Varnasan

CONTROL VALVE TECHNOLOGIES

VARNASAN PNEUMATIC ACTUATORS

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KING CERT ISO 9001:2015

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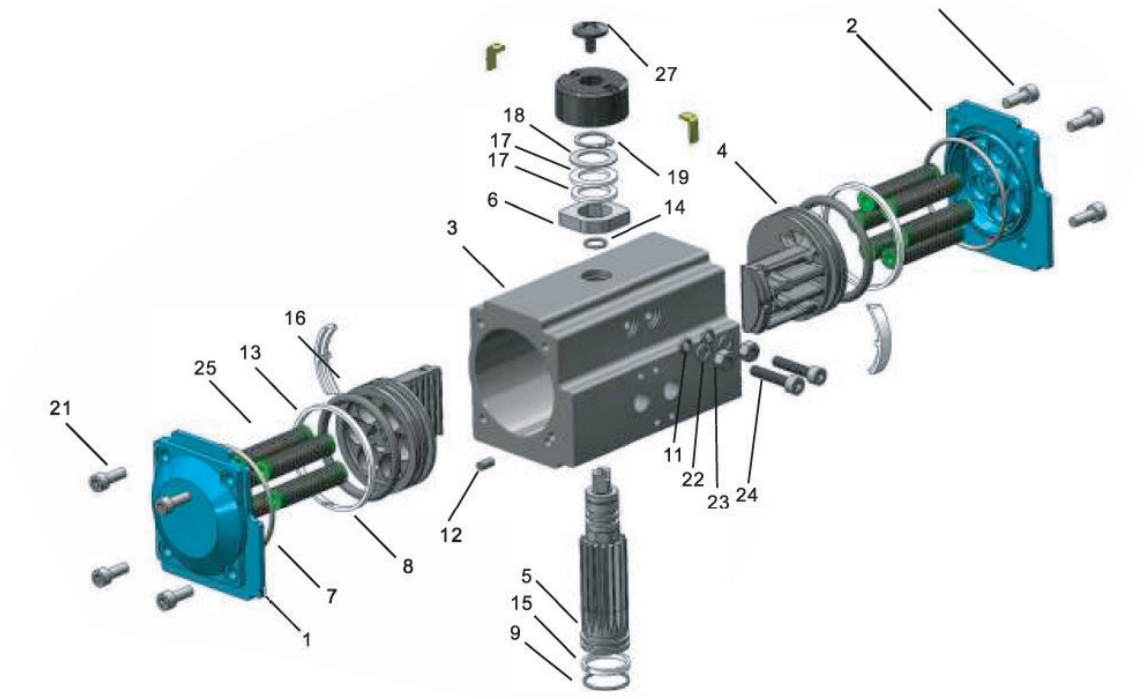
TCS

Varnasan
CONTROL VALVE TECHNOLOGIES

COMPONENTS AND MATERIALS, CORROSION

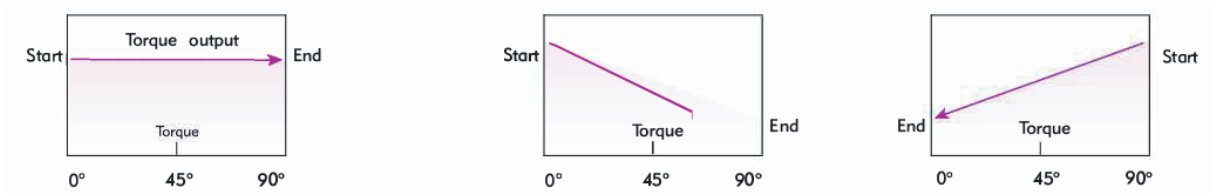
DOUBLE ACTING



	Protection cotegory	
Parts	**A**	**B**
cylinder	Hard an ode oxidation	Teflon coating+ Anode sclerosis
Cover	Polyester c oated metal	Teflon coating
Output shaft	Carbon steel electr oless nickel plating	Electroless nickel pl ating or stainless steel
Use Occasion	General situation	General occasions or low concentrations of acidic environment

