



KV SERIES / PNEUMATIC ACTUATOR



Die casting aluminium body with both internal and external corrosion protection having honed cylinder surface for longer life and low coefficient of friction.

Dual piston rack and pinion design for compact onstruction,symmetric mounting position,high-cycle life and fast operation,reverse rotation can be accomplished in the field by simply inverting the pistons.

Multiple bearings and guides on racks and pistons,low friction,high cycle life and prevent shaft blowout.

Modular preloaded spring cartridge design,with coated spring for simple versatile range,greater safety and corrosion resistance,longer cycle life.

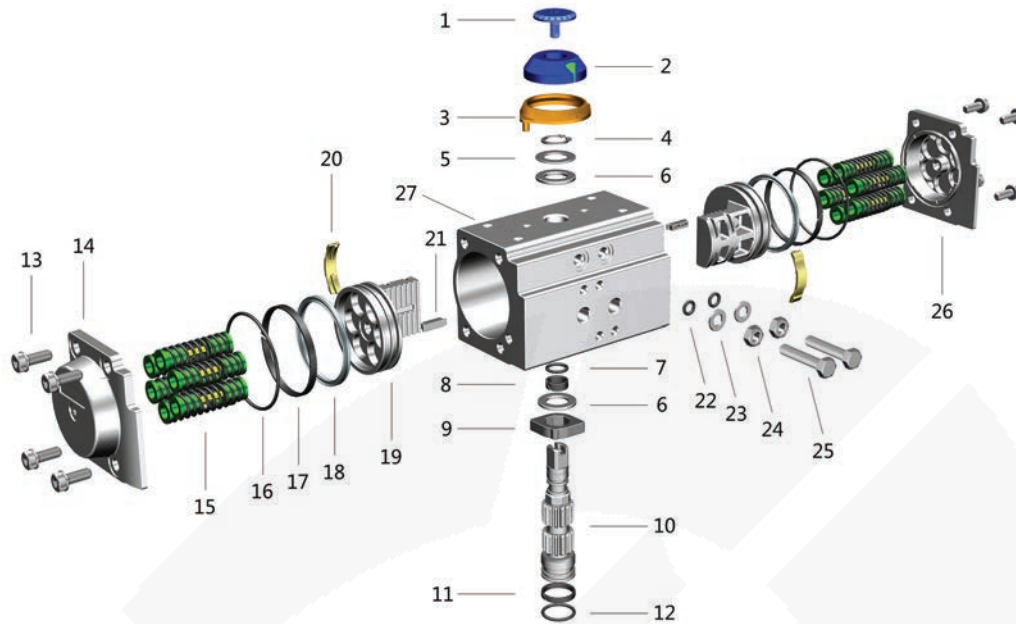
Fully machined teeth on piston and pinion for accurate low backlash rack and pinion engagement,- maximum efficiency,stainless steel fasteners for long term corrosion resistance.

SOLELY DISTRIBUTED BY



KV SERIES / PNEUMATIC ACTUATOR

KV / EXTRUDED ALUMINUM



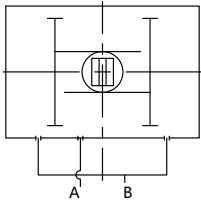
NO.	Part Name	Quantity	Material
1	Indicator Nut	1	ABS
2	Indicator	1	ABS
3	Indicator	1	ABS
4	Elastic Ring	1	Ss301
5	Shim	1	POM
6	Wear Pad	2	POM
7	Shaft Type O Ring	1	NBR
8	Wear Resistant Ring	1	POM
9	Adjusting Cam	1	WCB
10	Output Shaft	1	C45
11	Wear Resistant Ring	1	POM
12	Shaft Under the O Ring	1	NBR
13	End Cap Bolt	8	Ss301
14	Left End Cover	1	Die casting Alu
15	Spring Set	12	55Crsi
16	End Cover Type O Ring	2	NBR
17	Wear Resistant Ring	2	POM
18	Piston Seal Ring	2	NBR
19	Piston	2	Die casting Alu
20	Piston Guide Shoe	2	POM
21	Guide Block	2	PA66
22	Bolt with O Ring	2	NBR
23	Shim	2	Ss301
24	Nut	2	Ss301
25	Adjusting Bolt	2	Ss301
26	Right End Cover	1	Die casting Alu
27	Cylinder Body	1	6005-T5

