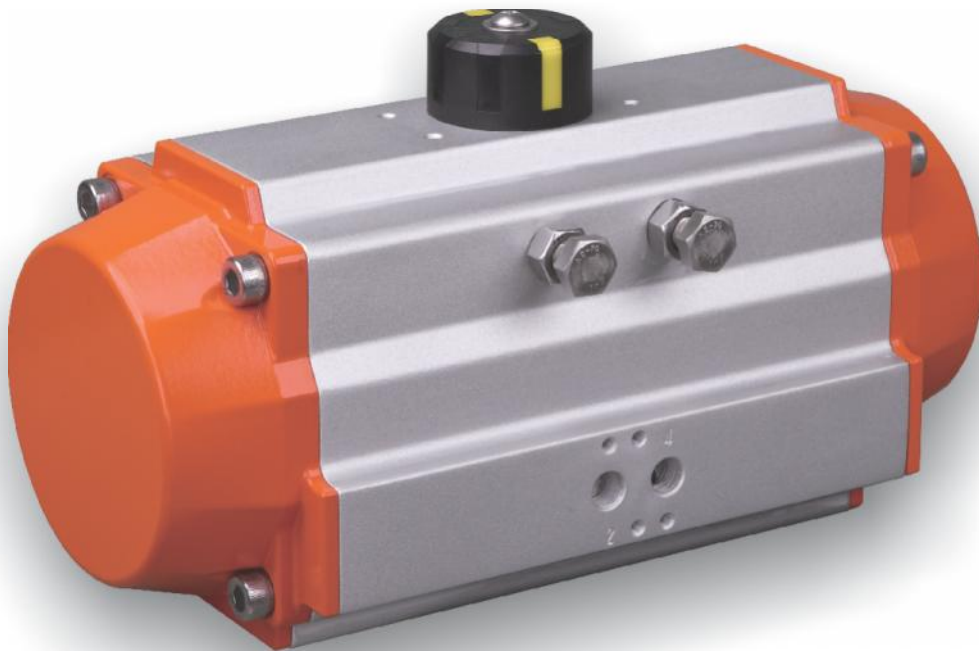


# B-SERIES PNEUMATIC ACTUATOR

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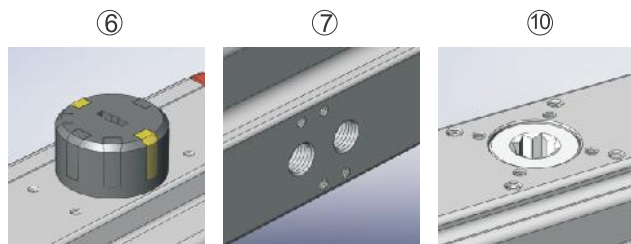
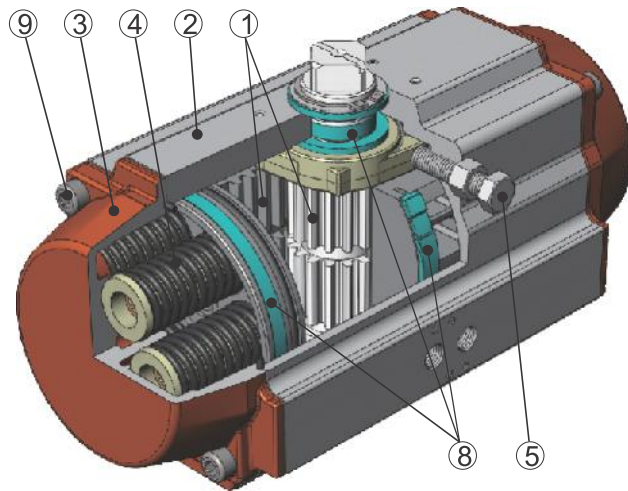




