

# Masoneilan\* Valves

## 37/38 Pneumatic Spring Diaphragm Actuator

The 37/38 Series actuator is designed to provide high performance, reliability and long service life.



imagination at work

# Features

GE's Masoneilan Type 37 direct acting and Type 38 reverse acting pneumatic spring diaphragm actuators are designed to provide high performance. Their features include:

## Heavy One-piece Yoke

Provides maximum strength and rigidity

## Diaphragm Cases

Pressed steel upper and lower cases combine lightness, high mechanical strength and adequate protection in the event of severe over-pressurization

## Thrust Capability

Two actuator types and seven sizes provide a wide range of applications

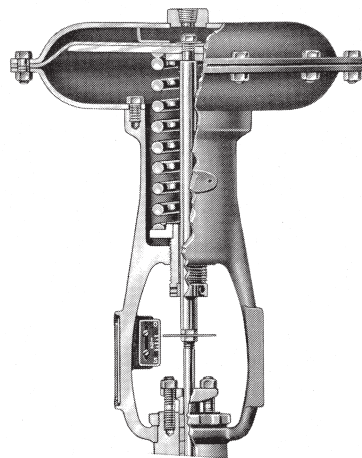
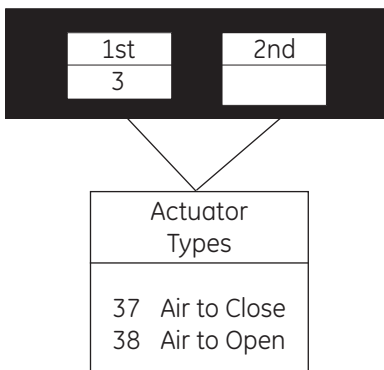
## Diaphragm

Molded elastomer with fabric insert for strength, long life and high sensitivity

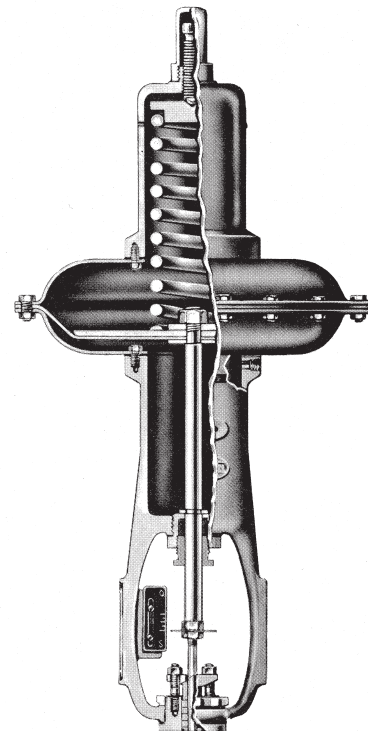
## Linearity

The molded diaphragm and deep cases minimize area change and produce a linear relationship between travel and air pressure

# Numbering System



Direct: air to extend stem  
Type 37



Reverse: air to retract stem  
Type 38

# Specifications

Actuator Size	Nominal Diaphragm Effective Area (sq. in.)	Max. Travel (in.)	Bench Range psi	Max. Supply psi
11	71	1.0	3-15 6-30	60
13	105	1.5	3-15 6-30	60
15	145	2.0	3-15 6-30	60
18	200	2.5	3-15 6-30	60
18 (16")	200	4.0	3-15 6-30	60
18 (20") Rev. only	200	4.0	6-30	60
24	330	4.0	3-15 6-30	55

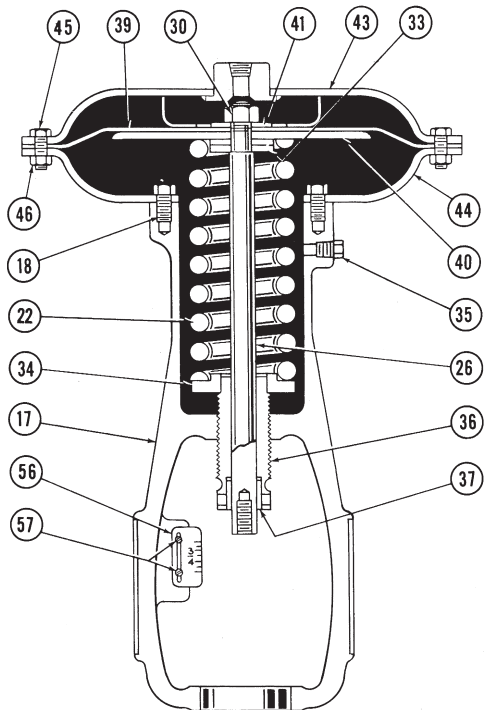
**NOTE:** Additional travels and spring ranges available.

