbs. (1.5 kg.)
T.T.	90°

75 PSIG (5 Kgf/cm<sup>2</sup>)

A	B	C	D	E	F	G	H	J	K	M	N
3.44 (87.3)	2.24 (56.8)	1.25 (31.8)	1.20 (30.5)	0.06 (1.5)	0.12 (3)	0.86 (22.5)	1.57 (40)	1.42 (36)	1.26 (32)	1.20 (30.5)	0.24 (6)

Millimeters in Parentheses

**NVM131-N01-35**  
**151-N01-35**

F.O.F.*	3.31 lbs. (1.5 kg.)
T.T.	45°

\*75 PSIG (5 Kgf/cm<sup>2</sup>)

A	B	C	D	E	F	G	H	J	K	M	N	O
3.21 (81.5)	1.99 (50.5)	1.22 (31)	0.06 (1.5)	0.12 (3)	1.57 (40)	1.06 (27)	1.20 (30.5)	0.24 (6)	1.88 (47.8)	1.46 (37.2)	0.67 (17)	1.73 (44)

Millimeters in Parentheses

# Series NVM

# MECHANICAL VALVES

## HOW TO ORDER DIMENSIONS

### NVM 200



### HOW TO ORDER

NVM 220 - N02 - 06S

**Valve Series**  
220 = 2-way; 2 ports  
230 = 3-way; 2 ports

**Port Size**  
02 = 1/4" NPT

**Roller Material (01,02,06,07)**  
— = Nylon (Standard)  
S = Steel

**Actuator**  
00 = Valve Body Only  
01 = Cam Lever  
02 = Cam Lever-One Way  
05 = Plunger  
06 = Roller Plunger, Inline  
07 = Roller Plunger, Set 90°  
08 = Toggle  
30 = Push Button-Mushroom\*  
32 = Push Button-Extended\*  
33 = Push Button-Flush\*  
34 = Selector - 90° Turn\*  
36 = Selector Key  
\*Specify Color  
- B = Black  
- G = Green  
- R = Red

### HOW TO ORDER NON-EXCHANGEABLE ACTUATORS

**NVM230-N02-35** = Dual Valve - 1/4" NPT, 3 position, closed center w/90° Selector\*

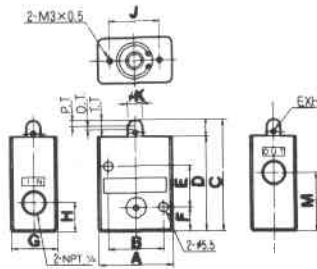
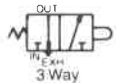
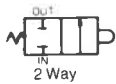
**NVM250-N02-35** = Dual Valve - 1/4" NPT, 3 position, open center w/90° Selector\*

\*Specify Color (black, green, red)



**NVM230-N02-35**  
**NVM250-N02-35**

### NVM220-N02-00 230-N02-00



<b>F.O.F.*lbs. (kg)</b>	11.46 (5.2)
<b>P.T. In (mm)</b>	0.12 (3)
<b>O.T. In (mm)</b>	0.08 (2)
<b>T.T. In (mm)</b>	0.19 (5)

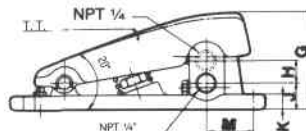
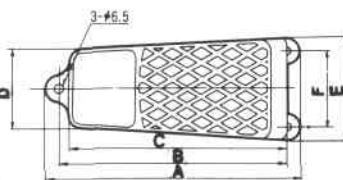
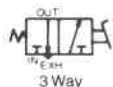
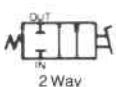
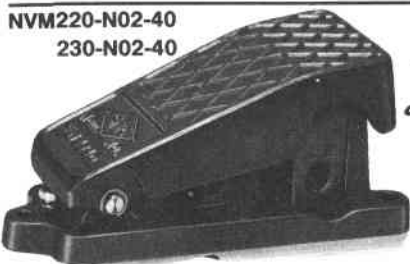
\*75 PSIG (5 Kgf/cm<sup>2</sup>)

### DIMENSIONS

A	B	C	D	E	F	G	H	J	K	M
1.57 (40)	1.18 (30)	2.40 (61)	2.05 (52)	0.87 (22)	0.51 (13)	0.98 (25)	0.63 (16)	1.06 (27)	0.31 (8)	1.26 (32)

Millimeters in Parentheses

### NVM220-N02-40 230-N02-40



### HOW TO ORDER

**NVM220-N02-40** = 2 way; 2 port - 1/4" NPT w/Foot Pedal

**NVM230-N02-40** = 3 way; 2 port - 1/4" NPT w/Foot Pedal

\*Note - Foot Guard is not available.

<b>F.O.F.*</b>	14.33 lbs. (6.5 kg)
<b>T.T.</b>	1.2"

\*75 PSIG (5 Kgf/cm<sup>2</sup>)

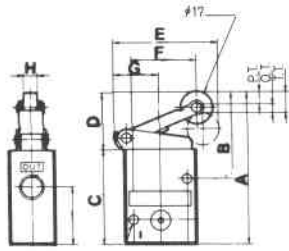
A	B	C	D	E	F	G	H	J	K	M
6.97 (177)	6.26 (159)	5.98 (152)	2.13 (54)	2.91 (74)	2.09 (53)	2.76 (70)	0.63 (16)	0.75 (19)	0.43 (11)	1.24 (31.5)

Millimeters in Parentheses

# Series NVM

# MECHANICAL VALVES DIMENSIONS

**VM220-N02-01**  
**230-N02-01**

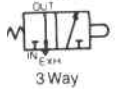
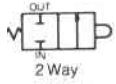


F.O.F.*	5.29 lbs. (2.4 kg.)
P.T.	0.256 in. (6.5mm)
O.T.	0.177 in. (4.5mm)
T.T.	0.433 in. (11mm)

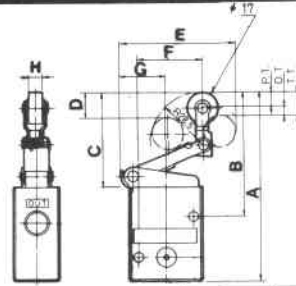
\*75 PSIG (5 Kgf/cm<sup>2</sup>)

A	B	C	D	E	F	G	H
3.31 (84)	1.93 (49)	2.05 (52)	1.26 (32)	2.24 (57)	1.39 (35.4)	0.96 (24.5)	0.31 (8)

Millimeters in Parentheses



**NVM220-N02-02**  
**230-N02-02**

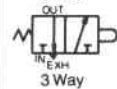
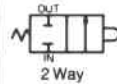


F.O.F.*	4.85 lbs. (2.2 kg.)
P.T.	2.76 in. (7mm)
O.T.	0.197 in. (5mm)
T.T.	0.47 in. (12mm)

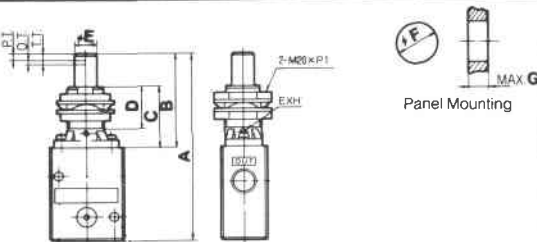
\*75 PSIG (5 Kgf/cm<sup>2</sup>)

A	B	C	D	E	F	G	H
4.09 (104)	2.72 (69)	2.05 (52)	0.55 (14)	2.48 (63)	1.39 (35.4)	0.96 (24.5)	0.31 (8)

Millimeters in Parentheses



**VM220-N02-05**  
**230-N02-05**

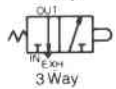
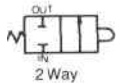


F.O.F.*	12.35 lbs. (5.6 kg.)
P.T.	0.138 in. (3.5mm)
O.T.	0.079 in. (2mm)
T.T.	0.216 in. (5.5mm)

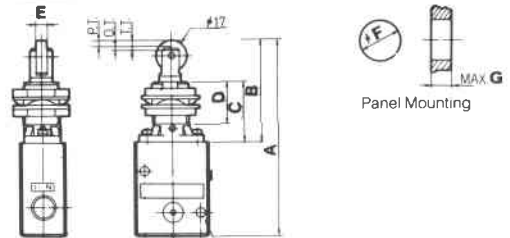
\*75 PSIG (5 Kgf/cm<sup>2</sup>)

A	B	C	D	E	F	G
4.07 (103.5)	2.03 (51.5)	1.32 (33.5)	0.91 (23)	0.47 (12)	0.81 (20.5)	0.39 (10)

Millimeters in Parentheses



**NVM220-N02-06**  
**230-N02-06**

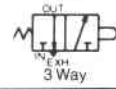
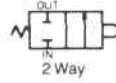


F.O.F.*	12.35 lbs. (5.6 kg.)
P.T.	0.138 in. (3.5mm)
O.T.	0.079 in. (2mm)
T.T.	0.216 in. (5.5mm)

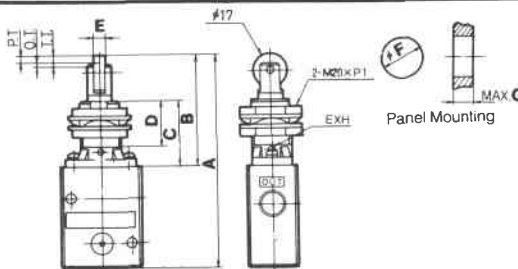
\*75 PSIG (5 Kgf/cm<sup>2</sup>)