# Specification And Type Catalogue For B-series

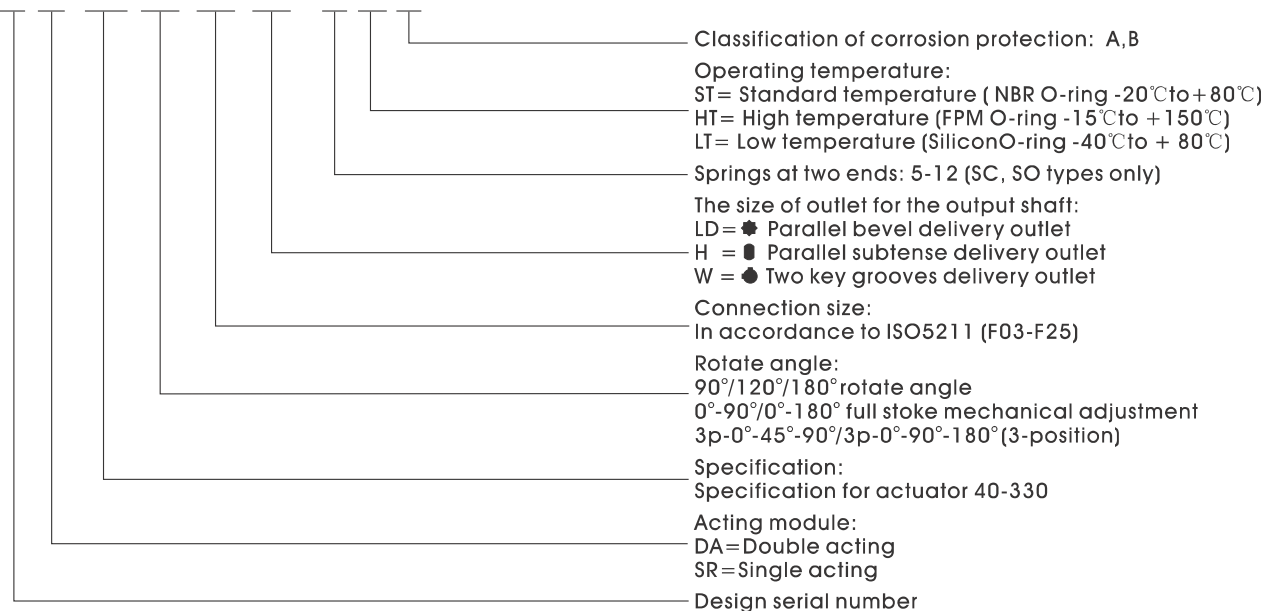
## Product Description

- 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/VDE3845iNAMUR 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 NAMUR criterion. To the interface the NAMUR 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