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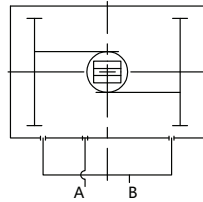
DOUBLE ACTING ACTUATORS

CCW

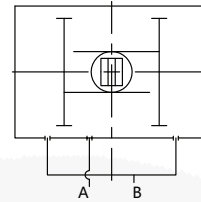
CW



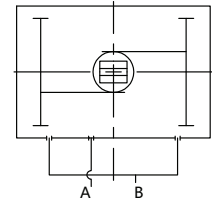
0°



90°



0°



90°

Air to port A forces the pistons outwards, causing the pinion to turn counterclockwise while the air is being exhausted from port B

Air to port B forces the pistons inwards, causing the pinion to turn clockwise while the air is being exhausted from port A

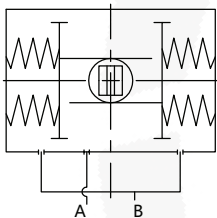
Air to port A forces the pistons outwards, causing the pinion to turn clockwise while the air is being exhausted from port B

Air to port B forces the pistons inwards, causing the pinion to turn counterclockwise while the air is being exhausted from port A

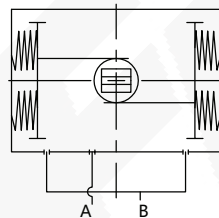
SPRING RETURN ACTUATORS

CCW

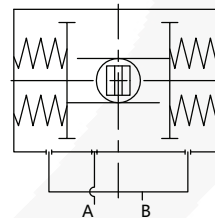
CW



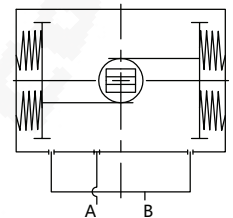
0°



90°



0°



90°

Air to port A forces the pistons outwards, causing the spring to compress, the pinion turns counterclockwise while air is being exhausted from port B

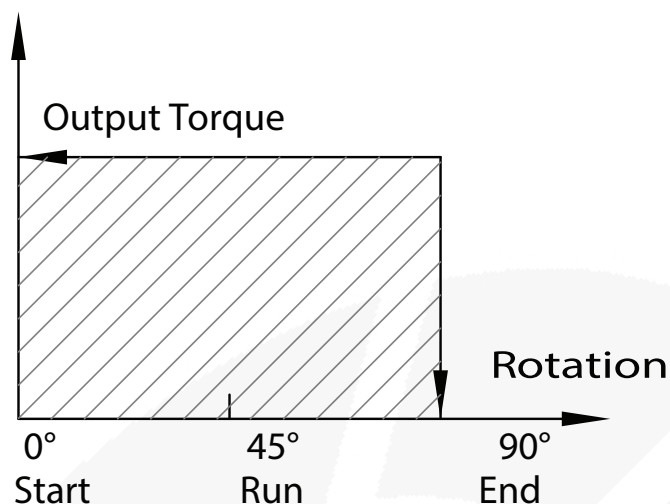
Loss of air pressure on port A, the stored energy in the springs forces the pistons inwards. The pinion turns clockwise while air is being exhausted from port A

Air to port A forces the pistons outwards, causing the spring to compress, the pinion turns clockwise while air is being exhausted from port B

Loss of air pressure on port A, the stored energy in the springs forces the pistons inwards. The pinion turns counterclockwise while air is being exhausted from port A

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OUTPUT TORQUE OF DOUBLE ACTING ACTUATORS



AIR SUPPLY PRESSURE (UNIT:BAR)

ACTUATOR TORQUE : Nm.

OUTPUT TORQUE OF DOUBLE ACTING ACTUATORS							
Model	2.5 BARS	3 BARS	4 BARS	5 BARS	6 BARS	7 BARS	8 BARS
KV-52DA	9.2	11	14.7	18.4	22.1	25.8	29.5
KV-63DA	15.1	18.1	24.1	30.1	36.1	42.1	48.2
KV-75DA	25.2	30.2	40.3	50.3	60.4	70.5	80.5
KV-83DA	38.5	46.2	61.6	77.1	92.5	107.9	123.3
KV-92DA	56.8	68.2	90.9	113.6	136.3	159.1	181.8
KV-105DA	82.2	98.7	131.6	164.4	197.3	230.2	263.1
KV-125DA	128	154	205	256	308	359	410
KV-140DA	219	263	351	439	526	614	702
KV-160DA	334	401	535	668	802	935	1069
KV-190DA	538	646	861	1077	1292	1508	1723
KV-210DA	658	789	1052	1316	1579	1842	2105
KV-240DA	894	1073	1432	1788	2145	2505	2860
KV-280DA	1315	1578	2104	2631	3157	3683	4209
KV-300DA	1845	2214	2953	3691	4429	5168	5906
KV-350DA	2740	3288	4385	5481	6577	7673	8770
KV-400DA	4289	5147	6863	8579	10294	12009	13725

