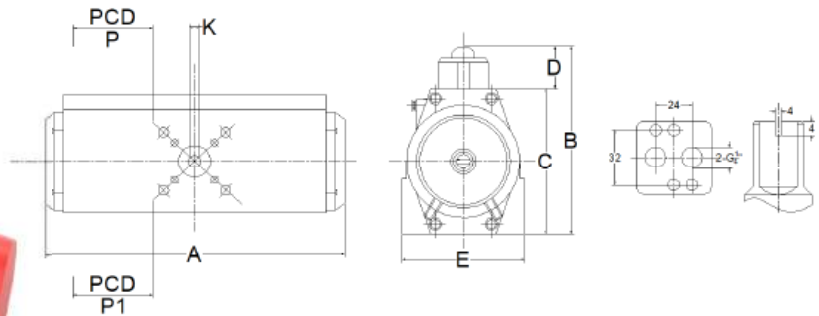


**PNEUMATIC ROTARY ACTUATORS - HEAVY DUTY (3 YR WARRANTY)**



**DIMENSIONAL DETAILS - DOUBLE ACTING**

DIMENSIONS

MODEL	A	B	C	D	E	PCD		K	WEIGHT (APPROX) KG	AIR CONSUMPTION IN LITER/BAR
						P	P1			
5412-DD	110	82	54.2	28.25	45	36	50	7×7, 9×9	0.6	ON REQUEST
ARA-DD-49-D	130	96.5	69.5	28.29	65	36	50	9×9, 11×11	1.1	0.2
ARA-DD-52-D	153.5	102	74	28.45	72.8	50	70	9×9, 11×11, 13×13, 14×14	1.4	0.25
ARA-DD-63-D	147.5	113.6	87.5	27.4	76	50	70	9×9, 11×11, 13×13, 14×14	2.65	0.43
ARA-DD-75-D	188	126.5	100	28.3	83	50	70	9×9, 11×11, 13×13, 14×14, 15×15, 17×17	2.8	0.66
ARA-DD-83-D	170	135.5	109	28.28	83.2	50	70	11×11, 13×13, 14×14, 17×17	3.3	0.75
ARA-DD-90-D	265.5	145.5	117	28.26	90.9	-	70	11×11, 13×13, 14×14, 15×15, 17×17	5.05	1.37
ARA-DD-110-D	267	166	140	28.3	124.9	70	102	14×14, 17×17, 22×22, 27×27	7.4	2.6
ARA-DD-127-D	312	180	153	28.26	135	102	125	14×14, 17×17, 22×22, 27×27	10.1	3.8
ARA-DD-140-D	364	198	172	38.48	144	102	125	17×17, 22×22, 27×27	14	4.1
ARA-DD-160-D	417	228	196	39.43	161	102	125	22×22, 27×27, 36×36	20.75	7.48
ARA-DD-200-D	405	292	253	39.81	210.4	100×150	140	27×27, 36×36	32.6	10.03
ARA-DD-210-D	563.5	292	253	39.81	210.2	100×151	140	27×27, 36×36, 46×46	59	10.64
ARM-240-D	620	320.2	292.5	28	-	-	165	46×46	65	ON REQUEST
ARM-270-D	733.4	364.3	328.4	36	-	-	165	46×46	83.5	ON REQUEST
ARM-300-D	825	393.7	355.7	38	-	-	165	46×46	109.5	ON REQUEST
ARM-350-D	842.2	445.6	410.6	35	-	-	165	46×46	147.6	ON REQUEST
ARM-400-D	926.5	503.3	463.4	40	-	-	165	55×55	310.5	ON REQUEST

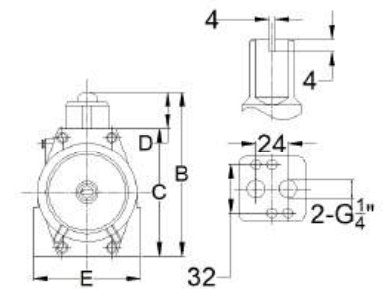
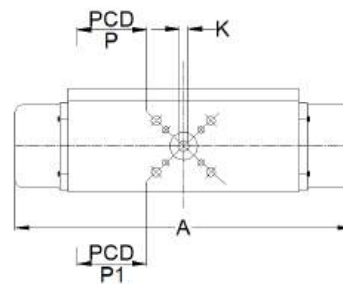
ALL DIMENSIONS ARE IN MM

