

1. Indicator

A position indicator with Namur mounting is standard on all HAITIMA pneumatic actuators for mounting accessories.

2. Pinion

The hardened alloy steel pinion is precision ground and Nickel plated (over 25um) in order to reduce friction, provide maximum wear resistance. Full conformance with the new standards of ISO5211 & DIN3337. The dimensions can be customized and as options, stainless steel and aluminium are also available.

3. Actuator Body

The aluminum extrusion is hard anodized (over 30um) to protect against wear and corrosion while reducing piston friction to the absolute minimum. Other options such as Nickel plating, PTFE and powder polyester painting are available.

4. End Caps

Epoxy coated (over 150um) die cast aluminum end caps provide maximum resistance against potentially corrosive elements. Other treatments such as Nickel plating & PTFE painting are available.

5. Pistons

The precisely-balanced and hard anodized treatment (over 30um) die cast aluminum pistons are fitted with high quality rings and guides. The twin rack and piston design creates a constant torque output on all actuators.

6. Travel Adjustment

The standard adjustment is $\pm 5^\circ$ in both the open and closed positions through easily accessible external adjustment bolts.

7. High Performance Springs

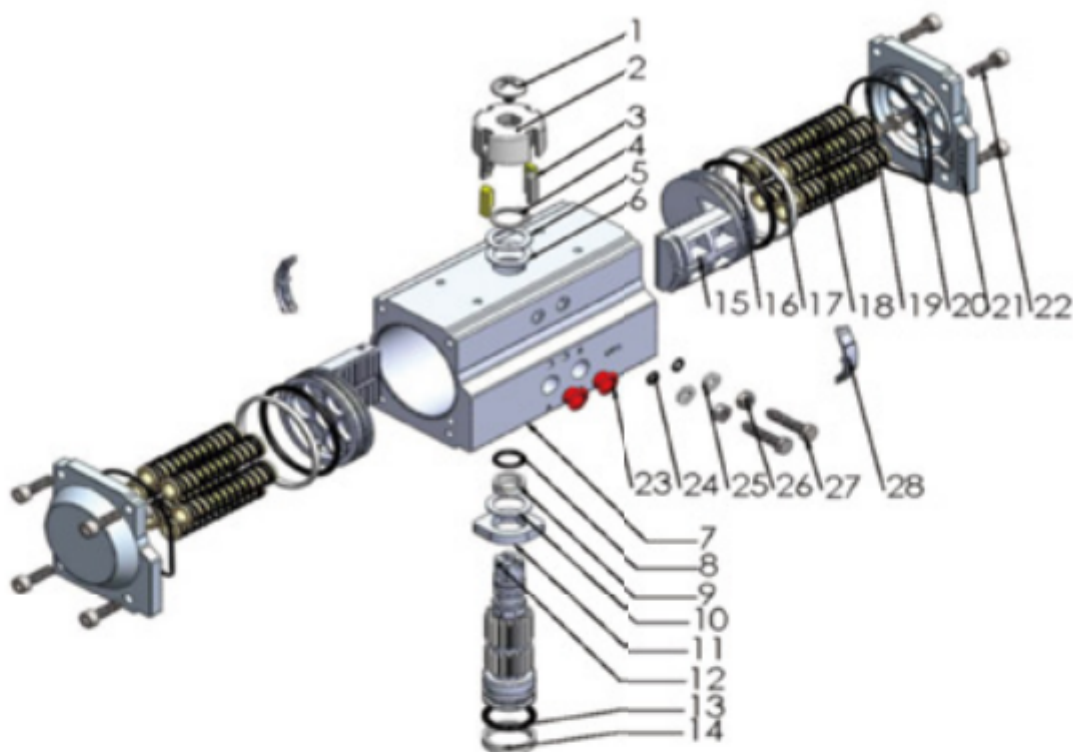
The high tensile steel springs are coated with zinc phosphate for corrosion resistance and longer service. The pre-loaded springs can be safely & rapidly disassembled.