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Air Consumption

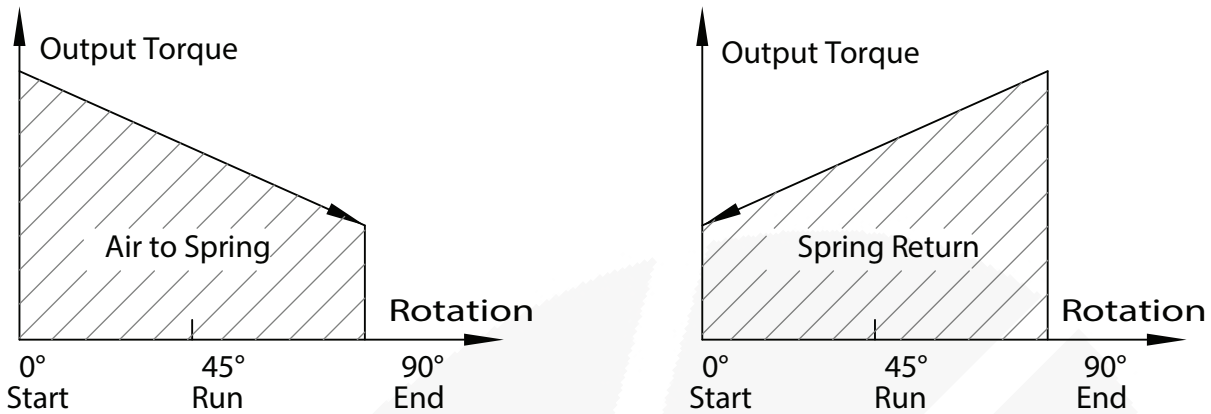
Model	Air volume opening	Air volume closing
KV032	0.035 L	0.045 L
KV052	0.09 L	0.12 L
KV063	0.14 L	0.2 L
KV075	0.21 L	0.3 L
KV083	0.29 L	0.41 L
KV092	0.49 L	0.71 L
KV105	0.7 L	0.99 L
KV140	1.7 L	2.4 L
KV160	2.6 L	3.7 L
KV190	4.2 L	5.9 L
KV210	5.7 L	8.2 L
KV240	9 L	12.8 L
KV270	12.6 L	17.9 L
KV300	21.4 L	30 L
KV350	31.2 L	43.7 L
KV400	47.9 L	67.1 L

Air consumption of double action actuator (L/min) = air volume (air volume opening + air volume closing) x (air supply (kpa) + 101.3) ÷ 101.3 x action cycle time (/min).

Air consumption of single action actuator (L/min) = air volume opening x (air supply (kpa) + 101.3) ÷ 101.3 x action cycle time (/min).

AUTHORIZED DISTRIBUTOR

OUTPUT TORQUE OF SPRING RETURN ACTUATORS



AIR SUPPLY PRESSURE (UNIT:BAR)

