



PNEUMATIC ACTUATOR



Fluid Supply

Higher performance and reliability

Fully compliance with all the latest international standards

Wide range options in technical specification and highly cost-effective

Compact housing design, suitable for any application and working environment



ATEX 94/9/EC

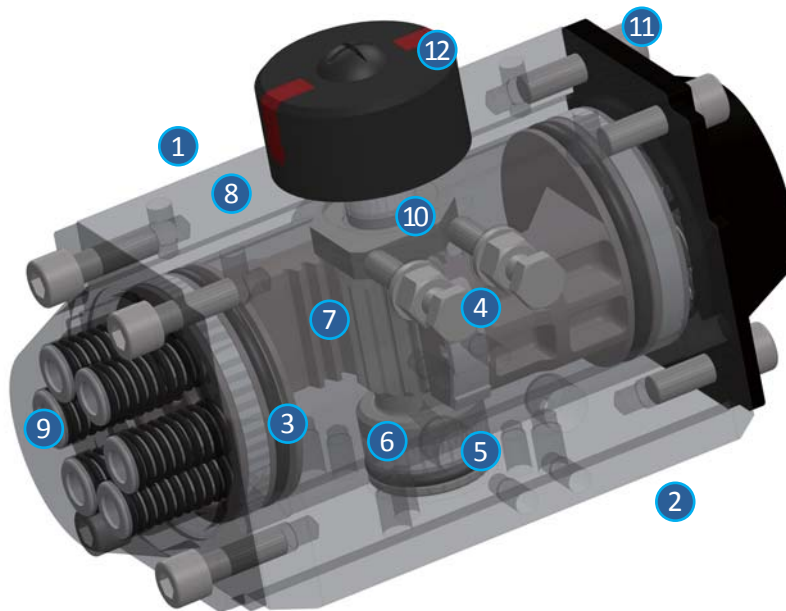
DESIGN

Fluid Supply series pneumatic actuators have introduced improvement design for rack and pinion. It is always Fluid Supply mission to offer initiative products by combining the long field experiences in products application and the latest production and materials technology available in the market today. The benefit of new design has long been verified in practice. With new technical features equipped, Fluid Supply series pneumatic actuators have advantageous characteristic in:

- Reliability
- High performance
- Fully compliance with all the latest international standards
- Extensive products range allows best versatility at lower price
- Innovations and patented solutions for a universal drive shaft
- Multifunction position indicator
- Compact and light

CONSTRUCTION

1. A single compact design utilizing identical body and end caps for both double acting and spring return models. This feature reduces inventory and allows field conversion, by adding or removing modular spring cartridges.
2. Full conformance to following latest specifications: ISO 5211, DIN 3337 and VDI/VDE 3845 for product interchangeability and easy mounting of solenoids, limit switches and other accessories.
3. Fluid Supply piston rack and pinion design for compact construction, symmetric mounting position, high-cycle life and fast operation. Reverse rotation can be accomplished in the field by simply inverting the pistons.
4. Two independent external travel stop adjustments permit easy and precise adjustment of $\pm 5^\circ$ in both directions. This adjustment may be made in either the open or closed position and provides for accurate valve alignment.
5. Multiple bearings and guides on pistons and racks for precise operation, low friction, high cycle life and a blowout proof pinion shaft.
6. Electroless nickel-plated blowout resistant, bearing guided, one-piece pinion shaft for improved safety and maximum cycle life.
7. High precision teeth on piston racks and pinion shaft for accurate positioning, low backlash, and maximum engagement resulting in overall efficient operation.
8. Extruded aluminum body with both internal and external corrosion protections having a honed cylinder surface for longer life and a lower coefficient of friction.
9. Modular preloaded spring cartridges designed with coated springs for simple range versatility, greater safety and corrosion resistance.
10. Selected high quality bearings and seals that provide a wide operating temperature range, low friction, and high cycle life.
11. Internal and external stainless steel fasteners for long term corrosion resistance.
12. Multifunctional position indicator for visual position indication, and a direct, easy, economical way to mount popular sensors.



