

PNEUMATIC ACTUATOR R – FORCE (RACK & PINION)



Rack & Pinion Pneumatic Actuator



The Alohan **R-FORCE** pneumatic actuator is designed using Rack & Pinion technology. Rack & Pinion is well known to all users as the most compact and reliable actuator. The latest manufacturing technologies have been operated in order to supply a high quality and cycle-life on **R-FORCE**. Our extensive inventory & engineering capabilities allow us to provide reliable and safety product to our customer with satisfaction.



● SPECIFICATION

Pressure Range	Maximum Working Pressure : 10 Bar(143 Psi)
Temperature Range	Standard: -20°C~80°C Low: -40°C~110°C High: -20°C~150°C
Movement	90 degree +5~ -10 (optional -30 degree)
Lubrication	All moving parts are lubricated for long life cycle
Life Cycle	More than 1,000,000 Operations

FEATURES

Center Stopper Bolt

Adjustment for open & close positions
90 degree : adjustable +5 ~ -10 degree
Max : -30 degree



Mounting Holes

Easy to mount accessory
VDI/VDE 3845 NAMUR

Spring Pack

Pre-compressed for safety

Mounting Holes

International standard
ISO5211, DIN3337, NAMUR

Double Square Drive Shaft

ISO5211 NAMUR

NAMUR Drive Shaft

Mechanical Stopper

Cylinder

Hard anodized aluminum

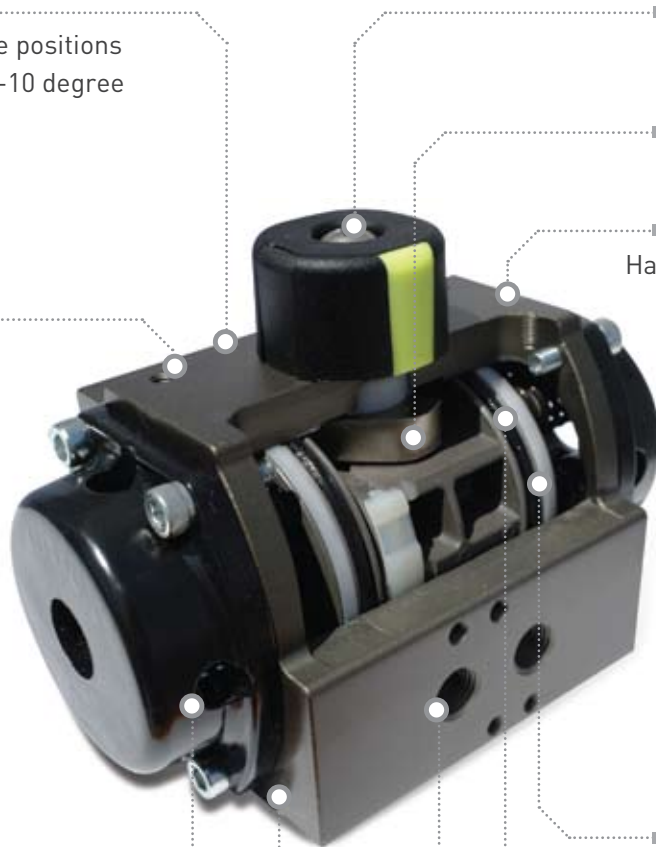
O-Ring

Specially treated for
reducing friction

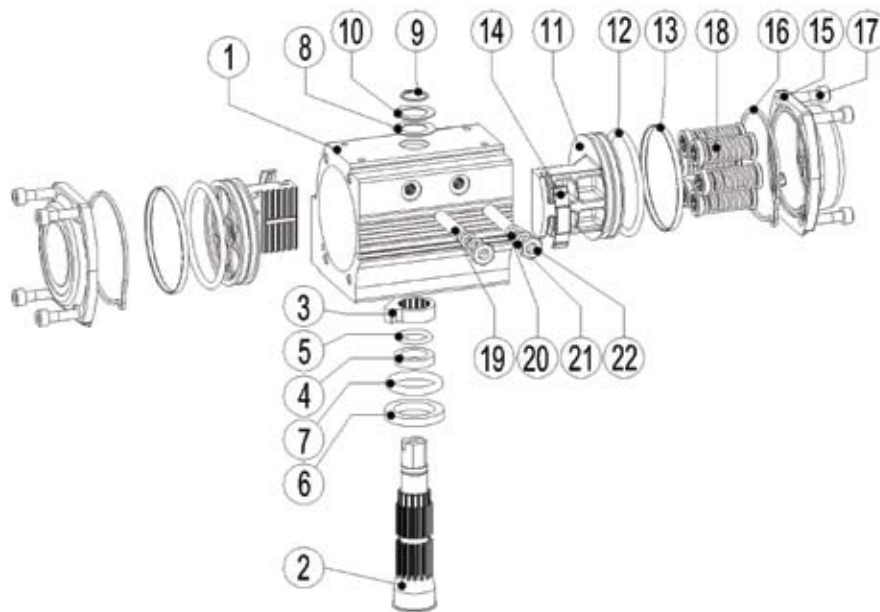
Guide Ring

For longer working life cycle

Direct Mounting NAMUR



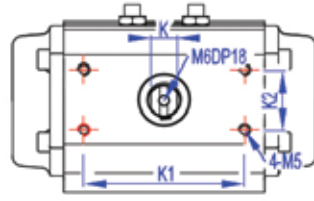
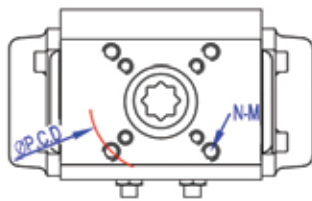
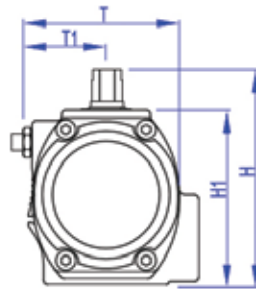
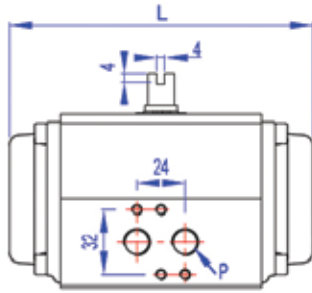
PART LIST (R-FORCE)



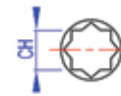
NO.	Part Name	Materials
1	Body	Aluminum Alloy