8. Bearings & Guides

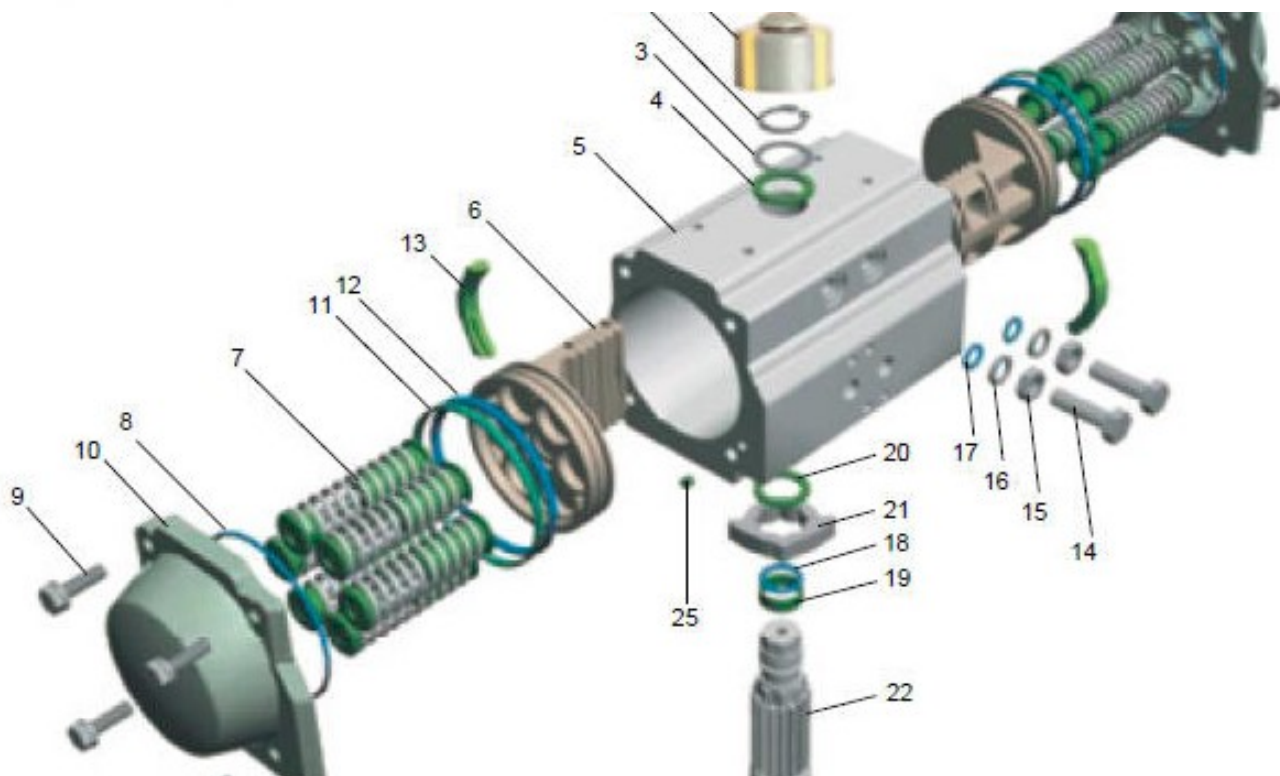
The highly durable compound material provides high trust stability with minimum friction and long life.

9. O-Rings

NBR O-rings provide trouble-free operation at standard temperature ranges. Viton and Silicone O-rings are available for high or low temperature applications.



Item	Description	Material	Protection	Qty	Optional
1	Screw	ABS+304		1	
2	Indicator	Plastic		1	
3	Indicator Pin	ABS		4	
4	Spring Clip	Stainless Steel		1	
5	Thrust Washer (Pinion)	Stainless Steel		1	
6*	Thrust Bearing (Pinion)	POM		1	
7	Actuator Body Extruded	Extruded Aluminum Alloy	Hard Anodized (over 30µm)	1	
8*	O-Ring (Top Pinion)	NBR		1	Viton/Silicone
9*	Bearing (Top Pinion)	POM		1	
10*	Thrust Bearing (Pinion)	POM		1	
11	Stroke Cam	Stainless Steel		1	
12	Pinion	Alloy Steel	Nickel Plated (over 25µm)	1	
13*	Bearing (Lower Pinion)	POM		1	
14*	O-Ring (Lower Pinion)	NBR		1	Viton/Silicone
15	Piston	Die Cast Aluminum Alloy	Hard Anodized (over 30µm)	2	
16*	Piston Seal	NBR		2	Viton/Silicone
17*	Piston Bearing	Stainless Steel		2	
18	Spring (Cartridge)	High Performance Spring Steel	Zinc Phosphate Coated	0-12	
19*	End Cap Seals	NBR		2	Viton/Silicone
20	Stroke Bolt	Stainless Steel		1	
21	End Cap	Die Cast Aluminum	Epoxy Coated (over 150µm)	2	
22	End Cap Bolts	Stainless Steel		8	
23	Plug	PE		2	
24*	Stroke Bolt O-Ring	NBR		2	Viton/Silicone
25	Stroke Bolt Washer	Stainless Steel		2	
26	Stroke Bolt Retaining Nut	Stainless Steel		2	
27	Stroke Bolt	Stainless Steel		2	
28*	Piston Guide	POM		2	