RANGE OF OPTIONS, QUALITY MANUFACTURING, AND ACCESSORIES

RANGE OF OPTIONS

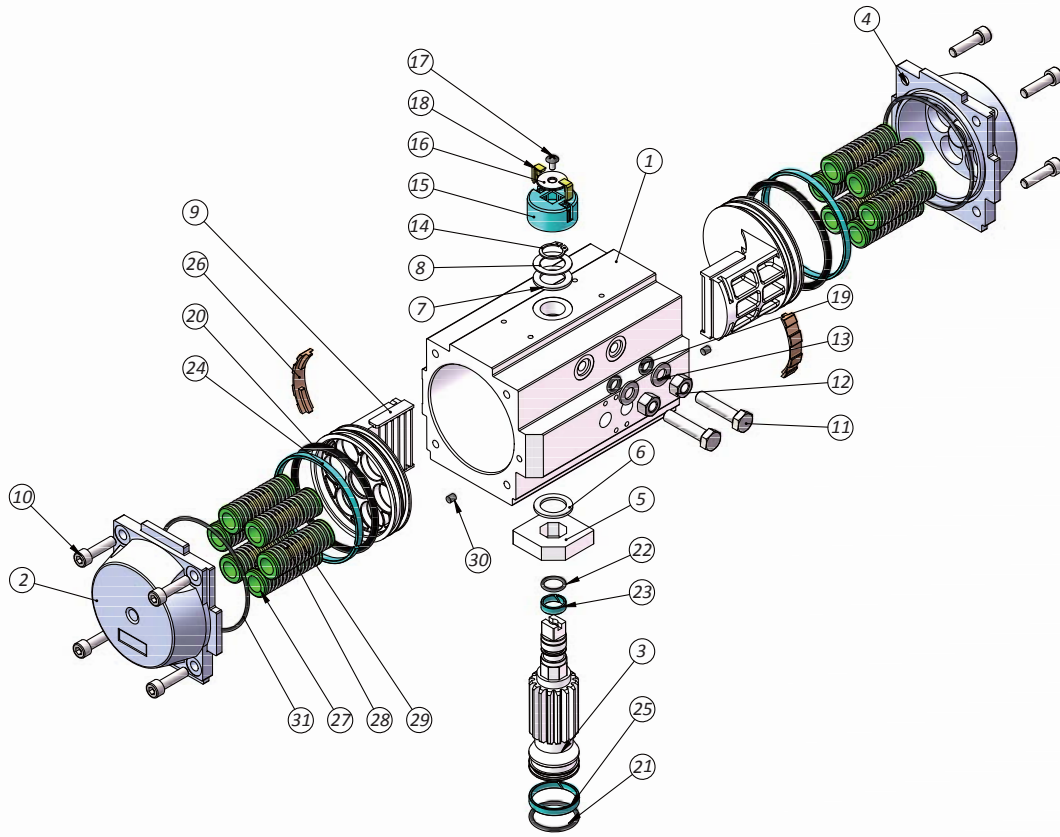
- A. Stainless steel 304 or 316 drive shafts are available on request for all sizes no matter the type of corrosion protection selected.
- B. For extremely high or low temperature applications, all models may be equipped with FPM or Silicon O rings along with an Fluid Supply tested and certified suitable lubricant.
- C. Other than the standard double square bottom drive shaft connection, we can supply a keyed drive connection, a flat head connection or a special personalized drive connection.

QUALITY MANAGEMENT

- Production conforms to ISO9001.
- Each individual actuator has been factory inspected and tested and given a serial number for full traceability.
- Each individual actuator is individually packed in a special cardboard carton for protection, with a product description label for easy identification and includes installation, operation and maintenance instructions.

ACCESSORIES AVAILABLE

- Different Square reductions suitable for drive shaft
- Centering rings for all sizes
- Brackets
- Couplings
- Solenoid valves
- Switch boxes
- Proximity switches
- Gear boxes
- Positioners



Item Number	Part Description	Material Quality	QTY	Item Number	Part Description	Material Quality	QTY	Item Number	Part Description	Material Quality	QTY
1	Body	Aluminium alloy	1	12	Nut(stop screw)	Stainless steel	2	23	Bearing(pinion top)	POM+PTFE	1
2	Left End cap	Aluminium alloy	1	13	Washer (stop screw)	Stainless steel	2	24	Bearing(pinion head)	POM+PTFE	2
3	Drive shaft	Alloy Steel	1	14	Spring clip	Spring steel	1	25	Bearing(pinion bottom)	POM+PTFE	1
4	Right end cap	Aluminium alloy	1	15	Position indicator	Nylon	1	26	Wear band	Nylon	2
5	OCTI-CAM	Alloy Steel	1	16	Indicator thrust bearing	Stainless steel	1	27	Spring seat	Nylon	24
6	Thrust bearing (pinion top)	POM+PTFE	1	17	Cap screw	Stainless steel	1	28	Spring	High-carbon steel	12
7	Thrust bearing	POM+PTFE	1	18	Color code	Nylon	2	29	Straining beam	Copper pipe	12
8	Thrust washer	Stainless steel	1	19	*o* ring(stop screw)	NBR	2	30	Plug	NBR	2
9	Piston	Aluminium alloy	2	20	*o* ring(piston)	NBR	2	31	*o* ring(end cap)	NBR	2
10	Cap screw (end cap)	Stainless steel	8	21	*o* ring(pinion bottom)	NBR	1				
11	Stop top screw	Stainless steel	2	22	*o* ring(pinion top)	NBR	1				

TECHNICAL DATA(METRIC UNIT)

Model TypeA	DA032		DA050		DA065		DA075		DA085		DA095		DA110		DA125		DA140		DA160		DA190		DA210		DA240		DA270		DA300		DA350		DA400	
	D	S	D	S	D	S	D	S	D	S	D	S	D	S	D	S	D	S	D	S	D	S	D	S	D	S	D	S	D	S	D	S		
Diameter (mm)	32	50	65	75	85	95	110	125	140	160	190	210	240	270	300	350	400																	
Air Volume Opening(L)	0.03	0.09	0.19	0.30	0.44	0.88	0.83	1.41	1.76	2.85	4.75	6.60	11.40	15.80	19.09	27.65	42.81																	
Air Volume Closing(L)	0.04	0.15	0.32	0.50	0.66	1.17	1.27	2.13	2.72	4.08	7.20	10.29	15.10	18.80	28.23	44.10	62.05																	
Opening Time (sec)	0.3	0.3	0.9	0.4	0.9	0.4	0.9	0.9	1.0	0.9	1.4	0.9	1.4	1.3	2.4	1.3	2.8	2.0	4.8	2.2	2.4	2.9	3.4	3.2	3.8	4.4	5.0	5.0	6.0	6.2	7.4	7.5	9.6	
Closing Time (sec)	0.4	0.4	0.7	0.4	0.8	0.4	0.9	0.9	1.2	1.0	1.4	1.0	1.6	1.4	2.4	1.4	3.0	2.4	4.9	2.6	3.0	3.8	4.1	3.7	4.0	4.9	5.5	6.0	6.8	7.2	8.4	8.5	10.6	
Weight (Kg)hal	0.47	0.59	1.13	1.25	1.97	2.21	2.93	3.29	3.78	4.26	5.14	5.86	6.09	7.17	10.86	12.54	13.77	15.93	20.15	23.75	28.41	33.81	40.03	48.43	52.6	77.76	73.64	90.6	108	135.6	146.7	188.1	220.5	283.5