A	B	C	D	E	F	G
4.25 (108)	2.20 (56)	1.32 (33.5)	0.91 (23)	0.24 (6)	0.81 (20.5)	0.39 (10)

Millimeters in Parentheses



**VM220-N02-07**  
**230-N02-07**

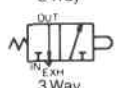
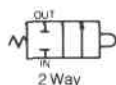


F.O.F.*	12.35 lbs. (5.6 kg.)
P.T.	0.138 in. (3.5mm)
O.T.	0.079 in. (2mm)
T.T.	0.216 in. (5.5mm)

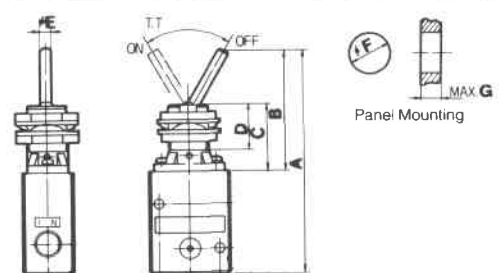
\*75 PSIG (5 Kgf/cm<sup>2</sup>)

A	B	C	D	E	F	G
4.25 (108)	2.20 (56)	1.32 (33.5)	0.91 (23)	0.24 (6)	0.81 (20.5)	0.39 (10)

Millimeters in Parentheses



**NVM220-N02-08**  
**230-N02-08**

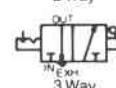
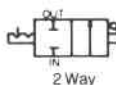


F.O.F.*	2.65 lbs. (1.2 kg.)
T.T.	60°

\*75 PSIG (5 Kgf/cm<sup>2</sup>)

A	B	C	D	E	F	G
4.43 (112.5)	2.38 (60.5)	1.32 (33.5)	0.91 (23)	0.24 (6)	0.81 (20.5)	0.39 (10)

Millimeters in Parentheses

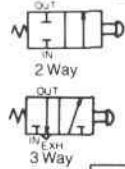
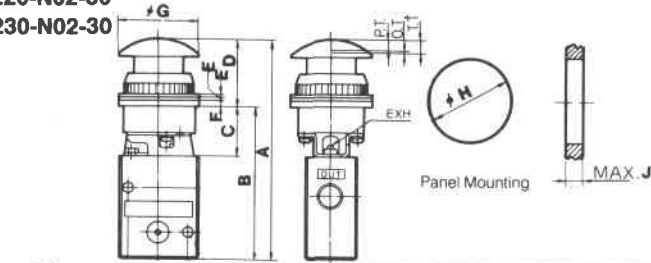




# Series NVM

# MECHANICAL VALVES DIMENSIONS

**NVM220-N02-30**  
**230-N02-30**



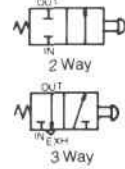
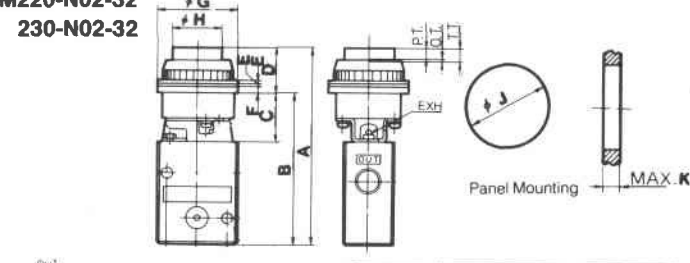
F.O.F.*	11.46 lbs. (5.2 kg.)
P.T.	0.216 in. (5.5mm)
O.T.	0.039 in. (1mm)
T.T.	0.256 in. (6.5mm)

\*75 PSIG (5 Kgf/cm<sup>2</sup>)

A	B	C	D	E	F	G	H	J
4.29	3.01	0.96	1.28	0.06	0.12	1.54	1.20	0.24
(109)	(76.5)	(24.5)	(32.5)	(1.5)	(3)	(39)	(30.5)	(6)

Millimeters in Parentheses

**NVM220-N02-32**  
**230-N02-32**



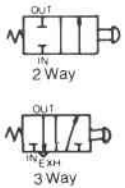
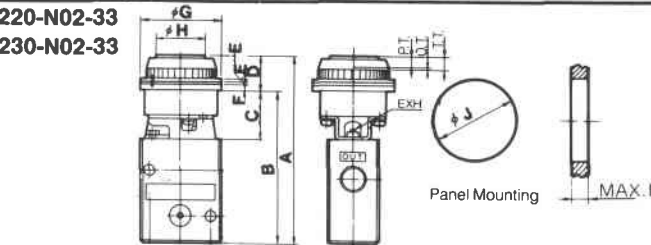
F.O.F.*	11.46 lbs. (5.2 kg.)
P.T.	0.216 in. (5.5mm)
O.T.	0.039 in. (1mm)
T.T.	0.256 in. (6.5mm)

\*75 PSIG (5 Kgf/cm<sup>2</sup>)

A	B	C	D	E	F	G	H	J	K
3.88	3.01	0.96	0.87	0.06	0.12	1.57	0.96	1.20	0.24
(98.5)	(76.5)	(24.5)	(22)	(1.5)	(3)	(40)	(24.5)	(30.5)	(6)

Millimeters in Parentheses

**NVM220-N02-33**  
**230-N02-33**



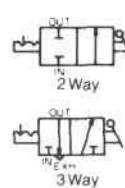
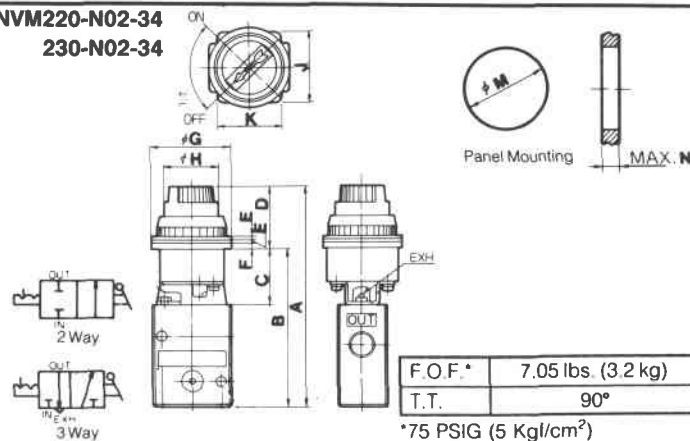
F.O.F.*	11.46 lbs. (5.2 kg.)
P.T.	0.216 in. (5.5mm)
O.T.	0.039 in. (1mm)
T.T.	0.256 in. (6.5mm)

\*75 PSIG (5 Kgf/cm<sup>2</sup>)

A	B	C	D	E	F	G	H	J	K
3.70	3.01	0.96	0.69	0.06	0.12	1.57	0.96	1.20	0.24
(94)	(76.5)	(24.5)	(17.5)	(1.5)	(3)	(40)	(24.5)	(30.5)	(6)

Millimeters in Parentheses

**NVM220-N02-34**  
**230-N02-34**



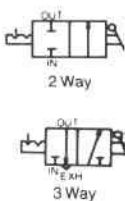
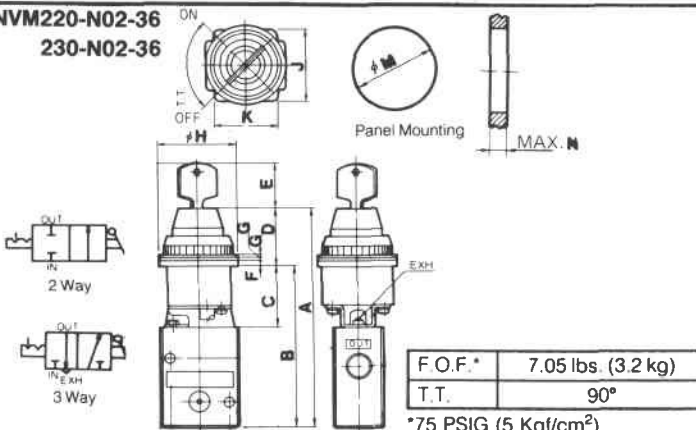
F.O.F.*	7.05 lbs. (3.2 kg)
T.T.	90°

\*75 PSIG (5 Kgf/cm<sup>2</sup>)

A	B	C	D	E	F	G	H	J	K	M	N
4.37	3.15	1.10	1.22	0.06	0.12	1.57	1.06	1.42	1.26	1.20	0.24
(111)	(80)	(28)	(31)	(1.5)	(3)	(40)	(27)	(36)	(32)	(30.5)	(6)

Millimeters in Parentheses

**NVM220-N02-36**  
**230-N02-36**



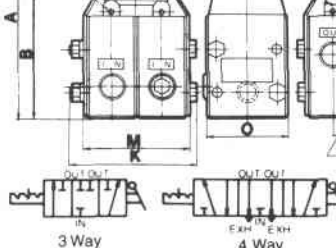
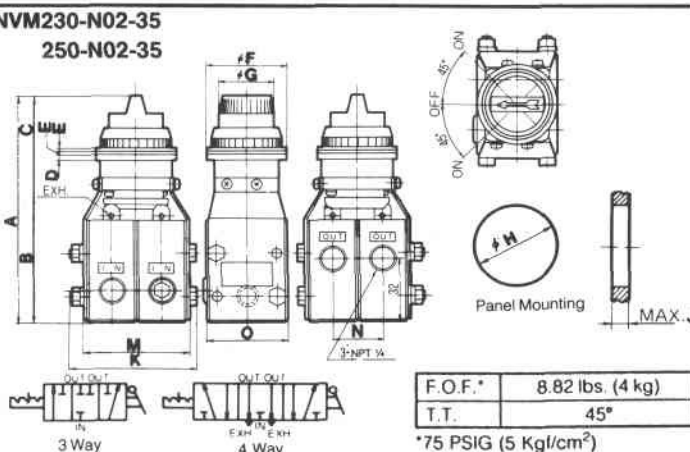
F.O.F.*	7.05 lbs. (3.2 kg)
T.T.	90°