Item	Description	Material	Protection	Qty	Optional
1	Indicator	ABS		1	
2	Spring Clip	Stainless Steel		1	
3	Thrust Washer (Pinion)	Stainless Steel		1	
4	Thrust Bearing (Pinion)	PTFE+15%Graphite		1	
5	Actuator Body	Extruded Alluminum Alloy	Hard Anodized (over 30µm)	1	Nickel or PTFE Plated
6	Piston	Die Cast Aluminum Alloy	Hard Anodized (over 30µm)	2	
7	Spring (Cartridge)	High Performance Spring Steel	Zinc Phosphate Coated	0-12	
8*	End Cap Seals	NBR		2	Viton / Silicone
9	End Cap Bolts	Stainless Steel		8	
10	End Cap	Die Cast Aluminum	Epoxy Coated (over 150µm)	2	Nickel or PTFE Plated
11*	Piston Bearing	POM		2	
12*	Piston Seal	NBR		2	Viton / Silicone
13*	Piston Guide	POM		2	
14	Stroke Bolt	Stainless Steel		2	
15	Stroke Bolt Retaining Nut	Stainless Steel		2	
16	Stroke Bolt Washer	Stainless Steel		2	
17*	Stroke Bolt O-Ring	NBR		2	Viton / Silicone
18*	O-Ring (Top Pinion)	NBR		1	Viton / Silicone
19*	Bearing (Top Pinion)	POM		1	
20*	Thrust Bearing (Pinion)	POM		1	
21	Stroke Cam	Stainless Steel		1	
22	Pinion	Alloy Steel	Nickel Plated (over 25µm)	1	
23*	Bearing (Lower Pinion)	POM		1	
24*	O-Ring (Lower Pinion)	NBR		1	Viton / Silicone
25*	Plug	NBR		2	Viton / Silicone

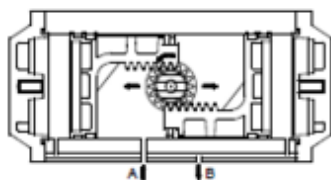
*Note: Recommended spare parts for maintenance.



Sizing example of HAITIMA double acting actuator:
 Valve torque 100Nm plus 30% safety factor= 130N.m. Minimum operating pressure 6bar. By reading down the 6bar column the figure below 130N.m is 136.4N.m, The model number shown in the left hand column is therefore HTD-092.

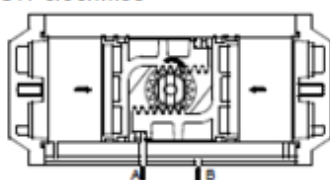
The operating principle of double acting actuator

CCW-counter-clockwise



Air to port A forces the pistons outwards, causing the piston to turn counter-clockwise while air is being exhausted from port B.

CW-clockwise



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

Torque Table of Double Acting Actuator

Unit in.lbs

Unit: N.m

Model	Air Supply Pressure						
	40 Psi	50 Psi	60 Psi	70 Psi	80 Psi	90 Psi	100 Psi
HTD-032	34	44	55	64	73	81	90
HTD-052	102	127	152	178	203	229	254
HTD-063	179	223	268	313	357	402	447
HTD-075	289	360	430	502	574	646	718
HTD-083	362	453	544	634	725	816	906
HTD-092	555	694	834	972	1110	1249	1388
HTD-105	829	1040	1251	1452	1657	1865	2072
HTD-125	1423	1779	2135	2491	2847	3203	3559
HTD-140	2142	2678	3213	3749	4284	4820	5356
HTD-160	3264	4080	4897	5713	6529	7345	8161
HTD-190	5261	6576	7891	9207	10522	11838	13153
HTD-210	7230	9038	10845	12653	14460	16267	18075
HTD-240	11333	14166	16999	19832	22666	25499	28332
HTD-270	15937	19921	23905	27889	31873	35857	39841
HTD-300	19557	24450	29344	34234	39123	44012	48901
HTD-350	29283	36606	43931	51255	58575	65896	73221
HTD-400	41816	52216	62599	73030	83462	93893	104325

Model	Air Supply Pressure					
	3 Bar	4 Bar	5 Bar	6 Bar	7 Bar	8 Bar
HTD-032	4.2	6	7.5	9	10	11.5
HTD-052	12.48	16.64	20.8	24.96	29.12	33.28
HTD-063	21.96	29.28	36.6	43.92	51.24	58.56
HTD-075	35.5	47	58.8	70.5	82.3	94
HTD-083	44.5	59.4	74.2	89.1	103.9	118.8
HTD-092	68.2	91.1	113.7	136.4	159.2	182.9
HTD-105	101.82	136.76	169.7	203.64	237.58	271.52
HTD-125	174.9	233.2	291.5	349.8	408.1	466.4
HTD-140	263.22	350.96	438.7	526.44	614.18	701.92
HTD-160	401.1	534.8	668.5	802.2	935.9	1069.6
HTD-190	646.44	861.9	1077.4	1292.9	1508.4	1723.8
HTD-210	888.4	1184.5	1480.6	1776.7	2072.8	2369
HTD-240	1392.5	1856.6	2320.8	2785	3249.1	3713.3
HTD-270	1958.2	2610.9	3263.6	3916.3	4569	5221.8
HTD-300	2403	3205	4006	4807	5608	6409
HTD-350	3598	4798	5998	7197	8397	9596
HTD-400	5138	6837	8546	10255	11964	13673