1. For model 32-160

(1)Room temperature (2)Actuator stroke 90° (3)Solenoid valve with orifice of 4 mm and a flow capacity Qn400L/min (4)Inside pipe diameter 6 mm (5)Medium clean air (6)Air supply pressure 5.5 bar (7)Actuator without external resistance load

2. For model 190-400

(1)Room temperature (2)Actuator stroke 90° (3)Solenoid valve with orifice of 12 mm and a flow capacity Qn5100L/min (4)Inside pipe diameter 8 mm (5)Medium clean air (6)Air supply pressure 5.5 bar (7)Actuator without external resistance load

Cautions: obviously on the field applications when one or more of the above parameter are different, the moving time will be different

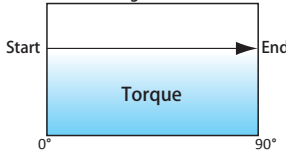
Air consumption rest with air supply, air volume and action cycle times. Expressions:

$$L/min = \text{Air volume}(\text{opening air volume} + \text{closing air volume}) \times \left[\frac{\text{Air Supply}(Kpa) + 101.3}{101.3} \right] \times \text{Action times}(\text{min})$$

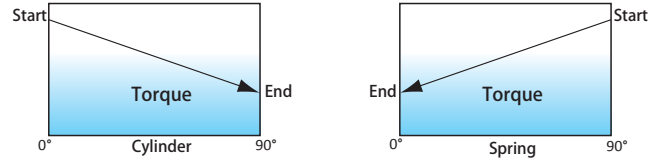
METRIC TORQUE RATINGS



Torque diagram double acting actuators



Torque diagram single acting actuators



DOUBLE ACTING TORQUE RATINGS IN Nm

Model	Supply Pressure (Unit:bar)									
	2.5	3	3.5	4	4.5	5	5.5	6	7	8
DA032	2.9	3.4	4.0	4.6	5.3	5.9	6.5	7.1	8.3	9.5
DA050	8.6	10.4	12.3	14.2	16.0	17.9	19.8	21.6	25.4	29.1
DA065	17.4	21.2	25.0	28.7	32.5	36.3	40.1	43.9	51.4	59.0
DA075	27.0	32.9	38.8	44.7	50.5	56.4	62.3	68.2	79.9	91.7
DA085	39.7	48.3	56.9	65.6	74.2	82.8	91.4	100.1	117.3	134.6
DA095	55.7	67.9	80.0	92.1	104.2	116.4	128.5	140.6	164.8	189.1
DA110	72.0	89.3	105.0	120.6	136.3	152.0	167.6	183.3	214.6	245.9
DA125	128.7	159.5	187.5	215.4	243.4	271.4	299.4	327.4	383.3	439.3
DA140	196	237	278	319	360	401	442	483	565	647
DA160	263.5	326.6	383.9	441.2	498.5	555.8	613.1	670.4	785.0	899.7
DA190	428.5	518.0	607.3	696.6	785.9	875.3	964.6	1053.9	1232.5	1411.1
DA210	598.2	723.2	847.9	972.6	1097.3	1222.0	1346.6	1471.3	1720.7	1970.1
DA240	928.3	1122.0	1315.0	1508.0	1702.0	1895.0	2089.0	2282.0	2669.0	3056.0
DA270	1305.0	1577.0	1849.0	2121.0	2393.0	2665.0	2937.0	3209.0	3753.0	4297.0
DA300	1678.6	2029.4	2379.3	2729.2	3079.1	3429.0	3778.9	4128.8	4828.5	5528.3
DA350	2492.5	3011.8	3531.1	4050.4	4569.6	5088.9	5608.2	6127.5	7166.0	8204.6
DA400	3798.1	4589.4	5380.7	6172.0	6963.3	7754.5	8545.8	9337.1	10919.7	12502.2