**TORQUE DETAILS - DOUBLE ACTING**

Air Supply Pressure in Bar Vs Torque Output Nm

MODEL	3 BAR	4 BAR	5 BAR	6 BAR	7 BAR
5412-DD	3.6	4.7	6	7.5	8.5
ARA-DD-49-D	9.5	12.6	16	19.5	22.5
ARA-DD-50-D	13.5	18.5	23	27.5	32
ARA-DD-50-D	19	25.5	32	39.5	46
ARA-DD-75-D	38	51	65	78	90.8

ARA-DD-83-D	42	56	71	85	97
ARA-DD-90-D	84	115.5	145	174	202
ARA-DD-110-D	135	170	225	265	304
ARA-DD-127-D	206	279	349	423	497
ARA-DD-140-D	301	408	514	620	694
ARA-DD-160-D	439	582	737	892	1064
ARA-DD-200-D	720	950	1182	1420	1650
ARA-DD-210-D	1138	1505	1900	2183	2486
ARA-240-D	1221	1628	2031	2445	2849
ARA-270-D	1958	2611	3264	3916	4569
ARA-300-D	2403	3205	4006	4807	5608
ARA-350-D	3598	4798	5998	7197	8397
ARA-400-D	5127	6837	8546	10255	11964



### DIMENSIONAL DETAILS - SINGLE ACTING

RACK AND PINION ACTUATOR (SINGLE ACTING)

MODEL	DIMENSIONS						PCD	PCD	K	WEIGHT (APPROX) KG	AIR CONSUMPTION IN LITERS/BAR
	A	B	C	D	E	P					
ARA-DD-49-S	140.5	98	69.5	28.29	65	36	50	9×9, 11×11	1.25	0.1	
ARA-DD-50-S	181.1	101.5	74	28.45	72.8	50	70	9×9, 11×11, 13×13, 14×14	1.6	0.16	
ARA-DD-63-S	196	113.5	87.5	27.4	76	50	70	9×9, 11×11, 13×13, 14×14	2.2	0.27	
ARA-DD-75-S	254.5	126.5	100	28.3	83	50	70	9×9, 11×11, 13×13, 14×14, 15×15, 17×17	3.75	0.31	
ARA-DD-83-S	254.5	135.4	109.4	28.28	83.2	50	70	11×11, 13×13, 14×14, 17×17	3.75	0.53	
ARA-DD-90-S	335.4	145.4	117	28.26	90.9	-	70	11×11, 13×13, 14×14, 15×15, 17×17	6.25	0.55	
ARA-DD-110-S	335.6	166	140	28.3	124.9	70	102	14×14, 17×17, 22×22, 27×27	9.55	1.13	
ARA-DD-127-S	435.1	179	153	28.26	135	102	125	14×14, 17×17, 22×22, 27×27	16.15	1.5	
ARA-DD-140-S	489.8	198	172	38.48	144	102	125	17×17, 22×22, 27×27	17.55	1.75	
ARA-DD-160-S	626.4	228	196	39.43	161	102	125	22×22, 27×27, 36×36	37.15	3.2	
ARA-DD-200-S	550.6	275.2	232.2	39.81	210.4	100×150	140	27×27, 36×36	40.95	7.38	
ARA-DD-210-S	777.4	292.3	253.1	39.81	210.2	100×151	140	27×27, 36×36, 46×46	78.65	8.46	
ARM-240-S	620	320.2	292.5	28	-	-	165	46×46	72.4	ON REQUEST	
ARM-270-S	733.4	364.3	328.4	36	-	-	165	46×46	104.6	ON REQUEST	
ARM-300-S	825	393.7	355.7	38	-	-	165	46×46	196.6	ON REQUEST	
ARM-350-S	842.2	445.6	410.6	35	-	-	165	46×46	250.5	ON REQUEST	
ARM-400-S	926.5	503.6	463.4	40	-	-	165	55×55	344.5	ON REQUEST	