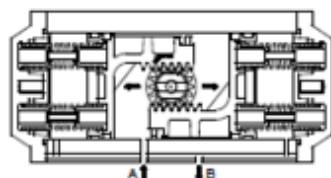


The operating principle of single acting spring return actuator

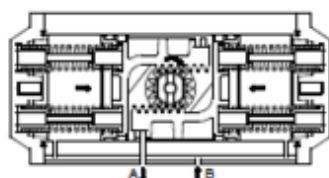
Sizing example of HAITIMA spring return actuator:
 Spring to close when air fails (air to open):
 Valve torque 60N.m plus 30% safety factor=78N.m. Minimum operating pressure:6bar. The spring return HAITIMA actuator selected is HTS-125-10. The HTS-125-10 has the following output torques:

- 1.air torque 0°(valve close)=173N.m > 78N.m
- 2.air torque 90°(valve open)=118N.m>78N.m
- 3.spring torque 90°(valve open)=156N.m > 78N.m
- 4.spring torque 0°(valve close)=119N.m > 78N.m

CCW-counter-clockwise



CW-clockwise



Air to port A forces the pistons outwards, causing the springs to compress. The pinion turns counter-clockwise while air is being exhausted through port B.

Loss of air pressure through port A allows the stored energy in the springs to force the pistons inwards. The pinion turns clockwise while air is being exhausted through port A.

Mounting Variations	Spring Arrangement
<p>CCW-counter-clockwise</p> <p>A </p> <p>B </p>	
<p>CW-clockwise</p> <p>C </p> <p>D </p>	



ALLVALVES SERIES ACTUATORS - PNEUMATIC ACTUATOR

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TYPE : PNEUMATIC ACTUATORS

Model	Spring Set	Spring Torque		AirSupply Pressure									
				3 Bar		4 Bar		5 Bar		6 Bar		7 Bar	
		0°	90°	0°	90°	0°	90°	0°	90°	0°	90°	0°	90°
HTS-052	5	4.0	6.2	8.5	5.3	12.6	10.4						
	6	4.8	7.5	7.7	5.0	11.8	9.1						
	7	5.5	8.7	7.0	3.8	11.1	7.9						
	8	6.3	9.9			10.3	6.7	14.5	10.9				
	9	7.1	11.2			9.5	5.4	13.7	9.6				
	10	7.9	12.4			8.7	4.1	12.9	8.4	17.1	12.6		
	11	8.7	13.7					12.1	7.1	16.3	11.3	20.4	15.4
	12	9.5	14.9					11.3	5.9	15.5	10.1	19.6	14.2
HTS-063	5	7.0	10.8	15.0	11.2	22.3	18.5	29.6	25.8				
	6	8.5	13.0	13.5	9.0	20.8	16.3	28.1	23.7				
	7	9.9	15.1	12.0	6.9	19.4	14.2	26.7	21.5				
	8	11.3	17.3			18.0	12.0	25.3	19.3	32.6	26.6		
	9	12.7	19.4			16.5	9.9	23.9	17.2	31.2	24.5		
	10	14.0	21.6			15.3	7.7	22.6	15.0	29.9	22.3	37.2	29.6
	11	15.5	23.7			13.8	5.6	21.1	12.9	28.4	20.2	35.7	27.5
	12	16.9	25.9					19.7	10.7	27.0	18.0	34.3	25.3
HTS-075	5	11.9	17.5	23.4	17.8	35.1	29.5						
	6	14.2	21.0	21.1	14.3	32.8	26.0						
	7	16.6	24.5	18.7	10.8	30.4	22.5						
	8	19.0	28.0			28.0	19.0	39.8	30.8				
	9	21.3	31.5			25.7	15.5	37.5	27.3				
	10	23.7	35.0			23.3	12.0	35.1	23.8	46.8	35.5	58.6	47.3
	11	26.1	38.5					32.7	20.3	44.4	32.0	56.2	43.8
	12	28.4	41.0					30.4	16.8	42.1	28.5	53.9	40.3
HTS-083	5	14.5	21.7	30.9	23.8	46.1	38.9						
	6	17.4	26.0	28.1	19.5	43.3	34.6						
	7	20.3	30.4	25.2	15.1	40.3	30.2						
	8	23.2	34.7			37.4	25.9	52.6	41.1				
	9	16.1	39.1			34.5	21.5	49.7	36.7				
	10	29.0	43.4			31.6	17.2	46.8	32.4	62.0	47.6	77.1	62.7
	11	31.9	47.7					43.9	28.1	59.1	43.3	74.2	58.4
	12	34.8	52.1					41.0	23.7	56.2	38.8	71.3	54.0
HTS-092	5	25.5	38.0	50.3	37.8	75.5	63.0						
	6	30.6	45.6	45.2	30.2	70.4	55.4						
	7	35.7	53.2	40.1	22.6	65.3	47.8						
	8	40.8	60.8			60.2	40.2	85.5	65.5				
	9	45.9	68.4			55.1	32.7	80.4	57.9				
	10	51.0	76.0			50.0	25.0	75.3	50.3	100.6	75.6	125.8	100.8
	11	56.1	83.6					70.2	42.7	95.5	68.0	120.7	93.2
	12	61.2	91.2					65.1	35.1	90.4	60.4	115.6	85.6