OUTPUT TORQUE OF SPRING RETURN ACTUATORS																		
AIR PRESSURE		2.5		3		4		5		6		7		8		SPRINGS' OUTPUT		
MODEL	SPRING(QTY)	0°	90°	0°	90°	0°	90°	0°	90°	0°	90°	0°	90°	0°	90°	90°	0°	
KV-52SR	S5	5.4	3.7													5.5	3.8	
	S6	4.7	2.5	6.5	4.3											6.7	4.5	
	S7	3.9	1.4	5.7	3.2	9.4	6.9									7.8	5.3	
	S8			5	2.1	8.7	5.8	12.4	9.5								8.9	6
	S9					7.9	4.7	11.6	8.4	15.3	12.1						10	6.8
	S10					7.2	3.6	10.9	7.3	14.6	11	18.3	14.7	22	18.4	11.1	7.5	
	S12							10.1	6.2	13.8	9.9	17.5	13.6	21.2	17.3	12.2	8.3	
KV-63SR	S5	9.3	6.6													8.5	5.8	
	S6	8.2	4.9	11.2	7.9											10.2	6.9	
	S7	7	3.2	10	6.2	16	12.2									11.9	8.1	
	S8			8.9	4.5	14.9	10.5	20.9	16.5							13.6	9.2	
	S9					13.7	8.7	19.7	14.7	25.7	20.7					15.4	10.4	
	S10					12.6	7	18.6	13	24.6	19	30.6	25	36.7	31.1	17.1	11.5	
	S12							17.4	11.3	23.4	17.3	29.4	23.3	35.5	29.4	18.8	12.7	
KV-75SR	S5	14.1	10.0													14.5	10.5	
	S6	11.9	6.9	16.9	11.9											17.4	12.7	
	S7	9.7	3.9	14.7	8.9	24.8	19.0									20.3	14.8	
	S8			12.4	5.8	22.5	15.9	32.5	25.9							23.2	16.9	
	S9					20.3	12.9	30.3	22.9	40.4	33					26.1	19.0	
	S10					18.1	9.8	28.1	19.8	38.2	29.9	48.3	40.0	58.3	50.0	29.0	21.1	
	S12							23.7	13.7	33.8	23.8	43.9	33.9	53.9	43.9	34.7	25.3	

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AIR PRESSURE		OUTPUT TORQUE OF AIR TO SPRING(BAR)														SPRINGS' OUTPUT		
		2.5		3		4		5		6		7		8				
MODEL	SPRING(QTY)	0°	90°	0°	90°	0°	90°	0°	90°	0°	90°	0°	90°	0°	90°	90°	0°	
KV-83SR	S5	21.9	14.3													23.0	15.8	
	S6	18.5	9.4	26.2	17.1											27.6	19.0	
	S7	15.2	4.6	22.9	12.3	38.3	27.7									32.2	22.1	
	S8			19.6	7.4	35.0	22.8	50.5	38.3								36.8	25.3
	S9					31.6	18.0	47.1	33.5	62.5	48.9						41.4	28.5
	S10					28.3	13.2	43.8	28.7	59.2	44.1	74.6	59.5	90.0	74.9	46.0	31.6	
	S11							40.5	23.8	55.9	39.2	71.3	54.6	86.7	70.0	50.6	34.8	
	S12							37.1	19.0	52.5	34.4	67.9	49.8	83.3	65.2	55.2	38.0	
KV-92SR	S5	32.2	20.6													34.4	23.3	
	S6	27.3	13.4	38.7	24.8											41.2	28.0	
	S7	22.4	6.1	33.8	17.5	56.5	40.2									48.1	32.7	
	S8			28.9	10.3	51.6	33.0	74.3	55.7							55.0	37.3	
	S9					46.7	25.8	69.4	48.5	92.1	71.2					61.9	42.0	
	S10					41.8	18.5	64.5	41.2	87.2	63.9	110.0	86.7	132.7	109.4	68.7	46.7	
	S11							59.5	34.0	82.2	56.7	105.0	79.5	127.7	102.2	75.6	51.4	
	S12							54.6	26.8	77.3	49.5	100.1	72.3	122.8	95.0	82.5	56.0	
KV-105SR	S5	48.9	30.4													49.2	31.6	
	S6	42.2	20.0	58.7	36.5											59.1	38.0	
	S7	35.6	9.7	52.1	26.2	85.0	59.1									68.9	44.3	
	S8			45.4	15.8	78.3	48.7	111.1	81.5							78.7	50.6	
	S9					71.7	38.4	104.5	71.2	137.4	104.1					88.6	56.9	
	S10					65.0	28.0	97.8	60.8	130.7	93.7	163.6	126.6	196.5	159.5	98.4	63.3	
	S11							91.1	50.4	124.0	83.3	156.9	116.2	189.8	149.1	108.3	69.6	
	S12							84.5	40.1	117.4	73.0	150.3	105.9	183.2	138.8	118.1	75.9	
KV-125SR	S5	72.9	45.5													78.4	52.4	
	S6	61.9	29.0	87.9	55.0											94.1	62.8	
	S7	50.8	12.5	76.8	38.5	127.8	89.5									109.7	73.3	
	S8			65.8	22.0	116.8	73.0	167.8	124.0							125.4	83.8	
	S9					105.8	56.5	156.8	107.5	208.8	159.5					141.1	94.2	
	S10					94.8	40.0	145.8	91.0	197.8	143.0	248.8	194.0	299.8	245.0	156.8	104.7	
	S11							134.8	74.5	186.8	126.5	237.8	177.5	288.8	228.5	172.4	115.2	
	S12							123.7	58.0	175.7	110.0	226.7	161.0	277.7	212.0	188.1	125.7	
KV-140SR	S5	128.7	83.3													129.0	85.8	
	S6	110.6	56.1	154.6	100.1											154.8	102.9	
	S7	92.6	29.0	136.6	73.0	224.6	161.0									180.5	120.1	
	S8			118.5	45.8	206.5	133.8	294.5	221.8							206.3	137.3	
	S9					188.5	106.7	276.5	194.7	363.5	281.7					232.1	154.4	
	S10					170.4	79.5	258.4	167.5	345.4	254.5	433.4	342.5	521.4	430.5	257.9	171.6	
	S11							240.3	140.4	327.3	227.4	415.3	315.4	503.3	403.4	283.7	188.7	
	S12							222.3	113.2	309.3	200.2	397.3	288.2	485.3	376.2	309.5	205.9	

