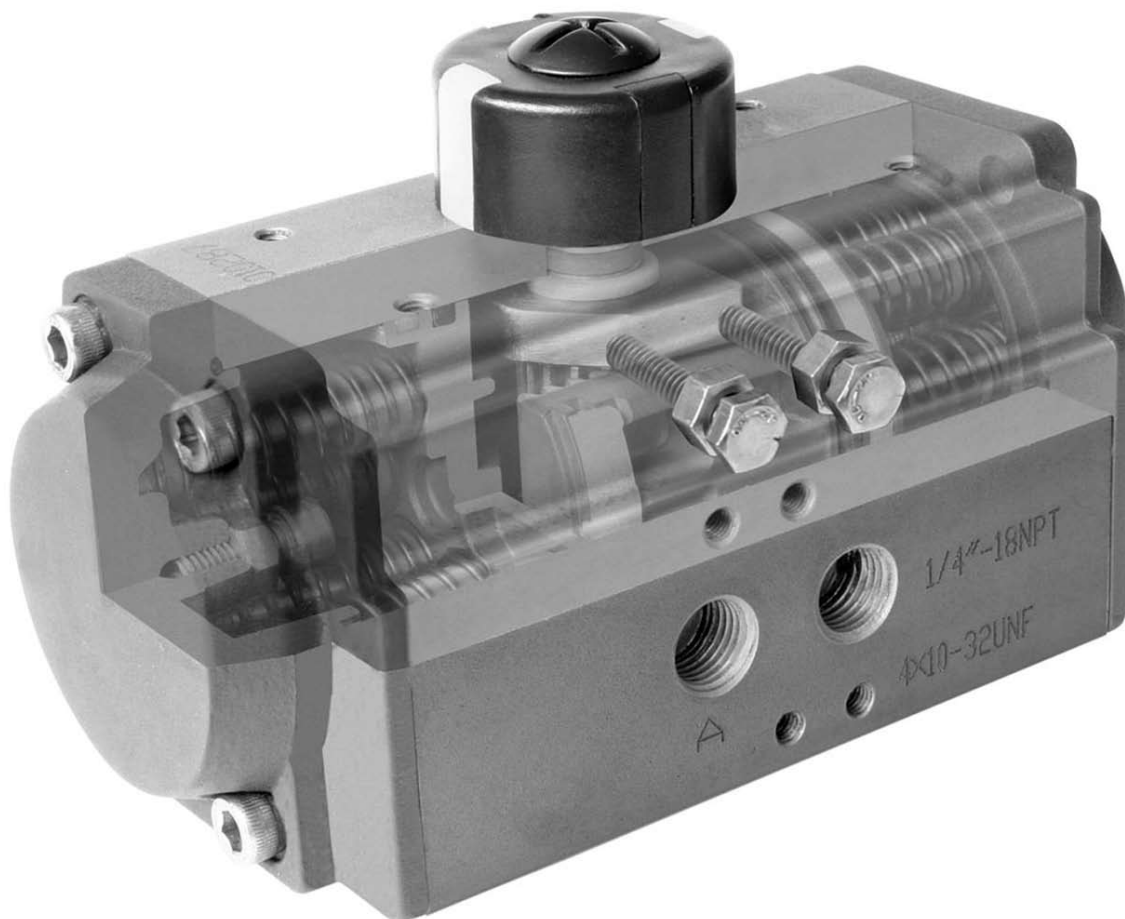




COMPACT CYLINDER ACTUATORS



Design & Construction

Compact actuators are a versatile rack and pinion design for use on 1/2 – 3" (15–80mm) Eccentric Plug Valves and 1 1/2 – 6" (40–150mm) BOS-CL butterfly valves. The compact, modular design allows the actuator to be mounted for a low profile assembly.

Wide Torque Range

Compact actuators are available in sizes to meet a wide variety of torque requirements. Double-acting units start at 200 in lbs. (22.6 nm) and go up to 28,000 in lbs. (3164 nm) of output torque at 80 psi (1650 kPa). Fail-safe, spring return models have output torque from 100 in lbs. (11.3 nm) to 3,000 in lbs. (339 nm). Compact actuators are matched to each valve's torque requirements to ensure the most economical valve and actuator package is specified.

Enclosed Construction

Compact actuators are environmentally shielded to protect internal parts from grit, moisture and corrosive contaminant. The actuator body is extruded, machined, anodized internally and externally and then polyester powder epoxy painted for maximum internal and external protection.

Maximum Cycle Life

Compact pistons are aluminum and the pinion is stainless steel. Both pistons incorporate a large wear band which significantly increases cycle life. Upper and lower bushings minimize wear and increase actuator duty cycle.

