

PNEUMATIC ACTUATOR

New DR/SC-Series 00015 to 05000



ISO9001-2000认证

shst

MADE IN SHANGHAI CHINA



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New Pneumatic Valve Actuator of Series DR/SC

The new dr/sc pneumatic actuator of rack and gear wheel type is manufactured by shanghai shst meter valve co., ltd adopting the latest technique both home and abroad. Cad based 3d modeling is also applied to optimize the design of the products and to make innovation on the design as well. The aspect of the product is modern, compact and good looking. Built with new materials and new process, the quality of the products could be guaranteed as well as the performance. Moreover more types of products are available to benefit customers. All the products are completely designed and manufactured in according to the latest international standard specification of technology to meet the requirement now and in future.



- ① The rack, gear wheel and the two pistons are designed in symmetric structure to perform stably and rapidly with high accuracy and high power output. The rotation in the inverse direction can be performed by simply changing the assembling location of the pistons.
- ② The extruded cylinder body is made of high quality stainless steel with fine machined socket and hard anodized outer surface (teflon coat + anodisation would be provided at special occasion) to prolong the service life and lower the coefficient of friction.
- ③ One-piece design is adopted. All type of single acting actuators and double acting actuators are provided with same cylinder body and end cap. The acting module could be easily changed by installing or demounting springs.
- ④ Combined preload security group spring could be mounted or increased/decreased easily and safely during assembling or during in field usage.
- ⑤ The two sole adjusting screws at the side surface of the actuator which has been already installed on the valve could make the adjustment of location of the valve opening and closing more convenient and accurate. The special adjusting screws which are much longer would be provided if full stroke adjustment is needed.
- ⑥ Multifunctional location indicator, in field visible indicator and standard socket in accordance to VDI/VDE3845, NAMUR could be installed and export all the accessories such as limit switch cabinet, electric localizer and position sensor (JEELON, P+F, Turck).
- ⑦ The air supply interface is built according to NUMAR criterion. To the interface the NUMAR solenoid valve can be installed directly.
- ⑧ The composite material made bearing shell at the back of the rack, the deflector ring of the pistons as well as the bearing shaft of the output shaft are provided with more lubrication to protect them against the metal-metal friction. Thus, a prolong service life and the low friction could be guaranteed.
- ⑨ All the fasteners are made of stainless steel to be resistant to corrosion for a long time.
- ⑩ The pontes are built in according to latest version of ISO5211, DIN3337 (F03-F25) to guarantee the interchangeability and versatility of the products.

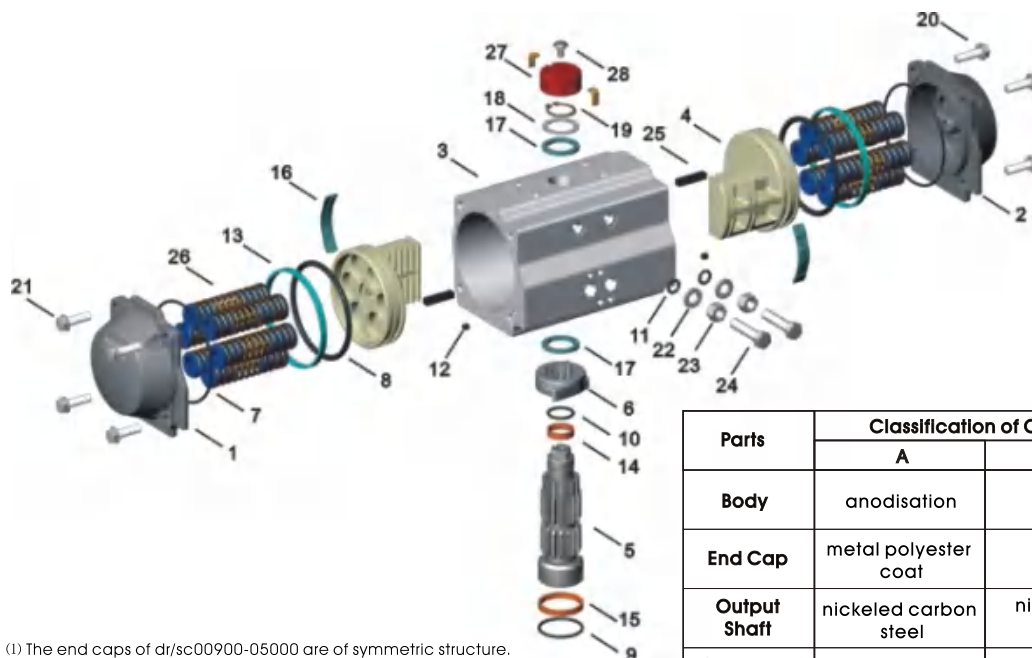
Type catalogue

DR 00150-090-F10-P22-10-HT-A

	classification of corrosion protection: A,B
	Operating Temperature:
	ST= standard temperature (nbr o-ring -20°C to +80°C)
	HT= high temperature (fpm o-ring -15°C to +150°C)
	LT= low temperature (silicon o-ring -40°C to +80°C)
	springs at two ends: 5-12 (SC, SO types only)
	The Size of Outlet for the Output Shaft:
	LD= parallel bevel delivery outlet
	H = parallel subtense delivery outlet
	W = two key grooves delivery outlet
	Connection Size:
	in accordance to ISO5211 (F03-F25)
	Rotate Angle:
	90°/120°/180° rotate angle
	0°-90°/0°-180° full stroke mechanical adjustment
	3p-0°-45°-90°/3p-0°-90°-180° 3-position
	Specification:
	specification for actuator 00015-05000
	Acting Module:
	DR=double acting, right-turning (CW)
	DL=double acting, left-turning (CCW)
	SC=single acting, spring to close (CW)
	SO=single acting, spring to open (CCW)



Components, Material and Corrosion Protection



(1) The end caps of dr/sc00900-05000 are of symmetric structure.

(2) 8 end cap screws are provided for dr/sc00015-02000

While 12 for dr/sc03000-05000.

* the recommended parts for repair including the parts in the box of spare parts

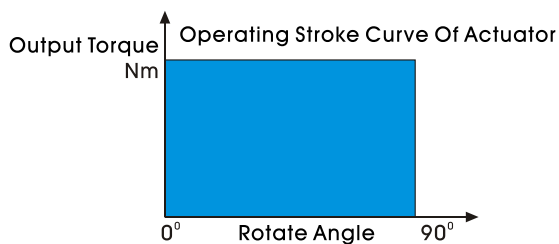
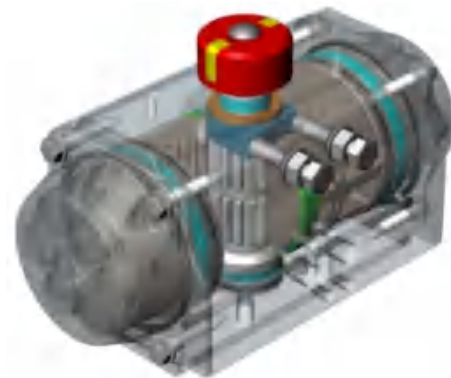
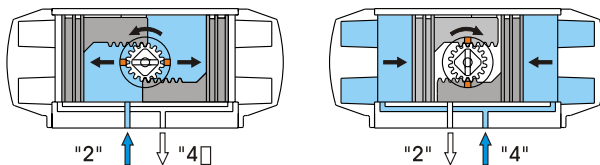
Parts	Classification of Corrosion Protection	
	A	B
Body	anodisation	PTFE coat + anodisation
End Cap	metal polyester coat	PTFE coat
Output Shaft	nickel carbon steel	nickel carbon steel or stainless steel
Operating Environment	normal occasion	normal occasion or environment with low concentration of the acidity

Code of The Parts	Number for Each type	Name of The Parts	Standard Material	Material Selection
01	1 ⁽¹⁾	left end cap	aluminium die-cast alloys	stainless steel
02	1 ⁽¹⁾	right end cap	aluminium die-cast alloys	stainless steel
03	1	cylinder body	extruded aluminum alloy	stainless steel
04	2	piston	aluminium die-cast alloys	-----
05	1	output shaft	carbon-steel	stainless steel
06	1	adjusting cam	stainless steel	-----
07 *	2	O-ring (end cap)	nitrile rubber	FPM or silicon rubber
08 *	2	O-ring (piston)	nitrile rubber	FPM or silicon rubber
09 *	1	O-ring (bottom of output shaft)	nitrile rubber	FPM or silicon rubber
10 *	1	O-ring (top of output shaft)	nitrile rubber	FPM or silicon rubber
11 *	2	O-ring (adjusting screw)	nitrile rubber	FPM or silicon rubber
12 *	2	stopper end (cylinder body)	nitrile rubber	FPM or silicon rubber
13 *	2	bearing shaft (pistons)	fluorocarbon	-----
14 *	1	bearing shaft(top of output shaft)	PA66	-----
15 *	1	bearing shaft(bottom of output shaft)	PA66	-----
16 *	1	pilot bearing (back of the piston)	PA66	-----
17 *	2	thrust bearing (output shaft)	PA66	-----
18	2	filler piece (output shaft)	PA66	-----
19	1	elastic collar	stainless steel	-----
20	8/12/16 ⁽²⁾	end cap screw	stainless steel	-----
21	8/12/16 ⁽²⁾	end cap filler piece	stainless steel	-----
22	2	filler piece	stainless steel	-----
23	2	screw cap	stainless steel	-----
24	2	adjusting screw	stainless steel	-----
25	2	guide pad	PA66 + 30%FG	-----
26	5-12	spring subassembly	alloy spring steel	-----
27	1	location indicator	PP + 30%GF	-----
28	1	screw	stainless steel	-----