SINGLE ACTING TORQUE RATINGS IN Nm

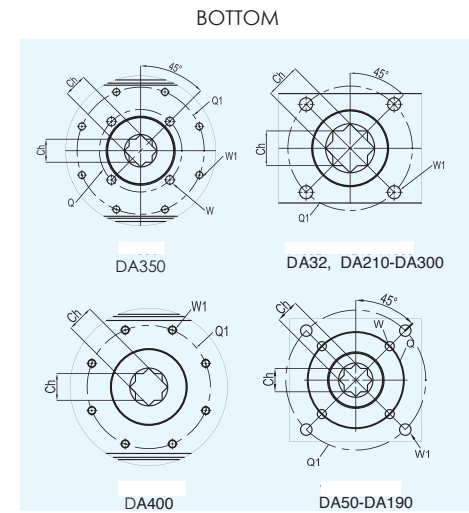
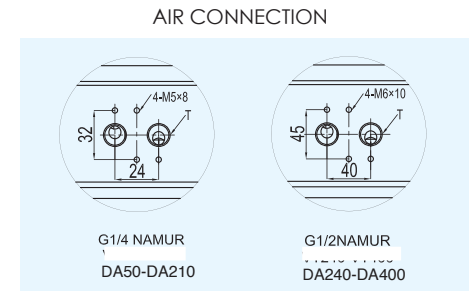
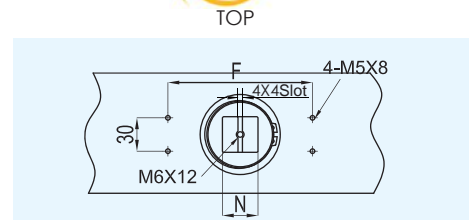
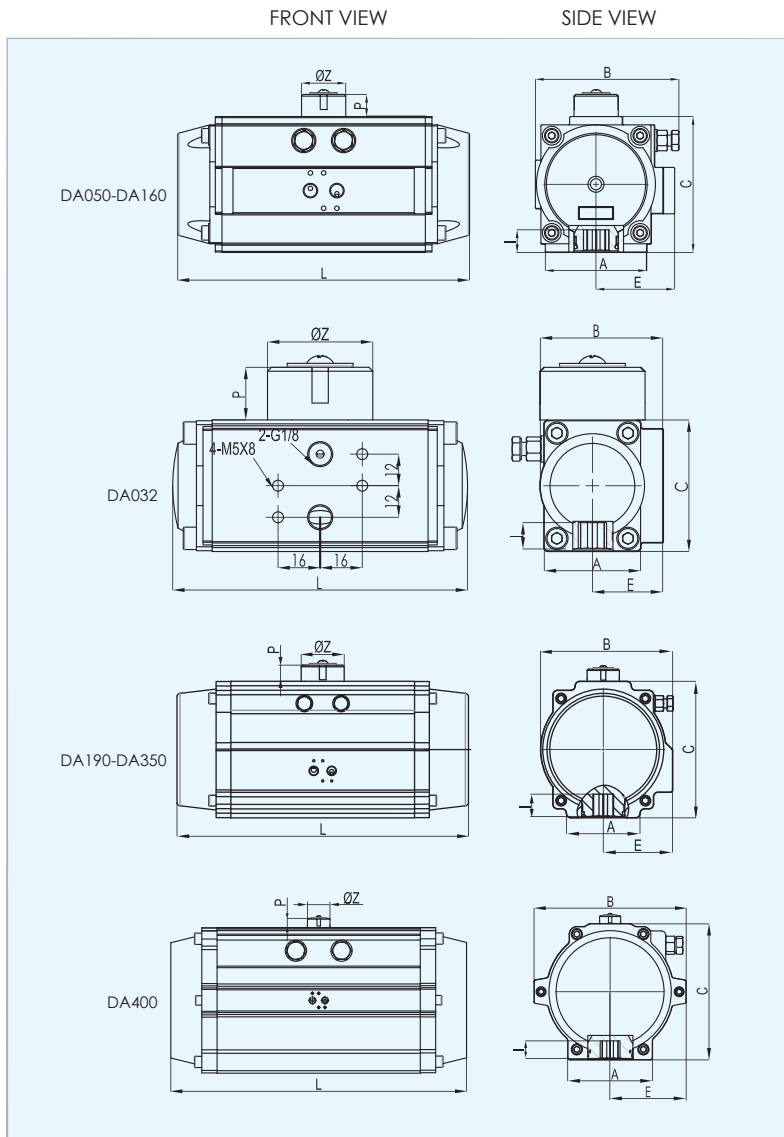
Model	Supply Pressure (Unit:bar)																		Spring stroke			
	2.5		3		3.5		4		4.5		5		5.5		6		7		8		90°	0°
	0°	90°	0°	90°	0°	90°	0°	90°	0°	90°	0°	90°	0°	90°	0°	90°	0°	90°				
DA050 S05	5.1	3.4	6.9	5.3	8.8	7.2	10.7	9.0	12.5	10.9	14.4	12.8	16.3	14.6	18.1	16.5	21.9	20.2	25.6	23.9	5.2	3.5
DA050 S06	4.4	2.4	6.2	4.3	8.1	6.1	10.0	8.0	11.8	9.9	13.7	11.7	15.6	13.6	17.4	15.5	21.2	19.2	24.9	22.9	6.2	4.2
DA050 S07			5.5	3.2	7.4	5.1	9.3	7.0	11.1	8.8	13.0	10.7	14.9	12.6	16.7	14.4	20.5	18.2	24.2	21.9	7.2	4.9
DA050 S08					6.7	4.1	8.6	5.9	10.4	7.8	12.3	9.7	14.2	11.5	16.0	13.4	19.8	17.1	23.5	20.9	8.2	5.6
DA050 S09							7.9	4.9	9.7	6.8	11.6	8.6	13.5	10.5	15.3	12.4	19.1	16.1	22.8	19.8	9.3	6.3
DA050 S10									9.0	5.7	10.9	7.6	12.8	9.5	14.6	11.3	18.4	15.1	22.1	18.8	10.3	7.0
DA050 S11											10.2	6.6	12.1	8.4	13.9	10.3	17.7	14.0	21.4	17.8	11.3	7.7
DA050 S12													11.4	7.4	13.2	9.3	17.0	13.0	20.7	16.7	12.4	8.4
DA065 S05	8.7	4.3	12.5	8.1	16.3	11.9	20.0	15.6	23.8	19.4	27.6	23.2	31.4	27.0	35.2	30.8	42.7	38.3	50.3	45.9	13.1	8.7
DA065 S06	7.0	1.7	10.7	5.5	14.5	9.2	18.3	13.0	22.1	16.8	25.9	20.6	29.7	24.4	33.4	28.2	41.0	35.7	48.6	43.3	15.7	10.4
DA065 S07			9.0	2.8	12.8	6.6	16.6	10.4	20.4	14.2	24.1	18.0	27.9	21.8	31.7	25.5	39.3	33.1	46.8	40.7	18.3	12.2
DA065 S08					11.0	4.0	14.8	7.8	18.6	11.6	22.4	15.4	26.2	19.1	30.0	22.9	37.5	30.5	45.1	38.1	21.0	13.9
DA065 S09							13.1	5.2	16.9	9.0	20.7	12.7	24.4	16.5	28.2	20.3	35.8	27.9	43.4	35.4	23.6	15.7
DA065 S10									15.1	6.3	18.9	10.1	22.7	13.9	26.5	17.7	34.0	25.2	41.6	32.8	26.2	17.4
DA065 S11											17.2	7.5	21.0	11.3	24.7	15.1	32.3	22.6	39.9	30.2	28.8	19.1
DA065 S12													19.2	8.7	23.0	12.4	30.6	20.0	38.1	27.6	31.4	20.9
DA075 S05	16.3	10.2	22.2	16.0	28.1	21.9	34.0	27.8	39.8	33.7	45.7	39.6	51.6	45.4	57.5	51.3	69.2	63.1	81.0	74.8	16.9	10.7
DA075 S06	14.2	6.8	20.1	12.7	25.9	18.6	31.8	24.4	37.7	30.3	43.6	36.2	49.4	42.1	55.3	47.9	67.1	59.7	78.8	71.4	20.2	12.8
DA075 S07			17.9	9.3	23.8	15.2	29.7	21.1	35.6	26.9	41.4	32.8	47.3	38.7	53.2	44.6	64.9	56.3	76.7	68.1	23.6	15.0
DA075 S08					21.7	11.8	27.5	17.7	33.4	23.6	39.3	29.4	45.2	35.3	51.0	41.2	62.8	53.0	74.5	64.7	27.0	17.1
DA075 S09							25.4	14.3	31.3	20.2	37.1	26.1	43.0	32.0	48.9	37.8	60.7	49.6	72.4	61.3	30.3	19.3
DA075 S10									29.1	16.8	35.0	22.7	40.9	28.6	46.8	34.5	58.5	46.2	70.3	58.0	33.7	21.4
DA075 S11											32.9	19.3	38.7	25.2	44.6	31.1	56.4	42.8	68.1	54.6	37.1	23.5