Adjustable Limit Stops

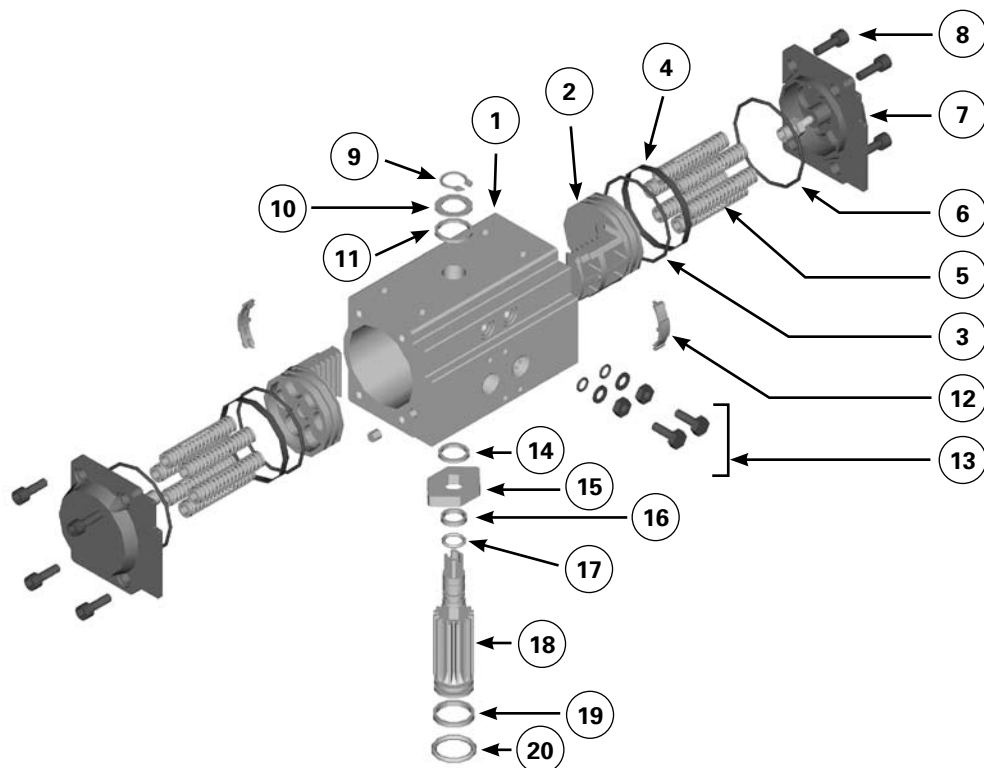
Each unit incorporates field adjustable double limit stops for precise positioning. The double limit stops allow for stop adjustment in both directions of travel and extend valve life.

Accessory Options

Compact actuators are available with all DeZURIK standard accessory options including positioners, solenoids, mechanical and proximity switches, air filter regulators and speed controls.

