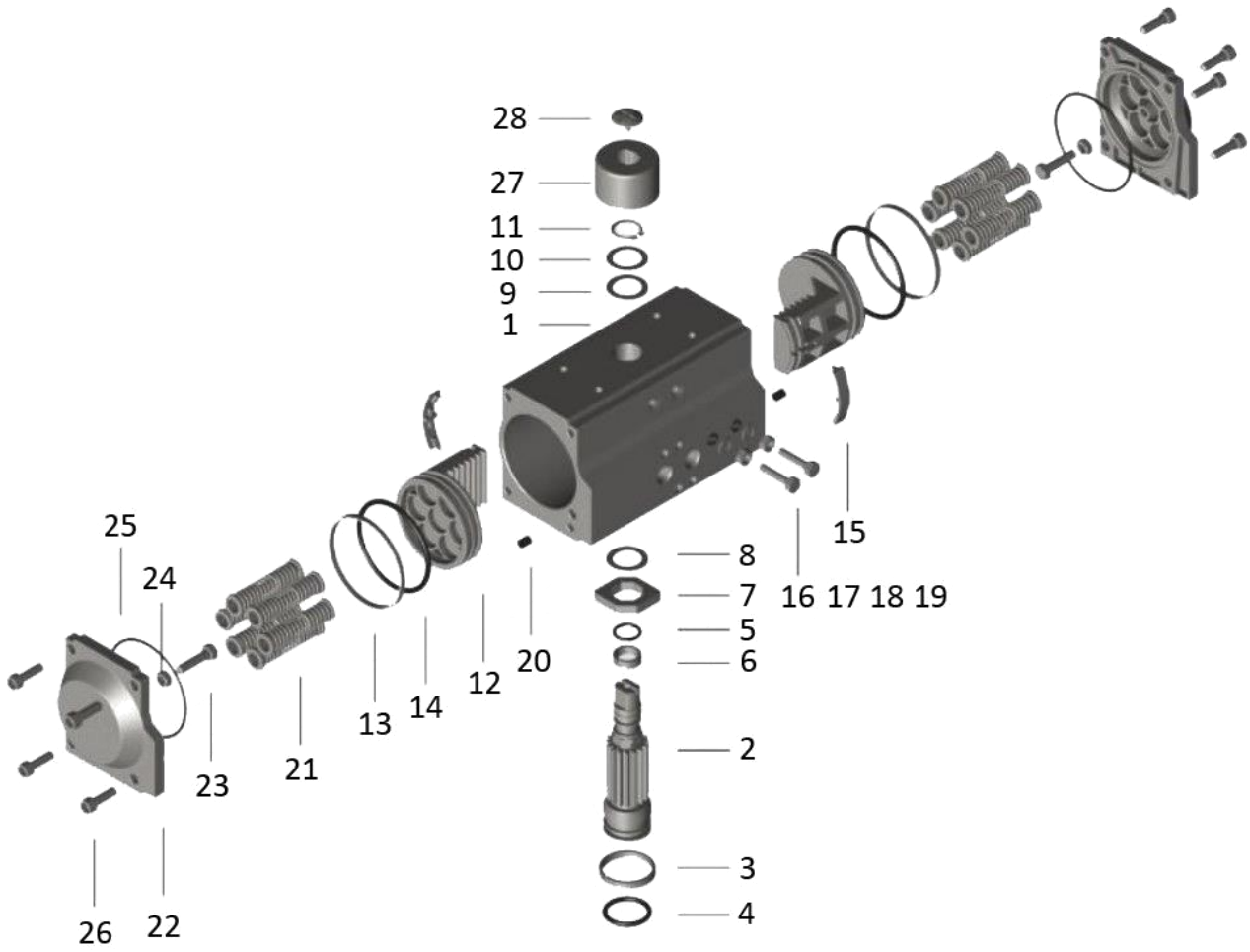


Pneumatic Actuator

Double Acting & Single Acting

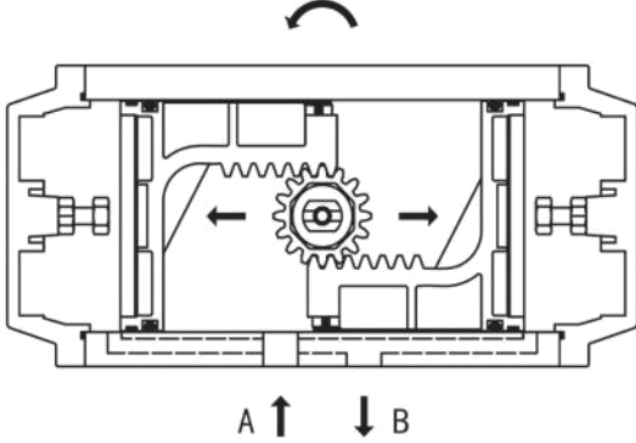


Part List

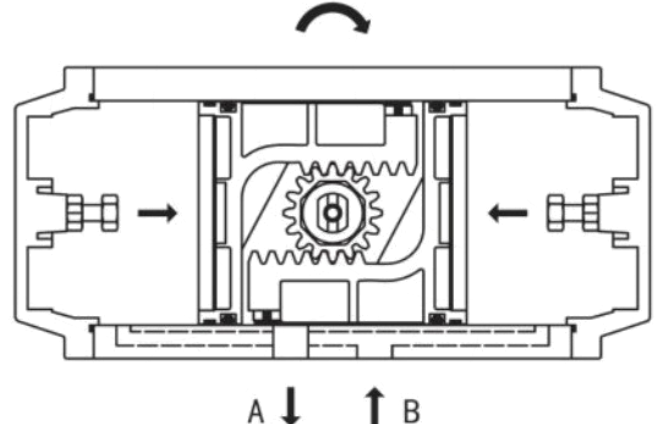
No	Description	Qty	Material	No	Description	Qty	Material
1	Cylinder	1	Aluminium Alloy	15	Bearing Ring (Piston)	2	POM
2	Pinion	1	Alloy Steel	16	Adjusting Screw	2	Stainless Steel
3	Bearing (Lower Pinion)	1	POM	17	Adjusting Nut	2	Stainless Steel
4	O-Ring (Lower Pinion)	1	NBR	18	Washer (Adjusting Screw)	2	Stainless Steel
5	O-Ring (Top Pinion)	1	NBR	19	O-Ring (Adjusting Screw)	2	NBR
6	Bearing (Top Pinion)	1	POM	20	Plug	2	NBR
7	Spacer	1	Alloy Steel	21	Spring	4 - 12	Spring Steel
8	Thrust Bearing Pinion	1	POM	22	End Cap	2	Alloy Steel