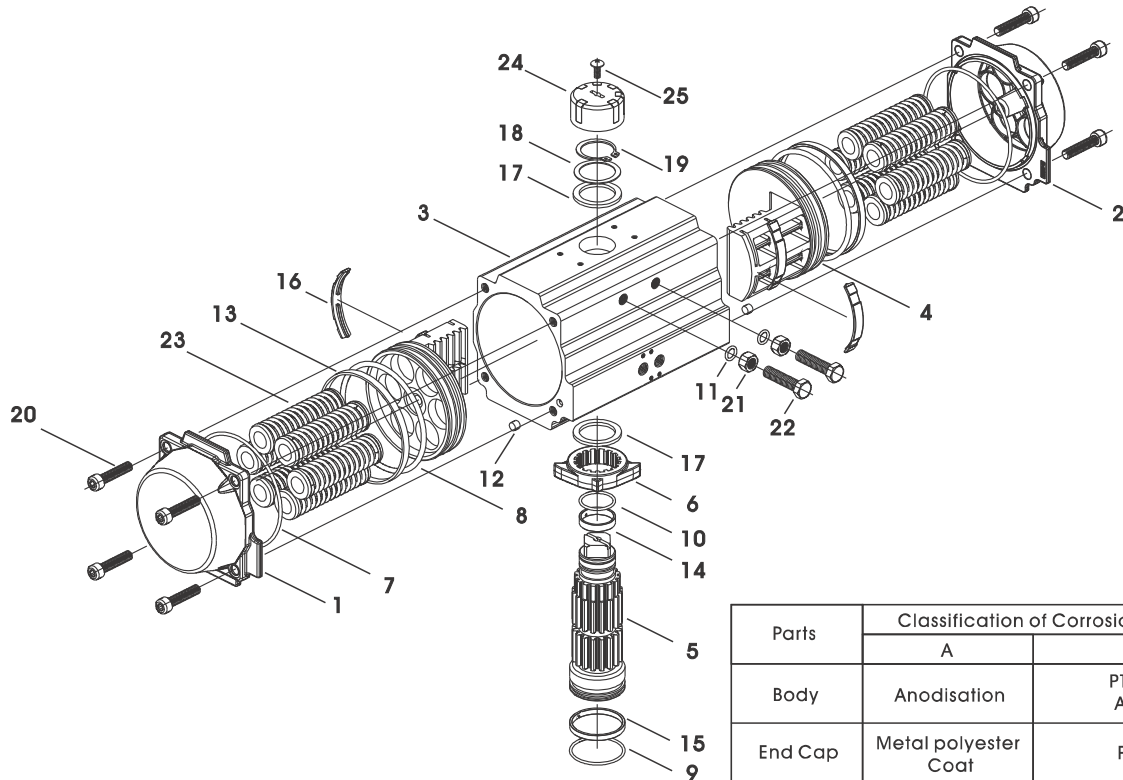
B-DA -100-090-F10-LD22-10-HT-A





## Components, Materials And Corrosion protection For B-Series

### Components, Material and Corrosion Protection



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

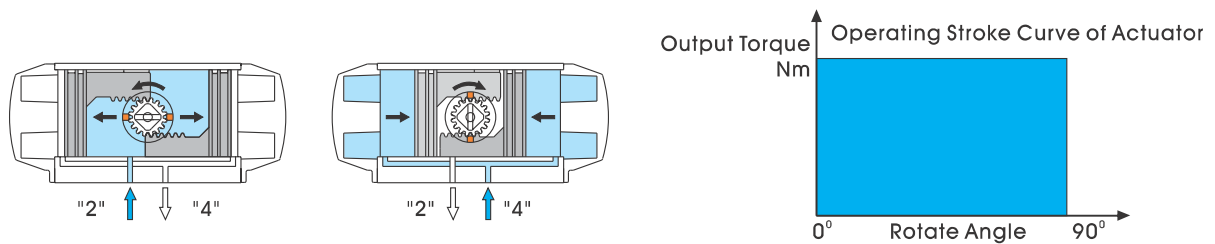
Code of The Parts	Number for Each type	Name of The Parts	Standard Material	Material Selection
01	1 <sup>(1)</sup>	Left end cap	Aluminium die-cast alloys	Stainless steel
02	1 <sup>(1)</sup>	Right end cap	Aluminium die-cast alloys	Stainless steel
03	1	Cylinder body	Extruded aluminum alloy	Stainless steel
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 <sup>(2)</sup>	End cap screw	Stainless steel	-----
21	2	End cap filler piece	Stainless steel	-----
22	2	Adjusting screw	Stainless steel	-----
23	5-12	Spring subassembly	Alloy spring steel	-----
24	1	Location indicator	PP+30%GF	-----
25	1	Screw	Stainless steel	-----