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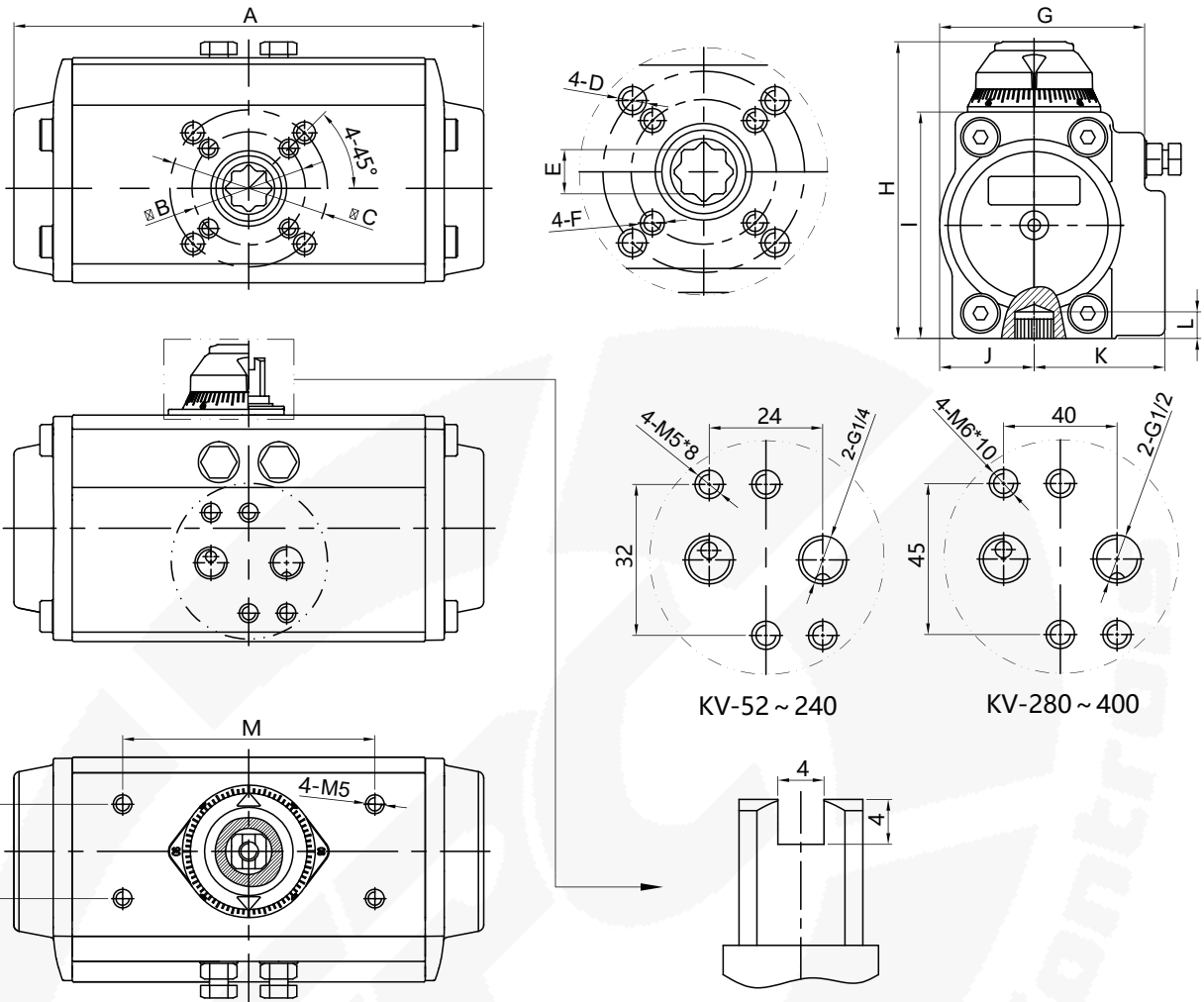
OUTPUT TORQUE OF AIR TO SPRING(BAR)																	SPRINGS' OUTPUT	
AIR PRESSURE		2.5		3		4		5		6		7		8				
MODEL	SPRING(QTY)	0°	90°	0°	90°	0°	90°	0°	90°	0°	90°	0°	90°	0°	90°	90°	0°	
KV-160SR	S5	187.0	114.7													208.3	139.7	
	S6	157.6	70.9	224.6	137.9											250	168	
	S7	128.2	27.0	195.2	94.0	329.2	228.0									292	196	
	S8			165.8	50.2	299.8	184.2	432.8	317.2							333	223	
	S9					270.4	140.3	403.4	273.3	537.4	407.3					375	251	
	S10					241.0	96.4	374.0	229.5	508.0	363.5	641.0	496.5	775.0	630.5	417	279	
	S11							344.6	185.6	478.6	319.6	611.6	452.6	745.6	586.6	458	307	
	S12							315.2	141.7	449.2	275.7	582.2	408.7	716.2	542.7	500	335	
KV-190SR	S5	327	212													293	190	
	S6	285	147	393	255											352	227	
	S7	243	82	351	190	566	405									410	265	
	S8			309	125	524	340	740	556							469	303	
	S9					482	275	698	491	913	706					527	341	
	S10					440	210	656	426	871	641	1087	857	1302	1072	586	379	
	S11							614	361	829	576	1045	792	1260	1007	645	417	
	S12							572	296	787	511	1003	727	1218	942	703	455	
KV-210SR	S5	369	258													360	260	
	S6	311	178	442	309											432	313	
	S7	253	99	384	230	647	493									503	365	
	S8			326	150	589	413	853	677							575	417	
	S9					531	333	795	597	1058	860					647	469	
	S10					473	253	737	517	1000	780	1263	1043	1526	1306	719	521	
	S11							679	437	942	700	1205	963	1468	1226	791	573	
	S12							621	357	884	620	1147	883	1410	1146	863	625	
KV-240SR	S5	533	372	712	550	1068	908									520	360	
	S6	461	268	640	446	996	804	1354	1162							625	432	
	S7	389	164	568	342	925	700	1282	1056	1640	1415					730	504	
	S8			496	238	852	596	1210	953	1568	1310	1925	1668			834	576	
	S9					780	490	1138	848	1495	1206	1852	1563	2210	1920	938	648	
	S10					708	386	1066	745	1422	1102	1780	1458	2137	1816	1042	720	
	S11							994	641	1350	998	1708	1355	2065	1712	1145	792	
	S12									1278	894	1636	1250	1994	1608	1250	864	
KV-280SR	S5	903	668	1193	961	1775	1547									1113	653.4	
	S6	788	505	1080	792	1664	1372	2248	1952							1335	783.6	
	S7	671	335	965	628	1553	1218	2141	1808	2729	2398					1558	914.2	
	S8			843	463	1435	1052	2021	1640	2607	2228	3193	2816			1780	1044	
	S9					1302	885	1895	1474	2488	2070	3081	2666	3674	3262	2003	1175	
	S10					1201	724	1783	1311	2377	1895	2960	2485	3546	3070	2226	1306	
	S11							1670	1145	2255	1735	2842	2320	3429	2908	2448	1436	
	S12									2143	1565	2728	2154	3312	2745	2671	1567	