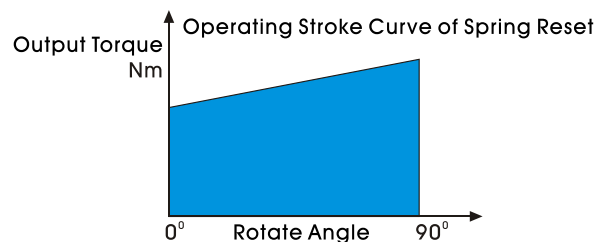
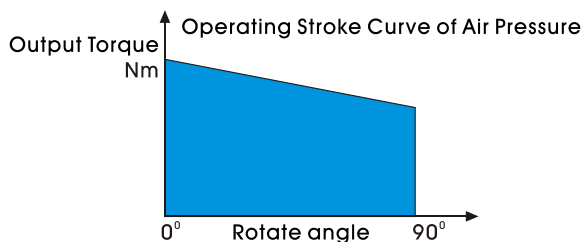
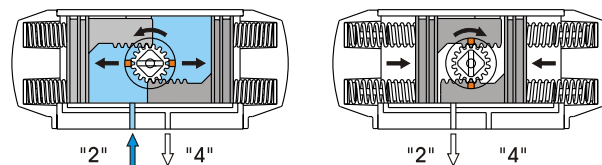
Operating Principle of DR(DL) Double Acting Type

The air source pressure comes into the cylinder body between the two pistons from air entrance (2) and pushes the pistons toward the end of the cylinder body. The air between the pistons and the ends of the cylinder body is released from air entrance (4). Meanwhile the racks of pistons rotate the output shaft anticlockwise (gear wheel) simultaneously, whereas if the air source pressure comes into the ends of the cylinder body from air entrance (4) and pushes the pistons toward each other with the air between two pistons released from air entrance (2), the output shaft (gear wheel) would be driven by the racks of the pistons simultaneously to rotate clockwise. (if the pistons are assembled in different direction from each other, the output shaft would turn out to rotate in inverse direction, namely the double acting reverse **DL** type)



Operating Principle of SC(SO) Single Acting Type

The air source pressure comes into the cylinder body between the two pistons from air entrance (2) and pushes the pistons toward the end of the cylinder body while the springs at each ends inside the cylinder body is forced to shrink with the air between the pistons and the ends of the cylinder body released from air entrance (4). in the meantime, the racks of pistons drive the output shaft (gear wheel) simultaneously to rotate anticlockwise. After the direction of the air source pressure is reversed by the solenoid valve, the springs at each end begin to reset and the pistons are forced toward each other by the elasticity with the air between two pistons released from air entrance (2). Meanwhile the output shaft (gear wheel) would be driven by the racks of the pistons simultaneously to rotate clockwise. (if the pistons are assembled in different direction from each other, the output shaft would turn out to rotate in inverse direction when the springs reset, namely the single acting reverse **SO** type)



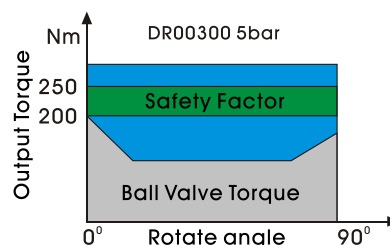


Pattern Selection of the Actuator

An increment should be added to the identified valve torque for safe when select the pattern of the pneumatic actuator. For vapor or non-lubricant liquor medium, the increment should be up to 25% of the valve torque, 30% for non-lubricant pasting liquor medium, 40% for non-lubricant dry air medium, 60% for non-lubricant particle medium delivered be air and 20% for lubricating clean medium with low friction respectively. (the safe increment above is recommended in theory for reference)

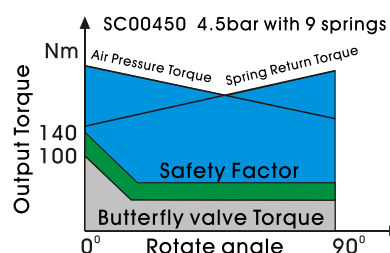
Sizing Example for Double-acting Actuator:

- * Published ball valve torque = 200 Nm
- * Operating medium = non-lubricated steam
- * Safety factor = 200 Nm + 25% = 250 Nm
- * Air supply pressure available = 5 bar
- * The double acting actuator that produces a minimum of 250 Nm at 5 bar is the DR00300 of 277 Nm according to the output torque table of the DR actuator.



Sizing of A Single-acting Actuator:

- * Published butterfly valve torque = 100Nm
- * Operating medium = non-lubricated dry air
- * Safety factor = 100Nm + 40% = 140Nm
- * Air supply pressure available = 4.5 bar
- * The spring return actuator selected is the SC00450 (9 springs) with a most similar ending torque of 148Nm at 4.5 bar according to the SC output torque table. (The relative balance of torques between air supply pressure and spring return should be noted.)



(A) The acting time of the actuator be tested under following conditions: (1) normal temperature (2) 90° stroke (3) caliber of the solenoid valve should be 4mm with the flow quantity of Qn400 L / min (4) inner diameter of the pipe should be 8mm (5) neutrally clean air (6) air source pressure at 5.5bar (7) actuator with no load
PS: The acting time would change as one or more variables change in field test.
(B) Suppose every SC actuator weighs as 10 springs, the increase/decrease weight of the actuator could be calculated by calculating the increase/decrease number of springs.

Relevant Data About The Actuator

TYPE	Max. Pressure	Rotate Angle	Operating Temperature	Stroke Adjustment per 1° laps	Diameter Φ (mm)	Ayr Volume(l)		Moving Time (sec)(A)		Weight (kg)(B)	
						Opening	Closing	Opening	Closing	Single	Spring
DR/SC00015	dry or lubricating clean compressed air 8bar	90° ± 4° or full stroke 0° ~ 90°	ST (standard) NBR O-ring -20 to +80 HT (high Temperature) FPM O-ring -15 to +150 LT (low Temperature) silicon O-ring -40 to +80	1/6	50	0.1	0.2	DR 0.2	DR 0.3	DR 1.1	-----
DR/SC00030				1/6	63	0.2	0.3	SC 0.3	SC 0.3	SC 1.2	0.01
DR/SC00060				1/5	75	0.3	0.5	DR 0.3	DR 0.3	DR 1.6	-----
DR/SC00100				1/5	88	0.5	0.8	SC 0.3	SC 0.4	SC 1.8	0.02
DR/SC00150				1/5	100	0.7	1.1	DR 0.3	DR 0.4	DR 2.8	-----
DR/SC00220				1/5	115	1.2	1.8	SC 0.4	SC 0.5	SC 3.2	0.03
DR/SC00300				1/4	125	1.5	2.3	DR 0.4	DR 0.5	DR 4.0	-----
DR/SC00450				1/4	145	2.4	3.8	SC 0.5	SC 0.6	SC 4.7	0.06
DR/SC00600				1/4	160	3.1	4.9	DR 0.5	DR 0.6	DR 5.9	-----
DR/SC00900				1/4	180	4.3	6.9	SC 0.7	SC 0.9	SC 6.7	0.07
DR/SC01200				1/4	200	5.9	9.5	DR 0.7	DR 0.8	DR 8.5	-----
DR/SC02000				1/4	240	10.0	15.2	SC 0.9	SC 1.1	SC 10.0	0.13
DR/SC03000				1/4	265	14.5	21.4	DR 0.9	DR 1.1	DR 10.7	-----
DR/SC05000				1/4	330	25.0	40.0	SC 1.2	SC 1.4	SC 12.5	0.16
								DR 1.2	DR 1.4	DR 15.5	-----
								SC 1.5	SC 1.8	SC 18.3	0.25
								DR 1.5	DR 1.7	DR 19.5	-----
								SC 1.8	SC 2.1	SC 23.3	0.36
								DR 2.0	DR 2.2	DR 26.7	-----
								SC 2.4	SC 2.8	SC 32.8	0.50
								DR 2.7	DR 3.2	DR 35.6	-----
								SC 3.5	SC 4.0	SC 43.6	0.62
								DR 3.5	DR 4.0	DR 58.2	-----
								SC 4.1	SC 4.6	SC 71.0	1.12
								DR 4.0	DR 4.5	DR 78.8	-----
								SC 4.5	SC 5.0	SC 96.5	1.56
								DR 6.0	DR 7.0	DR 130.	-----
								SC 7.5	SC 8.5	SC 163.	2.95