## Operating Principle Of B-Series

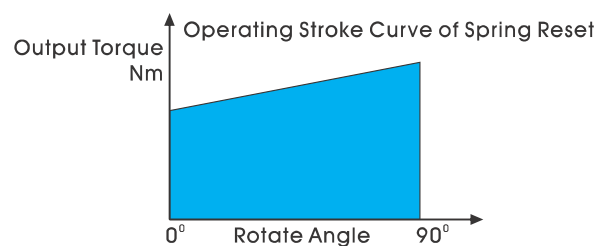
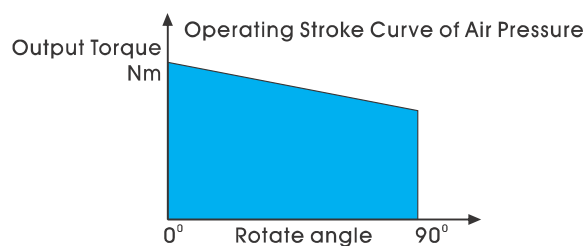
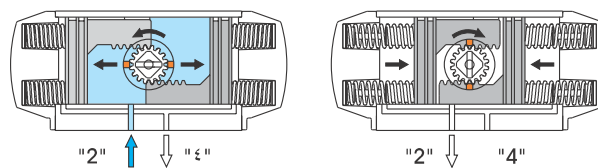
### Operating Principle Of DA Double Acting Type

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 type)



### Operating Principle Of SR 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 type)





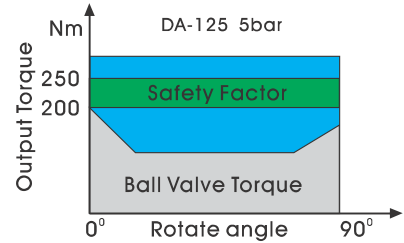
## Model Selection And Data About B-Series

### 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)

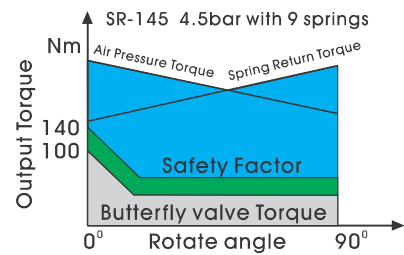
#### Sizing Example For Double-Acting Actuator:

- \* 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 DA-125 of 277 Nm according to the output torque table of the DA actuator.



#### Sizing Example For 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 SR-145 (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 of 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 SR 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 Angl	Operating Temperature	Stroke adjustment per 1° laps	Diameter Φ(mm)	Ayr Volume(l) Opening Closing	Moving time (sec)(A)		weight (kg)(B)	
							Opening	Closing	Single	Spring
DA/SR-50	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	DA0.2	DA0.3	DA1.1	----
SR0.3							SR0.3	SR1.2	0.01	
DA/SR-63				1/6	63	0.2 0.3	DA0.3	DA0.3	DA1.6	----
SR0.3							SR0.4	SR1.8	0.02	
DA/SR-75				1/5	75	0.3 0.5	DA0.3	DA0.4	DA2.8	----
SR0.4							SR0.5	SR3.2	0.03	
DA/SR-88				1/5	88	0.5 0.8	DA0.4	DA0.5	DA4.0	----
SR0.5							SR0.6	SR4.7	0.06	
DA/SR-100				1/5	100	0.7 1.1	DA0.5	DA0.6	DA5.9	----
SR0.7							SR0.9	SR6.7	0.07	
DA/SR-115				1/5	115	1.2 1.8	DA0.7	DA0.8	DA8.5	----
SR0.9							SR1.1	SR10.0	0.13	
DA/SR-125				1/4	125	1.5 2.3	DA0.9	DA1.1	DA10.7	----
SR1.2							SR1.4	SR12.5	0.16	
DA/SR-145				1/4	145	2.4 3.8	DA1.2	DA1.4	DA15.5	----
SR1.5							SR1.8	SR18.3	0.25	
DA/SR-160	1/4	160	3.1 4.9	DA1.5	DA1.7	DA19.5	----			
SR1.8				SR2.1	SR23.3	0.36				
DA/SR-180	1/4	180	4.3 6.9	DA2.0	DA2.2	DA26.7	----			
SR2.4				SR2.8	SR32.8	0.50				
DA/SR-200	1/4	200	5.9 9.5	DA2.7	DA3.2	DA35.6	----			
SR3.5				SR4.0	SR43.6	0.62				
DA/SR-240	1/4	240	10.0 15.2	DA3.5	DA4.0	DA58.2	----			
SR4.1				SR4.6	SR71.0	1.12				
DA/SR-265	1/4	265	14.5 21.4	DA4.0	DA4.5	DA78.8	----			
SR4.5				SR5.0	SR96.5	1.56				
DA/SR-330	1/4	330	25.0 40.0	DA6.0	DA7.0	DA130.	----			
SR7.5				SR8.5	SR163.	2.95				