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Model	Spring Set	Spring Torque		AirSupply Pressure										
				3 Bar		4 Bar		5 Bar		6 Bar		7 Bar		
		0°	90°	0°	90°	0°	90°	0°	90°	0°	90°	0°	90°	
HTS-105	5	33.2	49.8	68.6	52.0	103.6	87.0							
	6	39.9	59.8	61.9	42.0	96.9	77.0							
	7	46.5	69.7	55.3	32.1	90.3	67.1							
	8	53.1	76.7			83.7	60.1	116.6	90.0					
	9	59.8	79.7			77.0	57.4	109.9	80.3					
	10	66.4	89.4			70.4	47.2	103.3	70.1	137.3	104.0	171.2	138.0	
	11	73.0	99.6					96.7	60.1	130.6	94.0	164.4	128.0	
	12	79.7	109.6					90.0	50.2	123.9	84.1	157.9	118.1	
HTS-125	5	59.4	70.0	115.5	88.0	173.8	146.3							
	6	71.3	86.9	103.6	70.6	161.9	128.9							
	7	83.1	104.3	91.8	53.5	150.0	111.6							
	8	95.0	121.6			138.2	94.2	196.5	152.5					
	9	106.9	139.0			126.3	76.8	184.6	135.1					
	10	118.8	156.4			114.4	59.4	172.7	117.7	231.0	176.0			
	11	130.6	173.8					160.9	100.4	219.2	158.7	277.5	217.0	
	12	142.5	191.0					149.0	83.0	207.3	141.3	265.6	199.6	
HTS-140	5	88.5	132.0	174.7	131.2	262.5	219.0							
	6	106.2	158.4	157.0	104.8	244.8	192.6							
	7	123.9	184.8	133.9	78.4	227.1	166.2							
	8	141.6	211.2			209.4	139.8	297.1	227.5					
	9	159.3	237.6			191.7	113.4	279.4	201.1					
	10	177.0	264.0			174.0	87.0	261.7	174.7	349.4	262.4	437.8	350.1	
	11	194.7	290.4					244.0	148.3	331.7	236.0	419.5	323.8	
	12	212.4	316.8					226.3	121.9	314.0	209.6	401.8	297.4	