\*75 PSIG (5 Kgf/cm<sup>2</sup>)

A	B	C	D	E	F	G	H	J	K	M	N
4.50	3.30	1.25	1.20	0.89	0.06	0.12	1.57	1.42	1.26	1.20	0.24
(114.3)	(83.8)	(31.8)	(30.5)	(22.5)	(1.5)	(3)	(40)	(36)	(32)	(30.5)	(6)

Millimeters in Parentheses

**NVM230-N02-35**  
**250-N02-35**



F.O.F.*	8.82 lbs. (4 kg)
T.T.	45°

\*75 PSIG (5 Kgf/cm<sup>2</sup>)

A	B	C	D	E	F	G	H	J	K	M	N	O
4.45	3.23	1.22	0.12	0.06	1.57	1.06	1.20	0.24	2.50	2.09	0.98	1.57
(113)	(82)	(31)	(3)	(1.5)	(40)	(27)	(30.5)	(6)	(63.5)	(53.2)	(25)	(40)

Millimeters in Parentheses



### VM 430



### HOW TO ORDER

NVM 430 - N01 - 06S

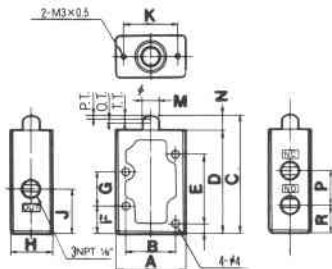
**Valve Series**  
430 = 3-way; 3 Ports

**Port Size**  
01 = 1/8" NPT

**Roller Material (01,02,06,07)**  
— = Nylon (Standard)  
S = Steel

**Actuator**  
01 = Cam Lever  
02 = Cam Lever-One Way  
05 = Plunger  
06 = Roller Plunger, inline  
07 = Roller Plunger, Set 90°  
08 = Toggle  
30 = Push Button-Mushroom\*  
32 = Push Button-Extended\*  
33 = Push Button-Flush\*  
34 = Selector - 90° Turn\*  
36 = Selector Key  
\*Specify Color  
- B = Black  
- G = Green  
- R = Red

### /M430-N01-00



<b>F.O.F.*lbs. (kg)</b>	5.73(2.6)
<b>P.T. In (mm)</b>	0.06 (1.5)
<b>O.T. In (mm)</b>	0.08 (2)
<b>T.T. In (mm)</b>	0.138 (3.5)

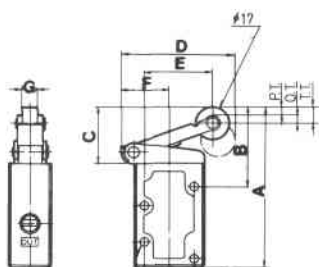


### DIMENSIONS

A	B	C	D	E	F	G	H	J	K	M	N	P	R
1.38	0.98	2.38	2.09	1.42	0.53	0.71	0.83	0.89	1.06	0.33	0.29	0.71	0.53
(35)	(25)	(60.5)	(53)	(36)	(13.5)	(18)	(21)	(22.5)	(27)	(8.5)	(7.5)	(18)	(13.5)

Millimeters in Parentheses

### /M430-N01-01



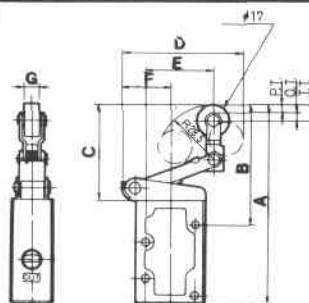
<b>F.O.F.</b>	2.65 lbs. (1.2 kg.)
<b>P.T.</b>	0.157 in. (4mm)
<b>O.T.</b>	0.177 in. (4.5mm)
<b>T.T.</b>	0.334 in. (8.5mm)

A	B	C	D	E	F	G
3.23	2.42	1.14	2.24	1.34	0.96	0.31
(86)	(61.5)	(29)	(57)	(34)	(24.5)	(8)

Millimeters in Parentheses



### NVM430-N01-02



<b>F.O.F.</b>	2.43 lbs. (1.1 kg.)
<b>P.T.</b>	0.157 in. (4mm)
<b>O.T.</b>	0.197 in. (5mm)
<b>T.T.</b>	0.334 in. (9mm)

A	B	C	D	E	F	G
4.02	2.42	1.93	2.48	1.42	0.96	0.31
(102)	(61.5)	(49)	(63)	(36)	(24.5)	(8)

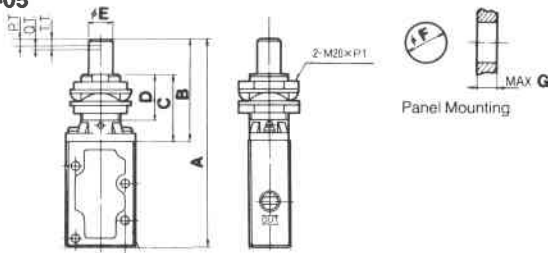
Millimeters in Parentheses



# Series NVM

# MECHANICAL VALVES DIMENSIONS

**NVM430-N01-05**



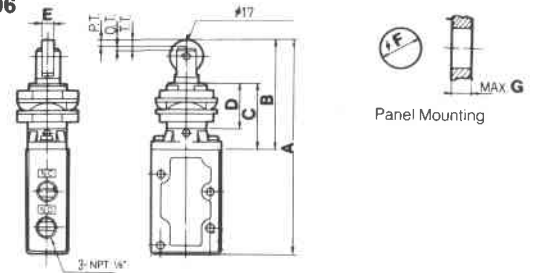
F.O.F.	6.61 lbs.	(3 kg.)
P.T.	0.138 in.	(3.5mm)
O.T.	0.079 in.	(2mm)
T.T.	0.217 in.	(5.5mm)

A	B	C	D	E	F	G
4.11 (104.5)	2.03 (51.5)	1.32 (33.5)	0.91 (23)	0.47 (12)	0.81 (20.5)	0.39 (10)

Millimeters in Parentheses



**NVM430-N01-06**



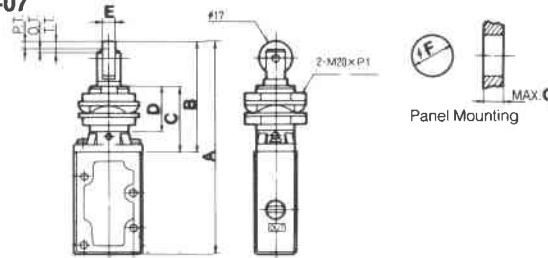
F.O.F.	6.61 lbs.	(3 kg)
P.T.	0.138 in.	(3.5 mm)
O.T.	0.079 in.	(2 mm)
T.T.	0.217	(5.5 mm)

A	B	C	D	E	F	G
4.29 (109)	2.20 (56)	1.32 (33.5)	0.91 (23)	0.24 (6)	0.81 (20.5)	0.39 (10)

Millimeters in Parentheses



**NVM430-N01-07**



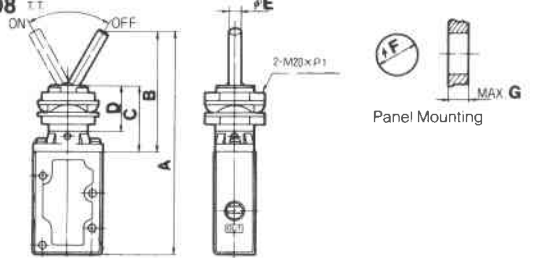
F.O.F.	6.61 lbs.	(3 kg)
P.T.	0.138 in.	(3.5 mm)
O.T.	0.079 in.	(2 mm)
T.T.	0.217	(5.5 mm)

A	B	C	D	E	F	G
4.29 (109)	2.20 (56)	1.32 (33.5)	0.91 (23)	0.24 (6)	0.81 (20.5)	0.39 (10)

Millimeters in Parentheses



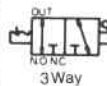
**NVM430-N01-08**



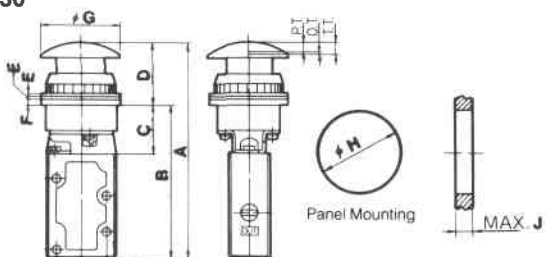
F.O.F.	1.54 lbs.	(0.7 kg.)
T.T.	60°	

A	B	C	D	E	F	G
4.47 (113.5)	2.38 (60.5)	1.32 (33.5)	0.91 (23)	0.24 (6)	0.81 (20.5)	0.39 (10)

Millimeters in Parentheses



**NVM430-N01-30**



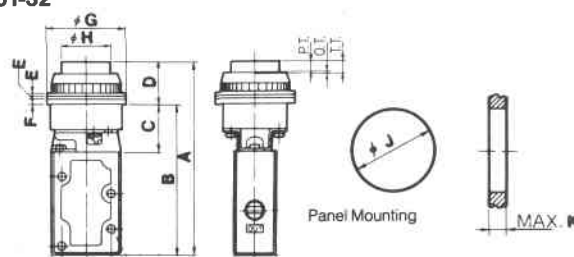
F.O.F.	5.73 lbs.	(2.6 kg.)
P.T.	0.216 in.	(5.5mm)
O.T.	0.039 in.	(1mm)
T.T.	0.256 in.	(6.5mm)