Part Number	Each number	Part Name	Standard Materials	Selected materials
01	1	LeftCaıer	Aluminum Die Casting	Stainless steel
02	1	FlahtCaıer	Aluminum Die Casting	Stainless steel
03	1	body	Aluminum extrusion	Stainless steel
04	2	Piston	Aluminum Die Casting	-----
05	1	Output sraft	Carbon Steel	Stainless steel
06	1	Cam adjustment	Stainless steel	-----
07	2	O-ring (cover)	NBR	Fluorine or silicone rubber
08	2	O-ring (Piston)	NBR	Fluorine or silicone rubber
09	1	O-ring (output shaft bottom)	NBR	Fluorine or silicone rubber
10	1	O-ring (output shaft at the top)	NBR	Fluorine or silicone rubber
11	2	O-ring (adjusting screw)	NBR	Fluorine or silicone rubber
12	2	Plug (Cylinder)	NBR	Fluorine or silicone rubber
13	2	Bearing (Piston)	(POM)	-----
14	1	Bearing (output shaft at the top)	(POM)	-----
15	1	Bearing (output shaft bottom)	(POM)	-----
16	1	Guide with Bearing (Piston back)	(POM)	-----
17	2	Thrust bearings (output shaft)	(POM)	-----
18	2	Gasket (output shaft)	Stainless steel	-----
19	1	Flexible file ring	Spring steel	-----
20	4	Cover bolt	Stainless steel	-----
21	4	Cover Gasket	Stainless steel	-----
22	2	Gasket	Stainless steel	-----
23	2	Nut	Stainless steel	-----
24	2	Adjustment bolt	Stainless steel	-----
25	5-12	Spring Components	Alloy spring steel	-----
26	1	Position indicator	(POM)	-----
27	1	Screw of indicator	(POM)	-----

Torque Diagram



double acting

single acting

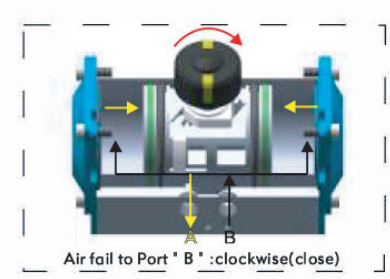
Double Acting Operation

20%-30%.
1OO N.m
1OOx (1+30%) =130 N.m
5 Bar
BT-105D.
Selection of double aetion actuators
lhe suggested safety factor lor duble acting actuators under normal working conditions is 20%-30%

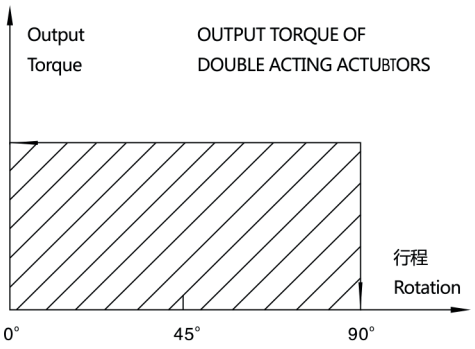
Example:

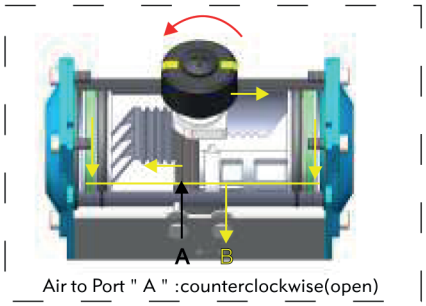
* The torque needed by valve= 100 N.m
*The torque considered safety factor 100x (1+30%) = 130 N.m
* Air Supply=5 Bar

According to double acting torque fable, we can choose the minimum modle is BT- 105.



COMPONENTS AND MATERIALS, CORROSION





Air to Port " A " :counterclockwise(open)

* Pistons must be inverted to reverse actuator rotation

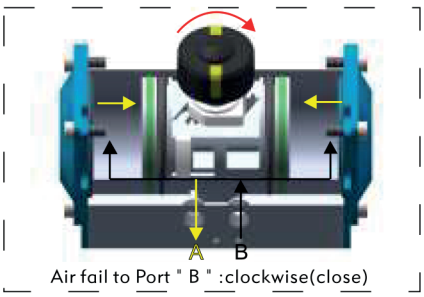
30%-50%.
100N.m
100x (1+30%) =130 N.m
BT-40SK10
0”=285N.m
90”=164N.m
0”= 193N.m
90”= 314N.m

Selection of single action actuators
Under normal operating conditions, a single actuator to consider the role of the safety factor of 30% -50%.

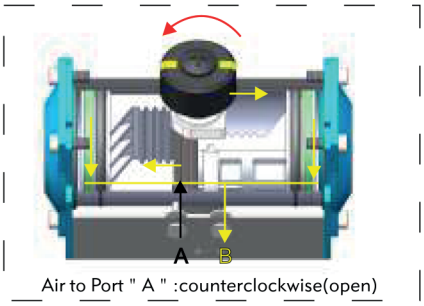
For example:
Valve required torque = 100 N.m
Safetytorque =100X (1+30%) = 130N.m
according to single acting actuator output torque table, we can find BT-40SK10
Torque following
Implementation process 0° = 285N.m air
Implementation process 90° = 164 N.m air
Spring stroke 0° = 193 N.m
Spring stroke 90° =314N.m

output Torque bigger than all our needs

Note:
Single action during the spring return actuators, actuator B hole ventilation does not affect actuator output torque.instead it’s helpful of sping return



Air fail to Port " B " :clockwise(close)