DA075 S12													36.6	21.8	42.5	27.7	54.2	39.5	66.0	51.2	40.4	25.7
DA085 S05	23.2	13.7	31.8	22.3	40.4	30.9	49.0	39.5	57.6	48.1	66.3	56.8	74.9	65.4	83.5	74.0	100.8	91.3	118.0	108.5	26.1	16.6
DA085 S06	19.8	8.4	28.4	17.0	37.1	25.7	45.7	34.3	54.3	42.9	62.9	51.5	71.6	60.2	80.2	68.8	97.4	86.0	114.7	103.3	31.3	19.9
DA085 S07			25.1	11.8	33.8	20.5	42.4	29.1	51.0	37.7	59.6	46.3	68.3	55.0	76.9	63.6	94.1	80.8	111.4	98.1	36.5	23.2
DA085 S08					30.4	15.2	39.1	23.9	47.7	32.5	56.3	41.1	64.9	49.7	73.6	58.4	90.8	75.6	108.1	92.9	41.7	26.5
DA085 S09							35.8	18.7	44.4	27.3	53.0	35.9	61.6	44.5	70.3	53.2	87.5	70.4	104.8	87.7	46.9	29.8
DA085 S10									41.1	22.1	49.7	30.7	58.3	39.3	67.0	48.0	84.2	65.2	101.5	82.5	52.1	33.1
DA085 S11											46.4	25.5	55.0	34.1	63.6	42.7	80.9	60.0	98.1	77.2	57.3	36.4
DA085 S12													51.7	28.9	60.3	37.5	77.6	54.8	94.8	72.0	62.5	39.7
DA095 S05	33.6	20.9	45.8	33.0	57.9	45.1	70.0	57.3	82.1	69.4	94.3	81.5	106.4	93.6	118.5	105.8	142.7	130.0	167.0	154.2	34.9	22.1
DA095 S06	29.2	13.9	41.4	26.1	53.5	38.2	65.6	50.3	77.7	62.4	89.8	74.5	102.0	86.7	114.1	98.8	138.3	123.0	162.6	147.3	41.8	26.5
DA095 S07			36.9	19.1	49.1	31.2	61.2	43.3	73.3	55.4	85.4	67.6	97.5	79.7	109.7	91.8	133.9	116.1	158.1	140.3	48.8	30.9
DA095 S08					44.6	24.2	56.8	36.4	68.9	48.5	81.0	60.6	93.1	72.7	105.2	84.8	129.5	109.1	153.7	133.3	55.8	35.4
DA095 S09							52.3	29.4	64.5	41.5	76.6	53.6	88.7	65.8	100.8	77.9	125.1	102.1	149.3	126.4	62.7	39.8
DA095 S10									60.0	34.5	72.2	46.7	84.3	58.8	96.4	70.9	120.6	95.1	144.9	119.4	69.7	44.2
DA095 S11											67.7	39.7	79.9	51.8	82.0	63.9	116.2	88.2	140.5	112.4	76.7	48.6
DA095 S12													75.4	44.8	97.6	57.0	111.8	81.2	136.0	105.4	83.6	53.0
DA110 S05	43.4	26.2	60.7	43.4	76.4	59.1	92.0	74.8	107.7	90.4	123.4	106.1	139.0	121.8	154.7	137.4	186.0	168.8	217.3	200.1	45.9	28.6
DA110 S06	37.7	17.0	55.0	34.3	70.6	49.9	86.3	65.6	102.0	81.3	117.6	96.9	133.3	112.6	149.0	128.3	180.3	159.6	211.6	190.9	55.0	34.3
DA110 S07			49.3	25.1	64.9	40.8	80.6	56.4	96.2	72.1	111.9	87.8	127.6	103.4	143.2	119.1	174.6	150.4	205.9	181.8	64.2	40.0
DA110 S08					59.2	31.6	74.9	47.3	90.5	62.9	106.2	78.6	121.9	94.3	137.5	109.9	168.9	141.3	200.2	172.6	73.4	45.8
DA110 S09							69.1	38.1	84.8	53.8	100.5	69.4	116.1	85.1	131.8	100.8	163.1	132.1	194.5	163.4	82.5	51.5
DA110 S10									79.1	44.6	94.8	60.3	110.4	75.9	126.1	91.6	157.4	122.9	188.7	154.2	91.7	57.2
DA110 S11											89.0	51.1	104.7	66.7	120.4	82.4	151.7	113.7	183.0	145.1	100.9	62.9
DA110 S12													99.0	57.6	114.6	73.2	146.0	104.6	177.3	135.9	110.0	68.6

