

Design & Construction



1. Indicator

Indicator according to VID/VIE3845 is convenient for mounting accessories such as limit switch box, Positioner and etc.

2. Pinion

The design of the nickel-plated alloy steel integrated forging pinion drive is according the NAMUR, ISO5211 and DIN3337 standards. Special standard are available upon request.

3. Actuator Body

High quality aluminium alloy extrusion formed. The surface has been treated by anodized hardening followed by epoxy polyester coating. Other surface treatments are available e.g. PTFE and Nickel plating as well as other colour coatings on request.

4. End Cap

The surface has been treated by anodized hardening followed by epoxy polyester coatings . Other surface treatments are available e.g. PTFE and Nickel plating as well as other colour coatings on request.

5. Piston

Are manufactured from Die-cast aluminium and treated by anodized hardening process. Symmetric mounting of the piston helps to ensure easy maintenance. Reverse action requirement can be achieved by inverting the pistons.

6. Adjusting Bolt

The two independent adjustment bolts can adjust opening and closing of the mounted valve within $\pm 5^\circ$

7. Spring

Are manufactured from 65Mn and are epoxy polyester coated. Springs are easily demounted and can be changed by quantity to suit different torque requirement.

8. Piston Ring

Are manufactured from low friction long life material POM. Can be easily changed for maintenance purposes.

9. O-Ring

Standard NBR rubber O-rings provide trouble-free operation at standard temperature ranges. For other temperature requirements relevant materials can be offered on request.

10. Air Connection

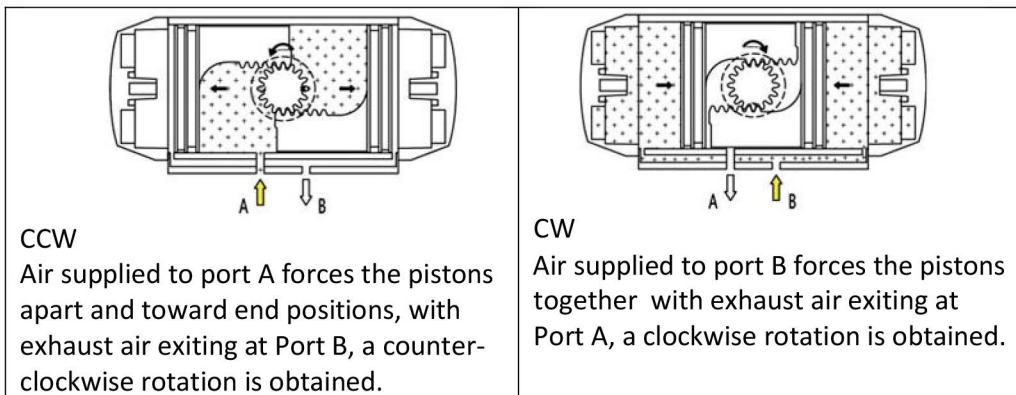
Conforms to NAMUR standards.

11. All stop parts are manufactured from SS304.

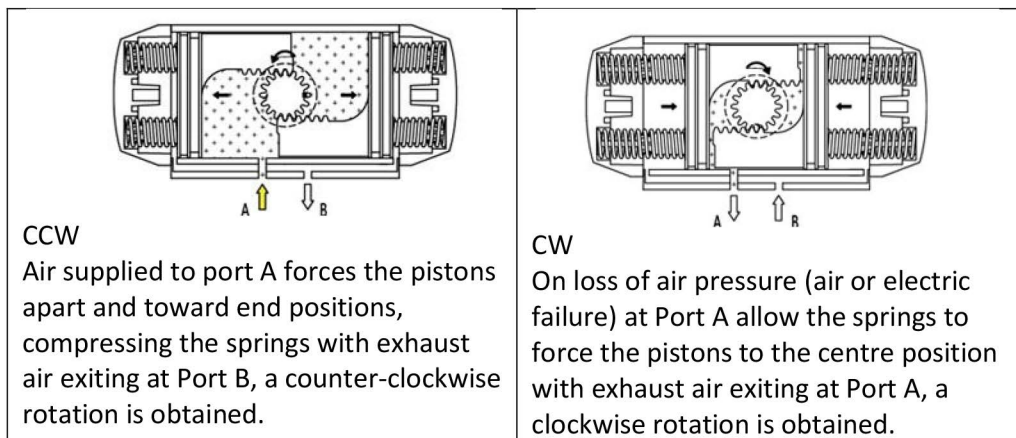
Operations

The standard rotation is clockwise to close; counter-clockwise rotation is obtained when port A is pressurized.