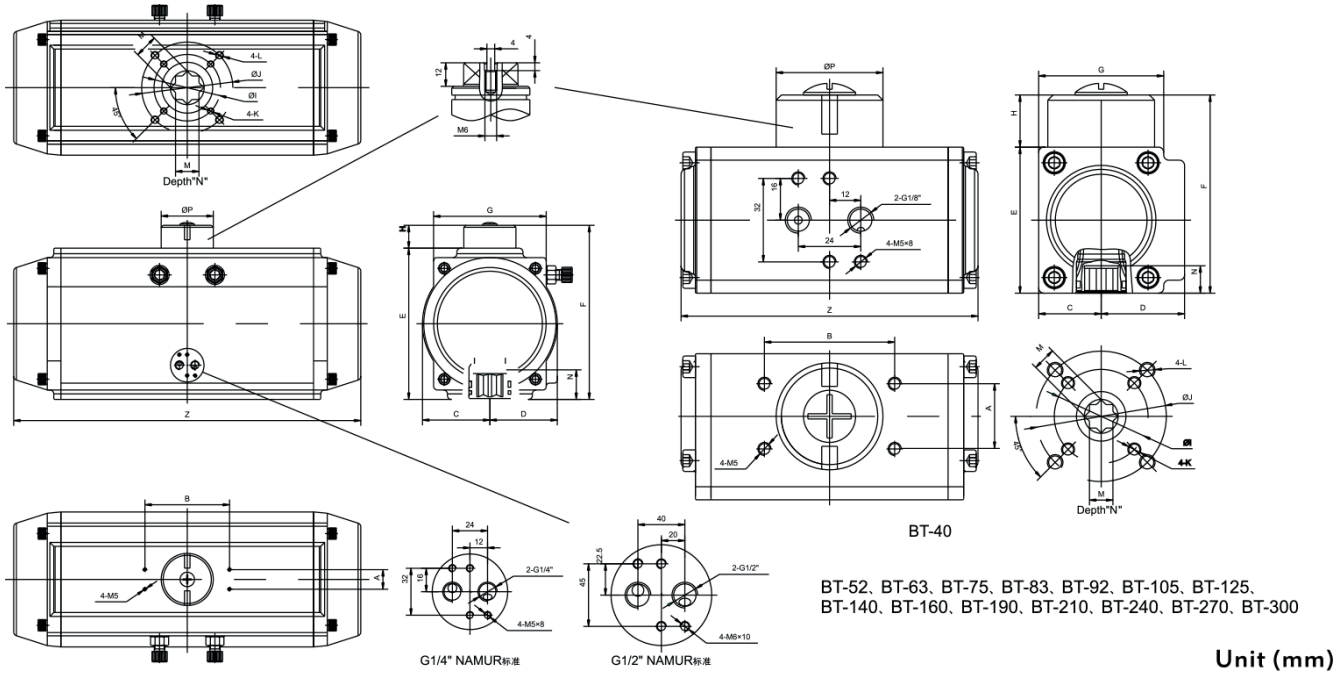
Air to Port " A " :counterclockwise(open)

* Spring force makes the actuator clokwise when the air is exhausted at port " A "
* When air fail to counterclockwise is required, the pistons must be inverted

Double Acting Actuator Output Torque(Nm)

Model	Unit : Bar)								
	3bar	3.5bar	4bar	4.5bar	5bar	5.5bar	6bar	6.5bar	7bar
VRA-RA040DA09036050	5.7	6.7	7.6	8.6	9.5	10.5	11.4	13.3	15.2
VRA-RA052DA11036050	12.0	14.0	16.0	18.0	20.0	22.0	24.0	28.0	32.0
VRA-RA063DA14050070	21.0	24.5	28.0	31.5	35.0	38.5	42.0	49.0	56.0
VRA-RA075DA14050070	30.0	35.0	40.0	45.0	50.0	55.0	60.0	70.0	80.0
VRA-RA083DA17050070	45.7	53.3	61.0	68.6	76.2	83.8	91.4	106.7	121.9
VRA-RA092DA17050070	67.4	78.7	89.9	101.2	112.4	123.6	134.9	157.4	179.8
VRA-RA105DA22070102	97.6	113.9	130.2	146.4	162.7	179.0	195.2	227.8	260.3
VRA-RA125DA22070102	152.2	177.6	203.0	228.3	253.7	279.1	304.4	355.2	405.9
VRA-RA140DA27102125	260.3	303.7	347.0	390.4	433.8	477.2	520.6	607.3	694.1
VRA-RA160DA27102125	396.6	462.7	528.8	594.9	661.0	727.1	793.2	925.4	1057.6
VRA-RA190DA36000140	639.3	745.9	852.4	959.0	1065.5	1172.1	1278.6	1491.7	1704.8
VRA-RA210DA36000140	781.0	911.2	1041.4	1171.5	1301.7	1431.9	1562.0	1822.4	2082.7
VRA-RA240DA46000165	1147.6	1338.8	1530.1	1721.3	1912.6	2103.9	2295.1	2677.6	3060.2
VRA-RA270DA46000165	1742.9	2033.4	2323.8	2614.3	2904.8	3195.3	3485.8	4066.7	4647.7
VRA-RA300DA46165215	2390.8	2789.3	3187.8	3586.2	3984.7	4383.2	4781.6	5578.6	6375.5

