



MT series Pneumatic actuators

SPECIFICATION DATA



FEATURES

- Double 5-degree stroke control.
- Life cycle of more than 2 million actuations.
- Meet the ISO5211, DIN3337 and Namur standards.
- Visual mechanical position indicator for accurate visual of valve position.
- Anodized aluminum extruded body designed to ASTM6005.
- Polyester coated end caps and stainless-steel fasteners
- Interface for Namur solenoid valve and limit switch boxes.

SPECIFICATIONS

Ambient Temperature	-20°C to +80°C
Indicator	Continuous Position Indicator
Manual Override	Optional
Travel	90 or 180 deg
Body Material	Anodized Aluminum
External Coating	Dry powder coating
Operating pressure	2-8bar dry clean air

The MT series pneumatic actuators are available in double acting or spring return. Robust and reliable they are available in a variety of materials and configurations.

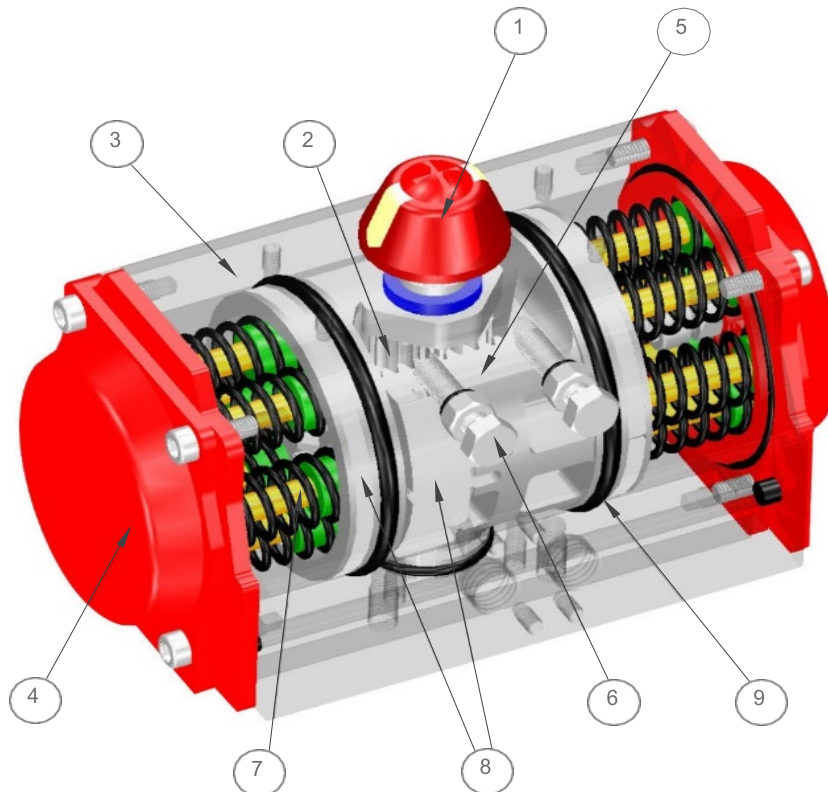
Options

- All grade 316 stainless steel version.
- -60 to +150 deg versions.
- Special colours.
- Coatings in PTFE or Nickel Phosphorus.
- 3 position for 3-way valves
- Longer stroke body for up to 180 deg rotation.

APPROVALS



1. Position indicator removable for fitment of Namur switch box.
2. Shaft according to ISO5211, DIN3337, NAMUR, and made of extruded low carbon alloy steel with nickel phosphorus coated for long-term operation even in harsh environments.
3. Body based on ISO5211 and made of hard anodized extruded aluminum to ASTM6005.
4. End caps standard in polyester, nickel phosphorus or PTFE coated are optional in any color.
5. Pistons are die-cast aluminum and anodized for fast and symmetrical operation.
6. Travel stop adjustment allowing adjustment of $\pm 5^\circ$ ensuring precise valve alignment.
7. Cartridge springs are preloaded from piano spring material to ensure long term trouble-free operation. Can be dismantled safely to the right spring quantity.
8. Bearings and guides are made from low friction, long-life compound material. (POM and Nylon and 30% glass fiber)