ALLVALVES SERIES ACTUATORS - PNEUMATIC ACTUATOR

www.allvalves.co.uk

TYPE : PNEUMATIC ACTUATORS

Model	Spring Set	Spring Torque		AirSupply Pressure									
				3 Bar		4 Bar		5 Bar		6 Bar		7 Bar	
		0°	90°	0°	90°	0°	90°	0°	90°	0°	90°	0°	90°
HTS-160	5	136.5	204.0	264.6	197.1	398.3	330.8						
	6	163.8	244.9	237.3	156.2	371.0	289.9						
	7	191.1	285.7	210.0	115.4	343.7	249.1						
	8	218.4	326.5	182.7	74.6	316.4	208.3	450.1	341.9				
	9	245.7	367.3			289.1	167.5	422.8	301.2				
	10	273.0	408.1			261.8	126.7	395.5	260.4	529.2	394.1	706.9	549.1
	11	300.3	448.9					368.2	219.6	501.9	353.3	635.6	487.0
	12	327.6	489.7					340.9	178.8	474.6	312.5	608.3	446.2
HTS-190	5	217.4	326.0	429.0	320.4	644.5	535.9						
	6	260.9	391.2	385.5	255.2	601.0	470.7						
	7	304.4	456.4	342.0	190.0	557.5	405.5						
	8	347.9	521.6			514.0	340.3	729.5	555.8				
	9	391.3	586.8			470.6	275.1	686.1	490.6				
	10	434.8	652.0			427.1	209.9	642.6	425.4	858.1	640.9	1073.6	856.4
	11	478.3	717.2					599.1	360.2	814.6	575.7	1030.1	791.2
	12	521.8	782.4					555.6	295.0	771.1	510.5	986.6	726.0
HTS-210	5	298.8	447.8	589.6	440.6	885.7	736.7						
	6	358.6	537.3	529.8	351.1	825.9	647.7						
	7	418.3	626.9	470.1	261.5	766.2	557.6						
	8	478.1	716.4			706.4	468.1	1002.5	764.2				
	9	537.8	809.0			646.7	375.5	942.8	671.6				
	10	597.6	895.5			586.9	289.0	883.0	585.1	1179.1	881.2	1475.2	1177.3
	11	657.4	985.1					823.2	495.5	1119.3	791.6	1415.4	1087.7
	12	717.0	1074.6					763.5	406.0	1059.6	702.1	1355.7	998.2
HTS-240	5	468.5	702.0	924.0	690.5	1488.1	1154.6						
	6	562.6	842.4	829.9	550.1	1294.0	1014.2						
	7	655.8	982.8	736.7	409.7	1200.8	873.8						
	8	749.5	1123.2			1107.1	733.4	1571.3	1197.6				
	9	843.2	1263.6			1013.4	593.0	1477.6	1057.2				
	10	936.9	1404.0			919.7	452.6	1383.9	916.8	1848.1	1381.0	2312.2	1846.1
	11	1030.6	1544.4					1290.2	776.4	1754.4	1240.6	2218.5	1704.7
	12	1124.3	1684.8					1196.5	636.0	1660.7	1100.2	2124.8	1564.3
HTS-270	5	658.5	987.0	1299.7	971.2	1952.4	1623.9						
	6	790.2	1184.4	1168.0	773.8	1820.7	1426.5						
	7	921.9	1381.8	1036.3	576.4	1689.0	1229.1						
	8	1053.6	1579.2			1557.3	1031.7	2210.0	1684.4				
	9	1185.3	1776.6			1425.6	834.3	2078.3	1487.0				
	10	1317.0	1974.0			1293.9	636.9	1946.6	1289.6	2599.3	1942.3	3252.0	2595.0
	11	1448.7	2171.4					1814.9	1092.2	2467.7	1744.9	3120.3	2397.6
	12	1580.4	2368.8					1683.2	894.8	2335.9	1547.5	2988.6	2200.2
HTS-300	5	800	1220	1603	1183								
	6	920	1337	1483	1066								
	7	1073	1559	1330	844	2132	1646						
	8	1226	1782	1177	621	1978	1423	2780	2224				
	9	1380	2004			1825	1201	2626	2002	3427	2803		
	10	1533	2228			1672	977	2473	1778	3274	2579	4075	3380
	11	1686	2450					2320	1556	3121	2357	3922	3158
	12	1922	2929					2084	1077	2885	1878	3686	2679

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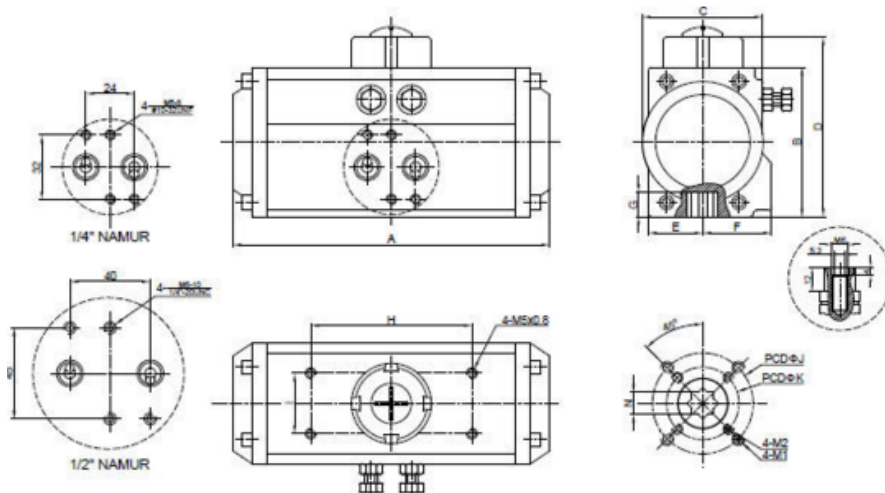
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Dimension Table