2	Shaft	Steel Alloy (Nickel Plated)
3	Stopper	Steel Alloy
4	Bushing (Top)	Engineering Plastic
5	Body O-ring (Top)	NBR
6	Bushing (Bottom)	Engineering Plastic
7	Body O-ring (Bottom)	NBR
8	Body Washer (Bottom)	Engineering Plastic
9	Body Washer (Top)	Stainless Steel
10	Body Snap-ring	Stainless Steel
11	Piston	Aluminum Alloy

NO.	Part Name	Materials
12	Piston O-ring	NBR
13	Piston Guide-ring	Engineering Plastic
14	Piston Pad	Engineering Plastic
15	Cover	Aluminum Alloy
16	Cover O-ring	NBR
17	Cover Bolt	Steel Alloy
18	Spring Unit	Steel Alloy
19	Adjust Bolt	Steel Alloy
20	Adjust O-ring	NBR
21	Adjust Washer	Steel Alloy
22	Adjust Nut	Steel Alloy

DIMENSION



MOUNT IMAGE



UNIT : mm,kg

MODEL	K	K1	K2	ISO5211	PCD	N-M	L(RD)	L(RS)	P	T	T1	H	H1	CH	DTH	WEIGHT(RD)	WEIGHT(RS)
RD32	7	25.5	25.5	F03	36	4-M5	66		1/8	45	25	55	45	9x9	9	0.3	
RD(S)40	9	50	25	F03/F05	36/50	4-M5/M6	97	109	1/4	60	33	74	54	9x9	9	0.5	0.6
RD(S)50	9	80	30	F03/F05/F07	36/50/70	4-M5/M6/M8	118.5	133	1/4	75	40	90	70	11x11	13	1.3	1.6
RD(S)65	13	80	30	F05/F07	50/70	4-M6/M8	131	154	1/4	88.5	46	106.5	86.5	14x14	16	1.7	2.1
RD(S)80	19	80	30	F07	70	4-M8	189	220	1/4	101	49.5	125	106	17x17	19	2.7	3.4
RD(S)90	19	80	30	F07	70	4-M8	189.5	219	1/4	104	54.5	136	116	17x17	19	4.1	5.1
RD(S)100	19	80	30	F07/F10	70/102	4-M8/M10	299	256	1/4	132.2	61.5	148	128	22x22	26	4.7	5.9
														17x17	19		
RD(S)125	19	80	30	F07/F10	70/102	4-M8/M10	299	330	1/4	151	71.5	174	154	22x22	26	7.4	9.2
RD(S)140	24	80	30	F10/F12	102/125	4-M10/M12	332	389	1/4	164	77	192	172	27x27	30	12.1	15.1
														22x22	26		
RD(S)160	24	80	30	F10/F12	102/125	4-M10/M12	364	416	1/4	188	103.5	216	196	27x27	30	16.8	21.0
RD(S)210	36	130	30	F14	140	4-M16	444	527	1/4	231	115	284	254	36x36	30	29.9	37.3