A	B	C	D	E	F	G	H	J
4.33 (110)	3.05 (77.5)	0.96 (24.5)	1.28 (32.5)	0.06 (1.5)	0.12 (3)	1.54 (39)	1.20 (30.5)	0.24 (6)

Millimeters in Parentheses



**NVM430-N01-32**



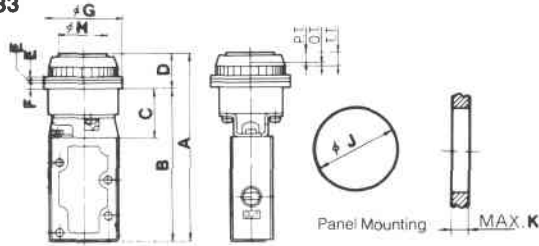
F.O.F.	5.73 lbs.	(2.6 kg)
P.T.	0.216 in.	(5.5 mm)
O.T.	0.039 in.	(1 mm)
T.T.	0.256 in.	(6.5 mm)

A	B	C	D	E	F	G	H	J	K
3.92 (99.5)	3.05 (77.5)	0.96 (24.5)	0.87 (22)	0.06 (1.5)	0.12 (3)	1.57 (40)	0.96 (24.5)	1.20 (30.5)	0.24 (6)

Millimeters in Parentheses



**NVM430-N01-33**



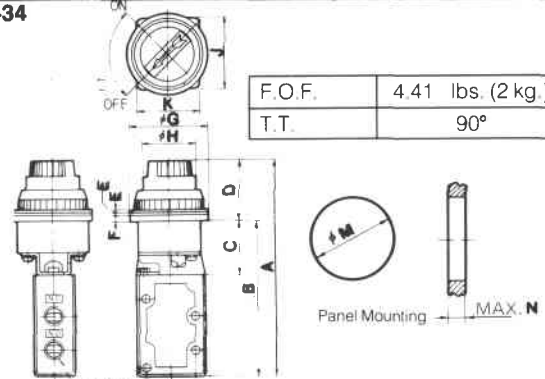
F.O.F.	5.73 lbs. (2.6 kg)
P.T.	0.216 in. (5.5 mm)
O.T.	0.039 in. (1 mm)
T.T.	0.256 in. (6.5 mm)



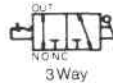
A	B	C	D	E	F	G	H	J	K
3.74	3.05	0.96	0.69	0.06	0.12	1.57	0.96	1.20	0.24
(95)	(77.5)	(24.5)	(17.5)	(1.5)	(3)	(40)	(24.5)	(30.5)	(6)

Millimeters in Parentheses

**NVM430-N01-34**



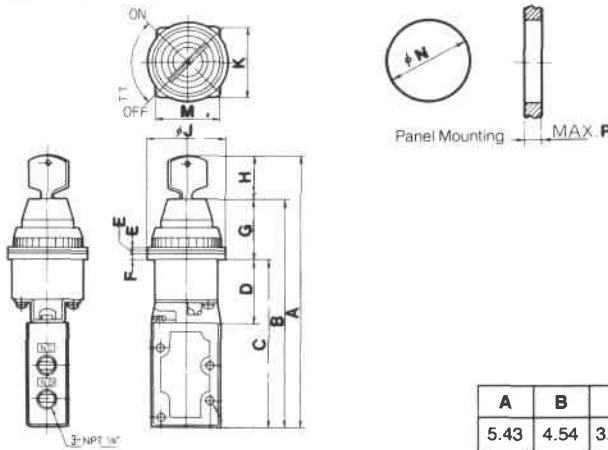
F.O.F.	4.41 lbs. (2 kg.)
T.T.	90°



A	B	C	D	E	F	G	H	J	K	M	N
4.41	3.19	1.10	1.22	0.06	0.12	1.57	1.06	1.42	1.26	1.20	0.24
(112)	(81)	(28)	(31)	(1.5)	(3)	(40)	(27)	(36)	(32)	(30.5)	(6)

Millimeters in Parentheses

**NVM430-N01-36**



F.O.F.	4.41 lbs. (2 kg)
T.T.	90°



A	B	C	D	E	F	G	H	J	K	M	N	P
5.43	4.54	3.34	1.25	0.06	0.12	1.20	0.89	1.57	1.42	1.26	1.20	0.24
(137.8)	(115.3)	(84.8)	(31.8)	(1.5)	(3)	(30.5)	(22.5)	(40)	(36)	(32)	(30.5)	(6)

Millimeters in Parentheses

**VM 830  
MIT VALVE**

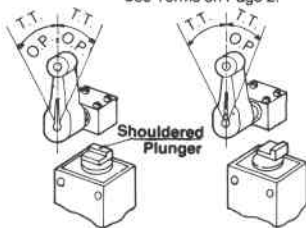
**HOW TO ORDER**

- NVM830-N01-00 = 3-way, 3-port - 1/8" NPT Valve Body Only
- NVM830-N01-01 = 3-way, 3-port - 1/8" NPT w/Roller Lever
- NVM830-N01-13 = 3-way, 3-port - 1/8" NPT w/Adjustable Roller Lever
- NVM830-N01-14 = 3-way, 3-port - 1/8" NPT w/Adjustable Rod Lever

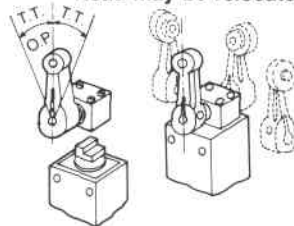


**CHANGING CAM DIRECTION**

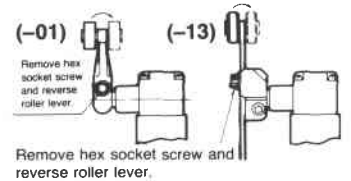
See Terms on Page 2.



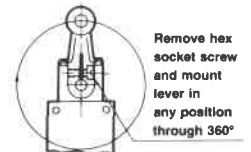
**Head may be relocated.**



**Roller Lever may be mounted in reverse.**



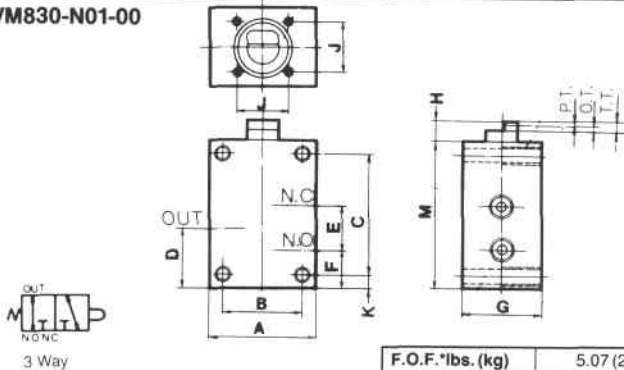
**Mounting position of lever may be changed.**



# Series NVM

# MECHANICAL VALVES DIMENSIONS

## NVM830-N01-00

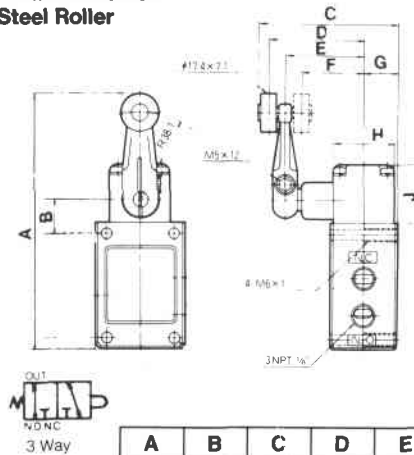


F.O.F.* lbs. (kg)	5.07 (2.3)
P.T. in (mm)	0.04 (1)
O.T. in (mm)	0.08 (2)
T.T. in (mm)	0.12 (3)

A	B	C	D	E	F	G	H	J	K	M
1.57 (40)	1.18 ± 0.008 (30 ± 0.2)	1.85 ± 0.008 (47 ± 0.2)	1.32 (33.5)	0.71 (18)	0.96 (24.5)	1.18 (30)	0.30 (7.5)	0.75 ± 0.008 (19 ± 0.2)	0.20 (5)	2.24 (57)

Millimeters in Parentheses

## NVM830-N01-01 Steel Roller



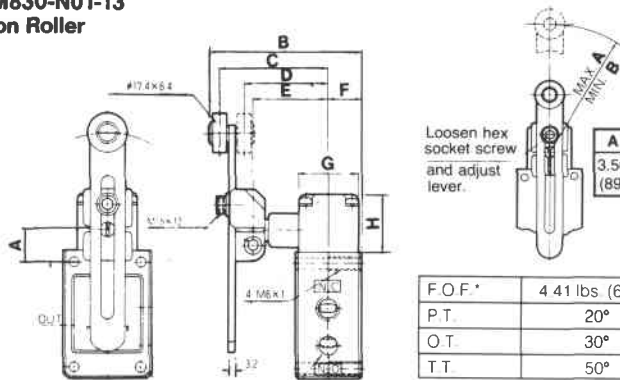
F.O.F.*	4.41 lbs (6 kg)
P.T.	20°
O.T.	30°
T.T.	50°

\*Length from center to center of roller = 1.5 in. (38.1mm)