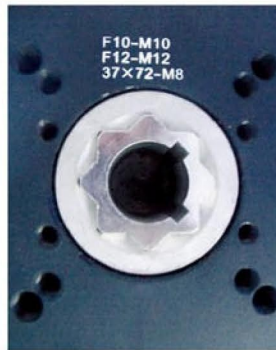
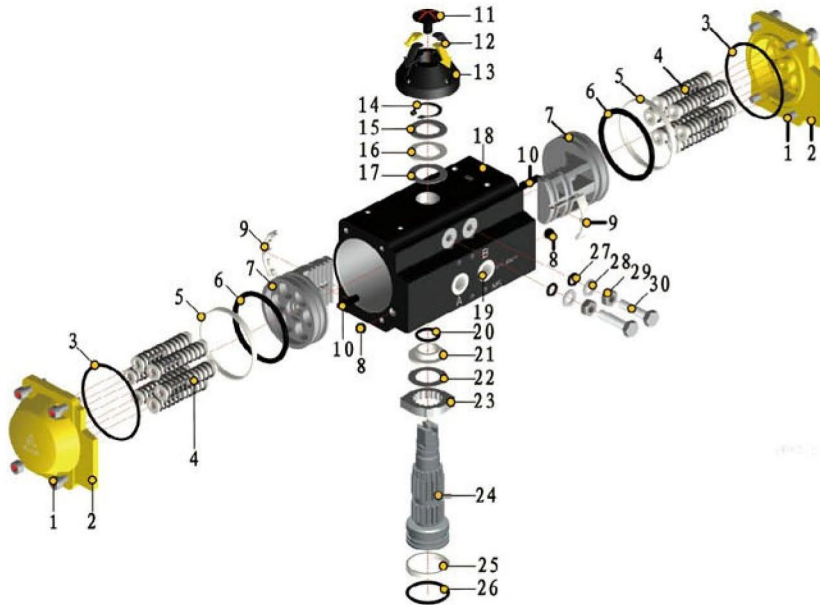
Double Acting Operation Function (Standard Rotation) Top View



Single Acting Operation Function (Standard Rotation) Top View



Explode View



Compared with the bottom design of the other producers, our actuator has four extra threaded holes. Using our mounting plate, it can be connected to all kinds of international valve standards.

Large diameter hole of output pinion drive on the actuator bottom makes it suitable for all kinds of valve stems & connecting keys by using inserts.

Deeper output pinion drive on the bottom of actuator is suitable for any long size stem of valve.

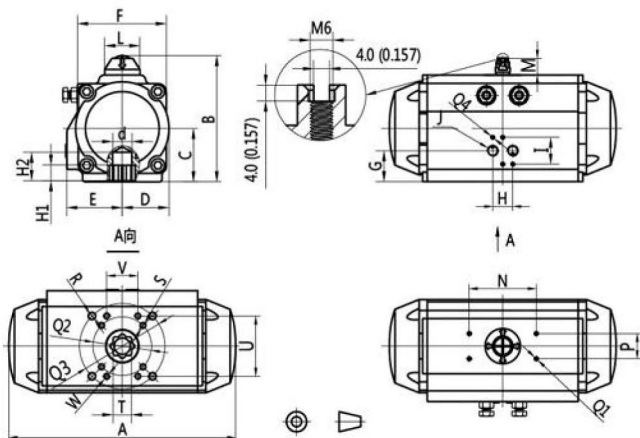


Parts List

No:	Part Description	Q.TY	Material	Surface Treated	Optional Material
1	Socket Head Screw	8	Stainless Steel 304		
2	End Cap	2	AL380	Anode Hardening + Polyester Coating	CF8/CF8M
3	O-Ring (Cylinder Head)	2	NBR Rubber		Viton / Silicone Rubber
4	Spring Steel	5-12	Spring Steel	Polyester Coating	
5	Piston Ring	2	POM		
6	O-Ring (Piston)	2	NBR Rubber		Viton / Silicone Rubber
7	Piston	2	AL380	Anode Hardening	
8	Stopper	2	NBR Rubber		Viton / Silicone Rubber
9	Guide Ring	2	PA6		
10	Guide Block	2	PA6		
11	Indicator Bolt	1	ABS		
12	Indicator Arrowhead	4	ABS		
13	Indicator	1	ABS		
14	Snap Ring	1	Stainless Steel		
15	Washer	1	Stainless Steel 304		
16	Disc Bearing	1	POM		
17	Washer	1	Stainless Steel 304		
18	Body	1	AL6063-T6	Anode Hardening + Polyester Coating	CF8/CF8M
19	Plug	2	PVC		
20	O-Ring (Pinion Top)	1	NBR Rubber		Viton / Silicone Rubber
21	Bearing (Pinion Top)	1	POM		
22	Disc Bearing	1	Stainless Steel 304		
23	Stroke Adjustment Stop	1	C20	Nickel Plated	CF8/CF8M
24	Pinion Shaft	1	C45	Nickel Plated	SUS304/SUS316
25	Bearing (Pinion Bottom)	1	POM		
26	O-Ring (Pinion Bottom)	1	NBR Rubber		Viton / Silicone Rubber
27	O-Ring (Adjusting Bolt)	2	NBR Rubber		Viton / Silicone Rubber
28	Metal Washer	2	Stainless Steel 304		
29	Nut	2	Stainless Steel 304		
30	Adjusting Bolt	2	Stainless Steel 304		