TORQUE



DOUBLE ACTING OUTPUT TORQUE

Unit : N-m

Model	Supply Air						
	3Bar	4Bar	4.5Bar	5Bar	6Bar	7Bar	8Bar
RD32	3.2	4.5	5.3	6.0	7.3		
RD40	5.0	7.0	8.0	9.0	11.0		
RD50	10.3	13.7	15.5	17.1	20.6	24.0	27.4
RD65	19.1	25.4	28.6	31.8	38.2	44.6	50.0
RD80	39.3	52.2	58.8	65.3	78.4	91.5	104.7
RD90	57.8	77.1	86.8	96.4	115.7	134.9	153.8
RD100	84.4	112.5	126.5	140.6	168.7	196.8	220.4
RD125	171.2	228.4	256.9	285.4	342.5	399.5	456.6
RD140	243.3	324.4	365.0	405.5	486.6	567.7	648.8
RD160	350.7	467.6	526.0	584.4	701.3	818.2	935.2
RD210	725.4	967.2	1,088.1	1,209.0	1,450.8	1,692.6	1,934.4

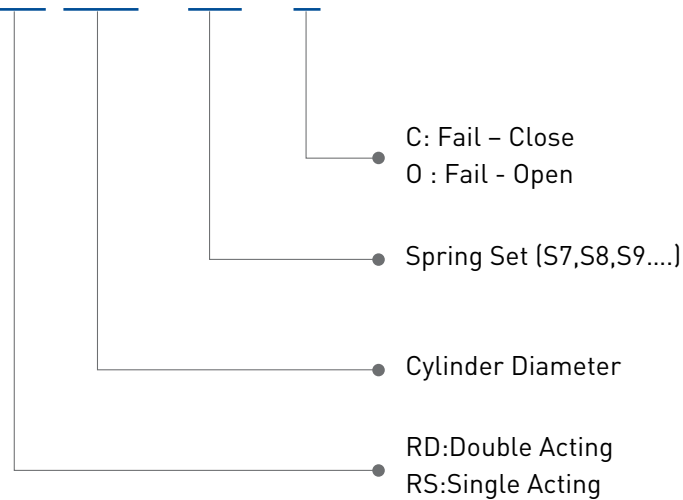
SPRING RETURN OUTPUT TORQUE

Unit : N-m

Model	Spring unit	Supply Air													
		3Bar		4Bar		4.5Bar		5Bar		6Bar		7Bar		SPRING	
		0°	90°	0°	90°	0°	90°	0°	90°	0°	90°	0°	90°	0°	90°
RS40	1	2.0	-	4.0	2.0	5.0	3.0	6.0	4.0	8.0	7.0	10.0	8.0	10.0	6.0
	2	1.0	-	2.0	-	3.0	-	4.0	-	6.0	2.0	8.0	4.0	12.0	9.0
RS50	5	6.8	5.3	10.2	8.7	11.9	10.4	13.6	12.1	-	-	-	-	5.0	3.5
	6	6.2	4.3	9.6	7.7	11.3	9.5	13.0	11.1	16.5	14.6	-	-	6.0	4.1
	7	5.5	3.3	8.9	6.7	10.6	8.4	12.3	10.1	15.8	13.6	19.2	17.0	7.0	4.8
	8	4.7	2.3	8.1	5.7	9.9	7.4	11.5	9.1	15.0	12.6	18.4	16.0	8.0	5.6
	9	-	-	7.4	4.6	9.2	6.4	10.8	8.0	14.3	11.5	17.7	14.9	9.1	6.3
	10	-	-	6.8	3.7	8.5	5.5	10.2	7.1	13.7	10.6	17.1	14.0	10.0	6.9
	11	-	-	-	-	7.8	4.4	9.5	6.1	13.0	9.6	16.4	13.0	11.0	7.6
	12	-	-	-	-	-	-	-	-	12.3	8.5	15.7	11.9	12.1	8.3
RS65	5	13.2	10.1	19.6	16.5	22.8	19.7	26.0	22.9	-	-	-	-	8.9	5.9
	6	11.9	10.1	18.3	14.7	21.5	17.9	24.7	21.1	31.1	27.5	-	-	10.8	7.1
	7	10.8	6.5	17.1	12.9	20.3	16.1	23.5	19.3	29.9	25.7	36.3	32.0	12.6	8.3
	8	9.6	4.7	16.0	11.1	19.2	14.3	22.4	17.5	28.7	23.8	35.1	30.2	14.4	9.5
	9	-	-	14.8	9.3	18.0	12.5	21.2	15.6	27.6	22.0	34.0	28.4	16.2	10.6
	10	-	-	13.6	7.5	16.8	10.6	20.0	13.8	26.4	20.2	32.8	26.6	18.0	11.8
	11	-	-	-	-	15.6	8.8	18.8	12.0	25.2	18.4	31.6	24.8	19.8	13.0
	12	-	-	-	-	-	-	-	-	24.1	16.7	30.4	23.1	21.5	14.2
RS80	5	26.6	19.6	39.6	32.5	46.2	39.1	52.7	45.6	-	-	-	-	19.7	12.6
	6	24.1	15.6	37.1	28.6	43.7	35.2	50.2	41.6	63.3	54.7	-	-	23.7	15.1