A	B	C	D	E	F	G	H	J
4.46 (113.4)	0.57 (14.6)	2.34 (59.5)	1.57 (40)	1.30 (33)	1.03 (26.2)	0.59 (15)	1.03 (26.2)	1.00 (25.4)

Millimeters in Parentheses

## NVM830-N01-13 Nylon Roller



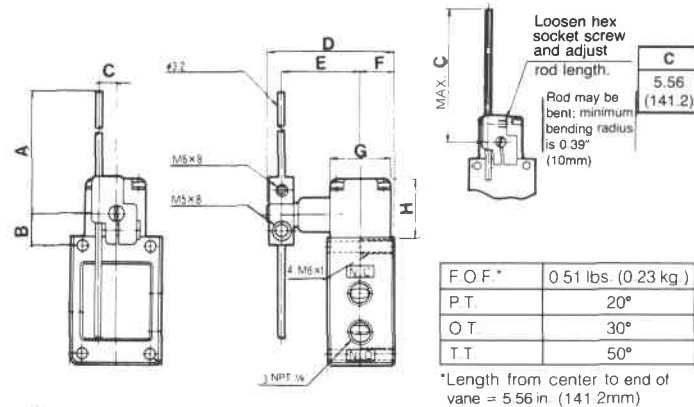
F.O.F.*	4.41 lbs (6 kg)
P.T.	20°
O.T.	30°
T.T.	50°

\*Length from center to center of roller = 1.5 in. (38.1mm)

A	B	C	D	E	F	G	H
0.57 (14.6)	2.64 (67)	1.86 (47.2)	1.45 (36.8)	1.30 (33)	0.59 (15)	1.03 (26.2)	1.00 (25.4)

Millimeters in Parentheses

## NVM830-N01-14



F.O.F.*	0.51 lbs (0.23 kg)
P.T.	20°
O.T.	30°
T.T.	50°

\*Length from center to end of vane = 5.56 in. (141.2mm)

A	B	C	D	E	F	G	H
5.56 (141.2)	0.57 (14.6)	0.25 (6.4)	2.15 (54.7)	1.30 (33)	0.59 (15)	1.03 (26.2)	1.00 (25.4)

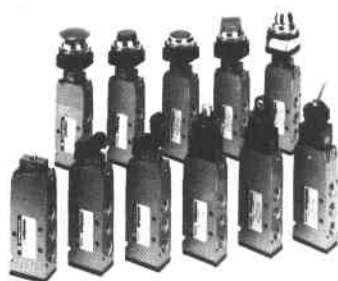
Millimeters in Parentheses

## ACTUATOR SUB ASSEMBLY

Description	Roller Mat.	VM 100 Part No.	VM 200-400 Part No.	VM 830 Part No.
Cam Lever	Nyl.	These valves are only offered with Actuator assemblies permanently attached to the valve body.	VM 01A (1)	—
Cam Lever	Stl.		VM 01AS (1)	—
Cam Lever One-Way	Nyl.		VM 02A (1)	—
Cam Lever One-Way	Stl.		VM 02AS (1)	—
Plunger	—	VM 05B (1)	VM 05A (2)	—
Roller Plunger-inline	Nyl.	VM 06B (1)	VM 06A (2)	—
Roller Plunger-inline	Stl.	VM 06BS (1)	VM 06AS (2)	—
Roller Plunger-Set 90°	Nyl.	VM 07B (1)	VM 07A (2)	—
Roller Plunger-Set 90°	Stl.	VM 07BS (1)	VM 07AS (2)	—
Toggle Lever	—	VM 08B (1)	VM 08A (2)	—
Push Button-Mushroom*	—	VM 30A* (1)	VM 30A* (1)	—
Push Button-Extended*	—	VM 32A* (1)	VM 32A* (1)	—
Push Button-Flush*	—	VM 33A* (1)	VM 33A* (1)	—
Selector 90° Turn*	—	VM 34A* (1)	VM 34A* (1)	—
Selector Key Lock	—	VM 36A (1)	VM 36A (1)	—
Roller Lever Arm	Stl.	—	—	VM 01F (3)
Roller Adj. Lever Arm	Stl.	—	—	VM 13F (3)
Rod Adj. Lever Arm	—	—	—	VM 14F (3)

\*Specify Button Color (black, red, green)

Note: MTG Screws  
1.) 2-M3x8  
2.) 2-M3x10  
3.) 4-M3x27



### FEATURES

- Patented Spool and Sleeve Design
- High Flow vs. Small Package Size
- Variety of Mechanical Actuators
- Air Piloted Spring Assist for Positive Return
- External Pilot Available for Vacuum and Low-Pressure Operation

### SPECIFICATIONS

CHARACTERISTICS	NVZM450	NVFM250
Port Size (NPTF)	1/8", PE 10-32 (NOM.M5)	1/4", PE 10-32 (NOM. M5)
C <sub>V</sub>	0.55	1.0
Max. Supply Pressure	220 PSIG (15 Kgf/cm <sup>2</sup> )	
Operating Pressure	22-150 PSIG (1.5-9.9 Kgf/cm <sup>2</sup> )	15-150 PSIG (1-9.9 Kgf/cm <sup>2</sup> )
Operating Temperature	40-140°F (5-60°C)	
Materials	Body	Aluminum Die Cast
	Spool & Sleeve	440F Stainless Steel, passivated & heat treated to 58-63 Rockwell C.
	Sleeve O-Rings	Buna N
	Spacer	Delrin
	Shock Pad	Urethane Rubber
Max. Cycle Rate	300 CPM	
Weight (Valve Body Only) oz. (g)	5.1 (144.6)	10.3 (292)

SMC has a unique design for the Series NVM, NVFM, NVZM mechanically actuated, pilot-operated, 4-way/5-ported valves. It combines pilot air for shifting the main valve, as well as assisting the return spring for smooth constant operation. The combination of these two features, plus the elimination of direct mechanical linkage ensures long operational life.

### HOW TO ORDER

**NVFM 250 - N02 - 02 S**

**Valve Series**  
 NVFM 250(1) - C<sub>V</sub>1.0  
 NVZM 450(1) - C<sub>V</sub>0.55

**Pilot Supply**  
 0 = Internal Pilot From "P" Port  
 1 = External Pilot Supply (Special Order Only)

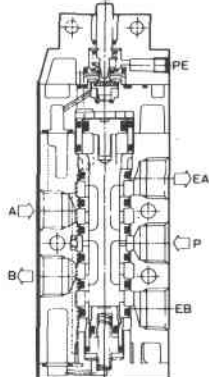
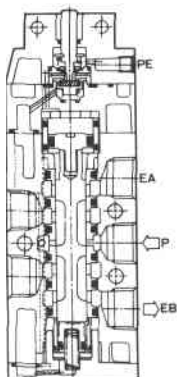
**Port Size (NPT)**  
 01 = 1/8" VZM450 Only  
 02 = 1/4" VFM250 Only

**Roller Material (01, 02, 06)**  
 — = Acetal (Standard)  
 S = Steel

**Actuator**  
 00 = Valve Body Only  
 01 = Standard Cam Lever  
 02 = Cam Lever - One Way  
 05 = Plunger  
 06 = Roller Plunger, Inline  
 08 = Toggle Lever  
 30 = Push Button-Mushroom\*  
 32 = Push Button-Extended\*  
 33 = Push Button-Flush\*  
 34 = Selector - 90° Turn\*  
 36 = Selector Key Lock  
 \*Specify Color  
 - B = Black  
 - G = Green  
 - R = Red

### ACTUATED

### REST POSITION



### HOW IT WORKS

When air pressure is supplied to the "P" port of the valve, pressure is internally supplied to the actuator pilot assembly, as well as the return spring of the valve. When a mechanical force is applied to the actuator stem, the pilot is opened allowing air pressure to shift the main valve spool. When the mechanical force is removed, the Twin Spring Pilot Assembly and the pilot-assisted return spring provides fast and accurate spool return.

### OPERATION REQUIREMENTS

Actuator (Suffix #)	Lever Angle	Speed ft./sec. (m/sec.)
Cam Lever (-01C)	30°	2.29 (0.7)
	45°	0.98 (0.3)
One-Way Cam Lever (-02C)	30°	2.29 (0.7)
	45°	0.98 (0.3)
Plunger (-05C; -05D)	—	0.65 (0.2)
Roller Plunger, Inline (-06C; -06D)	30°	0.98 (0.3)

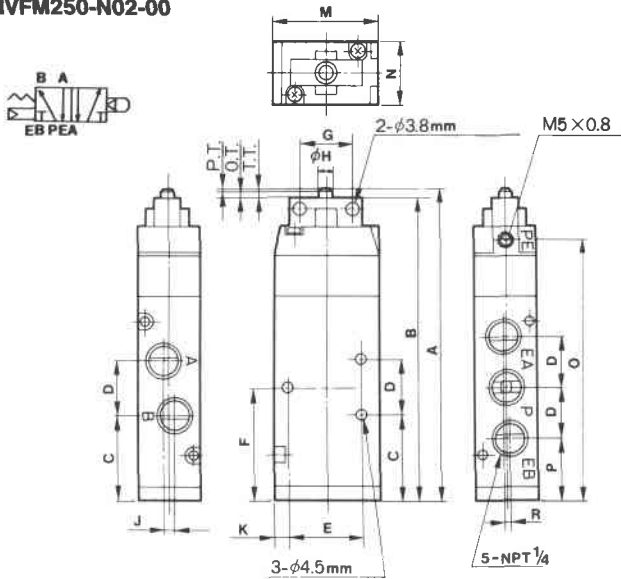
# Series NVM

# MECHANICALLY ACTUATED/PILOT OPERATED

## DIMENSIONS

### NVFM250

#### NVFM250-N02-00



#### ACTUATOR SUB ASSEMBLIES

Description	Roller Material	NVFM250 Part #	NVZM450 Part #
Cam Lever	Acetal	VM-01C	VM-01C
Cam Lever	Steel	VM-01CS	VM-01CS
Cam Lever One-Way	Acetal	VM-02C	VM-02C
Cam Lever One-Way	Steel	VM-02CS	VM-02CS
Plunger	—	VM-05D	VM-05C
Roller Plunger In Line	Acetal	VM-06D	VM-06C
Roller Plunger In Line	Steel	VM-06DS	VM-06CS
Toggle Lever	—	VM-08D	VM-08C
Push Button-Mushroom*	—	VM-30C	VM-30C
Push Button-Extended*	—	VM-32C	VM-32C
Push Button-Flush*	—	VM-33C	VM-33C
Selector, 90° Turn*	—	VM-34C	VM-34C
Selector Key Lock	—	VM-36C	VM-36C