ALL DIMENSIONS ARE IN MM

## TORQUE DETAILS - SINGLE ACTING

Model	Spring Set	Torque by Air Pressure				Torque In Nm				10Nm =		kgfm	
		Spring	3 BAR	4 BAR	5 BAR	6 BAR	7 BAR	Min.	Max.				
		Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.
ARA-DD-49-S	5	2.3	5.7	3	4	6.5	6.5	9.2	9.8	13.4	13.1	16.7	16.1
ARA-DD-49-S	*R 6	2.9	7.5	1.5	2.8	4.8	5.8	7.9	8.9	11.5	12	14.9	14.8
ARA-DD-49-S	7	2.6	9.4		1	3	2	6.2	4.6	9.6	7.8	13.1	10.7
ARA-DD-49-S	8	2.8	10.7		1.2	1.3	2.6	4.5	5.3	8.2	8	11.5	10.7
ARA-DD-49-S	9	3.1	12.8		1.5		3.4	2.6	5.6	5.8	8.1	9.2	11
ARA-DD-49-S	10	7.2	15.2		0.7		1.1		4.2	2.4	7.3	5.2	10.3
ARA-DD-50-S	5	3.1	11.5		10.5	7.1	14.5	12.1	18.8	17.2	22.8	22.5	27.4
ARA-DD-50-S	*R 6	5.2	15		7.5	3.6	10.8	8.7	14	13.9	17.3	18.5	21.4
ARA-DD-50-S	7	7	20		7.3	0	10.5	1.5	14.6	6.5	19.2	11.3	24.2
ARA-DD-50-S	8	4.5	13.8		6.5	2.5	11.5	7.7	15.5	12.4	20.5	17.3	25.3
ARA-DD-50-S	9	7	18.5		3.5		8.5	2	13	6.9	17.8	11.7	22.5
ARA-DD-50-S	10	8.2	22.1				6.8		11.9	3.4	16.6	8.2	21.4
ARA-DD-63-S	5	4.1	5	4.3	6.7	10.3	12.2	17.4	18	24.6	24.7	31.7	31.7
ARA-DD-63-S	*R 6	6.5	8.1	3.6	6.4	10.5	13.6	17.6	20.5	24.7	27.6	31.8	34.7
ARA-DD-63-S	7	11.2	17		5.3		8.6	3.9	12.7	10	18.8	16.7	25.6
ARA-DD-63-S	8	10	16.7	1.5	7.5	9.2	14.6	16.4	21.4	24.1	28.3	30.8	36.5
ARA-DD-63-S	9	13.6	21.5		4	4.5	11.6	11.5	18.7	18.6	25.5	25.7	33.5
ARA-DD-63-S	10	15.7	24.5		2		8.6	46	15.3	11.5	22.2	18.3	29.4
ARA-DD-75-S	5	8.3	18.5	17.9	24	31.8	37	44.2	51.5	54.6	65.8	62.4	79
ARA-DD-75-S	6	10	25	12.9	15.6	25	29.2	32	42.8	41	57.6	50	70.9
ARA-DD-75-S	*R7	14.5	30.3	6.2	15.5	13.2	29	19.8	42.7	25.9	56.5	32	70.5
ARA-DD-75-S	8	20	29.7	2.5	13	17	26	30	38	43	51	54.5	63.8
ARA-DD-75-S	9	24.8	35		11	12.1	24.5	24.4	37.4	35	50.2	42	63.3
ARA-DD-75-S	10	25	46.9		0.7		12	11.3	24.8	24.2	37.5	34.5	50.7
ARA-DD-83-S	5	7.5	14.7	32.3	36.6	46.9	50.8	61.5	64.8	76.6	79.2	91.1	93.5
ARA-DD-83-S	*R 6	19.4	30	9	23.2	24.2	37.2	39.1	51.8	53.6	66.8	67.9	81.3