9	Thrust Bearing Pinion	1	POM	23	Adjusting Screw (End Cap)	2	Stainless Steel
10	Thrust Washer (Pinion)	1	Stainless Steel	24	Adjusting Nut (End Cap)	2	Stainless Steel
11	Spring Clip	1	Stainless Steel	25	O-Ring (End Cap)	2	NBR
12	Piston	2	Alloy Steel	26	Bolts (End Cap)	8	Stainless Steel
13	Guide Ring (Piston)	2	POM	27	Indicator	1	Engineering Plastics
14	O-Ring (Piston)	2	NBR	28	Nut (Indicator)	1	Engineering Plastics

HOW IT WORKS (Standard Action)

Working Principle of Double Acting

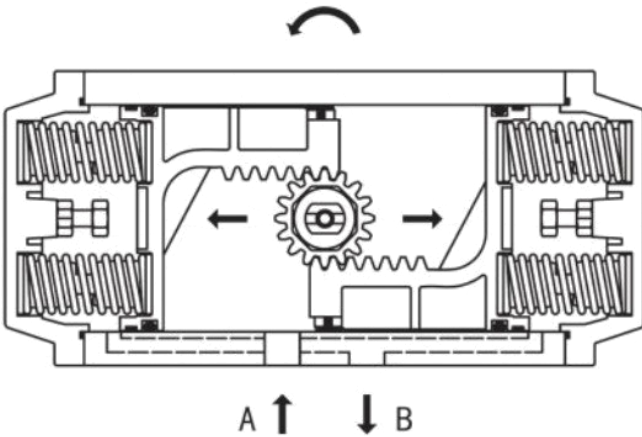


Air from Port A forces the pistons outwards, causing the springs to compress, the pinion turns counter-clockwise to open the valve while air is being exhausted from Port B.