## Output Torque Of B-Series

### Output Torque of DA 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
DA-40	4.7	5.6	6.6	7.6	8.5	9.5	10.3	11.3	13.2	15.1
DA-50	8.3	10.0	11.6	13.3	15.0	16.6	18.3	19.9	23.3	26.6
DA-63	14.7	17.6	20.5	23.5	26.4	29.3	32.2	35.2	41.0	46.9
DA-75	29.1	34.9	40.7	46.5	52.3	58.2	64.0	69.8	81.4	93.0
DA-88	45.7	54.9	64.0	73.2	82.3	91.5	101	110	128	146
DA-100	66.5	79.7	93.0	106	120	133	146	160	186	213
DA-115	107	129	150	172	193	215	236	258	301	344
DA-125	138	166	194	221	249	277	304	332	387	443
DA-145	217	261	304	348	391	434	478	521	608	695
DA-160	283	340	397	453	510	567	623	680	793	907
DA-180	383	459	536	612	689	765	842	918	1071	1224
DA-200	531	638	744	850	956	1063	1169	1275	1488	1700
DA-240	935	1122	1309	1496	1683	1870	2057	2244	2618	2992
DA-265	1347	1617	1886	2156	2425	2695	2964	3234	3772	4311
DA-330	2350	2821	3291	3761	4231	4701	5171	5641	6581	7521
DA-400										

### Output Torque Of SR 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		90° Start	0° 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				
SR-50	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
	12													10.1	6.6	11.8	8.2	15.1	11.6	18.4	14.9	11.7	8.1
SR-63	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
SR-75	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
SR-88	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
	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
SR-100	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
SR-115	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
	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 B-Series

### Output Torque of SR Single Acting Type(Nm)

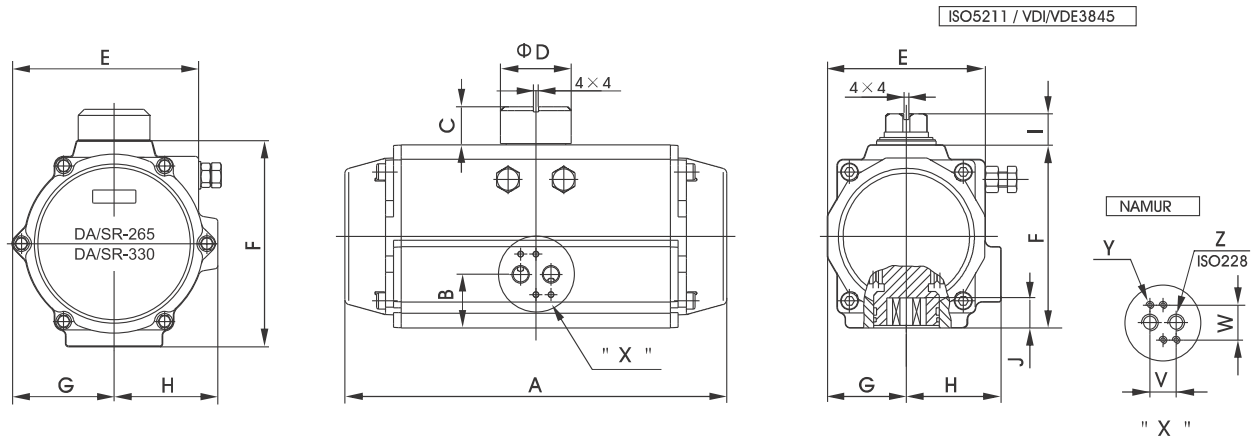
TYPE	Spring Quantity	Air Pressure Torque																		Spring Torque			
		2.5bar		3.0bar		3.5bar		4.0bar		4.5bar		5.0bar		5.5bar		6.0bar		7.0bar				8.0bar	
		0° Start	90° End	0° Start	90° End	0° Start	90° End	0° Start	90° End	0° Start	90° End	0° Start	90° End	0° Start	90° End	0° Start	90° End	0° Start	90° End	0° Start	90° End	90° Start	0° End
SR-125	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
SR-145	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
SR-160	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
SR-180	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
SR-200	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
SR-240	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
SR-265	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
SR-330	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.