Dimensional Drawing



Dimension

Model	A	B	C	D	E	F	G	H	I	I-1	J	J-1	K	L	M	N	P	Z	Air
VRA-RA040DA09036050	25	50	24	32	56	76	48	20	36	F03	50	F05	M5×8	M6×10	9	10	42	114	1/8"
VRA-RA052DA11036050	30	80	30	42.5	72.4	92.4	50.5	20	36	F03	50	F05	M5×8	M6×10	11	14	42	150	1/4"
VRA-RA063DA14050070	30	80	36	47	88.5	108.5	69.5	20	50	F05	70	F07	M6×10	M8×13	14	18	42	171	1/4"
VRA-RA075DA14050070	30	80	42.5	53	100	120	78	20	50	F05	70	F07	M6×10	M8×13	14	18	42	186	1/4"
VRA-RA083DA17050070	30	80	46.5	57	109.5	129.5	86	20	50	F05	70	F07	M6×10	M8×13	17	21	42	206	1/4"
VRA-RA092DA17050070	30	80	50	58	117	137	90	20	50	F05	70	F07	M6×10	M8×13	17	21	42	265	1/4"
VRA-RA105DA22070102	30	80	57.5	64	135	155	104.5	20	70	F07	102	F10	M8×13	M10×16	22	26	42	272	1/4"
VRA-RA125DA22070102	30	80	67.5	74.5	157	187	120.5	30	70	F07	102	F10	M8×13	M10×16	22	26	62	304	1/4"
VRA-RA140DA27102125	30	80	75.5	75.5	174	204	125	30	102	F10	125	F12	M10×16	M12×20	27	32	62	395	1/4"
VRA-RA160DA27102125	30	130	87	87	198	228	143	30	102	F10	125	F12	M10×16	M12×20	27	32	62	462	1/4"
VRA-RA190DA36000140	30	130	103	103	232	262	172	30			140	F14		M16×25	36	40	80	552	1/4"
VRA-RA210DA36000140	30	130	113	113	257	287	194	30			140	F14		M16×25	36	40	80	552	1/4"
VRA-RA240DA46000165	30	130	130	130	292	322	230	30			165	F16		M20×30	46	50	90	628	1/4"
VRA-RA270DA46000165	30	130	147	147	331	361	252	30			165	F16		M20×30	46	50	90	750	1/2"
VRA-RA300DA46165215	30	130	161	168	354	384	290	30	165	F16	215	F20	M20×30	M20×30	46	50	90	780	1/2"

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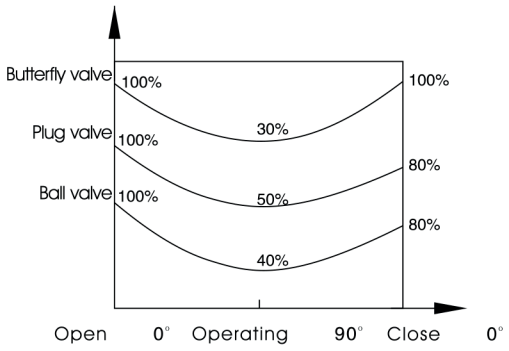
Single Acting Actuator Output Torque(Nm)