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		OUTPUT TORQUE OF AIR TO SPRING(BAR)														SPRINGS' OUTPUT	
AIR PRESSURE		2.5		3		4		5		6		7		8			
MODEL	SPRING(QTY)	0°	90°	0°	90°	0°	90°	0°	90°	0°	90°	0°	90°	0°	90°	90°	0°
KV-300SR	S5	1125	730	1504	1112	2262	1876									1237	730
	S6	962	495	1345	877	2111	1641	2877	2405							1484	876
	S7	805	260	1182	640	1948	1405	2714	2169	3480	2933					1731	1022
	S8			1022	405	1782	1168	2545	1930	3308	2692	4071	3454			1979	1168
	S9					1625	932	2385	1695	3149	2458	3913	3221	4677	3984	2226	1314
	S10					1462	701	2225	1460	2988	2222	3750	2987	4515	3748	2474	1460
	S11							2065	1225	2824	1987	3585	2750	4348	3512	2721	1601
	S12									2662	1750	3428	2514	4188	3277	2968	1752
KV-350SR	S5	1602	968	2172	1538	3312	2678									1930	1180
	S6	1340	592	1915	1162	3065	2302	4205	3442							2316	1416
	S7	1085	213	1655	783	2796	1926	3936	3066	5076	4206					2702	1652
	S8			1392	408	2532	1550	3675	2692	4815	3832	5955	4972			3088	1888
	S9					2275	1170	3401	2312	4556	3455	5696	4595	6836	5735	3474	2124
	S10					1995	791	3154	1935	4296	3075	5442	4220	6582	5362	3860	2360
	S11							2895	1556	4029	2697	5178	3840	6322	4984	4246	2596
	S12									3775	2318	4915	3465	6062	4605	4632	2832
KV-400SR	S5	2792	1758	3715	2681	5560	4526									2853	1819
	S6	2428	1187	3351	2110	5196	3955	7041	5800							3424	2182
	S7	2064	616	2987	1539	4832	3384	6677	5229	8522	7074					3995	2546
	S8			2623	968	4468	2813	6313	4658	8158	6503	10003	8348			4565	2910
	S9					4104	2242	5949	4087	7794	5932	9639	7777	11484	9622	5136	3274
	S10					3741	1671	5585	3516	7430	5361	9275	7206	11120	9051	5707	3638
	S11							5221	2945	7066	4790	8911	6635	10756	8480	6278	4001
	S12									6702	4219	8547	6064	10392	7909	6848	4365