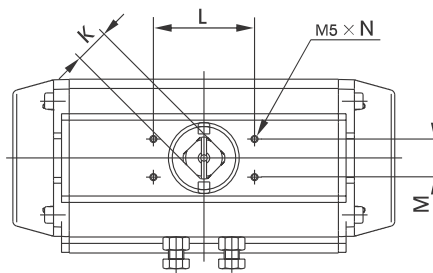
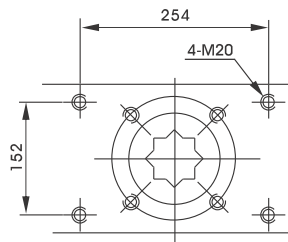


## Configuration Size Of B-Series

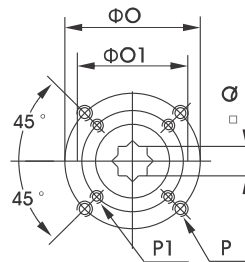
### Configuration And Connection Size(mm)



#### Connection Size of DA/SR-330



#### LD: Parallel Bevel



#### Bottom View

型号	40	50	63	75	88	100	115	125	145	160	180	200	240	265	330
	DA	DA/SR	DA/SR	DA/SR	DA/SR	DA/SR	DA/SR	DA/SR	DA/SR	DA/SR	DA/SR	DA/SR	DA/SR	DA/SR	DA/SR
ISO flange	F03	F04	F03-05	F05-07	F05-07	F07-10	F07-10	F07-10	F10-12	F10-12	F12	F14	F16	F16	F16
A	100	136.5	152.5	203.5	238.5	258	302	332	395	424	473	527	616	728	876
B	26.5	26.5	30	30.5	33	37.5	42.5	45	47.5	52.5	59	63	78.5	165	187
C	20	20	20	20	20	20	30	30	30	30	50	50	50	50	50
ΦD	40	40	40	40	40	40	56	56	65	65	80	80	115	115	115
E	55	59	70	83	97	109	125	130	148.5	164	182.5	203	242	298.5	383
F	53	69	85	102	115	127	145	157	177	196	220.5	245	298.5	330	405
G	26.5	29	36	41.5	48.5	54.5	62.5	68	78.5	87	98	109	130	163.5	201
H	28.5	40	45	50	56	64	75	80	89	95	100	111	132	166	204.5
I	14.5	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	10	12	16	16	19	19	24	24	29	29	29	38	38	48	57
K	11	11	11	17	17	17	27	27	27	27	36	36	36	36	36
L	50	80	80	80	80	80	80	80	80	80	130	130	130	130	130
M	25	30	30	30	30	30	30	30	30	30	30	30	30	30	30
N	4	4	8	8	8	8	8	8	8	8	8	8	8	8	8
ΦO1	36	42	36	50	50	70	70	70	102	102	125	140	165	165	165
ΦO	---	---	50	70	70	102	102	102	125	125	---	---	---	---	---
P1	4-M5	4-M5	4-M5	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-M6	4-M8	4-M8	4-M10	4-M10	4-M10	4-M12	4-M12	---	---	---	---	---
□Q	9	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	24	40	40	40
W	32	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	M5x8	M6x10	M6x10	M6x10
Z	1/8"	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"





Complete Sets Of Pneumatic Valves