ARA-DD-83-S	7	24.6	38.3	3.2	17.2	18.3	31.9	32.7	45.8	47.1	60.3	61.6	74.9
ARA-DD-83-S	8	20.3	37.8		13.2	12.5	27.3	26.6	40.9	41.6	55.6	55.6	69.3
ARA-DD-83-S	9	34.8	53.8		4.5		18.6	14.5	32.6	28.7	46.7	42.4	60.3
ARA-DD-83-S	10	51	78.5		8		12.4		17.6		23.8	12.2	34.4
ARA-DD-90-S	5	9	38.7	44.7	74.9	67.8	106.1	82.3	137.1	88.8	168.7	92.5	199.9
ARA-DD-90-S	*R 6	22.6	67.7	8.5	56	39.6	86.5	67.6	117.5	93.4	148.3	101	180
ARA-DD-90-S	7	19.9	110.8		39.5		68.8	30.1	100.7	60.2	132.3	88.6	163.4
ARA-DD-90-S	a	19.2	78.9		45.5	24.5	76	55.5	104	75.5	138.5	95	167.5
ARA-DD-90-S	9	21	119		35		64.5	16	92	47.2	124	79.5	153
ARA-DD-90-S	10	44.1	127.4		31.5		62.8	6.2	93.2	35.4	124.6	63.4	154.2
ARA-DD-110-S	5	47	89	30	78	74	123	117	168	162	214	206	259
ARA-DD-110-S	*R 6	58	117		64	41	109	ES	152	127	195	170	240
ARA-DD-110-S	7	72	146		44	11	89	54	134	98	178	142	222
ARA-DD-110-S	8	85	165		32		78	22	123	68	167	112	212
ARA-DD-110-S	9	102	192		17		64		111	12	152	19	195
ARA-DD-110-S	10	121	235				34		78	6	123	47	165
ARA-DD-127-S	5	25	72	142	185	202	260	246	336	292	413	325	487
ARA-DD-127-S	*R 6	70	164	36	125	111	202	135	278	248	355	302	430
ARA-DD-127-S	7	107	253		85	27	154	100	223	173	297	244	371
ARA-DD-127-S	8	82	187		113	72	189	153	268	203	342	233	415
ARA-DD-127-S	9	144	277		70		145	43	206	62	282	*	358
ARA-DD-127-S	10	150	328		42		118	14	190	87	263	16	337
ARA-DD-140-S	5	58	161	153	233	248	333	300	423	335	509	370	608
ARA-DD-140-S	*R 6	92	219	63	212	122	317	130	423	132	528	138	633
ARA-DD-140-S	7	123	285		175	95	277	193	383	219	488	245	597
ARA-DD-140-S	8	119	296	36	205	116	308	137	412	142	515	149	615
ARA-DD-140-S	9	147	377		160		266	110	368	145	471	157	572
ARA-DD-140-S	10	172	459		142	19	245	120	349	216	455	298	557
ARA-DD-160-S	5	85	170	266	368	414	518	566	672	720	831	839	985
ARA-DD-160-S	6	120	241	168	299	316	450	459	597	522	743	586	886
ARA-DD-160-S	7	175	356	44	245	193	392	342	540	480	688	573	833