Model		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	0° Start	90° End
VRA -RA052SR11036050	5	5.7	3.8	7.7	5.8	9.7	7.8	11.7	9.8	13.7	11.8	15.7	13.8									6.2	4.3
	6	5	2.6	7	4.6	9	6.6	11	8.6	13	10.6	15	12.6	17	14.6							7.4	5
	7			6.1	3.4	8.1	5.4	10.1	7.4	12.1	9.4	14.1	11.4	16.1	13.4	18.1	13.4					8.6	5.9
	8					7.3	4.1	9.3	6.1	11.3	8.1	13.3	10.1	15.3	12.1	17.3	12.1	21.3	18.1			9.9	6.7
	9							8.4	4.9	10.4	6.9	12.4	8.9	14.4	10.9	16.4	10.9	20.4	16.9	24.4	20.9	11.1	7.6
	10									9.5	5.6	11.5	7.6	13.5	9.6	15.5	9.6	19.5	15.6	23.5	19.6	12.4	8.5
	11											10.7	6.4	12.7	8.4	14.7	8.4	18.7	14.4	22.7	18.4	13.6	9.3
	12													11.8	7.2	13.8	7.2	17.8	13.2	21.8	17.2	14.8	10.2
VRA -RA063SR14050070	5	10.7	7.1	14.2	10.6	17.7	14.1	21.2	17.6	24.7	21.1	28.2	24.6									10.4	6.8
	6	9.3	5	12.8	8.5	16.3	12	19.8	15.5	23.3	19	26.8	22.5	30.3	26							12.5	8.2
	7			11.4	6.4	14.9	9.9	18.4	13.4	21.9	16.9	25.4	20.4	28.9	23.9	32.4	23.9					14.6	9.6
	8					13.6	7.8	17.1	11.3	20.6	14.8	24.1	18.3	27.6	21.8	31.1	21.8	38.1	32.3			16.7	10.9
	9							15.7	9.2	19.2	12.7	22.7	16.2	26.2	19.7	29.7	19.7	36.7	30.2	43.7	37.2	18.8	12.3
	10									17.8	10.6	21.3	14.1	24.8	17.6	28.3	17.6	35.3	28.1	42.3	35.1	20.9	13.7
	11											20	12.1	23.5	15.6	27	15.6	34	26.1	41	33.1	22.9	15
	12													22.1	13.5	25.6	13.5	32.6	24	39.6	31	25	16.4
VRA -RA075SR14050070	5	14.5	10.5	19.5	15.5	24.5	20.5	29.5	25.5	34.5	30.5	39.5	35.5									14.5	10.5
	6	12.3	7.6	17.3	12.6	22.3	17.6	27.3	22.6	32.3	27.6	37.3	32.6	42.3	37.6							17.4	12.7
	7			15.2	9.7	20.2	14.7	25.2	19.7	30.2	24.7	35.2	29.7	40.2	34.7	45.2	34.7					20.3	14.8
	8					18.1	11.8	23.1	16.8	28.1	21.8	33.1	26.8	38.1	31.8	43.1	31.8	53.1	46.8			23.2	16.9
	9							21	13.9	26	18.9	31	23.9	36	28.9	41	28.9	51	43.9	61	53.9	26.1	19
	10									23.9	16	28.9	21	33.9	26	38.9	26	48.9	41	58.9	51	29	21.1
	11											26.8	18.1	31.8	23.1	36.8	23.1	46.8	38.1	56.8	48.1	31.9	23.2
	12													29.7	20.3	34.7	20.3	44.7	35.3	54.7	45.3	34.7	25.3
VRA -RA083SR17050070	5	22.2	15	29.9	22.7	37.5	30.3	45.2	38	52.8	45.6	60.4	53.2									23	15.8
	6	19.0	10.4	26.7	18.1	34.3	25.7	42	33.4	49.6	41	57.2	48.6	64.8	56.2							27.6	19
	7			23.6	13.5	31.2	21.1	38.9	28.8	46.5	36.4	54.1	44	61.7	51.6	69.3	51.6					32.2	22.1
	8					28	16.5	35.7	24.2	43.3	31.8	50.9	39.4	58.5	47	66.1	47	81.4	69.9			36.8	25.3
	9							32.5	19.6	40.1	27.2	47.7	34.8	55.3	42.4	62.9	42.4	78.2	65.3	93.4	80.5	41.4	28.5
	10									37	22.6	44.6	30.2	52.2	37.8	59.8	37.8	75.1	60.7	90.3	75.9	46	31.6
	11											41.4	25.6	49	33.2	56.6	33.2	71.9	56.1	87.1	71.3	50.6	34.8
	12													45.8	28.6	53.4	28.6	68.7	51.5	83.9	66.7	55.2	38
VRA -RA092SR17050070	5	32.8	21.7	44.1	33	55.4	44.3	66.6	55.5	77.9	66.8	89.1	78									34.4	23.3
	6	28.1	14.9	39.4	26.2	50.7	37.5	61.9	48.7	73.2	60	84.4	71.2	95.6	82.4							41.2	28
	7			34.7	19.3	46	30.6	57.2	41.8	68.5	53.1	79.7	64.3	90.9	75.5	102.2	75.5					48.1	32.7
	8					41.4	23.7	52.6	34.9	63.9	46.2	75.1	57.4	86.3	68.6	97.6	68.6	120.1	102.4			55	37.3
	9							47.9	28	59.2	39.3	70.4	50.5	81.6	61.7	92.9	61.7	115.4	95.5	137.8	117.9	61.9	42
	10									54.5	32.5	65.7	43.7	76.9	54.9	88.2	54.9	110.7	88.7	133.1	111.1	68.7	46.7
	11											61	36.8	72.2	48	83.5	48	106	81.8	128.4	104.2	75.6	51.4
	12													67.6	41.1	78.9	41.1	101.4	74.9	123.8	97.3	82.5	56
VRA -RA105SR22070102	5	49.7	32.1	66	48.4	82.3	64.7	98.6	81	114.8	97.2	131.1	113.5									49.2	31.6
	6	43.3	22.2	59.6	38.5	75.9	54.8	92.2	71.1	108.4	87.3	124.7	103.6	141	119.9							59.1	38
	7			53.3	28.7	69.6	45	85.9	61.3	102.1	77.5	118.4	93.8	134.7	110.1	150.9	110.1					68.9	44.3
	8					63.3	35.2	79.6	51.5	95.8	67.7	112.1	84	128.4	100.3	144.6	100.3	177.2	149.1			78.7	50.6
	9							73.3	41.6	89.5	57.8	105.8	74.1	122.1	90.4	138.3	90.4	170.9	139.2	203.4	171.7	88.6	56.9
	10									83.1	48	99.4	64.3	115.7	80.6	131.9	80.6	164.5	129.4	197	161.9	98.4	63.3
	11											93.1	54.7	109.4	71	125.6	71	158.2	119.8	190.7	152.3	108	69.6
	12													103.1	61	119.3	61	151.9	109.8	184.4	142.3	118	75.9
VRA -RA125SR22070102	5	74.8	47.8	100.2	73.2	125.6	98.6	151	124	176.3	149.3	201.7	174.7									79	52
	6	63.8	32.8	89.2	58.2	114.6	83.6	140	109	165.3	134.3	190.7	159.7	216.1	185.1							94	63
	7			79.2	42.2	104.6	67.6	130	93	155.3	118.3	180.7	143.7	206.1	169.1	231.4	169.1					110	73
	8					93.6	52.6	119	78	144.3	103.3	169.7	128.7	195.1	154.1	220.4	154.1	271.2	230.2			125	84
	9							109	62	134.3	87.3	159.7	112.7	185.1	138.1	210.4	138.1	261.2	214.2	311.9	264.9	141	94
	10									123.3	71.3	148.7	96.7	174.1	122.1	199.4	122.1	250.2	198.2	300.9	248.9	157	105
	11											138.7	80.7	164.1	106.1	189.4	106.1	240.2	182.2	290.9	232.9	173	115