\* Specify Button Color (black, red, green)

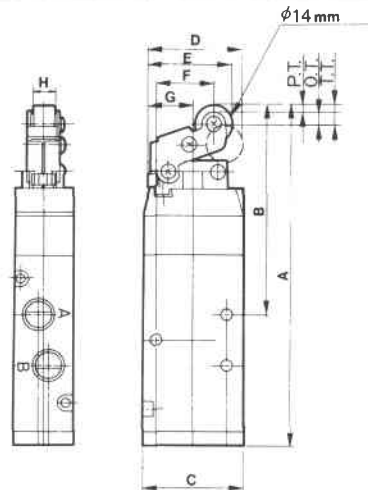
A	B	C	D	E	F	G	H	J	K	M	N	O	P	R
4.65 (118.2)	4.56 (114.7)	1.27 (32.2)	0.80 (20.4)	1.10 (28)	1.67 (42.2)	0.79 (20)	1.89 (48)	0.16 (4)	2.17 (55)	1.57 (40)	0.91 (23)	3.89 (98.7)	0.87 (22)	0.08 (2)

Millimeters in Parentheses

F.O.F.*	3.53 lbs. (1.6 Kg)
P.T.	0.04 in. (1 mm)
O.T.	0.08 in. (2.0 mm)
T.T.	0.12 in. (3 mm)

\*75 PSIG (5 Kgf/cm<sup>2</sup>)

#### NVFM250-N02-01



A	B	C	D	E	F	G	H
5.36 (136.2)	3.29 (83.6)	1.57 (40)	1.46 (37)	1.30 (33)	0.93 (23.5)	0.67 (17)	0.31 (8)

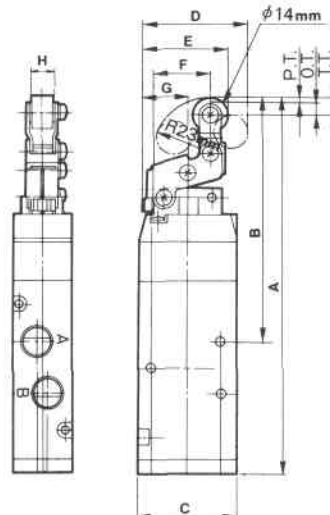
Millimeters in Parentheses

\* Actuators may be rotated to operate without changing port location:  
Remove screws and reverse actuator.

F.O.F.*	1.76 lbs. (0.8 Kg)
P.T.	0.87 in. (2.2 mm)
O.T.	0.16 in. (4.0 mm)
T.T.	0.24 in. (6.2 mm)

\*75 PSIG (5 Kgf/cm<sup>2</sup>)

#### NVFM250-N02-02



A	B	C	D	E	F	G	H
5.95 (151.2)	3.88 (98.6)	1.57 (40)	1.65 (42)	1.30 (33)	0.93 (23.5)	0.67 (17)	0.31 (8)

Millimeters in Parentheses

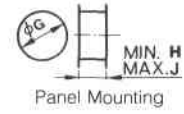
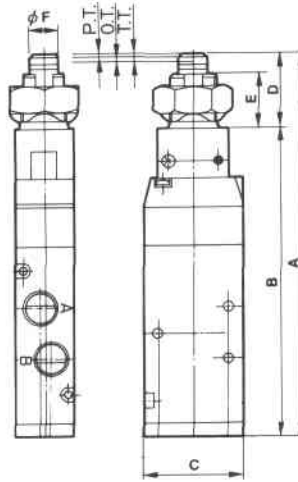
\* Actuators may be rotated to operate without changing port location:  
Remove screws and reverse actuator.

F.O.F.*	1.54 lbs. (0.7 Kg)
P.T.	0.09 in. (2.4 mm)
O.T.	0.18 in. (4.6 mm)
T.T.	0.28 in. (7.0 mm)

\*75 PSIG (5 Kgf/cm<sup>2</sup>)

DIMENSIONS  
NVFM250

VFM250-N02-05



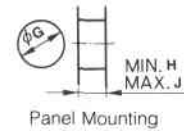
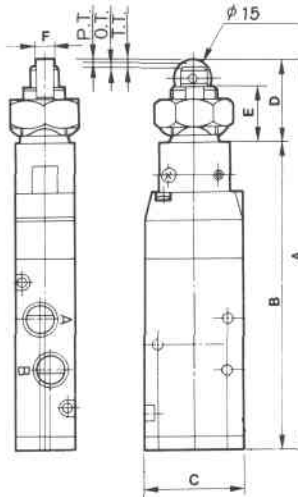
A	B	C	D	E	F	G	H	J
6.05	4.87	1.57	1.18	0.87	0.43	0.75	0.12	0.43
(153.7)	(123.7)	(40)	(30)	(22)	(11)	(19)	(3)	(11)

Millimeters in Parentheses

F.O.F.*	4.41 lbs. (2 Kg)
P.T.	0.06 in. (1.5 mm)
O.T.	0.08 in. (2.0 mm)
T.T.	0.14 in. (3.5 mm)

\*75 PSIG (5 Kg/cm<sup>2</sup>)

VFM250-N02-06



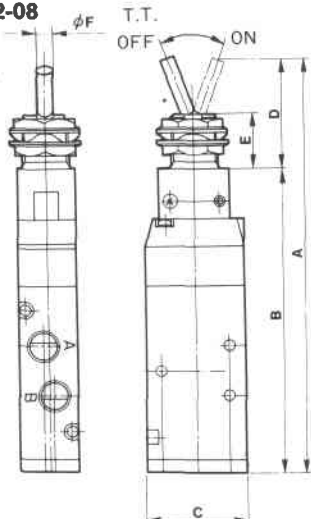
A	B	C	D	E	F	G	H	J
6.17	4.87	1.57	1.30	0.87	0.28	0.75	0.12	0.43
(156.7)	(123.7)	(40)	(33)	(22)	(7)	(19)	(3)	(11)

Millimeters in Parentheses

F.O.F.*	4.41 lbs. (2 Kg)
P.T.	0.06 in. (1.5 mm)
O.T.	0.08 in. (2.0 mm)
T.T.	0.14 in. (3.5 mm)

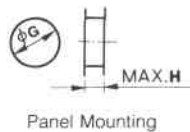
\*75 PSIG (5 Kg/cm<sup>2</sup>)

VFM250-N02-08



F.O.F.*	3.31 lbs. (1.5 Kg)
T.T.	40°

\*75 PSIG (5 Kg/cm<sup>2</sup>)

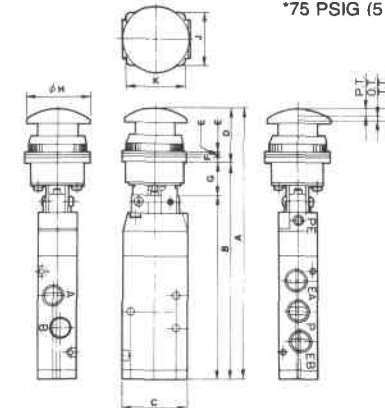


\* May be rotated without changing port location.

A	B	C	D	E	F	G	H
6.65	4.87	1.57	1.78	0.87	0.22	0.75	0.30
(168.9)	(123.7)	(40)	(45.2)	(22)	(5.5)	(19)	(7.5)

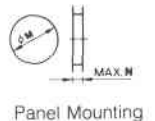
Millimeters in Parentheses

NVFM250-N02-30



F.O.F.*	4.63 lbs. (2.1 Kg)
P.T.	0.17 in. (4.4 mm)
O.T.	0.08 in. (2.0 mm)
T.T.	0.25 in. (6.4 mm)

\*75 PSIG (5 Kg/cm<sup>2</sup>)



A	B	C	D	E	F	G	H	J	K	M	N
6.60	5.32	1.57	1.28	0.06	0.12	0.80	1.54	1.26	1.42	1.20	0.24
(167.6)	(135.1)	(40)	(32.5)	(1.5)	(3)	(20.4)	(39)	(32)	(36)	(30.5)	(6)

Millimeters in Parentheses

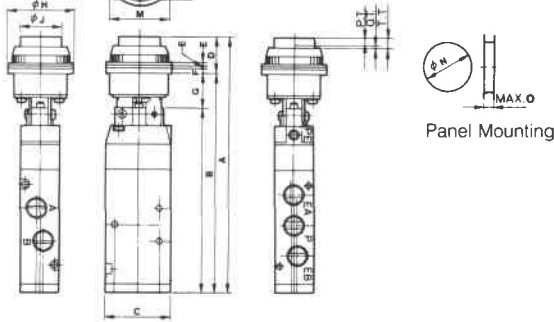


### NVFM250-N02-32



F.O.F.*	4.63 lbs.	(2.1 Kg)
P.T.	0.17 in.	(4.4 mm)
O.T.	0.08 in.	(2.0 mm)
T.T.	0.25 in.	(6.4 mm)