INPUT SHAFT OPTIONS

Double square

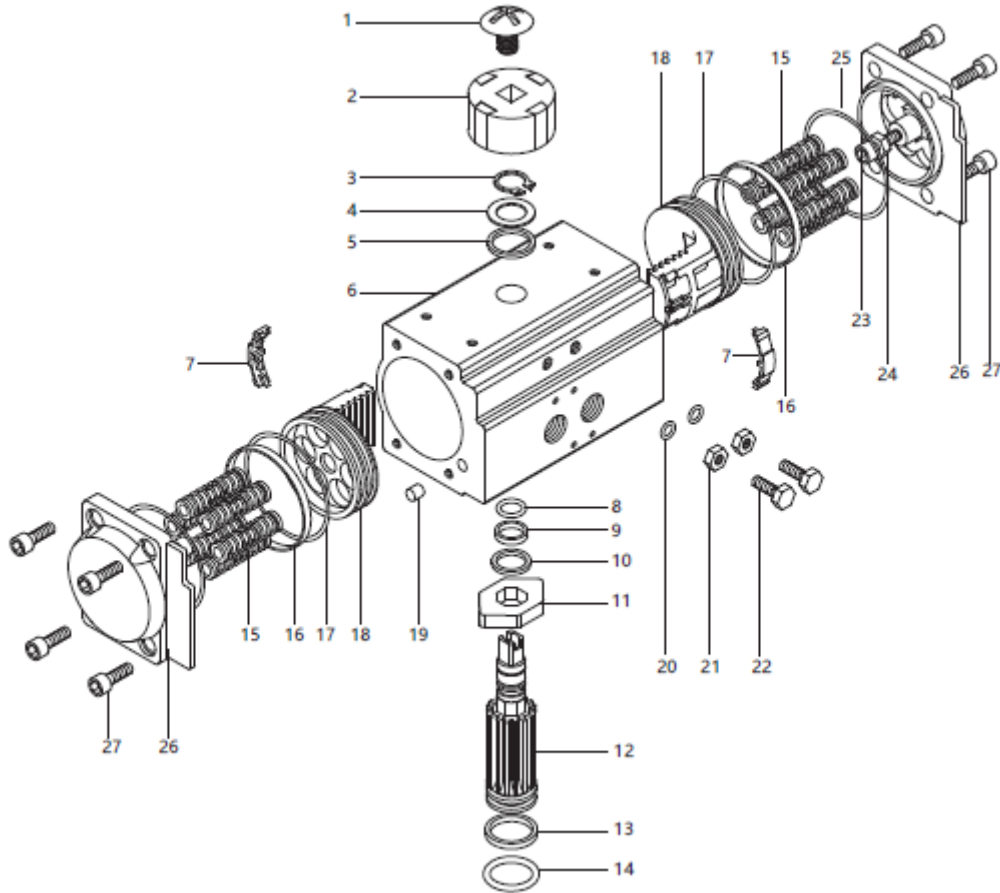


Double D

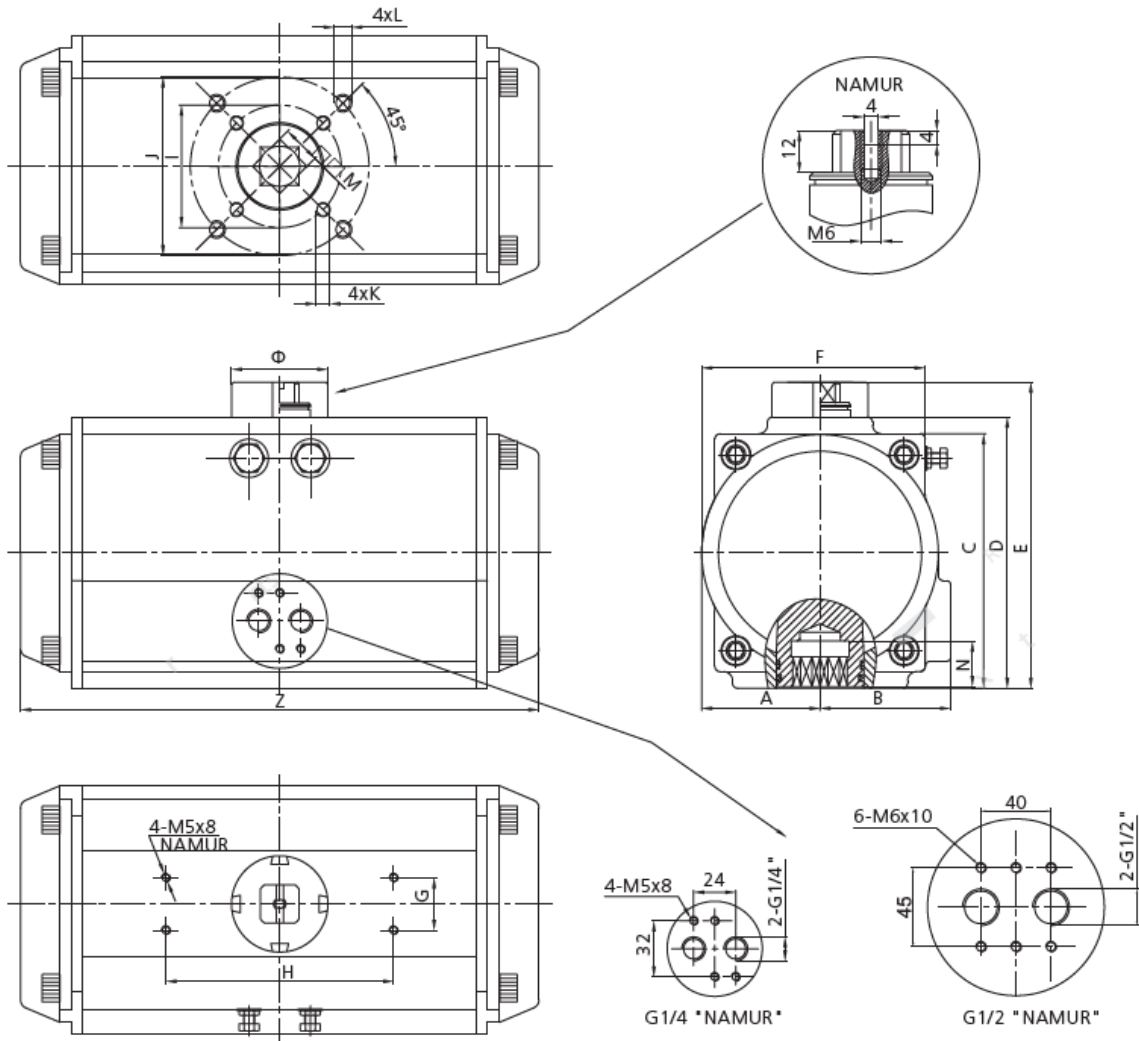


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