	12													154.1	91.1	179.4	91.1	230.2	167.2	280.9	217.9	188	125
VRA -RA140SR27102125	5	130.9	87.9	174.3	131.3	217.7	174.7	261	218	304.4	261.4	347.8	304.8									129	86
	6	113.9	61.9	157.3	105.3	200.7	148.7	244	192	287.4	235.4	330.8	278.8	374.2	322.2							155	103
	7			140.3	79.3	183.7	122.7	227	166	270.4	209.4	313.8	252.8	357.2	296.2	400.6	296.2					181	120
	8					166.7	97.7	210	141	253.4	184.4	296.8	227.8	340.2	271.2	383.6	271.2	470.3	401.3			206	137
	9							192	115	235.4	158.4	278.8	201.8	322.2	245.2	365.6	245.2	452.3	375.3	539.1	462.1	232	155
	10									218.4	132.4	261.8	175.8	305.2	219.2	348.6	219.2	435.3	349.3	522.1	436.1	258	172
	11											244.8	149.8	288.2	193.2	331.6	193.2	418.3	323.3	505.1	410.1	284	189
	12													271.2	167.2	314.6	167.2	401.3	297.3	488.1	384.1	310	206
VRA -RA160SR27102125	5	190.5	122.5	256.6	188.6	322.7	254.7	388.8	320.8	454.9	386.9	521	453									208	140
	6	162.5	80.5	228.6	146.6	294.7	212.7	360.8	278.8	426.9	344.9	493	411	559.1	477.1							250	168
	7			200.6	104.6	266.7	170.7	332.8	236.8	398.9	302.9	465	369	531.1	435.1	597.2	435.1					292	196
	8					239.7	129.7	305.8	195.8	371.9	261.9	438	328	504.1	394.1	570.2	394.1	702.4	592.4			333	223
	9							277.8	153.8	343.9	219.9	410	286	476.1	352.1	542.2	352.1	674.4	550.4	806.6	682.6	375	251
	10									315.9	177.9	382	244	448.1	310.1	514.2	310.1	646.4	508.4	778.6	640.6	417	279
	11											354	203	420.1	269.1	486.2	269.1	618.4	467.4	750.6	599.6	458	307
	12													392.1	227.1	458.2	227.1	590.4	425.4	722.6	557.6	500	335
VRA -RA190SR36000140	5	333	224	440	331	546	437	653	544	759	650	866	757									309	200
	6	293	162	400	269	506	375	613	482	719	588	826	695	933	802							371	240
	7			360	207	466	313	573	420	679	526	786	633	893	740	999	740					433	280
	8					426	251	533	358	639	464	746	571	853	678	959	678	1172	997			495	320
	9							493	296	599	402	706	509	813	616	919	616	1132	935	1346	1149	557	360
	10									559	341	666	448	773	555	879	555	1092	874	1306	1088	618	400
	11											626	386	733	493	839	493	1052	812	1266	1026	680	440
	12													693	431	799	431	1012	750	1226	964	742	480
VRA -RA210SR36000140	5	376	271	506	401	636	531	767	662	897	792	1027	922									380	275
	6	321	195	451	325	581	455	712	586	842	716	972	846	1102	976							456	330
	7			396	249	526	379	657	510	787	640	917	770	1047	900	1177	900					532	385
	8					471	303	602	434	732	564	862	694	992	824	1122	824	1383	1215			608	440
	9							547	358	677	488	807	618	937	748	1067	748	1328	1139	1588	1399	684	495
	10									622	412	752	542	882	672	1012	672	1273	1063	1533	1323	760	550
	11											697	466	827	596	957	596	1218	987	1478	1247	836	605
	12													772	520	902	520	1163	911	1423	1171	912	660
VRA -RA240SR46000165	5	547	403	738	594	929	785	1120	976	1312	1168	1503	1359									554	410
	6	465	292	656	483	847	674	1038	865	1230	1057	1421	1248	1612	1439							665	492
	7			573	373	764	564	955	755	1147	947	1338	1138	1529	1329	1721	1329					775	575
	8					683	453	874	644	1066	836	1257	1027	1448	1218	1640	1218	2022	1792			886	656
	9							791	532	983	724	1174	915	1365	1106	1557	1106	1939	1680	2322	2063	998	739
	10									901	614	1092	805	1283	996	1475	996	1857	1570	2240	1953	1108	821
	11											1010	694	1201	885	1393	885	1775	1459	2158	1842	1219	903
	12													1119	774	1311	774	1693	1348	2076	1731	1330	985
VRA -RA270SR46000165	5	892	665	1183	956	1473	1246	1764	1537	2054	1827	2345	2118									787	560
	6	780	509	1071	800	1361	1090	1652	1381	1942	1671	2233	1962	2523	2252							943	672
	7			960	642	1250	932	1541	1223	1831	1513	2122	1804	2412	2094	2703	2094					1101	783
	8					1138	775	1429	1066	1719	1356	2010	1647	2300	1937	2591	1937	3172	2809			1258	895
	9							1317	908	1607	1198	1898	1489	2188	1779	2479	1779	3060	2651	3641	3232	1416	1007
	10									1495	1042	1786	1333	2076	1623	2367	1623	2948	2495	3529	3076	1572	1119
	11											1674	1175	1964	1465	2255	1465	2836	2337	3417	2918	1730	1231
	12													1853	1308	2144	1308	2725	2180	3306	2761	1887	1342
VRA -RA300SR46165215	5	1263	932	1661	1330	2060	1729	2458	2127	2857	2526	3255	2924									1061	730
	6	1117	720	1515	1118	1914	1517	2312	1915	2711	2314	3109	2712	3508	3111							1273	876
	7			1369	906	1768	1305	2166	1703	2565	2102	2963	2500	3362	2899	3760	2899					1485	1022
	8					1622	1093	2020	1491	2419	1890	2817	2288	3216	2687	3614	2687	4411	3882			1697	1168
	9							1874	1279	2273	1678	2671	2076	3070	2475	3468	2475	4265	3670	5062	4467	1909	1314
	10									2127	1465	2525	1863	2924	2262	3322	2262	4119	3457	4916	4254	2122	1460
	11											2379	1651	2778	2050	3176	2050	3973	3245	4770	4042	2334	1606
	12													2632	1838	3030	1838	3827	3033	4624	3830	2546	1752