	7	21.6	11.7	34.6	24.7	41.2	31.3	47.7	37.8	60.8	50.9	73.8	63.9	27.5	17.6
	8	19.1	7.7	32.1	20.7	38.7	27.3	45.2	33.8	58.3	46.9	71.3	60.0	30.7	20.1
	9	-	-	29.6	16.7	36.2	23.3	42.7	29.8	55.7	42.9	68.8	56.0	35.5	22.6
	10	-	-	27.1	12.9	33.7	19.5	40.4	25.9	53.2	39.0	66.3	52.1	39.4	25.1
	11	-	-	-	-	31.2	15.5	37.7	22.0	50.7	35.0	63.8	48.1	43.3	27.6
	12	-	-	-	-	-	-	-	-	48.2	31.2	61.3	44.3	47.2	30.1
RS90	5	38.7	27.6	57.9	46.9	67.7	56.6	77.3	66.2	-	-	-	-	30.2	19.1
	6	34.8	21.5	54.1	40.8	63.8	50.5	73.4	60.1	92.7	79.4	-	-	36.3	23.0
	7	31.0	15.6	50.2	34.8	59.9	44.6	69.6	54.2	88.8	73.4	108.0	92.7	42.3	26.9
	8	27.2	9.5	46.4	28.8	56.2	38.5	65.8	48.1	85.0	67.4	104.3	86.6	48.3	30.6
	9	-	-	42.6	22.7	52.3	32.4	61.9	42.0	81.2	61.3	100.4	80.5	54.4	34.5
	10	-	-	38.7	16.6	48.4	26.4	58.0	36.0	77.3	55.2	96.5	74.5	60.5	38.4
	11	-	-	-	-	44.7	20.4	54.3	30.0	73.5	49.3	92.8	68.5	66.4	42.1
	12	-	-	-	-	-	-	-	-	69.7	43.2	88.9	62.4	72.5	46.0
RS100	5	58.3	43.8	86.4	71.9	100.4	85.9	114.5	100.0	-	-	-	-	40.6	26.1
	6	53.0	35.6	81.2	63.8	95.2	77.8	109.3	91.9	137.4	120.0	-	-	48.7	31.3
	7	47.8	27.6	75.9	55.7	89.9	69.7	104.0	83.8	132.1	112.0	160.3	140.1	56.8	36.6
	8	42.6	19.5	70.8	47.6	84.8	61.6	98.9	75.7	127.0	103.8	155.1	131.9	64.9	41.7
	9	-	-	65.5	39.4	79.5	53.5	93.6	67.6	121.7	95.7	149.9	123.8	73.0	47.0
	10	-	-	60.3	31.3	74.3	45.3	88.4	59.4	116.5	87.6	144.6	115.7	81.2	52.2
	11	-	-	-	-	69.1	37.2	83.2	51.3	111.3	79.4	139.5	107.5	89.3	57.4
	12	-	-	-	-	-	-	-	-	106.1	71.4	134.2	99.5	97.3	62.6
RS125	5	117.1	86.7	174.3	143.9	202.8	172.4	231.3	201.0	-	-	-	-	84.5	54.1
	6	106.3	69.2	163.5	126.4	192.0	154.9	220.5	183.4	277.6	240.5	-	-	102.0	64.9
	7	95.5	52.7	152.6	109.9	181.2	138.4	209.7	167.0	266.8	224.0	323.8	281.1	118.5	75.7
	8	84.7	35.2	141.8	92.4	170.4	120.9	198.9	149.5	256.0	206.5	313.0	263.6	136.0	86.5
	9	-	-	131.0	75.9	159.5	104.4	188.1	133.0	245.1	190.0	302.2	247.1	152.4	97.3
	10	-	-	120.2	58.4	148.7	86.9	177.3	115.5	234.3	172.5	291.4	229.6	170.0	108.2
	11	-	-	-	-	137.4	70.5	165.9	99.0	223.0	156.0	280.1	213.1	186.4	119.5
	12	-	-	-	-	-	-	-	-	212.7	138.5	269.8	195.6	203.9	129.8