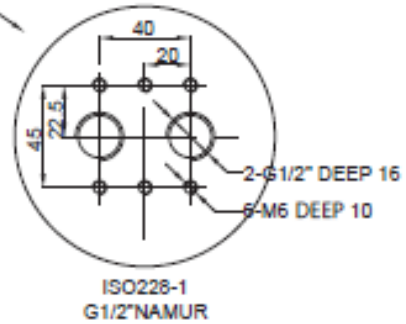
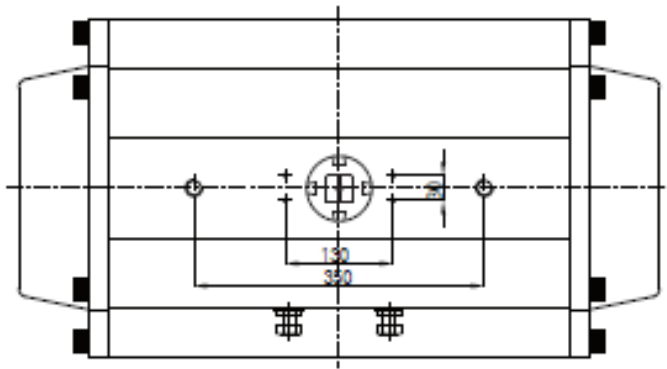
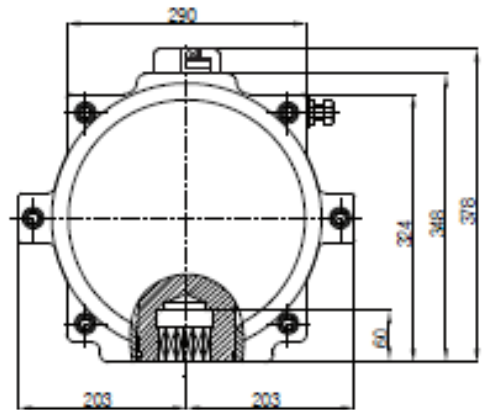
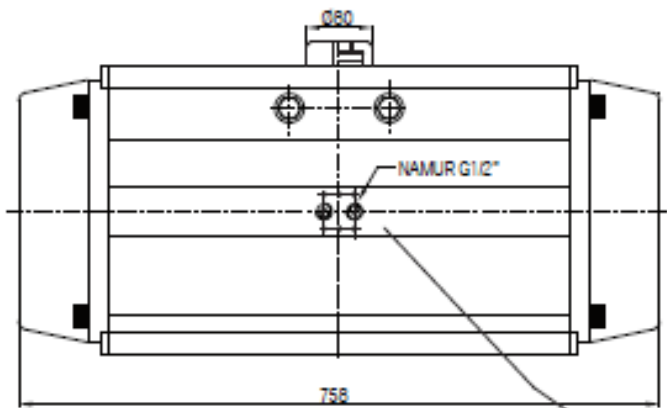
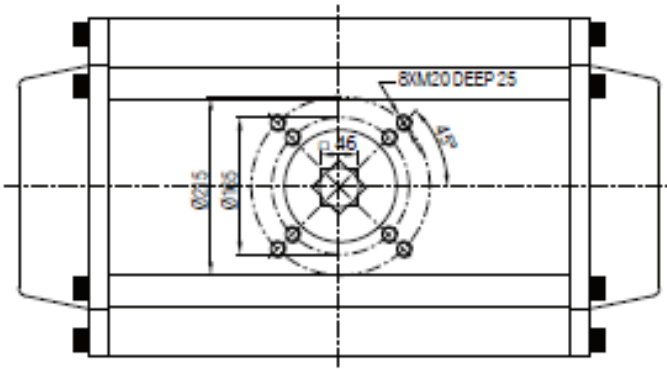