\*75 PSIG (5 Kgf/cm<sup>2</sup>)



A	B	C	D	E	F	G	H	J	K	M	N	O
6.19	5.32	1.57	0.87	0.06	0.12	0.80	1.57	0.96	1.26	1.42	1.20	0.24
(157.1)	(135.1)	(40)	(22)	(1.5)	(3)	(20.4)	(40)	(24.5)	(32)	(36)	(30.5)	(6)

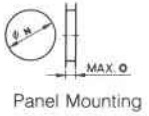
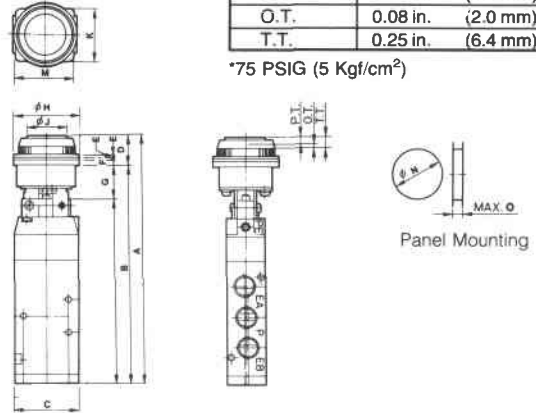
Millimeters in Parentheses

### NVFM250-N02-33



F.O.F.*	4.63 lbs.	(2.1 Kg)
P.T.	0.17 in.	(4.4 mm)
O.T.	0.08 in.	(2.0 mm)
T.T.	0.25 in.	(6.4 mm)

\*75 PSIG (5 Kgf/cm<sup>2</sup>)



A	B	C	D	E	F	G	H	J	K	M	N	O
6.01	5.32	1.57	0.69	0.06	0.12	0.80	1.57	1.06	1.26	1.42	1.20	0.24
(152.6)	(135.1)	(40)	(17.5)	(1.5)	(3)	(20.4)	(40)	(27)	(32)	(36)	(30.5)	(6)

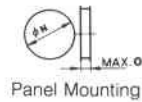
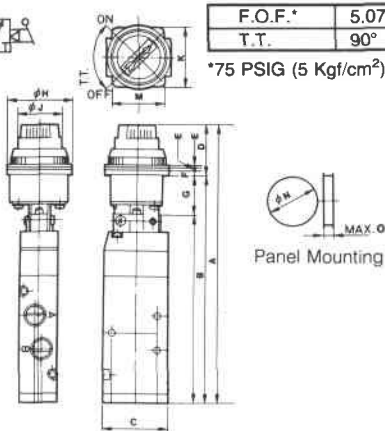
Millimeters in Parentheses

### NVFM250-N02-34



F.O.F.*	5.07 lbs.	(2.3 Kg)
T.T.	90°	

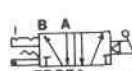
\*75 PSIG (5 Kgf/cm<sup>2</sup>)



A	B	C	D	E	F	G	H	J	K	M	N	O
6.68	5.46	1.57	1.22	0.06	0.12	0.94	1.57	1.06	1.42	1.26	1.20	0.24
(169.6)	(138.6)	(40)	(31)	(1.5)	(3)	(23.9)	(40)	(27)	(36)	(32)	(30.5)	(6)

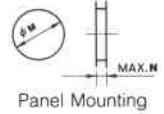
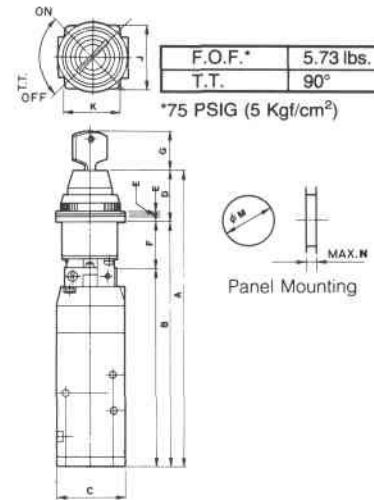
Millimeters in Parentheses

### NVFM250-N02-36



F.O.F.*	5.73 lbs.	(2.6 Kg)
T.T.	90°	

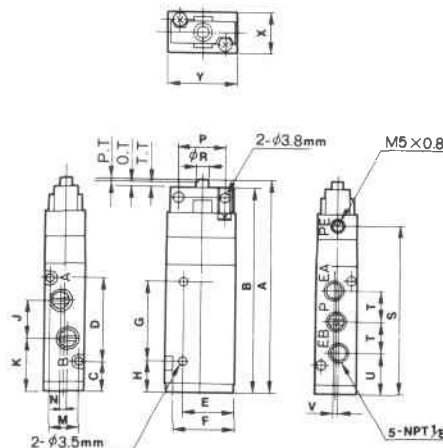
\*75 PSIG (5 Kgf/cm<sup>2</sup>)



A	B	C	D	E	F	G	H	J	K	M	N
6.80	5.61	1.57	1.20	0.06	1.09	0.89	1.57	1.42	1.26	1.20	0.24
(172.9)	(142.4)	(40)	(30.5)	(1.5)	(27.7)	(22.5)	(40)	(36)	(32)	(30.5)	(6)

Millimeters in Parentheses

### NVZM450-N01-00



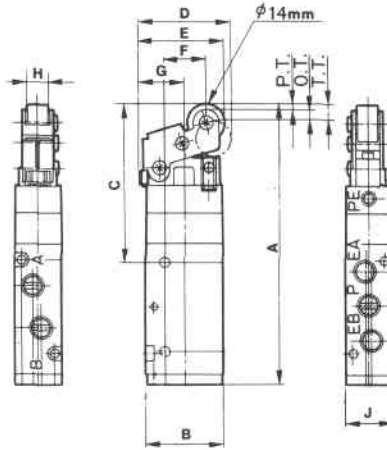
A	B	C	D	E	F	G	H	J	K	M	N	P	R	S	T	U	V	X	Y
3.72	3.58	0.50	1.50	0.89	1.05	1.42	0.54	0.67	0.92	0.51	0.12	0.79	0.19	2.95	0.55	17.8	0.08	0.71	1.18
(94.5)	(91)	(12.8)	(38)	(22.5)	(26.7)	(36)	(13.8)	(17)	(23.3)	(13)	(3)	(20)	(4.8)	(75)	(14)	(17.8)	(2)	(18)	(30)

Millimeters in Parentheses

F.O.F.*	3.53 lbs.	(1.6 Kg)
P.T.	0.04 in.	(1.0 mm)
O.T.	0.08 in.	(2.0 mm)
T.T.	0.12 in.	(3.0 mm)

\*75 PSIG (5 Kgf/cm<sup>2</sup>)

NVZM450-N01-01



\* Actuators may be rotated to operate without changing port location:  
Remove screws and reverse actuator.

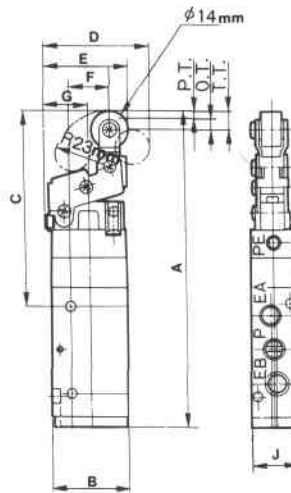
A	B	C	D	E	F	G	H	J
4.43	3.58	2.47	1.46	1.30	0.65	0.67	0.31	0.71
(112.5)	(91)	(62.7)	(37)	(33)	(16.5)	(17)	(8)	(18)

Millimeters in Parentheses

F.O.F.*	1.76 lbs.	(0.8 Kg)
P.T.	0.09 in.	(2.2 mm)
O.T.	0.16 in.	(4.0 mm)
T.T.	0.24 in.	(6.2 mm)

\*75 PSIG (5 Kgf/cm<sup>2</sup>)

VZM450-N01-02



\* Actuators may be rotated to operate without changing port location:  
Remove screws and reverse actuator.