Output Torque of DR Double Acting Type(Nm)

TYPE	2.5bar	3.0bar	3.5bar	4.0bar	4.5bar	5.0bar	5.5bar	6.0bar	7.0bar	8.0bar
DR00006										
DR00015	8.3	10.0	11.6	13.3	15.0	16.6	18.3	19.9	23.3	26.6
DR00030	14.7	17.6	20.5	23.5	26.4	29.3	32.2	35.2	41.0	46.9
DR00060	29.1	34.9	40.7	46.5	52.3	58.2	64.0	69.8	81.4	93.0
DR00100	45.7	54.9	64.0	73.2	82.3	91.5	101	110	128	146
DR00150	66.5	79.7	93.0	106	120	133	146	160	186	213
DR00220	107	129	150	172	193	215	236	258	301	344
DR00300	138	166	194	221	249	277	304	332	387	443
DR00450	217	261	304	348	391	434	478	521	608	695
DR00600	283	340	397	453	510	567	623	680	793	907
DR00900	383	459	536	612	689	765	842	918	1071	1224
DR01200	531	638	744	850	956	1063	1169	1275	1488	1700
DR02000	935	1122	1309	1496	1683	1870	2057	2244	2618	2992
DR03000	1347	1617	1886	2156	2425	2695	2964	3234	3772	4311
DR05000	2350	2821	3291	3761	4231	4701	5171	5641	6581	7521
DR10000										

Output Torque of SC Single Acting Type(Nm)

TYPE	Spring Quantity	Air Pressure Torque																		Spring Torque			
		2.5bar		3.0bar		3.5bar		4.0bar		4.5bar		5.0bar		5.5bar		6.0bar		7.0bar				8.0bar	
		0° Start	90° End	0° Start	90° End	0° Start	90° End	0° Start	90° End	0° Start	90° End	0° Start	90° End	0° Start	90° End	0° Start	90° End	0° Start	90° End	0° Start	90° End	90° Start	0° End
SC00015	05	4.9	3.4	6.6	5.1	8.2	6.8	9.9	8.4	11.6	10.1	13.2	11.7									4.9	3.4
	06	4.2	2.5	5.9	4.1	7.6	5.8	9.2	7.4	10.9	9.1	12.5	10.8	14.2	12.4							5.8	4.1
	07			5.2	3.2	6.9	4.8	8.5	6.5	10.2	8.1	11.9	9.8	13.5	11.5	15.2	13.1					6.8	4.7
	08					6.2	3.8	7.9	5.5	9.5	7.2	11.2	8.8	12.8	10.5	14.5	12.1	17.8	15.5			7.8	5.4
	09							7.2	4.5	8.9	6.2	10.5	7.8	12.2	9.5	13.8	11.2	17.2	14.5	20.5	17.8	8.8	6.1
	10									8.2	5.2	9.8	6.9	11.5	8.5	13.2	10.2	16.5	13.5	19.8	16.8	9.7	6.8
	11											9.2	5.9	10.8	7.6	12.5	9.2	15.8	12.5	19.1	15.9	10.7	7.4
SC00030	12													10.1	6.6	11.8	8.2	15.1	11.6	18.4	14.9	11.7	8.1
	05	9.1	6.2	12	9.1	15	12	17.9	15	20.8	17.9	23.7	20.8									8.5	5.5
	06	8	4.5	10.9	7.4	13.8	10.3	16.8	13.3	19.7	16.2	22.6	19.1	25.6	22.1							10.2	6.7
	07			9.8	5.7	12.7	8.7	15.7	11.6	18.6	14.5	21.5	17.4	24.5	20.4	27.4	23.3					11.8	7.8
	08					11.6	7	14.6	9.9	17.5	12.8	20.4	15.8	23.3	18.7	26.3	21.6	32.1	27.5			13.5	8.9
	09							13.4	8.2	16.4	11.1	19.3	14.1	22.2	17	25.2	19.9	31	25.8	36.9	31.6	15.2	10
	10									15.3	9.4	18.2	12.4	21.1	15.3	24.1	18.2	29.9	24.1	35.8	29.9	16.9	11.1
SC00060	11											17.1	10.7	20	13.6	22.9	16.5	28.8	22.4	34.7	28.2	18.6	12.2
	12													18.9	11.9	21.8	14.8	27.7	20.7	33.5	26.6	20.3	13.3
	05	18	11.7	23.8	17.6	29.6	23.4	35.4	29.2	41.2	35	47.1	40.8									17.3	11.1
	06	15.8	8.3	21.6	14.1	27.4	19.9	33.2	25.7	39	31.5	44.8	37.3	50.7	43.2							20.8	13.3
	07			19.4	10.6	25.2	16.4	31	22.3	36.8	28.1	42.6	33.9	48.4	39.7	54.3	45.5					24.2	15.5
	08					23	13	28.8	18.8	34.6	24.6	40.4	30.4	46.2	36.2	52	42	63.7	53.7			27.7	17.7
	09							26.6	15.3	32.4	21.1	38.2	27	44	32.8	49.8	38.6	61.5	50.2	73.1	61.8	31.1	19.9
SC00100	10									30.2	17.7	36	23.5	41.8	29.3	47.6	35.1	59.2	46.7	70.9	58.4	34.6	22.1
	11											33.8	20	39.6	25.8	45.4	31.7	57	43.3	68.7	54.9	38.1	24.3
	12													37.4	22.4	43.2	28.2	54.8	39.8	66.4	51.4	41.5	26.5
	05	27.4	16.8	36.5	26	45.7	35.1	54.8	44.3	63.9	53.4	73.1	62.6									28.9	18.3
	06	23.7	11.1	32.8	20.2	42	29.3	51.1	38.5	60.3	47.6	69.4	56.8	78.6	65.9							34.7	22
	07			29.2	14.4	38.3	23.6	47.5	32.7	56.6	41.9	65.7	51	74.9	60.1	84	69.3					40.4	25.7
	08					34.6	17.8	43.8	26.9	52.9	36.1	62.1	45.2	71.2	54.4	80.4	63.5	98.6	81.8			46.2	29.4
SC00150	09							40.1	21.2	49.3	30.3	58.4	39.5	67.5	48.6	76.7	57.7	95	76	113	94.3	52	33
	10									45.6	24.5	54.7	33.7	63.9	42.8	73	52	91.3	70.2	110	88.5	57.8	36.7
	11											51.1	27.9	60.2	37	69.3	46.2	87.6	64.5	106	82.8	63.5	40.4
	12													56.5	31.3	65.7	40.4	84	58.7	102	77	69.3	44
	05	41.1	27	54.4	40.3	67.7	53.6	81	66.8	94.2	80.1	108	93.4									39.4	25.3
	06	36.1	19.1	49.3	32.4	62.6	45.7	75.9	58.9	89.2	72.2	103	85.5	116	98.8							47.3	30.4
	07			44.3	24.5	57.6	37.8	70.8	51.1	84.1	64.3	97.4	77.6	111	90.9	124	104					55.2	35.4
SC00220	08					52.5	29.9	65.8	43.2	79.1	56.5	92.3	69.7	106	83	119	96.3	146	123			63.1	40.5
	09							60.7	35.3	74	48.6	87.3	61.9	101	75.1	114	88.4	140	115	167	142	71	45.5
	10									68.9	40.7	82.2	54	95.5	67.3	109	80.5	135	107	162	134	78.8	50.6
	11											77.2	46.1	90.5	59.4	104	72.7	130	99	157	126	86.7	55.6
	12													85.4	51.5	98.7	64.8	125	92	152	118	94.6	60.7
	05	63.3	41.8	87.8	63.3	109	84.7	131	106	152	128	174	149									65.6	41
	06	58.1	28.7	79.6	50.1	101	71.6	123	93.1	144	115	165	136	187	158							78.7	49.3
SC00220	07			71.3	37	92.8	58.5	114	80	136	101	157	123	179	144	200	166					91.8	57.5
	08					84.6	45.4	106	66.9	128	88.3	149	110	171	131	192	153	235	196			105	65.7
	09							97.9	53.8	119	75.2	141	96.7	162	118	184	140	227	183	270	226	118	74
	10									111	62.1	133	83.6	154	105	176	127	219	170	261	212	131	82
	11											124	70.5	146	92	167	113	210	156	253	199	144	90.3
	12													138	78.8	159	100	202	143	245	186	157	98.5