ARA-DD-160-S	8	163	343	55	246	108	407	136	563	156	718	167	873
ARA-DD-160-S	9	235	430		197	77	351	155	503	183	660	188	810
ARA-DD-160-S	*R 10	231	470		171	60	309	202	455	346	604	468	741
ARA-DD-200-S	12	147	251	256	495	417	739	569	977	700	1207	807	1440
ARA-DD-200-S	13	208	361	201	416	370	651	530	885	676	1120	808	1358
ARA-DD-200-S	R14	306	524	90	304	300	528	485	758	633	995	766	1238
ARA-DD-200-S	15	345	628		245	205	470	410	700	573	922	745	1166
ARA-DD-200-S	16	443	751		170	90	400	260	634	422	870	585	1099
ARA-DD-210-S	11	83	244	18	1118	20	1517	***	1912	***	***	***	***
ARA-DD-210-S	12	106	399	124	1082	130	1460	135	1833	139	***	145	***
ARA-DD-210-S	13	116	567	141	847	197	1237	217	1636	239	***	250	***
ARA-DD-210-S	14	307	815	12	680	20	1070	29	1454	30	1843	31	***
ARA-DD-210-S	*R15	415	1057	4	636	7	1115	10	1385	13	1780	16	*
ARA-DD-210-S	16	475	1195		600	7	995	12	1365	16	1750	*	22
ARM-240-S	5	924	690.5	1488.1	1154.6							468.5	702
ARM-240-S	6	829.9	550.1	1294	1014.2							562.6	842.4
ARM-240-S	7	736.7	409.7	1200.8	873.8							655.8	982.8
ARM-240-S	8			1107.1	733.4	1571.3	1197.6					749.5	1123.2
ARM-240-S	9			1013.4	593	1477.6	1057.2					843.2	1263.6
ARM-240-S	10			919.7	452.6	1383.9	916.8	1848.1	1381	2312.2	1845.1	936.9	1404
ARM-240-S	11							1754.4	1240.6	2218.5	1704.7	1030.6	1544.4
ARM-240-S	12							1660.7	1100.2	2124.8	1564.3	1124.3	1684.8
ARM-270-S	5	1299.7	971.2	1952.4	1623.9							658.5	987
ARM-270-S	6	1168	773.8	1820.7	1426.5							790.2	1184.4
ARM-270-S	7	1036.3	576.4	1689	1229.1							921.9	1381.8
ARM-270-S	8			1557.3	1031.7	2210	1684.4					1053.6	1579.2
ARM-270-S	9			1425.6	834.3	2078.3	1487					1185.3	1776.6
ARM-270-S	10			1293.9	6369	1946.6	1289.6	2599.3	1942.3	3252	2595	1317	1974
ARM-270-S	11					1814.9	1092.2	2467.6	1744.9	3120.3	2397.6	1448.7	2171.4
ARM-270-S	12					1683.2	894.8	2335.9	1547.5	2988.6	2200.2	1580.4	2306.8
ARM-300-S	5	1603	1183									800	1220
ARM-300-S	6	1483	1066									920	1337
ARM-300-S	7	1330	844	2132	1646							1073	1559
ARM-300-S	8	1177	621	1979	1423	2780	2224					1226	1782
ARM-300-S	9			1825	1201	2626	2002	3427	2803			1380	2004
ARM-300-S	10			1652	977	2473	1778	3274	2579	4075	3380	1533	2228
ARM-300-S	11							3121	2357	3922	3158	1686	2450
ARM-300-S	12							2815	1878	3685	2679	1922	2929
ARM-350-S	5	2399	1739									1199	1859
ARM-350-S	6	2120	1453									1478	2145
ARM-350-S	7	1874	1096	3074	2296							1724	2502
ARM-350-S	8	1627	738	2827	1938	4027	3138					1971	2860
ARM-350-S	9			2580	1581	3780	2781	4979	3980			2218	3217
ARM-350-S	10												
ARM-350-S	11												
ARM-350-S	12												
ARM-400-S	5	3418	2479										
ARM-400-S	6	2922	1670										
ARM-400-S	7	2647	1239	4357	2949								
ARM-400-S	8	2372	806	4082	2516	5191	4225						
ARM-400-S	9												
ARM-400-S	10												
ARM-400-S	11												
ARM 400-S	12												

SPRING SET DETAILS

Model	ARA-DD-49-S, ARA-DD-83-S, ARA-DD-127-S, ARA-DD-50-S, ARA-DD-90-S, ARA-DD-63-S, ARA-DD-140-S, ARA-DD-110-S, ARA-DD-160-S ARA-DD-75-S										ARA-DD-200-S / ARA-DD-210-S							
Spring Set	5	6	7	8	9	10	11	12	13	14	15	16	11	12	13	14	15	16
RH	0	1	2	1	2	2		1	2	2	2	2	0	1	2	2	2	2
LH	2	1	0	2	1	2	02	1	0	2	2	2	2	1	0	2	2	2
BIG LH								0	0	0	1	2	0	0	0	0	1	2