Installation Size (DFS050-DFS350)



Metric Unit mm

	DFS050	DFS063	DFS075	DFS085	DFS100	DFS115	DFS125	DFS145	DFS160	DFS180	DFS200	DFS240	DFS265	DFS300	DFS350
A	148	159	213	249	271	315	346	412	443	492	547	614	729	839	900
B	92	108	125	138	151	175	190	209.5	230	253	277	348	389	410	465
C	34.25	42.4	51	57.6	63.5	72.5	78.5	88	98.25	110	122	146	166.8	177.5	205
D	28.5	36	43.5	48.6	56	64	69	80	88	98.5	109	130.5	147	162	190
E	40.8	29	52.5	56.5	66	77	82	90	98.3	105.5	112	131	146.8	173	194.5
F	58	72	86	96.5	106	127	130	148.5	159.6	179.6	194	231	253.7	290	336
G	26	30	26.1	32	37	42.5	45.7	55	51.7	60.2	66	70	90	85	92
H	24	24	24	24	24	24	24	24	24	24	24	40	40	40	40
I	32	32	32	32	32	32	32	32	32	32	32	45	45	45	45
J	G1/4"	G1/4"	G1/4"	G1/4"	G1/4"	G1/4"	G1/4"	G1/4"	G1/4"	G1/4"	G1/4"	G3/8"	G3/8"	G1/2"	G1/2"
L	Φ 42	Φ 42	Φ 42	Φ 42	Φ 42	Φ 66	Φ 66	Φ 66	Φ 66	Φ 80	Φ 80	Φ 80	Φ 80	Φ 80	Φ 80
M	20	20	20	20	20	20	30	30	30	30	30	50	50	50	50
N	80	80	80	80	80	80	80	80	80	130	130	130	130	130	130
P	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30
Q1	M5	M5	M5	M5	M5	M5	M5	M5	M5	M5	M5	M5	M5	M5	M5
Q2	Φ 42	Φ 50	Φ 50	Φ 50	Φ 70	Φ 70	Φ 42	Φ 102	Φ 102	Φ 102	Φ 102	Φ 125	—	—	—
Q3	—	—	Φ 70	Φ 70	Φ 102	Φ 102	—	Φ 125	Φ 125	Φ 140	Φ 140	Φ 165	Φ 165	Φ 165	Φ 254
Q4	M5	M5	M5	M5	M5	M5	M5	M5	M5	M5	M5	M6	M6	M6	M6
R	—	—	4-M8	4-M8	4-M10	4-M10	—	4-M12	4-M12	4-M16	4-M16	4-M16	4-M20	4-M20	8-M16
S	4-M5	4-M6	4-M6	4-M6	4-M8	4-M8	4-M10	4-M10	4-M10	4-M10	4-M10	4-M12	—	—	—
T	17	17	22	22	22	22	36	36	36	36	36	46	46	46	55
H1	12	16	19	19	23	23	29	29	29	42	42	50	50	50	60
d	Φ 14.3	Φ 14.3	Φ 19.5	Φ 19.5	Φ 23	Φ 23	Φ 36	Φ 36	Φ 36	Φ 38	Φ 38	Φ 48	Φ 48	Φ 48	Φ 55
H2	32	34	34	34	48	48	65	65	65	92	92	92	92	92	100
U	—	—	—	—	72	—	72	72	72	99	99	—	—	—	—
V	—	—	—	—	37	—	37	37	37	53	53	—	—	—	—
W	—	—	—	—	M8	M8	M8	M8	M8	M10	M10	—	—	—	—