METRIC TORQUE RATINGS



SINGLE ACTING TORQUE RATINGS IN Nm

Model	Supply Pressure (Unit: bar)																				Spring stroke	
	2.5		3		3.5		4		4.5		5		5.5		6		7		8			
	0°	90°	0°	90°	0°	90°	0°	90°	0°	90°	0°	90°	0°	90°	0°	90°	0°	90°	0°	90°	90°	0°
DA125 S05	77.7	48.2	108.5	78.9	136.5	106.9	164.4	134.9	192.4	162.9	220.4	190.9	248.4	218.8	276.4	246.8	332.3	302.8	388.3	358.7	80.6	51.0
DA125 S06	67.5	32.0	98.3	62.8	126.3	90.8	154.2	118.8	182.2	146.8	210.2	174.7	238.2	202.7	266.2	230.7	322.1	286.7	378.1	342.6	96.7	61.2
DA125 S07			88.1	46.7	116.1	74.7	144.0	102.7	172.0	130.7	200.0	158.6	228.0	186.6	256.0	214.6	311.9	270.6	367.9	326.5	112.8	71.4
DA125 S08					105.9	58.6	133.8	86.6	161.8	114.5	189.8	142.5	217.8	170.5	245.8	198.5	301.7	254.4	357.7	310.4	128.9	81.6
DA125 S09							123.6	70.5	151.6	98.4	179.6	126.4	207.6	154.4	235.6	182.4	291.5	238.3	347.5	294.3	145.0	91.8
DA125 S10									141.4	82.3	169.4	110.3	197.4	138.3	225.4	166.3	281.3	222.2	337.3	278.2	161.1	102.0
DA125 S11											159.2	94.2	187.2	122.2	215.2	150.2	271.1	206.1	327.1	262.1	177.2	112.2
DA125 S12													177.0	106.1	205.0	134.0	260.9	190.0	316.9	246.0	193.3	122.4
DA140 S05	114.2	74.1	155.1	115	196.1	156	237.0	196.9	277.9	237.8	318.8	278.7									122.4	82.3
DA140 S06	97.7	49.6	138.7	90.6	179.6	131.5	220.5	172.4	261.5	213.3	302.4	254.3	343.3	295.2							146.8	98.7
DA140 S07			122.2	66.1	163.2	107.0	204.1	147.9	245.0	188.9	285.9	229.8	326.9	270.7	367.8	311.6					171.3	115.2
DA140 S08					146.7	82.5	187.6	123.5	228.6	164.4	269.5	205.3	310.4	246.2	351.3	287.2	433.2	369.0			195.8	131.6
DA140 S09							171.2	99.0	212.1	139.9	253.0	180.9	294.0	221.8	334.9	262.7	416.7	344.6	498.6	426.4	220.2	148.1
DA140 S10									195.7	115.5	236.6	156.4	277.5	197.3	318.4	238.2	400.3	320.1	482.1	401.9	244.7	164.5
DA140 S11											220.1	131.9	261.1	172.8	302.0	213.8	383.8	295.6	465.7	377.5	262.9	181.0
DA140 S12													244.6	148.4	285.5	189.3	367.4	271.1	449.2	353.0	293.6	197.4
DA160 S05	153.5	101.3	216.6	164.4	273.9	221.7	331.2	279.0	388.5	336.3	445.8	393.6	503.1	450.9	560.4	508.2	675.0	622.8	789.7	737.4	162.3	110.0
DA160 S06	131.5	68.8	194.6	131.9	251.9	189.2	309.2	246.5	366.5	303.8	423.8	361.1	481.1	418.4	538.4	475.7	653.0	590.3	767.7	705.0	194.7	132.0
DA160 S07			172.6	99.5	229.9	156.8	287.2	214.1	344.5	271.4	401.8	328.7	459.1	386.0	516.4	443.3	631.0	557.9	745.7	672.5	227.2	154.0
DA160 S08					207.9	124.3	265.2	181.6	322.5	238.9	379.8	296.2	437.1	353.5	494.4	410.8	609.0	525.4	723.7	640.1	259.6	176.0
DA160 S09							243.2	149.2	300.5	206.5	357.8	263.8	415.1	321.1	472.4	378.4	587.0	493.0	701.7	607.6	292.1	198.0
DA160 S10									278.5	174.0	335.8	231.3	393.1	288.6	450.4	345.9	565.0	460.5	679.7	575.2	324.5	220.0
DA160 S11											313.8	198.9	371.1	256.2	428.4	313.5	543.0	428.1	657.7	547.2	357.0	242.0
DA160 S12													349.1	223.7	406.4	281.0	521.0	395.6	635.7	510.3	389.4	264.0
DA190 S05	246.8	167.4	336.3	256.9	425.6	346.2	514.9	435.5	604.2	524.8	693.5	614.1									261.2	181.8
DA190 S06	210.4	115.1	299.9	204.6	389.2	293.9	478.5	383.3	567.8	472.6	657.2	561.9	746.5	651.2							313.4	218.1
DA190 S07			263.6	152.4	352.9	241.7	442.2	331.0	531.5	420.3	620.8	509.6	710.1	599.0	799.4	688.3					365.6	254.5