Sizing information and How to order



80N.m
80×30%=24N.m
6Bar

BT-125SK10
0° = 141N.m>80N.m
90° = 81N.m>24N.m
90° = 155N.m>24N.m
0° =95.3N.m>80N.m

Forexample:
Butterfly of the original maximum torque=80N.m
Opened torque 80 × 30% = 24N.m
Airpressure=6Bar

Wecanchoose BT-125SK10
Air travel 0° =141N.m> 80N.m
Air travel 90° = 81 N.m> 24N.m
Spring stroke 90° =155 N.m> 24N.m
Spring stroke 0° =95.3N.m> 80N.m
The above figures show opening meet of the butterfly valve

Operating type (Double acting and spring return)

NAMUR
Air supply connection is designed in accordance with NAMUR Standard to install solenoid valves.

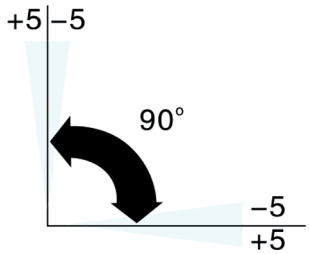
NAMUR
The Namur drive pinion and the Namur top mounting connection permit direct installation of accessories such as limitswitch box and positioner.

ISO5211、DIN3337

Bottom mounting connection is designed in accordance with ISO5211、DIN3337standards for direct mounting with valve gear boxes or mounting brackets.

Operating conditions:

1. 30μm
2. 2.5 , 8
3. -20℃~+80℃
   -40℃~+80℃
   -15℃~+150℃
4. 0°-90°
5.