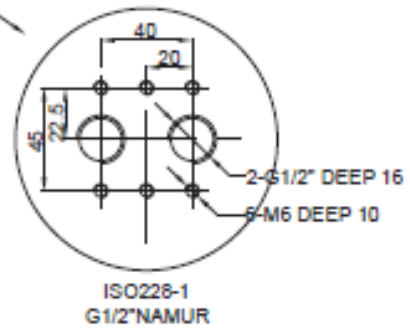
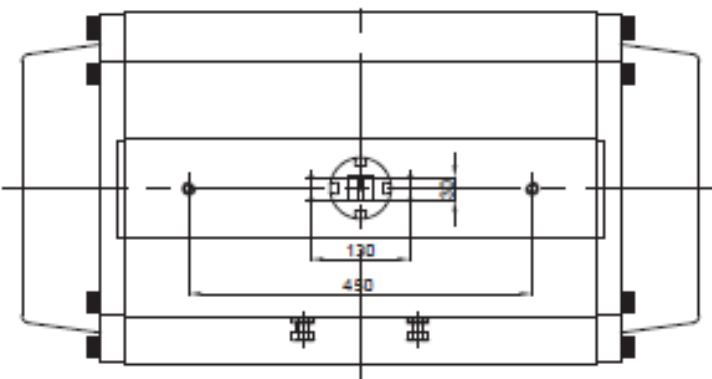
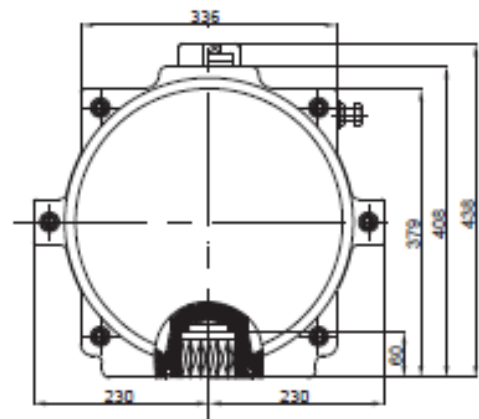
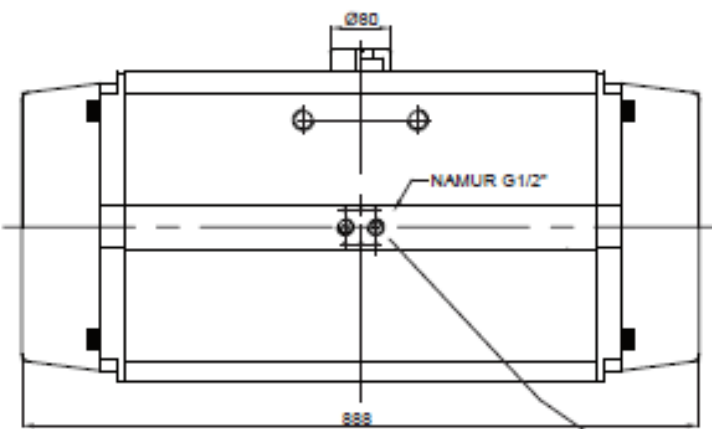
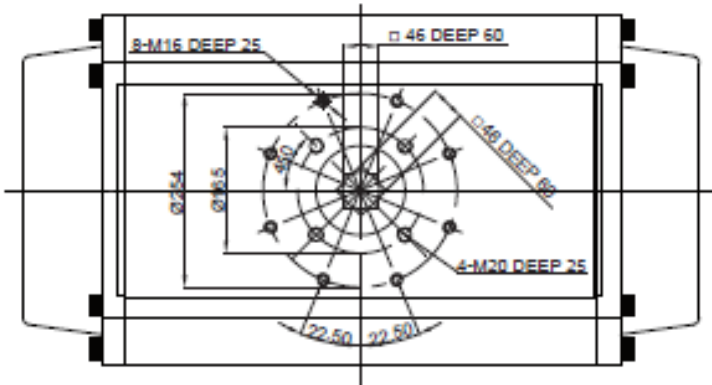
No.	Description	Qty	Material	No.	Description	Qty.	Material
1	Indicator screw	1	Plastic (ABS)	15	Spring	0~12	Spring steel
2	Indicator	1	Plastic (ABS)	16	Bearing (piston)	2	polyoxymethylene
3	Circlip	1	Stainless steel (304)	17	O-ring(piston)	2	NBR or Viton
4	Thrust washer	1	Stainless steel (304)	18	P is ton	2	Die-Cast aluminium (A380)
5	Outside washer	1	polyoxymethylene	19	P lug	2	NBR or Viton
6	Body	1	Extruded aluminium (6005-T 5)	20	O-ring	2	NBR or Viton
7	Guide(piston)	2	polyoxymethylene	21	Nut (adjust screw)	2	Stainless steel (304)
8	O-ring (pinion top)	1	NBR or Viton	22	Adjust screw	2	Stainless steel (304)
9	Bearing (pinion top)	1	polyoxymethylene	23	Stop screw	2	Stainless steel (304)
10	Inside washer	1	polyoxymethylene	24	Nut (stop screw)	2	Stainless steel (304)
11	Cam	1	(Alloy Steel) #45	25	O-ring (end cap)	2	NBR or Viton
12	P inion	1	(Alloy Steel) #45	26	Endcap	2	Die-Cast aluminium(A380)
13	Bearing (pinion bottom)	1	polyoxymethylene	27	End-cap screw	8	Stainless steel (304)
14	O-ring (pinion bottom)	1	NBR or Viton				