Model	A	B	C	D	E	F	G	H	I	N	J	K	M1	M2	Air Inlet
HT-032	114	45	47	65	23.5	23.5	14	50	25	9	F03	--	M5x8	--	1/8"
	4.49	1.77	1.85	2.56	0.93	0.93	0.55	1.97	0.98	0.35		#10-24UNC			
HT-052	158.4	74	60	94	30	41	14	80	30	11	F05	F03	M6x11	M5x10	1/8"or1/4"
	6.24	2.91	2.36	3.7	1.18	1.61	0.55	3.15	1.18	0.43		1/4"-20UNC	#10-24UNC		
HT-063	190	88	69	108	36	45	18	80	30	14	F07	F05	M8x15	M6x12	1/8"or1/4"
	7.48	3.46	2.72	4.25	1.42	1.77	0.71	3.15	1.18	0.55		5/16"-18UNC	1/4"-20UNC		
HT-075	207	100	79	120	42	52	20	80	30	14	F07	F05	M8x13	M6x11	1/8"or1/4"
	8.15	3.94	3.11	4.72	1.65	2.05	0.79	3.15	1.18	0.55		5/16"-18UNC	1/4"-20UNC		
HT-083	213	109	88	129	46	52.5	21	80	30	17	F07	F05	M8x15	M6x12	1/8"or1/4"
	8.39	4.29	3.46	5.08	1.81	2.07	0.83	3.15	1.18	0.67		5/16"-18UNC	1/4"-20UNC		
HT-092	259	120	97.5	140	51	57.5	22	80	30	17	F07	F05	M8x13	M6x12	1/8"or1/4"
	10.2	4.72	3.84	5.51	2.01	2.26	0.87	3.15	1.18	0.67		5/16"-18UNC	1/4"-20UNC		
HT-105	287	133	105.5	153	57.5	64	24	80	30	22	F10	F07	M10x18	M8x14	1/4"
	11.3	5.24	4.15	6.02	2.26	2.52	0.94	3.15	1.18	0.87		3/8"-16UNC	5/16"-18UNC		
HT-125	340	155	120.5	175	67.5	70	27.5	80	30	22	F10	F07	M10x18	M8x14	1/4"
	13.39	6.1	4.74	6.89	2.66	2.76	1.08	3.15	1.18	0.87		3/8"-16UNC	5/16"-18UNC		
HT-140	414	171.5	137	191.5	76	77	32	80	30	27	F12	F10	M12x22	M10x18	1/4"
	16.3	6.75	5.39	7.54	2.99	3.03	1.26	3.15	1.18	1.06		1/2"-13UNC	3/8"-16UNC		
HT-160	476	197	159.5	217	86.5	87.5	34	80	30	27	F12	F10	M12x22	M10x18	1/4"
	18.74	7.76	6.28	8.54	3.41	3.44	1.34	3.15	1.18	1.06		1/2"-13UNC	3/8"-16UNC		
HT-190	535	230	186	260	103	103	40	130	30	36	F14	--	M16x23	--	1/4"
	21.06	9.06	7.32	10.24	4.06	4.06	1.57	5.12	1.18	1.42		5/8"-11UNC			
HT-210	567.5	255	202	285	113	113	40	130	30	36	F14	--	M16x25	--	1/4"
	22.34	10.04	7.95	11.22	4.45	4.45	1.57	5.12	1.18	1.42		5/8"-11UNC			
HT-240	668	291.4	233	321.4	129	129	50	130	30	46	F16	--	M20x28	--	1/4"or3/8"
	26.3	11.47	9.17	12.65	5.08	5.08	1.97	5.12	1.18	1.81		3/4"-10UNC			
HT-270	744	320	264	350	146	146	57	130	30	46	F16	--	M20x28	--	1/4"or1/2"
	29.29	12.6	10.39	13.78	5.75	5.75	2.24	5.12	1.18	1.81		3/4"-10UNC			
HT-300	830	362	389	392	194.5	194.5	57	130	30	46	F16	F25	M20x28	M16x23	1/2"
	32.68	14.25	15.31	15.43	7.66	7.66	2.24	5.12	1.18	1.81		3/4"-10UNC	5/8"-11UNC		
HT-350	920	413	443	443	221.5	221.5	60	130	30	55	F16	F25	M20x28	M16x23	1/2"
	36.22	16.26	17.44	17.44	8.72	8.72	2.36	5.12	1.18	2.17		3/4"-10UNC	5/8"-11UNC		
HT-400	1012	465	496	495	248	248	60	130	30	55	F16	F25	M20x28	M16x23	1/2"
	39.84	18.31	19.53	19.49	9.76	9.76	2.36	5.12	1.18	2.17		3/4"-10UNC	5/8"-11UNC		