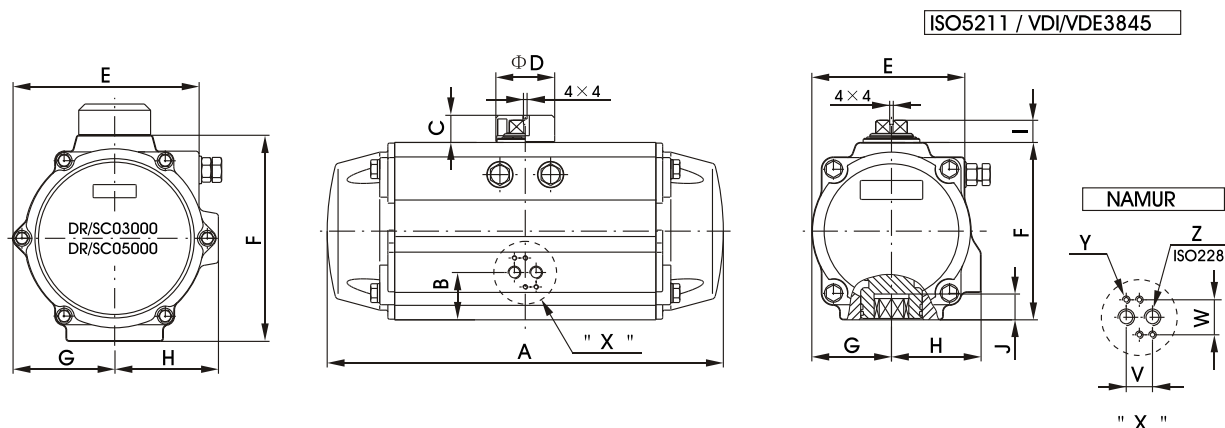
Output Torque of SC Single Acting Type(Nm)

TYPE	Spring Quantity	Air Pressure Torque																		Spring Torque			
		2.5bar		3.0bar		3.5bar		4.0bar		4.5bar		5.0bar		5.5bar		6.0bar		7.0bar				8.0bar	
		0° Start	90° End	0° Start	90° End	0° Start	90° End	0° Start	90° End	0° Start	90° End	0° Start	90° End	0° Start	90° End	0° Start	90° End	0° Start	90° End	0° Start	90° End	90° Start	0° End
SC00300	05	85.9	55.9	114	84	141	111	169	139	197	167	224	194									82.5	52.5
	06	75.4	39.4	103	67	131	95	158	122	186	150	214	178	241	205							98.9	62.9
	07			92.6	50.6	120	78	148	106	176	134	203	161	231	189							115	73.4
	08					110	62	137	89.4	165	117	193	145	221	173	248	200	304	256			132	83.9
	09							127	72.9	155	101	182	128	210	156	238	184	293	239	348	294	148	94.4
	10									144	84	172	112	200	140	227	167	283	223	338	278	165	105
	11											161	95.3	189	123	217	151	272	206	327	261	181	115
	12													179	107	206	134	262	190	317	245	198	12
SC00450	05	135	88.2	178	132	222	175	265	219	309	262	352	305									129	82.3
	06	119	62.4	162	106	205	149	249	193	292	236	336	280	379	323							155	98.7
	07			146	80.1	189	124	232	167	276	210	319	254	363	297	406	341					181	115
	08					173	97.7	216	141	259	185	303	228	346	272	390	315	477	402			206	132
	09							200	115	243	159	286	202	330	246	373	289	460	376	547	463	232	148
	10									227	133	270	177	313	220	357	263	444	350	531	437	258	165
	11											254	151	297	194	340	238	427	324	514	411	284	181
12													280	168	324	212	411	299	498	386	310	197	
SC00600	05	171	117	228	174	285	231	341	287	398	344	455	401									166	112
	06	149	84	206	141	262	197	319	254	376	311	432	367	489	424							199	135
	07			183	108	240	164	296	221	353	278	410	334	466	391	523	448					233	157
	08					217	131	274	188	331	244	387	301	444	358	501	414	614	528			266	179
	09							252	154	308	211	365	268	422	324	478	381	592	494	705	608	299	202
	10									286	178	343	235	399	291	456	348	569	461	683	575	332	224
	11											320	201	377	258	433	315	547	428	660	541	365	247
12													354	225	411	281	524	395	638	508	399	269	
SC00900	05	225	146	301	222	378	299	454	375	531	452	607	528									237	158
	06	193	98.3	270	175	346	251	423	328	499	404	576	481	652	557							284	190
	07			238	127	315	204	391	280	468	357	544	433	621	510	697	586					332	221
	08					283	157	359	233	436	310	512	386	589	463	665	539	818	692			379	253
	09							328	186	404	262	481	339	557	415	634	492	787	645	940	798	426	284
	10									373	215	449	291	526	368	602	444	755	597	908	750	474	316
	11											418	244	494	320	571	397	724	550	877	703	521	347
12													463	273	539	350	692	503	845	656	569	379	
SC01200	05	319	216	425	323	532	429	638	535	744	641	850	748									315	212
	06	277	153	383	260	489	366	595	472	702	578	808	685	914	791							378	255
	07			340	197	447	303	553	409	659	515	765	622	872	728	978	834					441	297
	08					404	240	510	346	617	452	723	559	829	665	935	771	1148	984			504	340
	09							468	283	574	389	680	496	787	602	893	708	1105	921	1318	1133	567	382
	10									532	326	638	433	744	539	850	645	1063	858	1275	1070	630	425
	11											595	370	702	476	808	582	1020	795	1233	1007	693	467
12													659	413	766	519	978	732	1191	944	756	510	
SC02000	05	501	319	688	506	875	693	1062	880	1249	1067	1436	1254									616	434
	06	414	196	601	383	788	570	975	757	1162	944	1349	1131	1536	1318							740	521
	07			514	259	701	446	888	633	1075	820	1262	1007	1449	1194	1636	1381					863	608
	08					614	323	801	510	988	697	1175	884	1362	1071	1549	1258	1923	1632			986	695
	09							714	387	901	574	1088	761	1275	948	1463	1135	1837	1509	2211	1883	1109	782
	10									815	451	1002	638	1189	825	1376	1012	1750	1386	2124	1760	1233	869
	11											915	514	1102	701	1289	888	1663	1262	2037	1636	1356	955
12													1015	578	1202	765	1576	1139	1950	1513	1479	1042	
SC03000	05	780	565	1050	834	1319	1104	1589	1373	1858	1643	2128	1912									783	567
	06	667	408	936	678	1206	947	1475	1217	1745	1486	2014	1756	2284	2025							939	680
	07			823	521	1092	791	1362	1060	1631	1330	1901	1599	2170	1869	2440	2138					1096	794
	08					979	634	1249	904	1518	1173	1787	1443	2057	1712	2326	1981	2865	2520			1252	907
	09							1135	747	1405	1017	1674	1286	1943	1555	2213	1825	2752	2364	3291	2903	1409	1021
	10									1291	860	1561	1130	1830	1399	2100	1668	2638	2207	3177	2746	1565	1134
	11											1447	973	1717	1242	1986	1512	2525	2051	3064	2590	1722	1247
12													1603	1086	1873	1355	2412	1894	2951	2433	1878	1361	
SC05000	05	1333	1017	1803	1487	2273	1957	2743	2427	3214	2897	3684	3367									1334	1017
	06	1130	750	1600	1220	2070	1690	2540	2161	3010	2631	3480	3101	3950	3571							1600	1221
	07			1396	954	1866	1424	2337	1894	2807	2364	3277	2834	3747	3304	4217	3774					1867	1424
	08					1663	1157	2133	1627	2603	2097	3073	2567	3543	3037	4013	3508	4954	4448			2134	1628
	09							1930	1360	2400	1831	2870	2301	3340	2771	3810	3241	4750	4181	5690	5121	2400	1831
	10									2196	1564	2666	2034	3136	2504	3607	2974	4547	3914	5487	4854	2667	2035
	11											2463	1767	2933	2237	3403	2707	4343	3648	5283	4588	2934	2238
12													2729	1971	3200	2441	4140	3381	5080	4321	3200	2442	

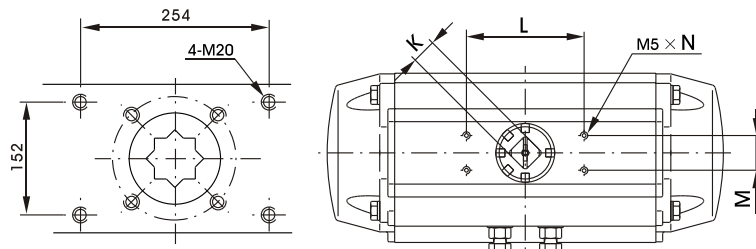
■ The darkened recommendation index under the air pressure torque are in accordance with the spring return torque datas and the spring number.