1.Operating media
Dry or lubricated air, or the non-corrosive gases
The maximum particle diameter must less than 30μm
2.Air supply pressure
The minximum supply pressure is 2.5 Bar
The maximum supply pressure is 8 Bar
3.Operating temperature
Standard：-20℃~+80℃
Low temperature：-40℃~+80℃
High temperature：-15℃~+150℃
4.Travel adjustment
Have adjustment range of ±5° for the rotation at 0°and 90°
5.Application
Either indoor or outdoor

Varnasan
CONTROL VALVE TECHNOLOGIES

Air Consumption

Model	Maximum pressure	The angle of rotation	Temperature	1°the need to adjust the number of laps	Diameter	(L) Internal volume close	Open	(A) On-off time close	Open	(kgs/per)Weight A weight	Spring weight
VRA-RA052SR11036050	8 bar Lubrication or dry of compressed air 8bar	(0°–90°) ± 5° 0°–90° (0°–90°) ± 5° or full itinerary 0°–90°	ST O –20–+80℃ HT O –15–+150℃ LT O –40+80℃ ST(normal) NBR O–ring –20–+80℃ HT(High Temperature) Viton O–ring –15–+150℃ LT(Low Temperature) Silicone O–ring –40+80℃	1/6	52	0.2	0.3	DA0.3 SR0.3	DA0.3 SR0.4	DA1.6 SR1.8	··· 0.02
VRA-RA063SR14050070				1/5	63	0.3	0.5	DA0.3 SR0.4	DA0.4 SR0.5	DA2.8 SR3.2	··· 0.03
VRA-RA075SR14050070				1/5	75	0.5	0.8	DA0.4 SR0.5	DA0.5 SR0.6	DA4.0 SR4.7	··· 0.06
VRA-RA083SR17050070				1/5	83	0.7	1.1	DA0.5 SR0.7	DA0.6 SR0.9	DA5.9 SR6.7	··· 0.07
VRA-RA092SR17050070				1/4	92	1.2	1.8	DA0.7 SR1.0	DA0.9 SR1.2	DA8.4 SR9.8	··· 0.10
VRA-RA105SR22070102				1/4	105	1.5	2.3	DA0.9 SR1.2	DA1.1 SR1.4	DA10.7 SR12.5	··· 0.13
VRA-RA125SR22070102				1/4	125	2.4	3.8	DA1.2 SR1.5	DA1.4 SR1.8	DA15.5 SR18.3	··· 0.25
VRA-RA140SR27102125				1/4	140	3.1	4.9	DA1.5 SR1.8	DA1.7 SR2.1	DA19.5 SR23.3	··· 0.36
VRA-RA160SR27102125				1/4	160	4.5	7.3	DA2.0 SR2.4	DA2.2 SR2.8	DA26.7 SR32.8	··· 0.5
VRA-RA190SR36000140				1/4	190	6.8	11.2	DA2.8 SR3.0	DA3.0 SR3.4	DA34.6 SR44.2	··· 0.5
VRA-RA210SR36000140				1/4	210	10	15.2	SR3.5 DA3.5	SR4.0 DA4.0	SR43.6 DA58.2	0.62 ···
VRA-RA240SR46000165				1/4	240	14.5	21.4	SR4.1 DA4.0	SR4.6 DA4.5	SR71.0 DA78.8	1.12 ···
VRA-RA270SR46000165				1/4	270	23.8	29.7	SR4.5 DA	SR5.0 DA	SR96.5	1.56
VRA-RA300SR46165215				1/4	300	35.1	46.3	SR DA	SR DA		

Air consumption rest with Supply. Air volume and Action cycle times,expressions

L/Min=Air volume(Air volume Opening+Air volume closing)×[(Air Supply(Kpa)+101.3)÷101.3]×Action cycle times(/min)

Common faults and inspection, troubleshooting

Failure phenomenon	Inspection Items	Solution
Pneumatic valve can not move	1, the electromagnetic valve is normal, coil is burned, Electromagnetic valve is stuck being stolen	Solenoid valve replacement, replacement coils, remove stolen property.
	2, a separate air supply pneumatic actuator test, check seals andWhether the cylinder is damaged.	Replace a bad ring and cylinder.
	3, there are impurities in the spool valve stuck.	Remove impurities, replace damaged parts.
	4, the handle in a manual motor location.	change the handle to pneumatic position
Slow motion, crawling	1, supply pressure is not enough.	The increase of gas supply pressure (0.4-0.7Mpa)
	2, pneumatic actuator output torque is too small.	Increase the pneumatic actuator Production.
	3, the valve spool or valve assembly too tight.	Re-assembly adjustments.
	4, air supply pipe plug, flow is too small.	Exclude plug, replace the filter cartridge.
Reply devices without signal	1, power line short circuit or open circuit.	Maintenance of power lines.
	2, reply within the cam position is not accurate.	Adjust the cam to the correct location
	3, micro switch damaged.	Replacement Micro Switch

Varnasan
CONTROL VALVE TECHNOLOGIES

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