Air Consumption - Air Volume Opening & Closing

Model	Air Volume@opening (liter/cu.in)	Air Volume@closing (liter/cu.in)	Model	Air Volume@opening (liter/cu.in)	Air Volume@closing (liter/cu.in)
HT-32	0.03	0.04	HT-125	1.20	1.60
	1.71	2.32		73.22	97.62
HT-52	0.09	0.12	HT-140	1.70	2.40
	5.49	7.32		103.72	146.43
HT-63	0.14	0.20	HT-160	2.60	3.70
	8.54	12.20		158.63	225.75
HT-75	0.21	0.30	HT-190	4.20	5.90
	12.81	18.30		256.25	359.98
HT-83	0.29	0.41	HT-210	5.70	8.20
	17.69	25.02		347.77	500.31
HT-92	0.49	0.71	HT-240	9.00	12.80
	29.90	43.32		549.12	780.97
HT-105	0.70	0.99	HT-270	12.60	17.90
	42.71	60.40		768.76	1092.13

The Table of Actuators Weight & Opening Closing Time

Model	HT-032		HT-052		HT-063		HT-075		HT-083		HT-092		HT-105	
	D	S	D	S	D	S	D	S	D	S	D	S	D	S
Screw stroke adj. for 1° adj. need	---		1/5 turn		1/5 turn		1/5 turn		1/5 turn		1/4 turn		1/4 turn	
Opening time (Sec.)	0.03	--	0.2	0.25	0.25	0.3	0.3	0.35	0.4	0.5	0.5	0.6	0.7	0.8
Closing time (Sec.)	0.03	--	0.25	0.3	0.3	0.35	0.4	0.5	0.5	0.6	0.7	0.9	0.9	1.1
Approximate weight (Kg/Lbs)	0.5/1.1	---	1.0/2.2	1.0/2.2	1.6/3.5	1.8/4.0	2.6/5.7	3.1/6.8	3.1/6.8	3.6/7.9	4.9/10.8	5.7/12.5	6.5/14.3	7.7/16.9

Model	HT-125		HT-140		HT-160		HT-190		HT-210		HT-240		HT-270	
	D	S	D	S	D	S	D	S	D	S	D	S	D	S
Screw stroke adj. for 1° adj. need	1/4 turn		1/4 turn		1/4 turn		1/3 turn		1/3 turn		1/3 turn		1/3 turn	
Opening time (Sec.)	0.9	1.1	1.3	1.5	1.6	1.8	2.2	2.4	2.9	3.4	3.8	4.3	4.5	5.0
Closing time (Sec.)	1.2	1.4	1.6	1.9	1.9	2.2	2.6	3.0	3.8	4.1	4.4	5.0	5.0	5.5
Approximate weight (Kg/Lbs)	9.9/21.8	11/24.2	13.8/30.4	16.3/35.9	19/41.8	24/52.8	28/61.6	34/74.8	37/81.4	45/99	52/114.4	64/140.8	85/187	104/228.8

Order Information

Type	Model	Spring Set	Seals	Options
HTD Double Acting Actuator	032	Blank	Blank	120
	052	(Double Acting Actuator)	(standard NBR seals)	120°operation
	063	05		180
HTS Spring Return Actuator	075	06	HT= Viton seals	180°operation
	083	07	(for high temperature)	SS
	092	08		Stainless Steel Housing
HTDN Double Acting Actuator (Nickel Plated Housing)	105	09	LT= Silicone seals	
	125	10	(for low temperature)	
	140	11		
HTSN Spring Return Actuator (Nickel Plated Housing)	160	12		
	190			
	210			
	240			
	270			

Note: The part numbers are represented as the following: Type-Model-Spring Set-Seals-Options



1. Pressure Ranges

40 psig to 100 psig
3 bar to 8 bar

2. Temperature Ranges

*Std. (NBR O-rings): -20°C(-4°F) to +80°C(+176°F)
*Lower Temp. (Silicone O-rings): -40°C(-40°F) to +80°C
(+176°C °F)
*High Temp. (Viton O-rings): -15°C(+5°F) to +150 °C
(+300 °F)

Note: Special grease is required for low and high temperature service condition.

3. Wide Range Available

The actuator range consists of 14 sizes, with torques from 97N.m(88in.lbs) to 4,122Nm (37,763in.lbs) at 6 bar (90 psig) air supply.

4. Operating Media

Filtered dry or lubricated air for non-corrosive gas, water or light hydraulic oil. The maximum particle size must not exceed 30 microns.

5. Stroke Adjustment

0° and 90° with standard adjustment + 5°.

6. Lubrication

All moving parts are factory lubricated for entire life cycle of actuator.

7. Construction

Twin piston rack and pinion actuator design, suitable for indoor and outdoor installation.

8. Connections

Bottom drilling complies with ISO 5211/DIN 3337 to match valve. Interface for solenoid valve, shaft top end and top drilling for assembling accessories are in accordance with VDI/VDE- 3845, NAMUR standard.

9. Inspection

Every actuator is hydraulically tested, certified and guaranteed for a minimum of 500,000 cycles.

