

FEATURES

Compact, multi-spring design.

- *Hysteresis is less than 0.8% of full stroke with positioner.*
- *Linearity is less than 1.5% of full stroke with positioner.*
- *Stainless steel stems are standard for maximum performance in corrosive environments.*

D52/R52 Series Spring-Diaphragm Pneumatic Linear Actuators

D52/R52 Series actuators are linear spring diaphragm pneumatic actuators designed for reliable operation of control valves. The D52/R52 line of high power, multi-spring diaphragm actuators are compact and light. The D52/R52 is a rugged unit available in a combination of case sizes, strokes and springs to satisfy a wide range of applications.

The Type D52, direct-acting actuator, strokes downward with an increase in air pressure. Opposing springs provide a fail-open response when attached to push-down-to-close globe control valves.

With the Type R52, reverse-acting actuator, an increase in air pressure retracts the actuator stem, providing fail-close response when attached to push-down-to-close globe control valves.



Specifications

Diaphragm Case: Cast Steel

Stem: 303 SS

Diaphragm: Ethylene Propylene Diene Monomer (EPDM)

Spring Case: Cast Iron

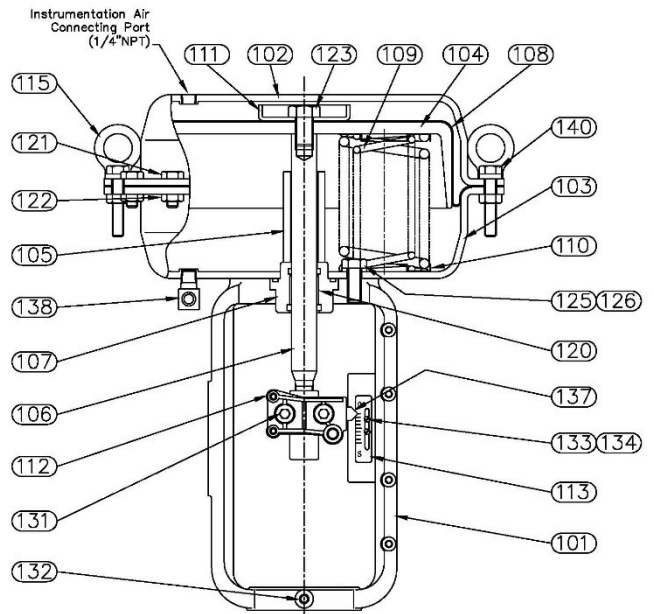
Max. Case Pressure: 45 psig (3 bar)

Temperature Limits: 14° F to +158° F (-10° C to +70° C)