AUTHORIZED DISTRIBUTOR

TYPE KV



MODEL	A	ØB	ØC	D	E	F	G	H	I	J	K	L	M	N
		ISO-5211	ISO-5211		ISO-SQUARE									
KV-52	149	Ø36/F03	Ø50/F05	M6*10	11	M5*8	65	94.5	72	30	41.5	13	80	30
KV-63	162	Ø50/F05	Ø70/F07	M8*13	14	M6*10	72	110	87.5	36	47	18	80	30
KV-75	184	Ø50/F05	Ø70/F07	M8*13	14	M6*10	81	119.5	99.5	42	53	18	80	30
KV-83	204	Ø50/F05	Ø70/F07	M8*13	17	M6*10	88	128.8	108.8	46	57	21	80	30
KV-92	262	Ø50/F05	Ø70/F07	M8*13	17	M6*10	98	136.5	116.5	50	61	21	80	30
KV-105	268	Ø70/F07	Ø102/F10	M10*16	22	M8*13	109.5	153	133	57.5	64	26	80	30
KV-125	301	Ø70/F07	Ø102/F10	M10*16	22	M8*13	127.5	175	155	67.5	74.5	26	80	30
KV-140	390	Ø102/F10	Ø125/F12	M12*20	27	M10*16	137.5	192	172	75	77	31	130	30
KV-160	458	Ø102/F10	Ø125/F12	M12*20	27	M10*16	158	217	197	87	87	31	130	30
KV-190	525	Ø140/F14	-	M16*22	36	M16*22	189	260	230	103	103	36	130	30
KV-210	532	Ø140/F14	-	M16*22	36	M16*22	211	285	255	114	114	36	130	30
KV-240	610	Ø165/F16	-	-	46	M20*25	242	342	305	129	133	50	130	30
KV-270	670	Ø165/F16	-	-	46	M20*25	273	364	327	142	156	50	130	30
KV-300	752	Ø165/F16	-	-	55	M20*25	312	380	345	162	173	60	130	30
KV-350	880	Ø165/F16	-	M16*25	55	M20*25	362	440	410	190	195	60	130	30
KV-400	950	Ø165/F16	-	M16*25	55	M20*28	450	506	466	260	260		130	30

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