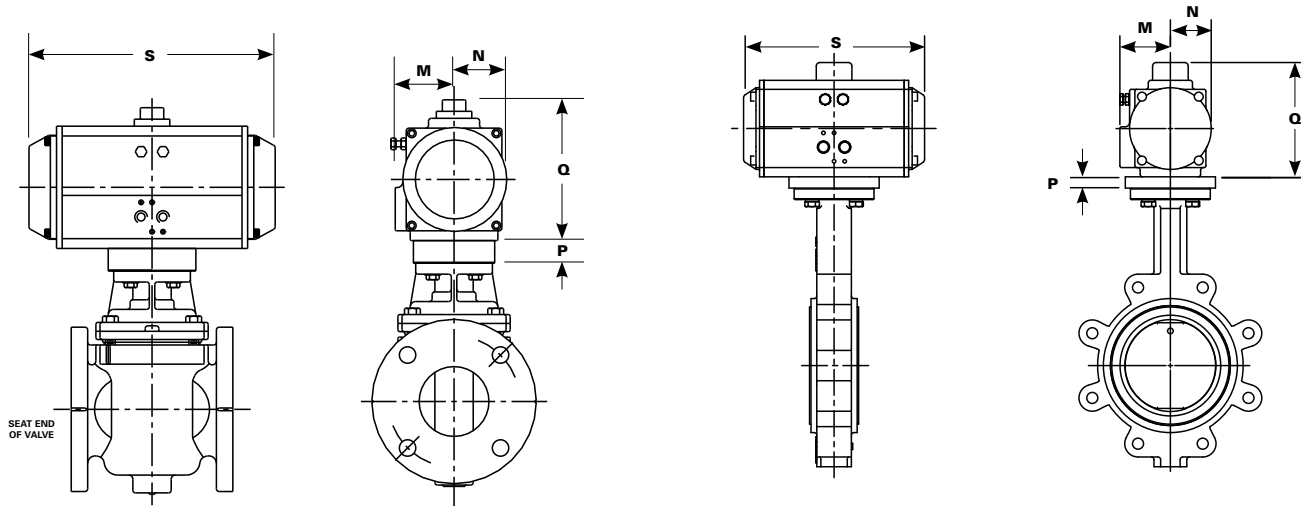
Materials of Construction

Item	Quantity	Description	Material
1	1	Actuator Housing	Hard Anodized Aluminum
2	2	Pistons	Aluminum
3	2	Piston Seals	Buna
4	2	Piston Bearings	Acetal
5	According to Model	Springs	Spring Steel Corr. Resistant
6	2	End Cap O-Ring	Buna
7	2	End Caps	Aluminum Baked Epoxy
8	8	End Cap Bolts	300 Series Stainless Steel
9	1	C-Clip	300 Series Stainless Steel
10	1	Thrust Follower	300 Series Stainless Steel
11	1	Thrust Ring	Acetal
12	2	Wear Bands	Acetal
13	1 set	Stroke Adj. Set	300 Series Stainless Steel
14	1	Shaft Seal	Buna
15	1	Stroke Adj. Stop	300 Series Stainless Steel
16	1	Bearing	Acetal
17	1	Thrust Follower	300 Series Stainless Steel
18	1	Drive Shaft	300 Series Stainless Steel
19	1	Shaft Bearing	Acetal
20	1	Shaft Seal	Buna



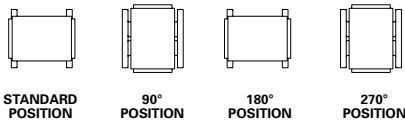
Dimensions

Eccentric Plug Valves (PEC)



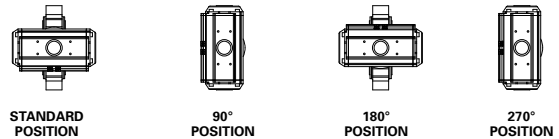
Actuator Mounting

Eccentric Plug Valve (PEC)



Actuator Mounting

BOS-CL Butterfly Valves



Actuator	Actuator Dimensions					
	M		N	P	Q	S
	Double Acting	Spring Return		PEC		
CMD-35	1.85 47	2.10 53	1.42 36	—	4.23 107	6.61 168
CMD-50	2.09 53	2.34 59	1.65 42	—	4.70 119	7.24 184
CMD-75	2.24 57	2.49 63	1.81 46	.84 21	5.07 129	10.31 262
CMD-110	2.30 58	2.55 65	1.97 50	.84 21	5.38 137	10.31 262
CMD-160	2.52 64	2.77 70	2.26 57	.84 21	6.02 153	10.55 268
CMD-255	2.93 74	3.18 81	2.66 68	.84 21	6.88 175	11.65 296
CMD-400	3.03 77	3.28 83	2.95 75	—	7.54 192	15.34 390
CMD-500	3.43 87	3.68 93	3.43 87	—	8.54 217	18.03 458

Actuator	Actuator Dimensions				
	M	N	P	Q	S
CMD-35	1.85 47	1.42 36	0.50 13	4.23 107	6.61 168
CMD-50	2.09 53	1.65 42	0.50 13	4.70 119	7.24 184
CMD-75	2.24 57	1.81 46	0.50 13	5.07 129	10.31 262
CMD-160	2.52 64	2.26 57	0.50 13	6.02 153	10.55 268

Inches
Millimeters

Note: All dimensions are subject to change without notice.
Request certified drawings for use in preparing piping layouts.

Actuator Weights

Actuator Size	Weight – lbs/kgs	
	Double Acting	Spring Return
35	$\frac{4}{1.81}$	$\frac{4}{1.81}$
50	$\frac{6}{2.72}$	$\frac{6}{2.72}$
75	$\frac{7}{3.18}$	$\frac{7}{3.18}$
110	$\frac{10}{4.54}$	$\frac{12}{5.44}$
160	$\frac{13}{5.90}$	$\frac{14}{6.35}$
255	$\frac{19}{8.62}$	$\frac{22}{9.98}$
400	$\frac{25}{11.3}$	$\frac{29}{13.2}$
500	$\frac{36}{16.3}$	$\frac{44}{20.0}$

Ordering

To order a Compact actuator, select the actuator model from the appropriate valve sizing charts. Specify mounting position as second line information. As reference information, the actuator code is defined in the following charts.

Actuator Type

CMD = Aero² Cylinder Actuators

Actuator Size

35 = Model 035
50 = Model 050
75 = Model 075
110 = Model 110
160 = Model 160
255 = Model 255
400 = Model 400
500 = Model 500

Spring Quantity/Spring Set

For spring return only. Leave field blank for Double Acting.

S8 = 8 Springs
S12 = 12 Springs

Spring Action

For spring return only. Leave field blank for Double Acting.

D = Direct, Spring-To-Open
R = Reverse, Spring-To-Close

Accessories

Refer to accessory bulletins for information on positioners, solenoids, mechanical and proximity switches, air filter regulators and speed controls.

Ordering Example:

PEC, 3, F1, CI, NBR, CR * CMD-160-S8-R

Sales and Service

For information about our worldwide locations, approvals, certifications and local representative:

Web Site: www.dezurik.com E-Mail: info@dezurik.com



250 Riverside Ave. N. Sartell, Minnesota 56377 • Phone: 320-259-2000 • Fax: 320-259-2227

DeZURIK reserves the right to incorporate our latest design and material changes without notice or obligation. Design features, materials of construction and dimensional data, as described in this bulletin, are provided for your information only and should not be relied upon unless confirmed in writing by DeZURIK. Certified drawings are available upon request.