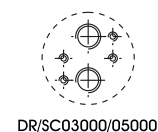
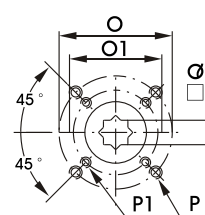
Configuration and Connection Size(mm)



Connection Size of DR/SC05000



LD: Parallel Bevel



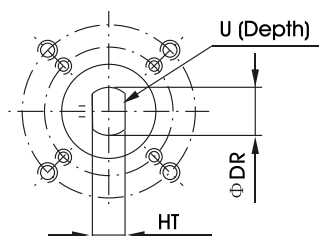
Bottom View

TYPE	00015	00030	00060	00100	00150	00220	00300	00450	00600	00900	01200	02000	03000	05000
ISOflange	DR/SC	DR/SC	DR/SC	DR/SC	DR/SC	DR/SC	DR/SC	DR/SC	DR/SC	DR/SC	DR/SC	DR/SC	DR/SC	DR/SC
A	F04	F05	F05-07	F05-07	F07-10	F07-10	F07-10	F10-12	F10-12	F12	F14	F16	F16	F16
B	140.5	158.5	210.5	247.5	268.5	315	345	408.5	437.5	487	543	633	728	876
C	26.5	30	30.5	32.5	37.5	42.5	45	47.5	52	58.5	62.5	78.5	165	187
D	20	20	20	20	20	30	30	30	30	50	50	50	50	50
ΦD	40	40	40	40	40	56	56	65	65	80	80	115	115	115
E	59	72	84.5	97.5	111	127	136	156.5	169	190.5	213	251	298.5	383
F	69	85	102	115	127	145	157	177	196	220.5	245	298.5	330	405
G	29	36	42.5	49.5	56	64	69.5	80	88	99	110	131	163.5	201
H	41.5	47	52	56.8	67	77	82	91.5	99	105	112	131	166	204.5
I	14.5	14.5	14.5	14.5	14.5	24.5	24.5	24.5	24.5	44.5	44.5	44.5	44.5	44.5
JmIm	12	16	16	19	19	24	24	29	29	29	38	38	48	57
K	11	11	17	17	17	27	27	27	27	36	36	36	36	36
L	80	80	80	80	80	80	80	80	80	130	130	130	130	130
M	30	30	30	30	30	30	30	30	30	30	30	30	30	30
N	4	8	8	8	8	8	8	8	8	8	8	8	8	8
ΦO1	42	50	50	50	70	70	70	102	102	125	140	165	165	165
ΦO	---	---	70	70	102	102	102	125	125	---	---	---	---	---
P1	4-M6	4-M6	4-M6	4-M6	4-M8	4-M8	4-M8	4-M10	4-M10	4-M12	4-M16	4-M20	4-M20	4-M20
P	---	---	4-M8	4-M8	4-M10	4-M10	4-M10	4-M12	4-M12	---	---	---	---	---
Q	11	14	14	17	17	22	22	27	27	27	36	36	46	55
V	24	24	24	24	24	24	24	24	24	24	24	40	40	40
W	32	32	32	32	32	32	32	32	32	32	32	45	45	45
Y	M5x8	M5x8	M5x8	M5x8	M5x8	M5x8	M5x8	M5x8	M5x8	M5x8	M5x8	M6x10	M6x10	M6x10
Z	1/8 "	1/8 "	1/8 "	1/8 "	1/4 "	1/4 "	1/4 "	1/4 "	1/4 "	1/4 "	1/4 "	3/8 "	1/2 "	1/2 "



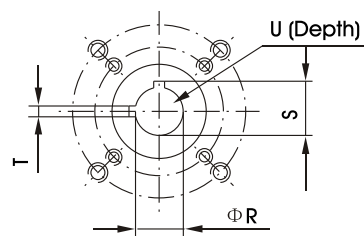
Connection Size of Delivery Outlet (customized)

H: Parallel Subtense



Bottom View

W: Two Key Grooves



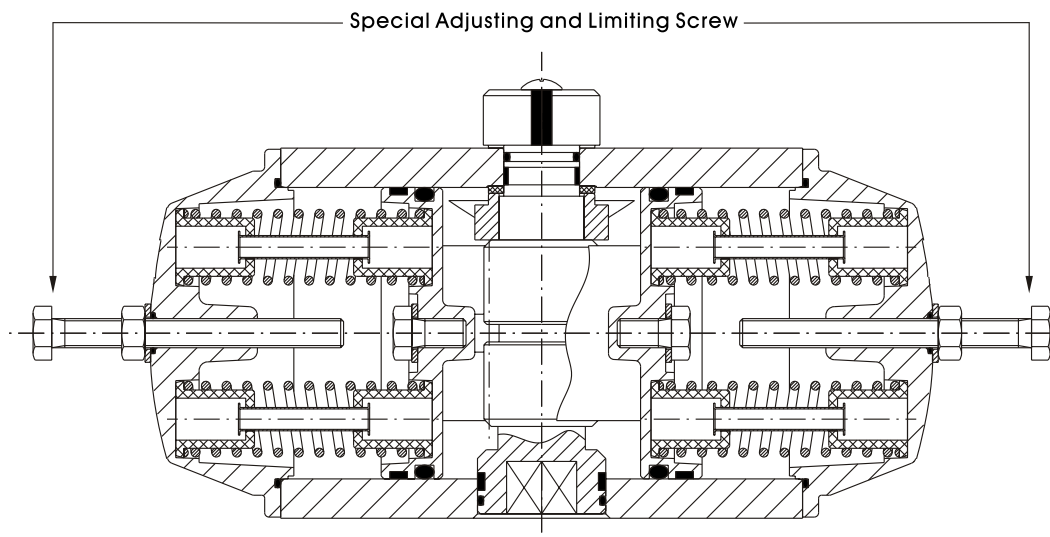
Bottom View

PS: could be customized as require

TYPE	00015	00030	00060	00100	00150	00220	00300	00450	00600	00900	01200	02000	03000	05000
DR/SC	DR/SC	DR/SC	DR/SC	DR/SC	DR/SC	DR/SC	DR/SC	DR/SC	DR/SC	DR/SC	DR/SC	DR/SC	DR/SC	DR/SC
ΦR	12.7	12.7	12.7	15.88	19.05	22.23	22.23	28.58	28.58	31.75	31.75	33.34	38.1	41.28
S	14.2	14.2	14.2	18.4	21.6	24.8	24.8	32.1	32.1	35.3	35.3	37.4	42.4	45.3
T	3	3	5	5	5	5	5	8	8	8	8	10	10	12
U	32	32	32	32	32	45	45	45	45	45	45	51	51	65
ΦDR	13	13	13	16.1	19.2	22.4	22.4	28.8	28.8	32	32	33.6	38.4	41.5
HT	10	10	10	12	14	17	17	22	22	24	24	27	27	32

Full Stroke Modulating And Limiting Actuator

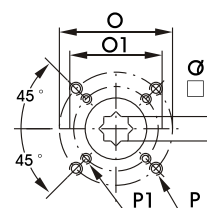
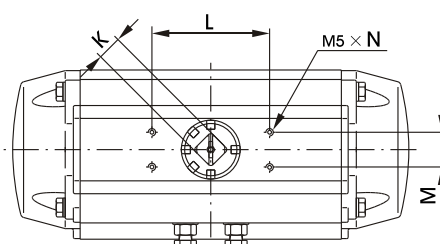
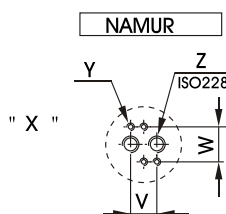
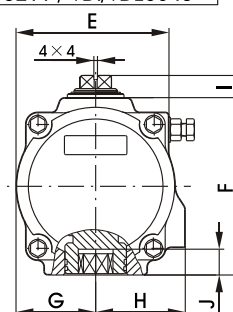
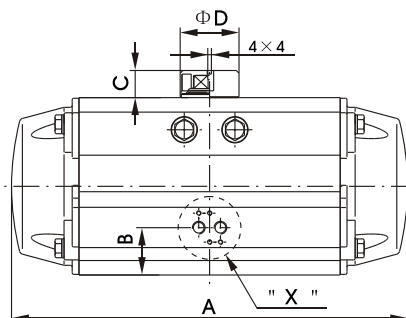
Special adjusting banking screws are provided at the two ends of the new type pneumatic actuator. The actuator can be adjusted at the range between 0°~90°, 0°~120° or 0°~180°. Full stroke adjustment could be applied to all series of actuators.





Configuration And Connection Size of 120°/180° Stroke Actuator(double acting)

ISO5211 / VDI/VDE3845



1. Actuators of other types could be provided as customer requires
2. Actuators with different stroke type could be provided, such as 140° or 160° stroke.