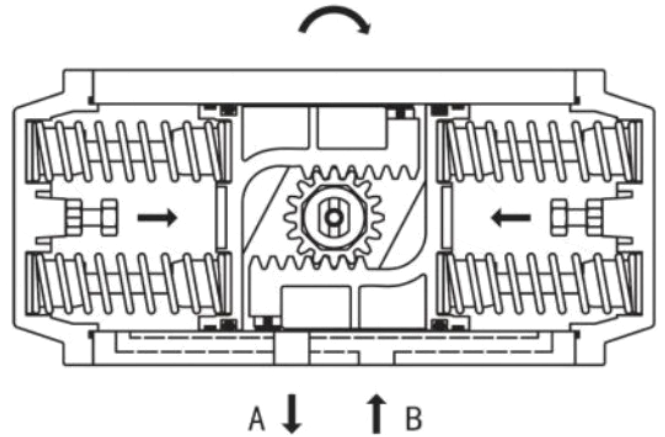


Air from Port B forces the pistons inwards, causing the springs to compress, the pinion turns clockwise to close the valve while air is being exhausted from Port A.

Working Principle of Single Acting (Spring Return)



Air from Port A forces the pistons outwards, causing the springs to compress, the pinion turns counter-clockwise to open the valve while air is being exhausted from Port B.



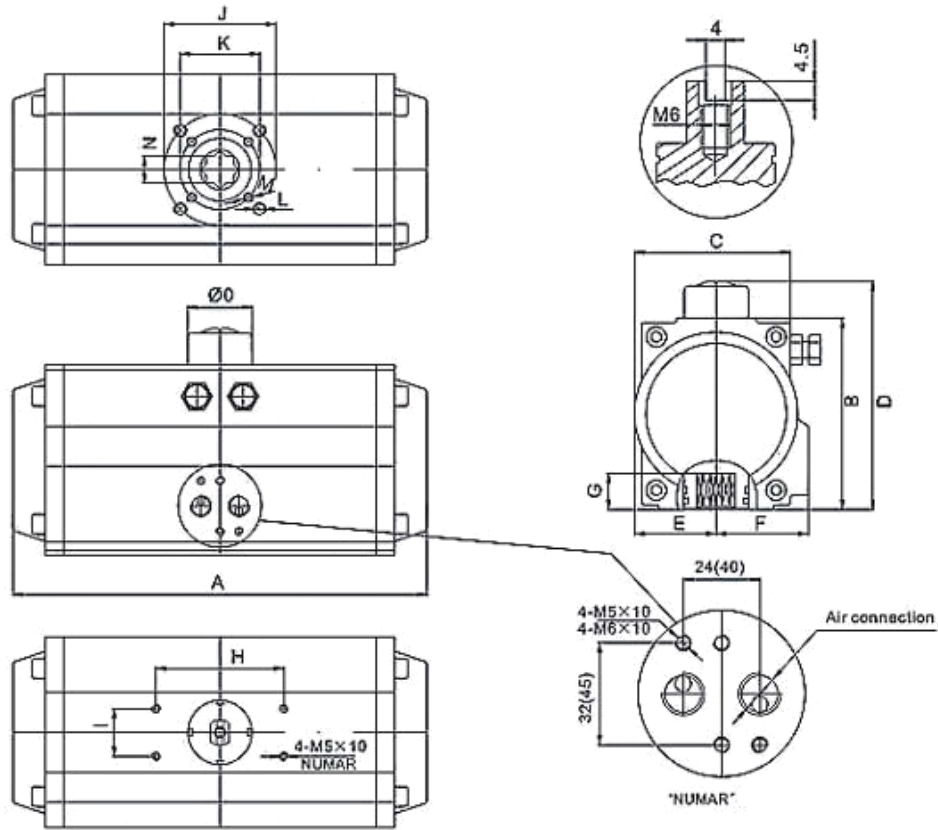
In case of air or power disruption, the rebound of spring forces the pistons inwards, the pinion turns clockwise to close the valve while air is being exhausted from Port A. Air from Port B can accelerate the close of the valve.