A	B	C	D	E	F	G	H	J
5.02	1.18	3.06	1.65	1.30	0.65	0.67	0.31	0.71
(127.5)	(30)	(77.7)	(42)	(33)	(16.5)	(17)	(8)	(18)

Millimeters in Parentheses

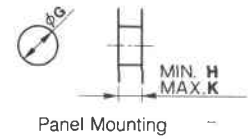
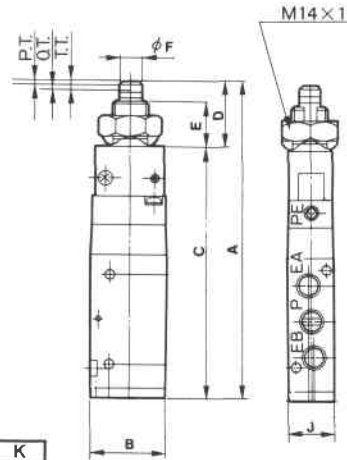
F.O.F.*	1.54 lbs.	(0.7 Kg)
P.T.	0.09 in.	(2.4 mm)
O.T.	0.18 in.	(4.6 mm)
T.T.	0.28 in.	(7.0 mm)

\*75 PSIG (5 Kgf/cm<sup>2</sup>)

# Series NVM

## MECHANICALLY ACTUATED/PILOT OPERATED DIMENSIONS NVZM450

### NVZM450-N01-05



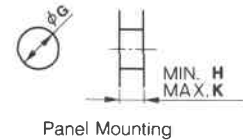
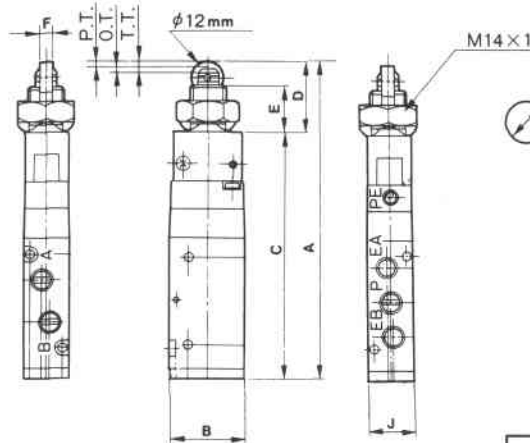
A	B	C	D	E	F	G	H	J	K
4.92	1.18	3.94	0.98	0.69	0.33	0.59	0.10	0.71	0.37
(125)	(30)	(100)	(25)	(17.5)	(8.5)	(15)	(2.5)	(1.8)	(9.5)

Millimeters in Parentheses

F.O.F.*	3.97 lbs. (1.8 Kg)
P.T.	0.06 in. (1.5 mm)
O.T.	0.08 in. (2.0 mm)
T.T.	0.14 in. (3.5 mm)

\*75 PSIG (5 Kgf/cm<sup>2</sup>)

### NVZM450-N01-06



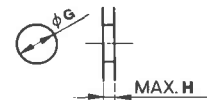
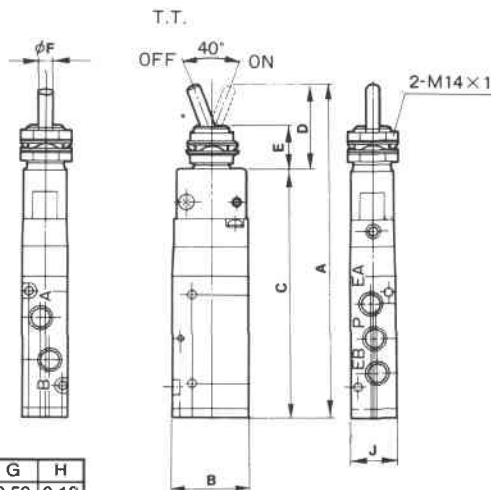
A	B	C	D	E	F	G	H	J	K
4.98	1.18	3.94	1.04	0.69	0.20	0.59	0.10	0.71	0.37
(126.5)	(30)	(100)	(26.5)	(17.5)	(5)	(15)	(2.5)	(18)	(9.5)

Millimeters in Parentheses

F.O.F.*	3.97 lbs. (1.8 Kg)
P.T.	0.06 in. (1.5 mm)
O.T.	0.08 in. (2.0 mm)
T.T.	0.14 in. (3.5 mm)

\*75 PSIG (5 Kgf/cm<sup>2</sup>)

### NVZM450-N01-08



A	B	C	D	E	F	G	H
5.28	1.18	3.94	1.34	0.69	0.20	0.59	0.18
(134)	(30)	(100)	(34)	(17.5)	(5)	(15)	(4.5)

Millimeters in Parentheses

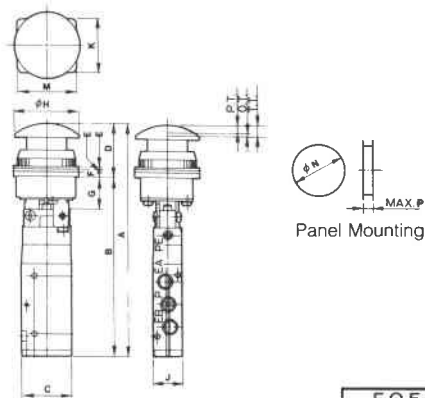
F.O.F.*	3.31 lbs. (1.5 Kg)
T.T.	40°

\*75 PSIG (5 Kgf/cm<sup>2</sup>)

\* May be rotated without changing port location.

**MECHANICALLY ACTUATED/PILOT OPERATED  
DIMENSIONS  
NVZM450**

**NVZM450-N01-30**



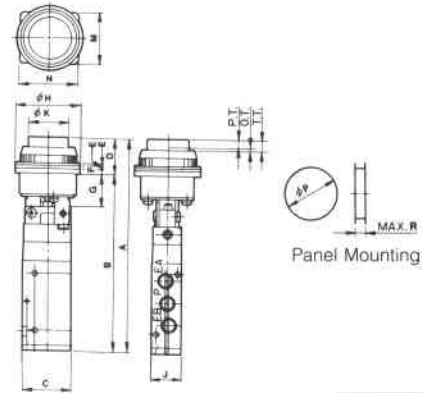
A	B	C	D	E	F	G	H	J	K	M	N	P
5.66	4.39	1.18	1.28	0.06	0.12	0.80	1.54	0.71	1.26	1.42	1.20	0.24
(143.9)	(111.4)	(30)	(32.5)	(1.5)	(3)	(20.4)	(39)	(18)	(32)	(36)	(30.5)	(6)

Millimeters in Parentheses

F.O.F.*	4.63 lbs.	(2.1 Kg)
P.T.	0.17 in.	(4.4 mm)
O.T.	0.08 in.	(2.0 mm)
T.T.	0.25 in.	(6.4 mm)

\*75 PSIG (5 Kgf/cm<sup>2</sup>)

**NVZM450-N01-32**



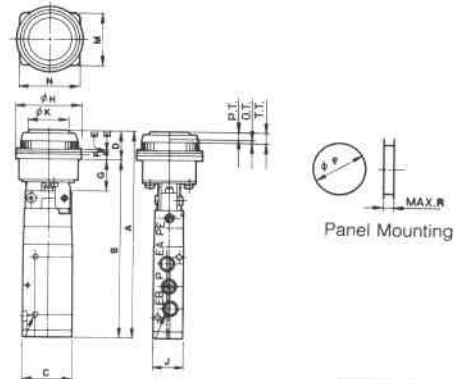
A	B	C	D	E	F	G	H	J	K	M	N	P	R
5.25	4.39	1.18	0.87	0.06	0.12	0.80	1.57	0.71	0.96	1.26	1.42	1.20	0.24
(133.4)	(111.4)	(30)	(22)	(1.5)	(3)	(20.4)	(40)	(18)	(24.5)	(32)	(36)	(30.5)	(6)

Millimeters in Parentheses

F.O.F.*	4.63 lbs.	(2.1 Kg)
P.T.	0.17 in.	(4.4 mm)
O.T.	0.08 in.	(2.0 mm)
T.T.	0.25 in.	(6.4 mm)

\*75 PSIG (5 Kgf/cm<sup>2</sup>)

**NVZM450-N01-33**



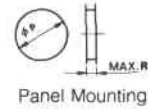
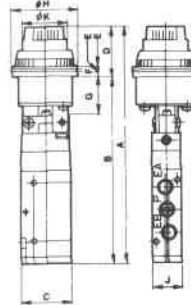
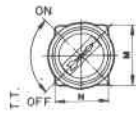
A	B	C	D	E	F	G	H	J	K	M	N	P	R
5.07	4.39	1.18	0.69	0.06	0.12	0.80	1.57	0.71	0.96	1.26	1.42	1.20	0.24
(128.9)	(111.4)	(30)	(17.5)	(1.5)	(3)	(20.4)	(40)	(18)	(24.5)	(32)	(36)	(30.5)	(6)

Millimeters in Parentheses

F.O.F.*	4.63 lbs.	(2.1 Kg)
P.T.	0.17 in.	(4.4 mm)
O.T.	0.08 in.	(2.0 mm)
T.T.	0.25 in.	(6.4 mm)

\*75 PSIG (5 Kgf/cm<sup>2</sup>)

### ZM450-N01-34



Panel Mounting

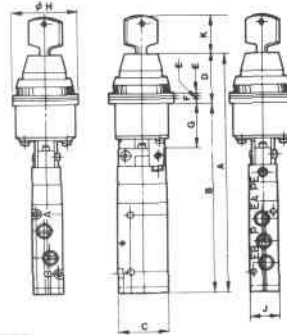
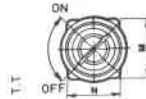
A	B	C	D	E	F	G	H	J	K	M	N	P	R
5.74	4.52	1.18	1.22	0.06	0.12	1.06	1.57	0.71	1.06	1.42	1.26	1.20	0.24
(145.9)	(114.9)	(30)	(31)	(1.5)	(3)	(23.9)	(40)	(18)	(27)	(36)	(32)	(30.5)	(6)

Millimeters in Parentheses

F.O.F.*	5.07 lbs. (2.3 Kg)
T.T.	90°

\*75 PSIG (5 Kgf/cm<sup>2</sup>)

### ZM450-N01-36



Panel Mounting

A	B	C	D	E	F	G	H	J	K	M	N	P	R
5.87	4.67	1.18	1.20	0.06	0.12	1.09	1.57	0.71	0.89	1.42	1.26	1.20	0.24
(149.2)	(118.7)	(30)	(30.5)	(1.5)	(3)	(27.7)	(40)	(18)	(22.5)	(36)	(32)	(30.5)	(6)

Millimeters in Parentheses

F.O.F.*	5.73 lbs. (2.6 Kg)
T.T.	90°

\*75 PSIG (5 Kgf/cm<sup>2</sup>)

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