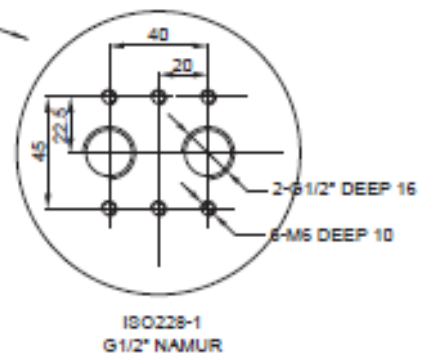
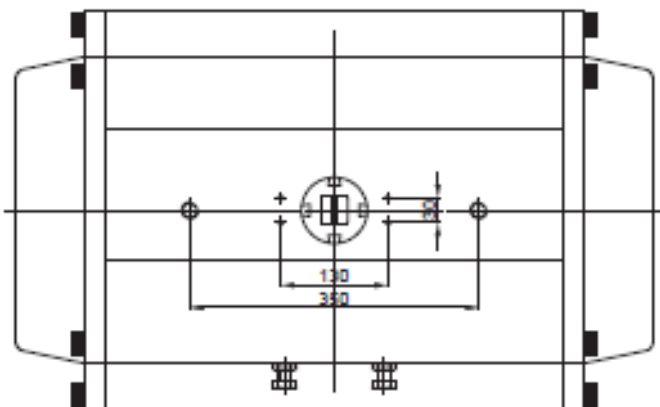
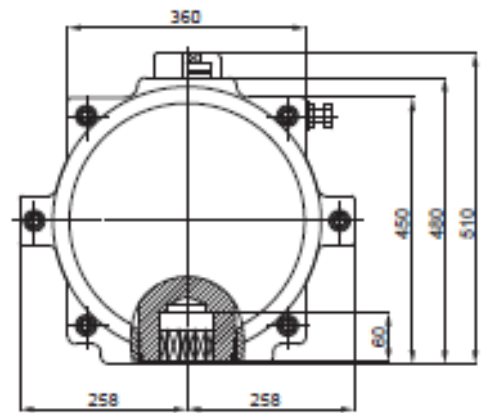
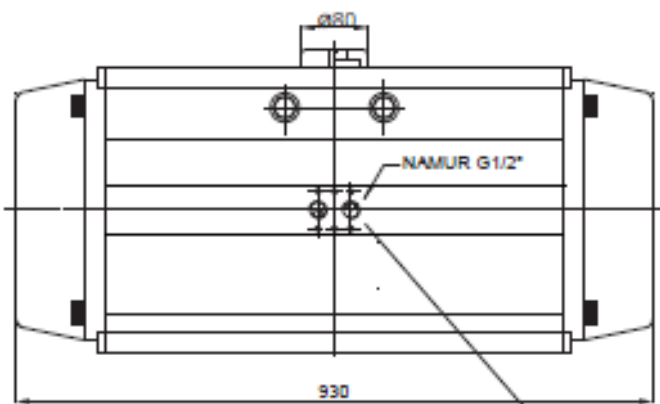
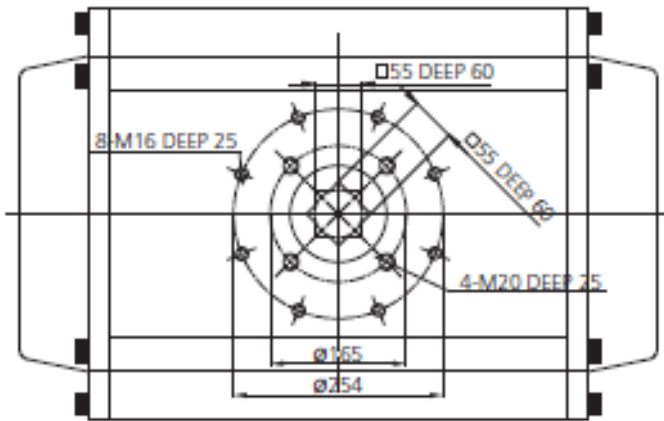


Unit: mm

Model	A	B	C	D	E	F	G	H	I	J	K	L	M	N	Z	Φ	Air Connection
D-52	30	41.5	65.5	72	92	65	30	80	Φ 36	Φ 50	M5x8	M6x10	11	14	147	Φ 40	G1/4"(1/4"NPT)
D-63	36	47	81	87.5	107.5	72	30	80	Φ 50	Φ 70	M6x10	M8x13	14	18	168	Φ 40	G1/4"(1/4"NPT)
D-75	42	53	94	99.5	119.5	81	30	80	Φ 50	Φ 70	M6x10	M8x13	14	18	184	Φ 40	G1/4"(1/4"NPT)
D-83	46	57	98.5	108.7	128.7	92	30	80	Φ 50	Φ 70	M6x10	M8x13	17	21	204	Φ 40	G1/4"(1/4"NPT)
D-92	50	58.5	111	116.5	136.5	98	30	80	Φ 50	Φ 70	M6x10	M8x13	17	21	262	Φ 40	G1/4"(1/4"NPT)
D-105	57.5	64	122.5	133	153	109.5	30	80	Φ 70	Φ 102	M8x13	M10x16	22	26	268	Φ 40	G1/4"(1/4"NPT)
D-125	67.5	74.5	145.5	155	175	127.5	30	80	Φ 70	Φ 102	M8x13	M10x16	22	26	301	Φ 55	G1/4"(1/4"NPT)
D-140	75	77	161	172	192	137.5	30	80	Φ 102	Φ 125	M10x16	M12x20	27	31	394	Φ 55	G1/4"(1/4"NPT)
D-160	87	87	184	197	217	158	30	80	Φ 102	Φ 125	M10x16	M12x20	27	31	458	Φ 55	G1/4"(1/4"NPT)
D-190	103	103	216	230	260	189	30	130		Φ 140		M16x25	36	40	528	Φ 80	G1/4"(1/4"NPT)
D-210	113	113	235.5	255	285	210	30	130		Φ 140		M16x25	36	40	532	Φ 80	G1/4"(1/4"NPT)
D-240	130	130	264.5	289	319	245	30	130		Φ 165		M20x25	46	50	602	Φ 80	G1/4"(1/4"NPT)
D-270	147	147	299	326	356	273	30	130		Φ 165		M20x25	46	50	722	Φ 80	G1/2"(1/2"NPT)