TYPE	00015	00030	00060	00100	00150	00220	00300	00450	00600	00900	01200	02000	03000	05000
DR	DR	DR	DR	DR	DR	DR	DR	DR	DR	DR	DR	DR	DR	DR
ISOflange	—	F05	F05-07	—	F07-10	—	F07-10	—	F10-12	—	F14	—	—	—
A(120°)	—	183	243	—	309	—	397	—	504	—	622	—	—	—
A(180°)	—	225	305	—	385	—	498	—	630	—	775	—	—	—
B	—	30	30.5	—	37.5	—	45	—	52	—	62.5	—	—	—
C	—	20	20	—	20	—	30	—	30	—	50	—	—	—
ΦD	—	40	40	—	40	—	56	—	65	—	80	—	—	—
E	—	72	84.5	—	111	—	136	—	169	—	213	—	—	—
F	—	85	102	—	127	—	157	—	196	—	245	—	—	—
G	—	36	42.5	—	56	—	69.5	—	88	—	110	—	—	—
H	—	47	52	—	67	—	82	—	99	—	112	—	—	—
I	—	14.5	14.5	—	14.5	—	24.5	—	24.5	—	44.5	—	—	—
Jmm	—	16	16	—	19	—	24	—	29	—	38	—	—	—
K	—	11	17	—	17	—	27	—	27	—	36	—	—	—
L	—	80	80	—	80	—	80	—	80	—	130	—	—	—
M	—	30	30	—	30	—	30	—	30	—	30	—	—	—
N	—	8	8	—	8	—	8	—	8	—	8	—	—	—
ΦO1	—	50	50	—	70	—	70	—	102	—	140	—	—	—
ΦO	—	---	70	—	102	—	102	—	125	—	---	—	—	—
P1	—	4-M6	4-M6	—	4-M8	—	4-M8	—	4-M10	—	4-M16	—	—	—
P	—	---	4-M8	—	4-M10	—	4-M10	—	4-M12	—	---	—	—	—
□Q	—	14	14	—	17	—	22	—	27	—	36	—	—	—
ΦR	—	—	—	—	—	—	—	—	—	—	—	—	—	—
S	—	—	—	—	—	—	—	—	—	—	—	—	—	—
T	—	—	—	—	—	—	—	—	—	—	—	—	—	—
U	—	—	—	—	—	—	—	—	—	—	—	—	—	—
V	—	24	24	—	24	—	24	—	24	—	24	—	—	—
W	—	32	32	—	32	—	32	—	32	—	32	—	—	—
Y	—	M5x8	M5x8	—	M5x8	—	M5x8	—	M5x8	—	M5x8	—	—	—
Z	—	1/8"	1/8"	—	1/4"	—	1/4"	—	1/4"	—	1/4"	—	—	—



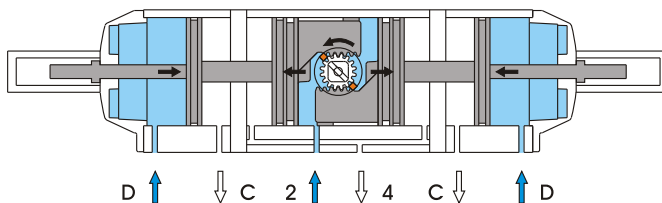
3-position Pneumatic Actuator

Two types of 3-position pneumatic actuators can be provided, namely 0°-45°-90° type and 0°-90°-180° type respectively. After the air comes into the cylinder from the air entrance " 2 ", the pistons' movements toward the ends would be limited by the auxiliary pistons mechanism. Thus the pistons would stay in the middle position. The position of the mid position could be adjust to 20°, 30°, 50°, 75° and 95°, 120°, 130°, 150°, 175° etc by using the adjusting screws at each end of the surface.



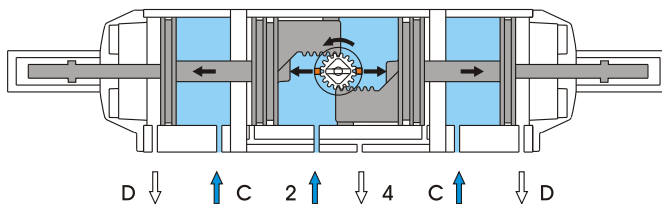
Operating Principles:

The control circuit with solenoid valve is designed to complete the operation of 3-position pneumatic actuator. The control principles are as followed.



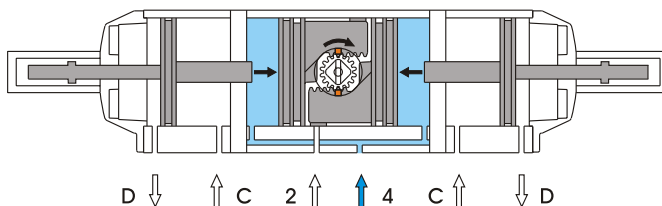
Position 1 (mid position)

Air source pressure come into both entrance 2 and entrance D simultaneously and press out the air from entrance 4 and C. The inner pistons move along Entrance 2 while the inner pistons are limited in the mid position which is decided before by the auxiliary pistons mechanism through entrance D.



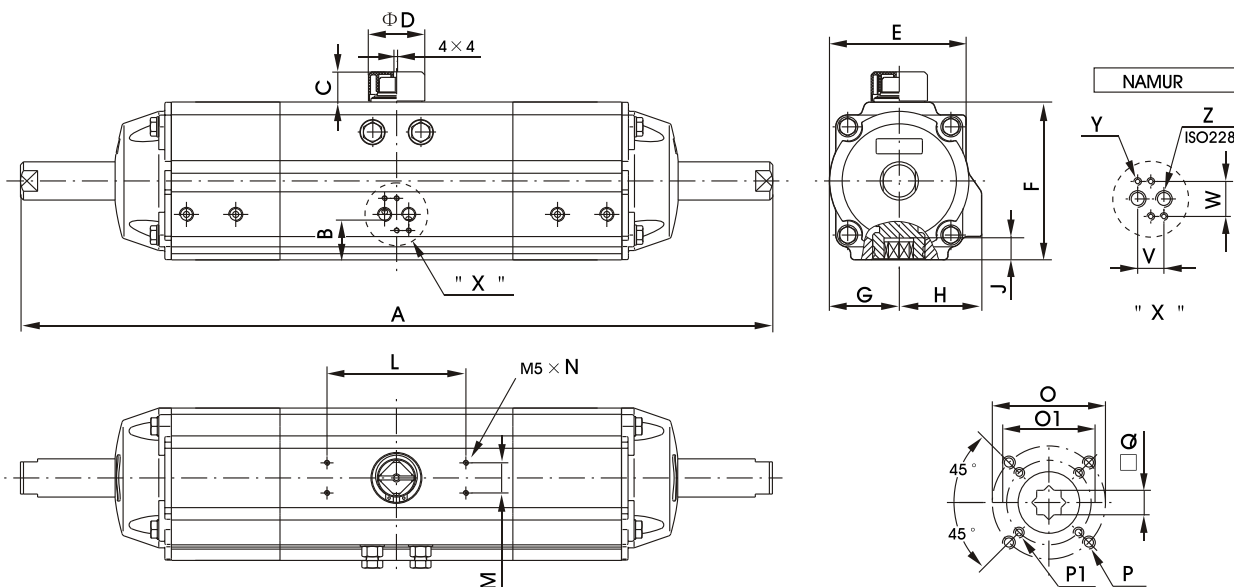
Position 2 (complete open position)

Air source pressure come into both entrance 2 and entrance C simultaneously and press out the air from entrance 4 and D. The inner pistons in entrance 2 keeps moving while the lock of auxiliary pistons mechanism is released through entrance C and the inner pistons reach complete open position.



Position 3 (complete close position)

Air source pressure come into entrance 4 and press out the air from entrance 2. The inner pistons move toward midposition to reach complete close position. Springs with 3 different reset type, namely 0°-45°-90° are provided. When air supply or power supply are cut off (or when air source fails), the springs would force the inner pistons to move to the complete close position.