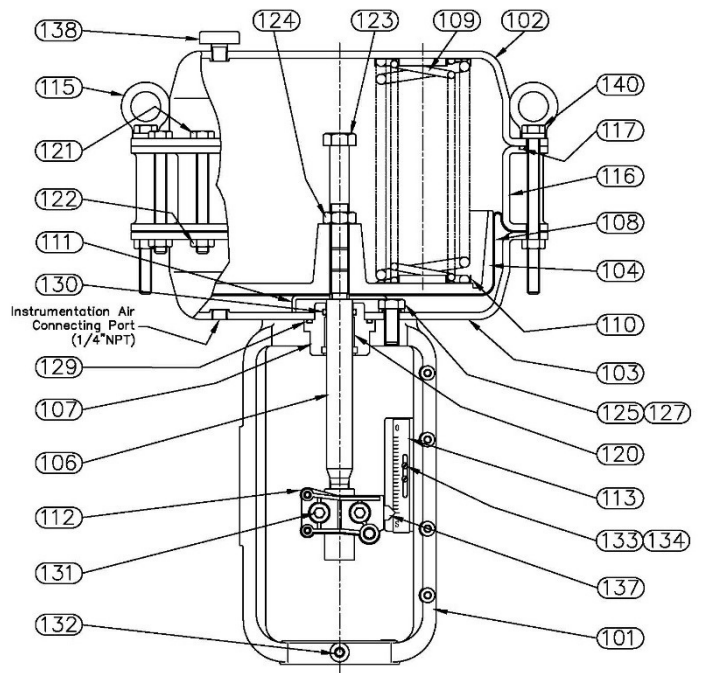
Bill of Materials and Parts

No.	Name
101	Yoke
102	Diaphragm Upper Case
103	Diaphragm Lower Case
104	Diaphragm Plate
105	Stopper
106	Actuator Rod
107	Guide Holder
108	Diaphragm
109	Spring
110	Spring Seat
111	Center Plate
112	Connector
113	Scale Plate
115	Hanging Ring
120	Dry Bearing
121	Hexagon Bolt
122	Hexagon Nut
123	Hexagon Bolt
124	Spring Washer
125	Hexagon Bolt
126	Spring Washer
127	Seal Washer
129	O-Ring
130	O-Ring
131	Hexagon Socket Head Bolt
132	Hexagon Socket Set Screw
133	Small Cap Screw
134	Speed Nut
137	Indicator
138	Exhaust Plug
140	Hexagon Bolt

Parts For Models D52 — Direct-Acting

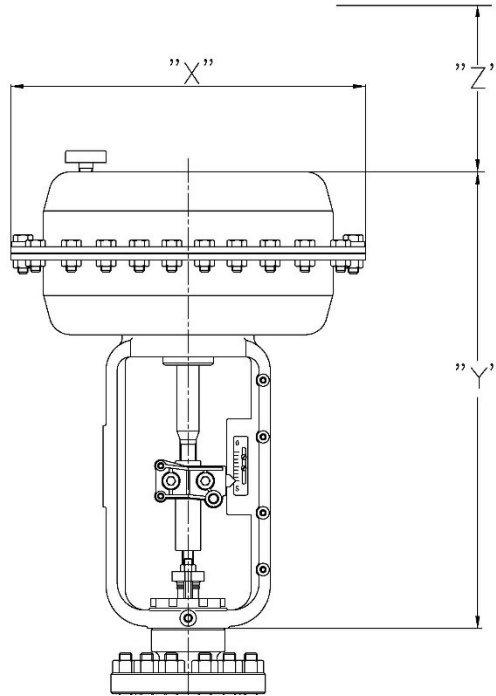


Parts For Models R52— Reverse-Acting



DIMENSIONS

Note: Z-Dimension is the height the actuator must be raised to clear valve stem.



Actuator Type	Actuator Model	Actuator Dimensions inches (mm)			Approx. Weight lb (kg)
		Z		XY(Max)	
Direct	D52BDLLA	14.4 (367)	16.9 (430)	24 (609.6)	88.2 (40)
Reverse	R52BCLLA	14.4 (367)	18.5 (470)	24 (609.6)	79.9 (36.3)
Reverse	R52BDLLA	14.4 (367)	18.5 (470)	30 (762)	79.9 (36.3)
Direct	D52CCLLA, D52CELLA	18.6 (472)	19.5 (495)	30 (762)	154.3 (70)
Reverse	R52CCLLA	18.6 (472)	21.1 (535)	24 (609.6)	154.3 (70)
Reverse	R52DDLLA, R52DELLA	26.7 (678)	28.2 (717)	30 (762)	418.9 (190)
Direct	D52DHMLE, D52DHMLF, D52DJLLF, D52DJLLG	26.7 (678)	32.2 (817)	30 (762)	551.2 (250)
Reverse	R52DHMLE, R52DHMLF, R52DJLLF, R52DJLLG	26.7 (678)	32.2 (817)	30 (762)	551.2 (250)

How To Order

For actuator selection, refer to KOSO Hammel Dahl actuator selection guide. For options not shown or to enter an order, contact your local sales representative.

D/R Series

1	Model
D52	Direct-acting—Stem extends with increased air pressure
R52	Reverse-acting—Stem retracts with increasing air pressure

2, 3		Case Size/ Mount/ Travel					
Case Size	Mount	Travel					
		0.75	1	1.125	1.5	2.25	3.5
85	2.125	-	BD	BC	-	-	-
145	2.125	-	-	CC	-	-	-
	2.812	-	-	-	CE	-	-
325	2.125	-	-	DD	-	-	-
	2.812	-	-	-	DE	-	-
	3.562	-	-	-	-	DH	DJ

4, 5	Spring Span & Adjuster
LL	4 psig
ML	2.6 psig

6	Variations
A	None
E	Diameter 5/8" Valve Stem
F	Diameter 7/8" Valve Stem
G	Diameter 1-1/4" Valve Stem

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CONTROL VALVES

KOSO HAMMEL DAHL