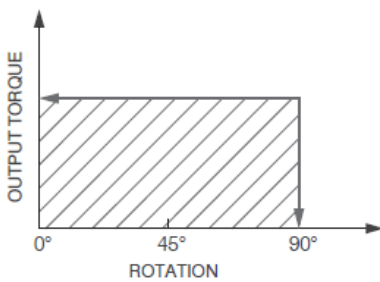




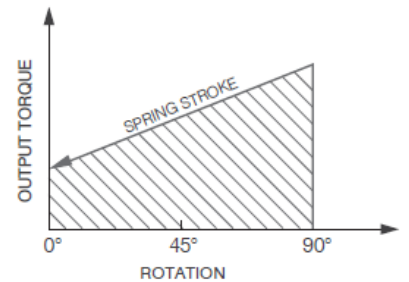
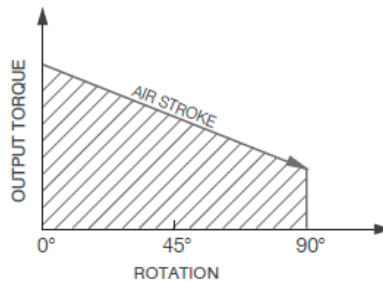
OUTPUT TORQUE DOUBLE ACTING

TORQUE @ AIR PRESSURE (BAR)										
MODEL	2	2.5	3	4	4.5	5	5.5	6	7	8
D40DA	4.8	6	7.2	9.5	10.7	11.9	13.1	14.3	16.7	19.1
D52DA	8	10	12	16	18	20	21.9	23.9	27.9	31.9
D63DA	14.6	18.2	21.9	29.2	32.8	36.5	40.1	43.8	51.1	58.4
D75DA	20.1	25.1	30.1	40.1	45.1	50.2	55.2	60.2	70.2	80.3
D83DA	31.4	39.2	47	62.7	70.5	78.4	86.2	94.1	109.7	125.4
D92DA	45.1	56.4	67.7	90.3	101.6	112.9	124.1	135.4	158	180.6
D105DA	66.1	82.7	99.2	132.2	148.8	165.3	181.8	198.4	231.4	264.5
D125DA	100.3	125.4	150.5	200.6	225.7	250.8	275.9	301	351.1	401.3
D140DA	171	213.8	256.5	342	384.8	427.5	470.3	513	598.5	684
D160DA	266	332.5	399	532	598.5	665	731.5	798	931	1064
D190DA	425.6	532	638.4	851.2	957.6	1064	1170.4	1276.8	1489.6	1702.4
D210DA	532	665	798	1064	1197	1330	1463	1596	1862	2128
D240DA	796.5	961.9	1154.3	1539	1731.4	1923.8	2116.1	2308.5	2693.3	3078
D270DA	1169.6	1462.1	1754.5	2339.3	2631.7	2924.1	3216.5	3508.9	4093.7	4678.6
D300DA	1526	1908	2289	3052	3434	3815	4197	4578	5341	6104
D350DA	2285	2856	3427	4570	5141	5712	6283	6854	7997	9139
D400DA	3256	4069	4883	6511	7325	8139	8953	9767	11394	13022

Double Acting



Spring return



OUTPUT TORQUE SPRING RETURN

TORQUE @ AIR PRESSURE (BAR)																	
	2.5		3		4		5		6		7		8		SPRING OUTPUT		
SPRING	0°	90°	0°	90°	0°	90°	0°	90°	0°	90°	0°	90°	0°	90°	0°	90°	
D52SR	QTY	START	END	START	END	START	END	START	END	START	END	START	END	START	END		
	5	5.7	3.8	7.6	5.7											6.2	4.3
	6	4.9	2.5	6.9	4.5	10.9	8.5									7.4	5
	7	4	1.3	6	3.3	9.8	7.3	14	10.4							8.6	5.9
	8			5.2	2	9.2	6	13.2	9.1	17.2	14.1					9.9	6.7
	9			4.3	0.8	8.3	4.8	12.3	7.9	16.3	12.8	20.3	16.8			11.1	7.6
	10					7.4	3.6	11.5	6.7	15.5	11.6	19.5	15.6			12.4	8.5
	11					6.6	2.3	10.6	5.4	14.6	10.4	18.6	14.3	22.6	18.3	13.6	9.3
12							9.7	4.2	13.8	9.1	17.8	12.2	21.8	17.1	14.8	10.2	