DA190 S08					316.5	189.5	405.8	278.7	495.1	368.1	584.5	457.4	673.8	546.7	779.5	636.0	941.7	814.7			417.8	290.8
DA190 S09							369.5	226.6	458.8	315.9	548.1	405.2	637.4	494.5	745.2	583.8	905.3	762.4	1084.0	941.1	470.1	327.2
DA190 S10									422.4	263.6	511.8	353.0	601.1	442.3	710.9	531.6	869.0	710.2	1047.6	888.8	522.3	363.5
DA190 S11											475.4	300.7	564.7	390.0	676.6	479.3	832.6	658.0	1011.3	836.6	574.5	399.9
DA190 S12													528.4	337.8	642.3	427.1	796.3	605.7	974.9	784.4	628.8	436.8
DA210 S05	352.8	239.1	477.8	364.1	602.5	488.8	727.2	613.5	851.9	738.2	976.6	862.9	1101.2	987.5	1225.9	1112.2	1475.3	1361.6	1724.7	1611.0	359.1	245.4
DA210 S06	303.7	167.3	428.7	292.3	553.4	417.0	678.1	541.7	802.8	666.4	927.5	791.0	1052.2	915.7	1176.9	1040.4	1426.2	1289.8	1675.6	1539.2	430.9	294.5
DA210 S07			379.6	220.5	504.3	345.2	629.0	469.8	753.7	594.5	878.4	719.2	1003.1	843.9	1127.8	968.6	1377.2	1218.0	1626.5	1467.4	502.7	343.6
DA210 S08					455.3	273.3	579.9	398.0	704.6	522.7	829.3	647.4	954.0	772.1	1078.7	896.8	1328.1	1146.2	1577.5	1395.5	574.6	392.6
DA210 S09							530.9	326.2	655.6	450.9	780.2	575.6	904.9	700.3	1029.6	825.0	1279.0	1074.3	1528.4	1323.7	646.4	441.7
DA210 S10									606.5	379.1	731.2	503.8	855.8	628.4	980.5	753.1	1229.9	1002.5	1479.3	1251.9	718.2	490.8
DA210 S11											682.1	431.9	806.8	556.6	931.5	681.3	1180.9	930.7	1430.2	1180.1	790.0	539.9
DA210 S12													757.7	484.8	882.4	609.5	1131.8	858.9	1381.1	1108.3	861.8	589.0
DA240 S05	517.8	374.3	711.2	567.7	904.6	761.1	1098.0	954.5	1291.4	1147.9	1484.8	1341.3									554.0	410.5
DA240 S06	435.7	263.5	629.1	456.9	822.5	650.3	1015.9	843.7	1209.3	1037.1	1402.7	1230.5	1596.1	1423.9							664.8	492.6
DA240 S07			547.0	346.1	740.4	539.5	933.8	732.9	1127.2	926.3	1320.6	1119.7	1514.0	1313.1	1707.4	1506.5					775.6	574.7
DA240 S08					658.3	428.7	851.7	622.1	1045.1	815.5	1238.5	1008.9	1431.9	1202.3	1625.3	1395.7	2012.1	1782.5			886.4	656.8
DA240 S09							769.6	511.3	963.0	704.7	1156.4	898.1	1349.8	1091.5	1543.2	1284.9	1930.0	1671.7	2316.8	2058.5	997.2	738.9
DA240 S10									880.9	593.9	1074.3	787.3	1267.7	980.7	1461.1	1174.1	1847.9	1560.9	2234.7	1947.7	1108.0	821.0
DA240 S11											992.2	676.5	1185.6	869.9	1379.0	1063.3	1765.8	1450.1	2152.6	1836.9	1218.8	903.1
DA240 S12													1103.5	759.1	1296.9	952.5	1683.7	1339.3	2070.5	1726.1	1329.6	985.2
DA270 S05	745.9	519.4	1017.9	791.4	1289.9	1063.4	1561.8	1335.3	1833.8	1607.3	2105.7	1879.2									786.0	559.5
DA270 S06	634.0	362.2	906.0	634.2	1178.0	906.2	1449.9	1178.1	1721.9	1450.1	1993.8	1722.0	2265.8	1994.0							943.2	671.4
DA270 S07			794.1	477.0	1166.1	749.0	1338.0	1020.9	1610.0	1292.9	1881.9	1564.8	2153.9	1836.8	2425.9	2108.8					1100.4	783.3
DA270 S08					954.2	591.8	1226.1	863.7	1498.1	1135.7	1770.0	1407.6	2040.0	1679.6	2314.0	1951.6	2857.9	2495.5			1257.6	895.2
DA270 S09							1114.2	706.5	1386.2	978.5	1580.4	1250.4	1930.1	1522.4	2202.1	1794.4	2746.0	2338.3	3289.9	2882.2	1414.8	1007.1
DA270 S10									1274.3	821.3	1546.2	1093.2	1818.2	1365.2	2090.2	1637.2	2634.1	2181.1	3178.0	2725.0	1572.0	1119.0
DA270 S11											1434.3	936.0	1706.3	1208.0	1978.3	1480.0	2522.2	2023.9	3066.1	2567.8	1729.2	