RS140	5	126.3	82.5	248.0	204.2	288.5	244.7	329.1	285.3	-	-	-	-	120.3	76.4
	6	110.5	58.3	232.1	179.9	272.7	220.5	313.2	261.0	394.3	342.1	-	-	144.5	92.3
	7	95.6	35.0	217.2	156.6	257.8	197.2	298.3	237.7	379.4	318.8	460.5	399.9	167.8	107.2
	8	79.7	10.7	201.4	132.4	241.9	172.9	282.5	213.5	363.6	294.6	444.7	375.7	192.0	123.1
	9	-	-	186.4	108.1	227.0	148.7	267.5	189.2	348.6	270.3	429.7	351.4	216.3	138.0
	10	-	-	170.6	83.9	211.1	124.4	251.7	165.0	332.8	246.1	413.9	327.2	240.5	153.8
	11	-	-	-	-	196.2	101.1	236.8	141.7	317.9	222.8	399.0	303.9	263.8	168.7
	12	-	-	-	-	-	-	-	-	302.0	198.6	383.1	279.7	288.0	184.6
RS160	5	235.4	179.7	352.3	296.6	410.7	355.0	469.1	413.4	-	-	-	-	171.0	115.4
	6	211.7	145.7	328.6	262.7	387.0	321.1	445.4	379.5	562.3	496.4	-	-	205.0	139.1
	7	189.0	110.7	305.9	227.6	364.3	286.0	422.7	344.4	539.6	461.3	656.5	578.2	240.0	161.7
	8	165.3	76.7	282.2	193.6	340.6	252.0	399.0	310.4	515.9	427.3	632.8	544.3	274.0	185.4
	9	-	-	259.6	159.7	318.0	218.1	376.4	276.5	493.3	393.4	610.2	510.3	308.0	208.1
	10	-	-	236.9	125.7	295.3	184.1	353.7	242.5	470.6	359.4	587.5	476.3	342.0	230.7
	11	-	-	-	-	271.6	150.1	330.0	208.5	446.9	325.4	563.8	442.3	376.0	254.4
	12	-	-	-	-	-	-	-	-	424.3	290.4	541.2	407.3	411.0	277.1
RS210	4	563.8	442.9	805.6	684.6	-	-	-	-	-	-	-	-	282.5	161.6
	5	523.4	372.3	765.2	614.1	886.1	735.0	1,007.0	855.9	-	-	-	-	353.1	202.0
	6	483.1	301.7	724.8	543.4	845.7	664.4	966.7	785.3	1,208.2	1,027.0	-	-	423.7	242.4
	7	442.6	231.0	684.3	472.8	805.3	593.7	926.2	714.6	1,168.0	956.4	1,410.1	1,197.9	494.4	282.8
	8	-	-	644.0	402.2	764.9	523.1	885.8	644.1	1,127.9	885.8	1,369.9	1,127.9	565.0	323.2
	9	-	-	603.6	331.6	724.5	452.5	845.4	573.4	1,087.7	815.1	1,328.7	1,056.8	635.6	363.6
	10	-	-	563.2	260.9	684.1	381.8	805.0	502.7	1,046.5	744.5	1,288.5	986.3	706.3	404.0
	11	-	-	-	-	643.8	311.3	764.7	432.2	1,006.4	673.9	1,248.4	915.8	776.8	444.3
12	-	-	-	-	603.3	240.6	724.2	361.5	965.9	603.3	1,208.2	845.1	847.5	484.8	

Ordering Code

RS 065 - S6 - C



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