OUTPUT TORQUE SPRING RETURN

TORQUE @ AIR PRESSURE (BAR)																	
SPRING	2.5		3		4		5		6		7		8		SPRING OUTPUT		
	0°	90°	0°	90°	0°	90°	0°	90°	0°	90°	0°	90°	0°	90°	0°	90°	
QTY	START	END	START	END	START	END	START	END	START	END	START	END	START	END			
D63SR	5	11.4	7.7	15	11.4	22.3	14.9								10.4	6.8	
	6	10.1	5.7	13.6	9.3	20.9	16.6	28.3	23.9						12.5	8.2	
	7	8.6	3.6	12.5	7.2	19.5	14.5	26.8	21.9						14.6	9.6	
	8			10.9	5.1	18.2	12.4	25.5	19.8	32.8	27	40.1	34.3			16.7	10.9
	9					16.8	10.4	24.1	17.7	31.4	24.9	38.7	32.2			18.8	12.3
	10					1.4	8.2	22.8	15.6	30	22.8	37.3	30.1	44.7	37.4	20.9	13.7
	11							21.5	13.5	28.7	20.7	36	28	43.3	35.3	22.9	15
	12							20	11.4	27.3	18.6	34.6	25.9	41.9	33.3	25	16.4
	D75SR	5	14.5	10.6	19.4	15.5	29.5	25.7								14.5	10.5
		6	12.4	7.6	17.3	12.6	27.4	22.7	37.5	32.8						17.4	12.7
		7	10.4	4.8	15.2	9.7	25.3	19.9	35.4	29.9						20.3	14.8
		8			13.1	6.8	23.1	16.9	33.3	27	43.2	37	53.3	47			23.2
9						21	14.1	31.2	24.1	41.1	34.1	51.2	44.2			26.1	19
10						19	11.1	28.8	21.2	39	31.2	49.1	41.2	59.1	51.2	29	21.1
11								27	18.3	37	28.3	47	38.4	57	48.4	31.9	23.2
12								24.9	15.4	34.9	25.4	44.9	35.4	54.9	45.4	34.7	25.3
D83SR	5	23.3	16.1	31.1	24	46.8	39.7								23	15.8	
	6	20.1	11.5	28	19.3	43.7	35.1	59.4	50.7						27.6	19	
	7	17	6.9	24.8	14.8	40.5	30.5	56.2	46.2						32.2	22.1	
	8			21.7	10.1	37.4	25.8	53.1	41.5	68.8	57.2	84.5	72.9			36.8	25.3
	9					34.2	21.3	49.9	37	65.6	52.6	81.2	68.3			41.4	28.5
	10					31	16.6	46.7	32.3	62.4	48	78.1	63.7	93.8	79.3	46	31.6
	11							43.6	27.7	59.3	43.4	75	59.1	90.6	74.8	50.6	34.8
	12							40.4	23.2	56.1	38.9	71.7	54.5	87.4	70.2	55.2	38
D92S	5	33.1	22	44.2	33.2	66.8	55.9								34.4	23.3	
	6	28.4	15.2	39.6	26.4	62.2	49	84.8	71.6						41.2	28	
	7	23.8	8.2	34.9	19.4	57.5	42.1	80.2	64.7						48.1	32.7	
	8			31.3	12.6	52.9	35.2	75.5	57.9	98.1	80.5	120.7	103			55	37.3
	9					48.2	28.4	70.9	51	93.5	73.6	116	96.1			61.9	42
	10					43.6	21.5	66.2	44.1	88.8	66.7	111.3	89.2	134.0	111.8	68.7	46.7
	11							61.5	37.2	84.1	59.9	106.6	82.4	129.2	105	75.6	51.4
	12							56.8	30.4	79.4	53	101.9	75.5	124.5	98.1	82.5	56
D105SR	5	51	33.4	67.5	49.9	100.6	83								49.2	31.6	
	6	44.7	23.5	61.1	40	94.2	73.2	127.3	106.2						59.1	38	
	7	38.4	13.7	54.9	30.3	87.9	63.4	121	96.4						68.9	44.3	
	8			48.5	20.4	81.6	53.5	114.7	86.5	147.7	119.6	180.8	152.7			78.7	50.6
	9					75.3	43.7	108.4	76.8	141.5	109.8	174.5	142.9			88.6	56.9
	10					68.9	33.4	102	66.5	135.1	99.6	168.2	132.6	201.2	165.7	98.4	63.3
	11							95.7	57	128.7	90.1	161.8	123.1	194.8	156.2	108.3	69.6
	12							89.4	47.5	122.5	80.6	155.5	113.6	188.6	146.7	118.1	75.9
D125SR	5	73	47	98	72	148	122								79	52	
	6	63	31	88	56	138	107	188	157						94	63	
	7	52	15	77	40	127	90	178	141						110	73	
	8			67	25	117	75	167	125	217	176	268	226			125	84
	9					107	59	157	109	207	159	257	210			141	94
	10					96	44	146	94	196	144	247	194	297	245	157	105
	11							136	78	186	128	236	178	286	228	173	115
	12							125	63	176	113	226	163	276	213	188	125