## Travel Time - Typical Bench Values

Actuator Size	Travel (inches)	Time (seconds) □	
		8012 Electro-pneumatic Positioner	7400 Pneumatic Positioner
11	1.0	3.3	7
13	1.0	4.9	11
	1.5	6.3	13
15	1.5	9.4	17
	2.0	11.4	20
18	2.0	19	30
	2.5	21	34
18 (16")	3.5	29	44
	4.0	32	48

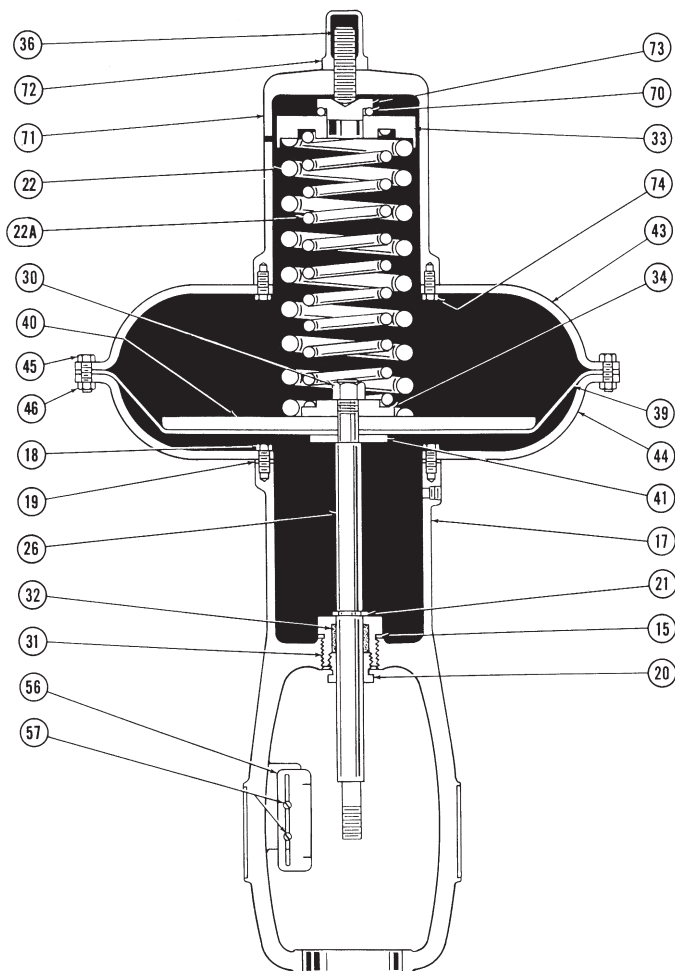
□ 3-15 psi bench range and 20 psi supply. For 6-30 psi bench range, increase travel time by 15%.