Configuration And Connection Size(mm)

TYPE	A		B	C	ΦD	E	F	G	H	J	L	M	N	O1	O	P1	P	Q	V	W	Y	Z
	0°-45°-90°	0°-90°-180°																				
DRSC00030	390	440	30	20	40	72	85	36	47	16	80	30	8	50	—	4-M6	—	14	24	32	M5×8	1/8"
DRSC00060	480	570	30.5	20	40	84.5	102	42.5	52	16	80	30	8	50	70	4-M6	4-M8	14	24	32	M5×8	1/8"
DRSC00150	600	710	37.5	20	40	111	127	56	67	19	80	30	8	70	102	4-M8	4-M10	17	24	32	M5×8	1/4"
DRSC00300	720	910	45	30	56	136	157	69.5	82	24	80	30	8	70	102	4-M8	4-M10	22	24	32	M5×8	1/4"
DRSC00600	915	1130	52	30	65	169	196	88	99	29	80	30	8	102	125	4-M10	4-M12	27	24	32	M5×8	1/4"
DRSC01200	1155	1400	62.5	50	80	213	245	110	112	38	130	30	8	140	—	4-M16	—	36	24	32	M5×8	1/4"

Output Torque of DR Double Acting Type(Nm)

TYPE	2.5bar	3.0bar	3.5bar	4.0bar	4.5bar	5.0bar	5.5bar	6.0bar	7.0bar	8.0bar
DR00030	14.7	17.6	20.5	23.5	26.4	29.3	32.2	35.2	41.0	46.9
DR00060	29.1	34.9	40.7	46.5	52.3	58.2	64.0	69.8	81.4	93.0
DR00150	66.5	79.7	93.0	106	120	133	146	160	186	213
DR00300	138	166	194	221	249	277	304	332	387	443
DR00600	283	340	397	453	510	567	623	680	793	907
DR01200	531	638	744	850	956	1063	1169	1275	1488	1700



SC 0°-45°-90°Single Acting Output Torque (spring resets) (Nm)

TYPE	Spring Quantity	Air Pressure Torque																		Spring Torque			
		2.5bar		3.0bar		3.5bar		4.0bar		4.5bar		5.0bar		5.5bar		6.0bar		7.0bar				8.0bar	
		0° Start	90° End	0° Start	90° End	0° Start	90° End	0° Start	90° End	0° Start	90° End	0° Start	90° End	0° Start	90° End	0° Start	90° End	0° Start	90° End	0° Start	90° End	90° Start	0° End
SC00030	05	9.1	6.2	12	9.1	15	12	17.9	15	20.8	17.9	23.7	20.8									8.5	5.5
	06	8	4.5	10.9	7.4	13.8	10.3	16.8	13.3	19.7	16.2	22.6	19.1	25.6	22.1							10.2	6.7
	07			9.8	5.7	12.7	8.7	15.7	11.6	18.6	14.5	21.5	17.4	24.5	20.4	27.4	23.3					11.8	7.8
	08					11.6	7	14.6	9.9	17.5	12.8	20.4	15.8	23.3	18.7	26.3	21.6	32.1	27.5			13.5	8.9
	09							13.4	8.2	16.4	11.1	19.3	14.1	22.2	17	25.2	19.9	31	25.8	36.9	31.6	15.2	10
	10									15.3	9.4	18.2	12.4	21.1	15.3	24.1	18.2	29.9	24.1	35.8	29.9	16.9	11.1
	11											17.1	10.7	20	13.6	22.9	16.5	28.8	22.4	34.7	28.2	18.6	12.2
	12													18.9	11.9	21.8	14.8	27.7	20.7	33.5	26.6	20.3	13.3
SC00060	05	18	11.7	23.8	17.6	29.6	23.4	35.4	29.2	41.2	35	47.1	40.8									17.3	11.1
	06	15.8	8.3	21.6	14.1	27.4	19.9	33.2	25.7	39	31.5	44.8	37.3	50.7	43.2							20.8	13.3
	07			19.4	10.6	25.2	16.4	31	22.3	36.8	28.1	42.6	33.9	48.4	39.7	54.3	45.5					24.2	15.5
	08					23	13	28.8	18.8	34.6	24.6	40.4	30.4	46.2	36.2	52	42	63.7	53.7			27.7	17.7
	09							26.6	15.3	32.4	21.1	38.2	27	44	32.8	49.8	38.6	61.5	50.2	73.1	61.8	31.1	19.9
	10									30.2	17.7	36	23.5	41.8	29.3	47.6	35.1	59.2	46.7	70.9	58.4	34.6	22.1
	11											33.8	20	39.6	25.8	45.4	31.7	57	43.3	68.7	54.9	38.1	24.3
	12													37.4	22.4	43.2	28.2	54.8	39.8	66.4	51.4	41.5	26.5
SC00150	05	41.1	27	54.4	40.3	67.7	53.6	81	66.8	94.2	80.1	108	93.4									39.4	25.3
	06	36.1	19.1	49.3	32.4	62.6	45.7	75.9	58.9	89.2	72.2	103	85.5	116	98.8							47.3	30.4
	07			44.3	24.5	57.6	37.8	70.8	51.1	84.1	64.3	97.4	77.6	111	90.9	124	104					55.2	35.4
	08					52.5	29.9	65.8	43.2	79.1	56.5	92.3	69.7	106	83	119	96.3	146	123			63.1	40.5
	09							60.7	35.3	74	48.6	87.3	61.9	101	75.1	114	88.4	140	115	167	142	71	45.5
	10									68.9	40.7	82.2	54	95.5	67.3	109	80.5	135	107	162	134	78.8	50.6
	11											77.2	46.1	90.5	59.4	104	72.7	130	99	157	126	86.7	55.6
	12													85.4	51.5	98.7	64.8	125	92	152	118	94.6	60.7
SC00300	05	85.9	55.9	114	84	141	111	169	139	197	167	224	194									82.5	52.5
	06	75.4	39.4	103	67	131	95	158	122	186	150	214	178	241	205							98.9	62.9
	07			92.6	50.6	120	78	148	106	176	134	203	161	231	189	259	217					115	73.4
	08					110	62	137	89.4	165	117	193	145	221	173	248	200	304	256			132	83.9
	09							127	72.9	155	101	182	128	210	156	238	184	293	239	348	294	148	94.4
	10									144	84	172	112	200	140	227	167	283	223	338	278	165	105
	11											161	95.3	189	123	217	151	272	206	327	261	181	115
	12													179	107	206	134	262	190	317	245	198	126
SC00600	05	171	117	228	174	285	231	341	287	398	344	455	401									166	112
	06	149	84	206	141	262	197	319	254	376	311	432	367	489	424							199	135
	07			183	108	240	164	296	221	353	278	410	334	466	391	523	448					233	157
	08					217	131	274	188	331	244	387	301	444	358	501	414	614	528			266	179
	09							252	154	308	211	365	268	422	324	478	381	592	494	705	608	299	202
	10									286	178	343	235	399	291	456	348	569	461	683	575	332	224
	11											320	201	377	258	433	315	547	428	660	541	365	247
	12													354	225	411	281	524	395	638	508	399	269
SC01200	05	319	216	425	323	532	429	638	535	744	641	850	748									315	212
	06	277	153	383	260	489	366	595	472	702	578	808	685	914	791							378	255
	07			340	197	447	303	553	409	659	515	765	622	872	728	978	834					441	297
	08					404	240	510	346	617	452	723	559	829	665	935	771	1148	984			504	340
	09							468	283	574	389	680	496	787	602	893	708	1105	921	1318	1133	567	382
	10									532	326	638	433	744	539	850	645	1063	858	1275	1070	630	425
	11											595	370	702	476	808	582	1020	795	1233	1007	693	467
	12													659	413	766	519	978	732	1191	944	756	510

The darkened recommendation index under the air pressure torque are in accordance with the spring return torque datas and the spring number.



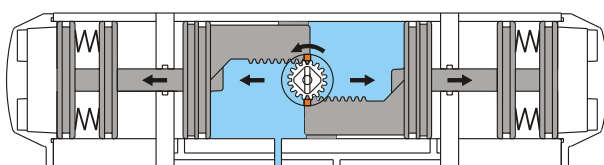
180°Stroke Single Acting Actuator (spring reset)

Spring subassembly are provided at each end of 180°spring reset type pneumatic actuator which is suitable to act the back-and-forth movement among 0°-90°-180°and comes back to the position of 90°by spring resetting when air source pressure drops (or fails).

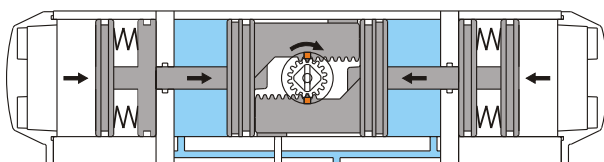
The 180° full -open position and the 0° shut-up position can be made for precious external adjustment at $\pm 4^\circ$ via standard methods.



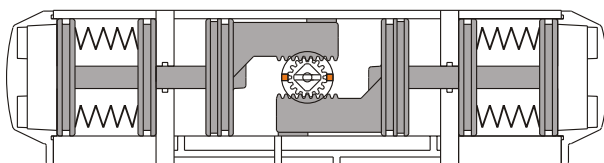
Control Principle



"2" ↑ "4" ↓



"2" ↓ "4" ↑



"2" ↓ "4" ↓

From 90° to 180°

The air source pressure comes into the cylinder body between the two pistons from air entrance (2) and pushes the pistons toward the end of the cylinder body. The spring subassembly at each end is forced to shrink while the air between the pistons and the ends of the cylinder body is released from air entrance (4). Meanwhile the racks of pistons drive the output shaft (gear wheel) simultaneously to rotate anticlockwise to 180°.