MODEL	A	B	C	L	E	F	P	ØZ	N	I	FLANGE	Q	Q1	W	W1	Ch	T
DA032	37	47	50	110	27	50	20	40	10	10	F03	-	36	-	M5x9	9x9	G1/8"
DA050	45	70.5	70	154	41.5	80	20	40	10	12	F03/05	36	50	M5x7.5	M6x9	11x11	G1/4"
DA065	62	89.5	89	189	51.5	80	20	40	10	16	F05/07	50	70	M6x9	M8x12	14x14	G1/4"
DA075	68	102.5	100	210	59	80	20	40	14	16	F05/07	50	70	M6x9	M8x12	14x14	G1/4"
DA085	68	112.5	113	229	63.5	80	20	40	14	19	F05/07	50	70	M6x9	M8x12	17x17	G1/4"
DA095	92	126	123	264	71	80	20	40	14	19	F05/07	50	70	M6x9	M8x12	17x17	G1/4"
DA110	93	138.5	136	266	76.5	80	20	40	14	19	F07/10	70	102	M8x12	M10x15	17x17	G1/4"
DA125	96	157	161	337	85	80	30	56	22	25	F07/10	70	102	M8x12	M10x15	22x22	G1/4"
DA140	110	178	178	377	97	80	30	56	22	31	F10/12	102	125	M10x15	M12x18	27x27	G1/4"
DA160	112	196	200	412	106	130	30	56	22	31	F10/12	102	125	M10x15	M12x18	27x27	G1/4"
DA190	136	216.5	232	488	112	130	30	56	22	41	F10/14	102	140	M10x15	M16x24	36x36	G1/4"
DA210	140	235.5	255	550	120	130	30	80	32	40	F14	-	140	-	M16x24	36x36	G1/4"
DA240	159	262	292	602	131	130	30	80	32	50	F16	-	165	-	M20x28	46x46	G1/2"
DA270	159	295	331	672	147.5	130	30	80	32	50	F16	-	165	-	M20x28	46x46	G1/2"
DA300	180	335	354	784	173	130	30	80	32	50	F16	-	165	-	M20x28	46x46	G1/2"
DA350	270	385	410	845	195	130	30	80	32	50	F16/F25	165	254	M20x28	M16x30	46x46	G1/2"
DA400	290	520	466	956	260	130	30	80	32	60	F25	-	254	-	M16x30	55x55	G1/2"

MODEL	TYPE	SPRING QTY	FLANGE	SQURE	OPTION	SEALING PART
DA032	D=DOUBLE ACTING S=SPRING RETURN	ONLY FOR SPRING REST 4 5 6 7 8 9 10 11 12	F03	9×9	CAP COLOR RAL ■ 7046 ■ 9004 ■ 5021 ■ 3020 ■ 6002 ■ 5015 TYPE OF BODY P Smooth Surface + hard Anodized S Sandblasted Surface + hard Anodized (Color: Grey) H Sandblasted Surface + hard Anodized (Color: Dark Grey) F Sandblasted Surface + hard Anodized + PTFE Coated	STANDARD NITRILE RUBBER -15°C+80°C HT FLUORORUBBER (FOR HIGH TEMPERATURE) -15°C+150°C LT SILASTIC (FOR LOW TEMPERATURE) -40°C+80°C
DA050			F03/05	11×11		
DA065			F05/07	14×14		
DA075			F05/07	14×14		
DA085			F05/07	17×17		
DA095			F05/07	17×17		
DA110			F07/10	17×17		
DA125			F07/10	22×22		
DA140			F10/12	27×27		
DA160			F10/12	27×27		
DA190			F10/14	36×36		
DA210			F14	36×36		
DA240			F16	46×46		
DA270			F16	46×46		
DA300			F16	46×46		
DA350			F16/25	46×46		
DA400			F25	55×55		

Note:

- The standard rotation of double acting and spring return is clockwise to close (for double acting when port 4 is pressurised).
- The standard temperature of sealing part is -15°C to 80°C, if high temperature or low temperature required, relevant sealing parts can be used.
- All technical parameters of products please refer to this catalog. Customization for special requirement is available. Please contact the sales.
- Customization including but not limited to the items below:
 - Color combination.
 - Flange and Square custom made.
 - Higher protection level.

Model Selection Example:

Example 1: DA095D F07/10 17 P7046

Description: Actuator model DA095, double acting, ISO flange F07&F10, 17 mm bottom square with standard indicator, P body, cap color grey (RAL7046), nitrile rubber sealing.

Example 2: DA190S12 F10/14 36 S5021HT

Description: Actuator model DA190, single acting spring return, with 12 springs, ISO flange F10&F14, 36 mm bottom square, S body, cap color green (RAL5021), fluororubber sealing.