# Materials of Construction



**Type 37 Actuator \***  
**Direct: air to extend stem**

\* Size 11 view shown



**Type 38 Actuator**  
**Reverse: air to retract stem**

# Materials of Construction

## Direct - Type 37

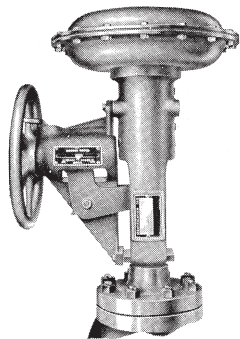
Ref. No.	Description	Materials
17	Yoke	Cast Iron
18	Cap Screw	Carbon Steel
22	Actuator Spring	Spring Steel
26	Actuator Stem	Steel
30	Hex Nut	Carbon Steel
33	Spring Guide	Carbon Steel
34	Spring Button	Nickel Copper Alloy
35	Pipe Plug	Plastic
36	Spring Adjuster	Steel
37	Bushing	Steel
39	Diaphragm	Elastomer w/Fabric Insert
40	Diaphragm Plate	Carbon Steel
41	Diaphragm Washer	Carbon Steel
43	Diaphragm Case	Carbon Steel
44	Diaphragm Case	Carbon Steel
45	Cap Screw	Carbon Steel
46	Hex Nut	Carbon Steel
56	Travel Indicator Scale	Aluminum
57	Machine Screw	Stainless Steel
70	Ball & Retainer□	Stainless Steel

□ Size 13, 15, 18 and 24 only.

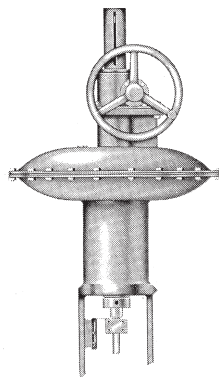
## Reverse - Type 38

Ref. No.	Description	Materials
15	Gasket (Packing Box)	Copper
17	Yoke	Cast Iron
18	Cap Screw	Carbon Steel
19	Gasket	Acrylic Fiber
20	Packing Nut	Brass
21	Snap Ring	Carbon Steel
22	Actuator Spring	Spring Steel
22A	Actuator Spring	Spring Steel
26	Actuator Stem	Stainless Steel
30	Hex Nut	Carbon Steel
31	Packing Box	Brass
32	Yoke Packing	Braided PTFE
33	Spring Guide	Carbon Steel
34	Spring Button	Nickel Copper Alloy
36	Spring Adjuster	Carbon Steel
39	Diaphragm	Elastomer w/Fabric Insert
40	Diaphragm Plate	Carbon Steel
41	Diaphragm Washer	Carbon Steel
43	Diaphragm Case	Carbon Steel
44	Diaphragm Case	Carbon Steel
45	Cap Screw	Carbon Steel
46	Hex Nut	Carbon Steel
56	Travel Indicator Scale	Aluminum
57	Machine Screw	Stainless Steel
70	Ball & Retainer	Stainless Steel
71	Spring Barrel	Cast Iron
72	Spring Barrell Cap	Cast Iron
73	Ball Bearing Race	Steel
74	Cap Screw	Carbon Steel