OUTPUT TORQUE SPRING RETURN

TORQUE @ AIR PRESSURE (BAR)																	
SPRING	2.5		3		4		5		6		7		8		SPRING OUTPUT		
	0°	90°	0°	90°	0°	90°	0°	90°	0°	90°	0°	90°	0°	90°	0°	90°	
	QTY	START	END	START	END	START	END	START	END	START	END	START	END	START	END		
D140SR	5	128	85	171	127	256	213								129	86	
	6	111	59	154	102	239	187	325	273						155	103	
	7	94	33	137	76	222	162	308	247						181	120	
	8			120	50	205	136	291	221	376	307	462	392		206	137	
	9					187	110	273	196	358	281	444	367		232	155	
	10					170	84	256	169	341	255	427	340	512	426	258	172
	11							238	143	324	229	409	314	495	400	284	189
	12							221	118	307	203	392	289	478	374	310	206
D160SR	5	193	124	259	191	392	324								208	140	
	6	165	83	232	149	365	282	498	415						250	168	
	7	137	41	203	107	336	240	469	373						292	196	
	8			176	66	309	199	442	237	575	465	708	598		333	223	
	9					280	157	413	290	546	423	679	556		375	251	
	10					253	115	386	248	519	381	652	514	785	647	417	279
	11							358	207	491	340	624	473	757	606	458	307
	12							330	165	463	298	596	431	729	564	500	335
D190SR	5	332	222	438	329	651	542								309	200	
	6	292	161	398	267	611	480	824	693						371	240	
	7	252	99	358	205	571	418	784	631						433	280	
	8			318	143	531	356	744	569	957	782	1169	995		495	320	
	9					491	295	704	507	917	720	1130	933		557	360	
	10					451	233	664	446	877	658	1090	871	1302	1084	618	400
	11							624	384	837	597	1050	809	1263	1022	680	440
	12							584	322	797	535	1010	748	1223	960	742	480
D210SR	5	390	285	523	418	789	684								380	275	
	6	335	209	468	342	734	608	1000	874						456	330	
	7	280	133	413	266	679	532	945	798						532	385	
	8			358	190	624	456	890	722	1156	988	1422	1254		608	440	
	9					569	380	835	646	1101	912	1367	1178		684	495	
	10					514	304	780	570	1046	836	1312	1102	1578	1368	760	550
	11							725	494	991	760	1257	1026	1523	1292	836	605
	12							670	418	936	684	1202	950	1468	1216	912	660
D240SR	5	552	409	744	600	1129	985								554	410	
	6	470	297	662	489	1047	874	1432	1259						665	492	
	7	388	187	580	379	964	764	1349	1149						775	575	
	8			498	268	883	653	1267	1037	1652	1422	2037	1807		886	656	
	9					800	542	1185	926	1569	1311	1954	1696		998	739	
	10					718	431	1103	816	1488	1201	1872	1586	2257	1970	1108	821
	11							1021	705	1406	1090	1791	1474	2176	1859	1219	903
	12							939	594	1323	979	1708	1363	2093	1748	1330	985
D270SR	5	903	675	1195	968	1779	1552								787	560	
	6	790	519	1083	811	1667	1396	2252	1981						943	672	
	7	679	361	972	654	1556	1238	2141	1823						1101	783	
	8			860	497	1444	1081	2029	1666	2614	2252	3199	2836		1258	895	
	9					1332	923	1917	1509	2502	2094	3087	2678		1416	1007	
	10					1220	767	1805	1352	2390	1937	2974	2521	3560	3107	1572	1119
	11							1693	1194	2278	1779	2862	2364	3448	2949	1730	1231
	12							1582	1037	2167	1623	2751	2207	3336	2792	1887	1342



OUTPUT TORQUE SPRING RETURN

TORQUE @ AIR PRESSURE (BAR)																			
	2		2.5		3		4		5		6		7		8		SPRING OUTPUT		
SPRING	0°	90°	0°	90°	0°	90°	0°	90°	0°	90°	0°	90°	0°	90°	0°	90°	0°	90°	
QTY	START END		START END		START END		START END		START END		START END		START END		START END		START END		
D300SR	5	715	347	1097	729												1061	730	
	6	553	112	935	494	1316	875										1273	876	
	7			772	258	1153	639	1916	1402								1485	1022	
	8					991	403	1754	1166	2517	1929						1697	1168	
	9							1592	930	2355	1693	3118	2456				1909	1314	
	10							1430	695	2193	1458	2956	2221	3719	2984	4482	3747	2122	1460
	11									2030	1222	2793	1985	3556	2748	4319	3511	2334	1606
	12									1868	986	2631	1749	3394	2512	4157	3275	2546	1752
	D350SR	5	982	393	1553	964												1702	1173
		6	721	15	1292	586	1863	1157										2043	1408
		7			1031	208	1602	779	2745	1922								2383	1642
		8					1341	401	2484	1544	3626	2686						2724	1877
9								2224	1165	3366	2307	4508	3449				3064	2112	
10								1963	787	3105	1929	4247	3071	5390	4214	6532	5356	3405	2346
11										2844	1551	3986	2693	5129	3836	6271	4978	3745	2581
12										2584	1172	3726	2314	4869	3457	6011	4599	4086	2816
D400SR	7	1215	56	2028	869												2880	1837	
	8			1736	411	2550	1225										3292	2100	
	9					2259	768	3887	2396								3703	2362	
	10					1967	311	3595	1939	5223	3567						4115	2624	
	11							3303	1482	4931	3110	6559	4738				4526	2887	
	12							3012	1025	4640	2653	6268	4281	7895	5908	9523	7536	4938	3149
	13									4348	2195	5976	3823	7603	5450	9231	7078	5349	3412
	14									4057	1738	5685	3366	7312	4993	8940	6621	5761	3674
	15									3765	1281	5393	2909	7020	4536	8648	6164	6172	3937
16											5101	2452	6728	4079	8356	5707	6584	4199	

WEIGHTS AND OPTIONS

WEIGHTS IN KG		
MODEL	DOUBLE ACTING	SPRING RETURN
D52	1.38	1.45
D-63	2.03	2.05
D-75	2.7	2.9
D-83	3.13	3.6
D-92	4.6	5.22
D-105	6.77	6.85
D-125	8.9	10.11
D-140	13.25	15.55
D-160	20.14	24
D-190	31.3	35.25
D-210	46.8	54.8
D-240	67.28	80.2
D-270	96.9	118
B-300	110	130
B-350	186.5	234.4
B-400	289	360.4

Stainless steel version



Switch Boxes



Solenoid Valves