From 90° to 0°

The air source pressure comes into the cylinder body between the two pistons from air entrance (4) and pushes the pistons toward each other. The spring subassembly at each end begins to reset while the air between the pistons is released from air entrance (2). Meanwhile the racks of pistons rotate the output shaft (gear wheel) clockwise simultaneously to 0°.

Air fail Operation

When the position is at 180°: when the air source pressure of entrance (2) is lost or the power supply of the solenoid valve is cut, the springs force the pistons to move toward the middle of the cylinder body which would rotate the output shaft clockwise to position of 90°.

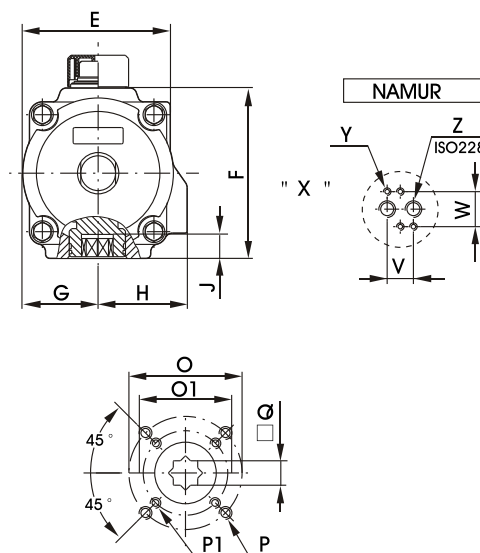
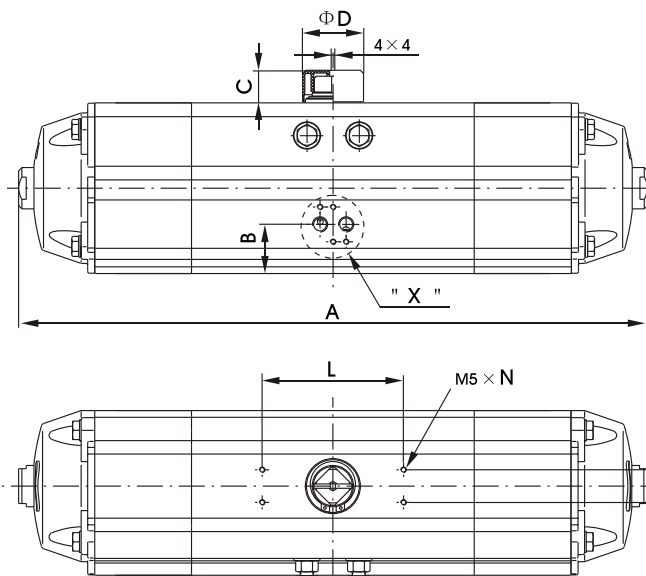
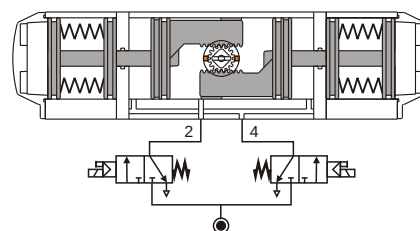
When the position is at 0°: when the air source pressure of entrance (4) is lost or the power supply of the solenoid valve is cut, the springs force the pistons to move toward the end of the cylinder body which would rotate the output shaft anticlockwise to position of 90°.



Control Principle

In order to control the operation of the actuators 180° with 90° fail safe position, a system of solenoid valves controlling a sequence of air supplies to the actuator is required as described besides.

The actuator may be controlled by two 3/2 way solenoid valves or by one 5/3 way solenoid valve.



Configuration and Connection Size(mm)

TYPE	A	B	C	ΦD	E	F	G	H	J	L	M	N	O1	O	P1	P	□Q	V	W	Y	Z
SC00150	630	37.5	20	40	111	127	56	67	19	80	30	8	70	102	4-M8	4-M10	17	24	32	M5×8	1/4"
SC00300	812	45	30	56	136	157	69.5	82	24	80	30	8	70	102	4-M8	4-M10	22	24	32	M5×8	1/4"
SC00600	1007	52	30	65	169	196	88	99	29	80	30	8	102	125	4-M10	4-M12	27	24	32	M5×8	1/4"
SC01200	1242	62.5	50	80	213	245	110	112	38	130	30	8	140	—	4-M16	—	36	24	32	M5×8	1/4"

Output Torque

TYPE	Spring Quantity	Air Pressure Torque																Spring Torque			
		2.5bar		3.0bar		3.5bar		4.0bar		4.5bar		5.0bar		5.5bar		6.0bar				7.0bar	
		90° and 180°	90° and 180°	90° and 180°	90° and 180°	90° and 180°	90° and 180°	90° and 180°	90° and 180°	90° and 180°	90° and 180°	90° and 180°	90° and 180°	90° and 180°	90° and 180°	90° and 180°	90° and 180°	90° and 180°	90° and 180°	90° and 180°	90° and 180°
SC00150	06	36.1	19.1	49.3	32.4	62.6	45.7	75.9	58.9	89.2	72.2	103	85.5	116	98.8					47.3	30.4
	08					52.5	29.9	65.8	43.2	79.1	56.5	92.3	69.7	106	83	119	96.3	146	123	63.1	40.5
	10									68.9	40.7	82.2	54	95.5	67.3	109	80.5	135	107	162	134
	12													85.4	51.5	98.7	64.8	125	92	152	118
SC00300	06	75.4	39.4	103	67	131	95	158	122	186	150	214	178	241	205					98.9	62.9
	08					110	62	137	89.4	165	117	193	145	221	173	248	200	304	256	132	83.9
	10									144	84	172	112	200	140	227	167	283	223	338	278
	12													179	107	206	134	262	190	317	245
SC00600	06	149	84	206	141	262	197	319	254	376	311	432	367	489	424					199	135
	08					217	131	274	188	331	244	387	301	444	358	510	414	614	528	266	179
	10									286	178	343	235	399	291	456	348	569	461	683	575
	12													354	225			524	395	638	508
SC01200	06	277	153	383	260	489	366	595	472	702	578	808	685	914	791					378	255
	08					404	240	510	346	617	452	723	559	829	665	935	771	1148	984	504	340
	10									532	326	638	433	744	539	850	645	1063	858	1275	1070
	12													659	413	766	519	978	732	1191	944



Standard Solenoid Valve
Could Be Provided
VDI/VDE3845、NAMUR



Standard Switch Cabinet
Could Be Provided
VDI/VDE3845



Standard Valve Positioner
Could Be Provided
VDI/VDE3845



Manual Clutch Could Be Provided



Pneumatic Ball Valve
Pneumatic Butterfly Valve





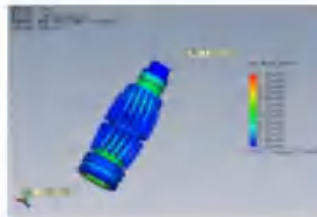
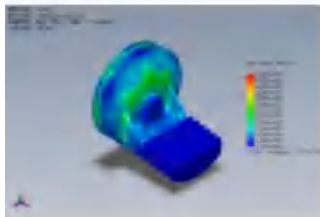
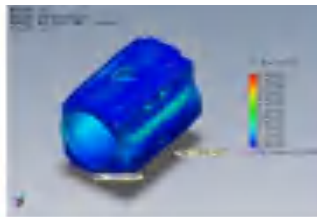
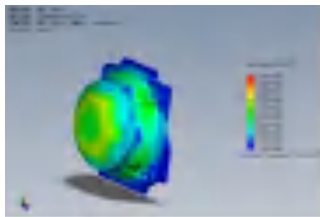
The factory is located in the new material deep processing industrial Zone, Jinshan District, Shanghai with plant area of 32000 m² and total building area of 19000 m². The total green area is up to 9500 m². The factory has 5 workshops with an investment of ¥50 Million. The factory has accomplished ISO9001-2000 authentication. CAD based 3D modeling is applied to optimize the design procedure to endow the products with both beautiful appearance and best quality. The precision center machine tools make up many of all the equipments as to guarantee the precision of the parts and to perform the ability of volume-producing. The main products that the company produces and sells are pneumatic actuators and pneumatic valves of high technology requirements. The annual capacity of the factory is up to more than 100,000 units and the company is now becoming more and more powerful. Based on the international trade platform in Shanghai, the company nowadays is dedicated to exploit the international market and to become the global leading producer of pneumatic actuators and pneumatic valves.

Factory Garden



Factory Outlook





Design	
Materials	Processing
Assembling	Products
Workshop	