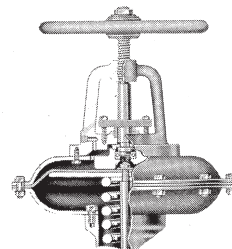
# Handwheels



6A Series Side Mounted



8A Series Side Mounted



Case Mounted

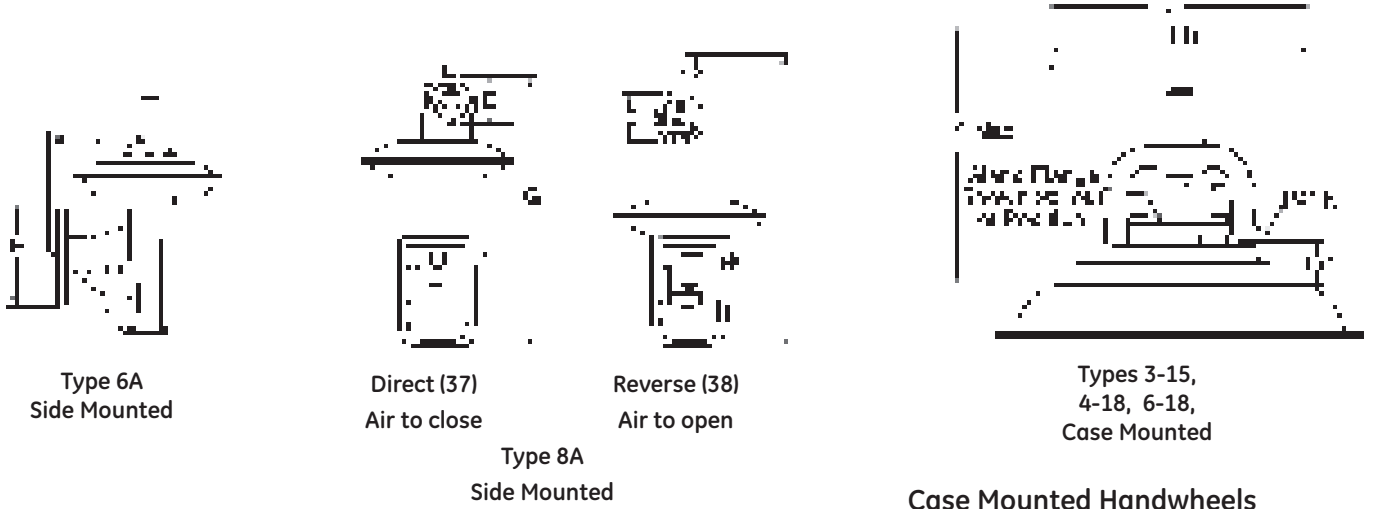
## Side Mounted

H/W Type	Actuator Size	Action	Max. Travel (in.)	Max. Air Supply psi
6A1	11	Direct & Reverse	1.0	60
6A2	13	Direct & Reverse	1.5	60
6A3	15	Direct & Reverse	2.0	60
	18	Direct & Reverse	2.0	40
		Direct & Reverse	2.5	35
	18 (16")	Reverse	2.5	35
	18 (20")	Reverse	2.5	35
8A	18	Direct & Reverse	2.5	60
	18 (16")	Direct & Reverse	4.0	60
	18 (20")	Reverse	4.0	60
	24	Direct & Reverse	4.0	55

## Case Mounted

H/W Type	Actuator Size	Max. Travel (in.)	Turns for Rated Travel
<b>Direct Actuator</b>			
2-11	11	1.0	14.0
2-13	13	1.5	28.0
3-15	15	2.0	16.0
4-18	18	2.5	20.0
6-18	18 (16")	4.0	32.0
7-24	24	4.0	32.0
<b>Reverse Actuator</b>			
9-11	11	1.0	14.0
9-13	13	1.5	21.0

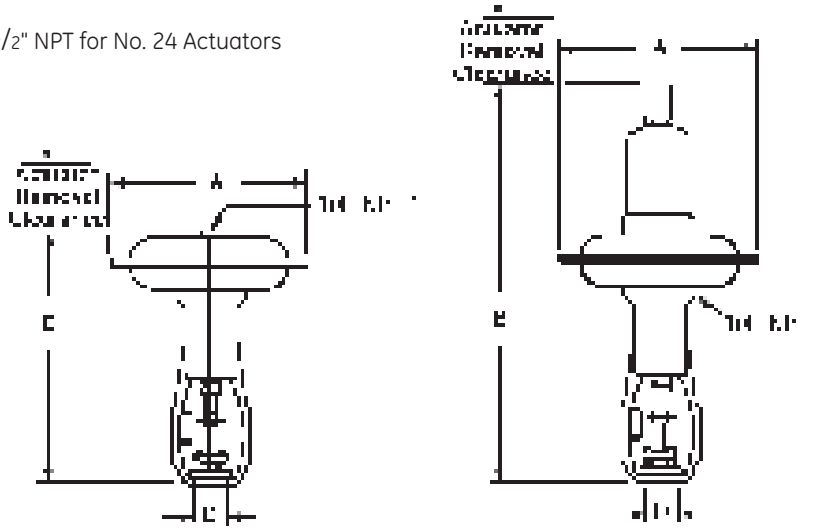
# Dimensions (in.)



## Case Mounted Handwheels

Type	J	K
<b>Direct Actuator</b>		
2-11	9.00	9.50
2-13	9.00	9.50
3-15	12.00	12.75
4-18	18.00	12.75
6-18	18.00	15.50
<b>Reverse Actuator</b>		
9-11	9.00	13.00
9-13	9.00	16.25