Notes

1. The standard rotation is clockwise for closing the valve, while counter-clockwise for opening.
2. If the assembly direction of the piston is reversed, then the standard rotation is counter-clockwise for closing the valve, clockwise for opening.

Pneumatic Actuator

Double Acting & Single Acting



DIMENSIONS																
MODEL	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	Air
VT-032	114	45	47	65	23	23	14	50	25		F03		M5x8	9	Ø30	G1/8
VT-052	158	74	60	94	30	41	14	80	30	F05	F03	M6x10	M5x8	11	Ø40	G1/4
VT-063	190	88	69	108	36	45	18	80	30	F07	F05	M8x13	M6x12	14	Ø40	G1/4
VT-075	207	100	79	120	42	52	20	80	30	F07	F05	M8x13	M6x11	14	Ø40	G1/4
VT-083	213	109	88	129	46	52	21	80	30	F07	F05	M8x13	M6x12	17	Ø40	G1/4
VT-092	259	120	97	140	51	57	22	80	30	F07	F05	M8x13	M6x12	17	Ø40	G1/4
VT-105	287	133	105	153	57	64	24	80	30	F10	F07	M10x16	M8x14	22	Ø40	G1/4
VT-125	340	155	120	175	67	70	27	80	30	F10	F07	M10x16	M8x14	22	Ø65	G1/4
VT-140	414	171	137	191	75	77	32	80	30	F12	F10	M12x20	M10x18	27	Ø65	G1/4
VT-160	476	197	159	217	86	87	34	80	30	F12	F10	M12x20	M10x18	27	Ø78	G1/4
VT-190	535	230	186	260	10	102	40	130	30	F12		M12x20		36	Ø78	G1/4
VT-210	567	255	202	285	113	113	40	130	30	F14		M16x24		36	Ø78	G1/4
VT-240	668	291	233	321	129	129	50	130	30	F16		M20x26		46	Ø78	G3/8
VT-270	744	320	264	350	146	146	57	130	30	F16		M20x26		46	Ø78	G1/2
VT-300	830	362	312	392	194	194	57	130	30	F25	F16	M16x24	M20x28	46	Ø78	G1/2
VT-350	920	412	353	443	221	221	60	130	30	F25	F16	M16x24	M20x28	55	Ø95	G1/2
VT-400	1.012	465	391	495	248	248	60	130	30	F25	F16	M16x24	M20x28	55	Ø95	G1/2



Unit: Nm

Output Torque of VALVETEK Double Acting Pneumatic Actuators							
Model	Air pressure(unit:bar)						
	2	3	4	5	6	7	8
VT 032DA	2,78	4,20	6,00	7,50	9,00	10,00	11,50
VT 052DA	8,32	12,48	16,64	20,80	24,96	29,12	33,28
VT 063DA	14,64	21,96	29,28	36,60	43,96	51,24	58,56
VT 075DA	20,76	31,14	41,52	51,90	62,28	76,66	83,04
VT 083DA	30,32	45,48	60,64	75,80	90,96	106	121
VT 092DA	50,52	75,78	101	126	151	176	202
VT 105DA	67,88	101	137	170	203	237	271
VT 125DA	116	175	233	292	349	408	466
VT 140DA	175	263	351	439	526	614	701
VT 160DA	267	401	535	669	802	935	1.069
VT 190DA	430	646	862	1.077	1.292	1.508	1.723
VT 210DA	592	888	1.185	1.481	1.776	2.072	2.369
VT 240DA	928	1.393	1.857	2.321	2.785	3.249	3.713
VT 270DA	1.305	1.958	2.611	3.264	3916.3	4.569	5.221
VT 300DA	1.602	2.403	3.205	4.006	4.807	5.608	6.409
VT 350DA	2.399	3.598	4.798	5.998	7.197	8.397	9.596
VT 400DA	3.418	5.127	6.837	8.546	10.255	11.964	13.673