\* 1/2" NPT for No. 24 Actuators



Direct (Type 37)  
Air to close

Reverse (Type 38)  
Air to open

Actuator						Side Mounted Handwheels				
Actuator Size	Actuator Removal Clearance	A	B	C	Spud Dia. D	Type	E	F	G Dir.	H Rev.
11	5.6	13.00	24.1	16.4	2.25	6A1	9	8.75	-----	---
13	5.6	15.00	29.6	20.1	2.25	6A2	12	10.88	-----	-----
15	5.6	17.50	35.3	25.4	3.31	6A3	18	15.00	-----	-----
18	5.6	20.75	36.8	26.8	3.31					
18 (16")	5.6	20.75	42.1	33.2	3.75	8A	8	-----	53	53
18 (20")	5.6	20.75	52.0	N/A	3.75	8A	8	-----	N/A	53
24	5.0	27.50	45.5	34.7	3.75	8A	12	-----	53	58

# Weights (lbs.)

Actuator Size	Direct Type 37	Reverse Type 38	Side Mounted Handwheel	
			Type	Weight
11	45	55	6A1	19
13	70	87	6A2	45
15	120	140	6A3	75
18	180	250		
18 (16*)	190	370	8A	40
18 (20*)	N/A	450		
24	325	540	8A	70

Case Mounted Handwheel		
Type	Actuator Size	Weight
<b>Direct Actuator</b>		
2-11	11	25
2-13	13	25
3-15	15	40
4-18	18	
6-18	18 (16*)	45
<b>Reverse Actuator</b>		
9-11	11	20
9-13	13	25

## DIRECT SALES OFFICE LOCATIONS

### BELGIUM

Phone: +32-2-344-0970  
Fax: +32-2-344-1123

### BRAZIL

Phone: +55-11-2146-3600  
Fax: +55-11-2146-3610

### CHINA

Phone: +86-10-8486-4515  
Fax: +86-10-8486-5305

### FRANCE

Courbevoie  
Phone: +33-1-4904-9000  
Fax: +33-1-4904-9010

### GERMANY

Ratingen  
Phone: +49-2102-108-0  
Fax: +49-2102-108-111

### INDIA

Mumbai  
Phone: +91-22-8354790  
Fax: +91-22-8354791

### New Delhi

Phone: +91-11-2-6164175  
Fax: +91-11-5-1659635

### ITALY

Phone: +39-081-7892-111  
Fax: +39-081-7892-208

### JAPAN Chiba

Phone: +81-43-297-9222  
Fax: +81-43-299-1115

### KOREA

Phone: +82-2-2274-0748  
Fax: +82-2-2274-0794

### MALAYSIA

Phone: +60-3-2161-0322  
Fax: +60-3-2163-6312

### MEXICO

Phone: +52-5-310-9863  
Fax: +52-5-310-5584

### THE NETHERLANDS

Phone: +0031-15-3808666  
Fax: +0031-18-1641438

### RUSSIA

Veliky Novgorod  
Phone: +7-8162-55-7898  
Fax: +7-8162-55-7921

### Moscow

Phone: +7 495-585-1276  
Fax: +7 495-585-1279

### SAUDI ARABIA

Phone: +966-3-341-0278  
Fax: +966-3-341-7624

### SINGAPORE

Phone: +65-6861-6100  
Fax: +65-6861-7172

### SOUTH AFRICA

Phone: +27-11-452-1550  
Fax: +27-11-452-6542

### SOUTH and CENTRAL

AMERICA and the CARIBBEAN  
Phone: +55-12-2134-1201  
Fax: +55-12-2134-1238

### SPAIN

Phone: +34-93-652-6430  
Fax: +34-93-652-6444

### UNITED ARAB EMIRATES

Phone: +971-4-8991-777  
Fax: +971-4-8991-778

### UNITED KINGDOM

Wooburn Green  
Phone: +44-1628-536300  
Fax: +44-1628-536319

### UNITED STATES

Massachusetts  
Phone: +1-508-586-4600  
Fax: +1-508-427-8971

### Corpus Christi, Texas

Phone: +1-361-881-8182  
Fax: +1-361-881-8246

### Deer Park, Texas

Phone: +1-281-884-1000  
Fax: +1-281-884-1010

### Houston, Texas

Phone: +1-281-671-1640  
Fax: +1-281-671-1735



\* Trademark of General Electric Company

Other company names and product names used in this document are the registered trademarks or trademarks of their respective owners.