Unit: Nm

Output Torque of VALVETEK Spring Return Pneumatic Actuators													
Output Torque of Air Supply												Output Torque of Spring	
(bar)		3		4		5		6		7			
Model	Spring Quantity	0 Start	90 End	0 Start	90 End	0 Start	90 End	0 Start	90 End	0 Start	90 End	0 Start	90 End
VT 052SR	6	8	5	12	9							5	8
	8			10	7	15	11					6	10
	10			9	4	13	8	17	13			8	12
	12					11	6	15	10	20	14	10	15
VT 063SR	6	14	9	21	16	28	24					9	13
	8			18	12	25	19	33	27			11	17
	10			15	8	23	15	30	22	37	30	14	22
	12					20	11	27	18	34	25	17	26
VT 075SR	6	21	14	33	26								
	8			28	19	40	31					19	28
	10			23	12	35	24	47	36	59	47	24	35
	12					30	17	42	29	54	40	28	42
VT 083SR	6	28	20	43	35							17	26
	8			37	26	53	41					23	35
	10			32	17	47	32	62	48	77	63	29	43
	12					41	24	56	39	71	54	35	52
VT 092SR	6	41	27	64	50							28	41
	8			54	36	77	59	100	81			37	55
	10			45	22	68	45	91	68	113	90	46	69
	12					59	31	81	54	104	77	55	83
VT 105SR	6	62	42	97	77							40	60
	8			84	57	117	90					53	80
	10			70	37	103	70	137	104	171	138	66	100
	12					90	50	124	84	158	118	80	120
VT 125SR	6	104	71	162	129							71	104
	8			138	94	197	153					95	139
	10			114	59	173	118	231	176			119	174
	12					149	83	207	141	266	200	143	209
VT 140SR	6	157	105	245	193							106	158
	8			209	140	297	228					142	211
	10			174	87	262	175	349	262	438	350	177	264
	12					226	122	314	210	402	297	212	317

Unit: Nm

Output Torque of VALVETEK Spring Return Pneumatic Actuators													
Output Torque of Air Supply												Output Torque of Spring	
(bar)		3		4		5		6		7			
Model	Spring Quantity	0 Start	90 End	0 Start	90 End	0 Start	90 End	0 Start	90 End	0 Start	90 End	0 Start	90 End
VT 160SR	6	237	156	371	290							164	245
	8	183	75	316	208	450	342					218	327
	10			262	127	396	260	529	394			273	408
	12					341	179	475	313	608	446	328	490
VT 190SR	6	386	255	601	471							261	391
	8			514	340	730	556					348	522
	10			427	210	643	425	858	641	1.074	856	435	652
	12					556	295	771	511	987	726	522	782
VT 210SR	6	530	351	826	647							359	537
	8			706	468	1.003	764					478	716
	10			587	289	883	585	1.179	881	1.475	1.177	598	896
	12					764	406	1.060	702	1.356	998	717	1.075
VT 240SR	6	830	550	1.294	1.014							563	842
	8			1.107	733	1.571	1.198					750	1.123
	10			920	453	1.384	917	1.848	1.381	2.312	1.845	937	1.404
	12					1.197	636	1.661	1.100	2.125	1.564	1.124	1.685
VT 270SR	6	1.168	774	1.821	1.427							790	1.184
	8			1.557	1.032	2.210	1.684					1.054	1.579
	10			1.294	637	1.947	1.290	2.599	1.942	3.252	2.595	1.317	1.974
	12					1.683	895	2.336	1.548	2.989	2.200	1.580	2.369
VT 300SR	6	1.483	1.066									920	1.337
	8	1.177	621	1.979	1.423	2.780	2.224					1.226	1.782
	10			1.652	977	2.473	1.778	3.274	2.579	4.075	3.380	1.533	2.228
	12					2.014	1.077	2.815	1.878	3.686	2.679	1.922	2.929
VT 350SR	6	2.120	1.453									1.478	2.145
	8	1.627	738	2.827	1.938	4.027	3.138					1.971	2.860
	10			2.335	1.223	3.535	2.423	4.734	3.622	5.934	4.822	2.463	3.575
	12					3.120	1.537	4.319	2.736	5.519	3.936	2.878	4.461
VT 400SR	6	2.922	1.670									2.205	3.457
	8	2.372	806	4.082	2.516	5.791	4.225					2.755	4.321
	10			3.531	1.652	5.240	3.361	6.949	5.070	8.658	6.779	3.306	5.185
	12					4.445	2.190	6.154	3.899	8.106	5.608	4.101	6.356