

铝合金气动执行器 ALUMINIUM ACTUATORS

COPESFC

NEW MT SERIES



- MaxTork 齿轮齿条气动执行器，以紧凑的设计输出线性扭矩，单作用和双作用执行器使用相同的缸体和端盖。
- 连接尺寸符合 Namur VDI/VDE3845 和 ISO 5211 标准，无需增加转接板、直接安装电磁阀、回讯器或定位器。
- 标准旋转角度 90°，根据需要可选 120°、135°、150° 和 180° 旋转角度。MT15 及以上型号在开和关方向 ± 10° 可调（国际专利）。
- 齿轮轴采用标准双四方孔输出轴，可选双 D 输出型式、键式驱动、以适合您的特殊需要。
- 轴承将齿轮轴和外壳隔离，适合高速循环应用。
- 齿轮轴参与活塞全程运动。
- 齿轮轴高度可手动调节而不影响显示位置。
- 标准开关指示器，适用于所有旋转角度。
- 活塞轴瓦避免了活塞和缸壁接触，并起到导向和耐腐蚀作用。
- MT 系列执行器活塞具有防齿轮轴飞出装置。
- 所有内外部配件都进行耐腐蚀处理。
- 预压缩环氧涂层特殊钢弹簧。
- 加长的不锈钢端盖紧固件长度防止弹簧飞出。所有零部件都抗腐蚀。
- 工作压力 2-10bar (40 - 150 PSI)。水、氮气和有压液体也可作为执行器的源动力。
- 所有外部紧固件都是耐腐蚀不锈钢材质。
- 所有产品都在工厂进行永久无硅树脂润滑。
- 所有产品都贴有序列号，方便追踪查询。
- 所有产品都进行工厂压力泄漏测试，独立包装，方便运输。

- The MaxTork rack & pinion pneumatic actuator produces linear torque output in a compact design utilizing the same body and end caps for double acting and spring return units.
- Namur VDI/VDE 3845 and ISO 5211 dimensions on all sizes. No special blocks are required to mount solenoid valves, limit switches or positioners
- The standard angle of rotation is 90°. Additional travel rotations of 120°, 135°, 150° and 180° are available. MT15 and upper sizes feature a travel stop with ± 10° in both open and close directions (International Patent).
- The female pinion drive is standard with a double square output drive, and optional with a double-D drive, keyed drive and designs to meet your specific requirements
- Shaft bearings isolate the pinion gear from the housing and support the shaft for high cycle applications
- The pinion teeth are engaged for the full length and stroke of the piston.
- The pinion height allows manual override without disturbing the indicated positions.
- External open/closed indicator is standard, available indicators for all the rotations.
- Pistons incorporate double wear pads to separate the rack from the actuator wall and serve as both guide and wear bearings.
- MT series pistons feature a keyway as anti-blowout system.
- All internal and external components are treated to increase corrosion resistance.
- Epoxy coated special steel springs are pre-loaded.
- The stainless steel end cap fasteners are extra long to allow for spring relaxation. All parts are corrosion resistant.
- Air pressure operation from 2 to 10 Bar (40 – 150 PSI). Water, nitrogen and compatible hydraulic fluids may also be used to power the actuator.
- All external fasteners are corrosion resistant stainless steel.
- All units are permanently lubricated at the factory with non-silicone grease.
- All units are externally stamped with a progressive traceable serial number.
- 100% of all units are factory pressure leak tested, and individually boxed for shipment.



Certificati ATEX II 2GD
ATEX II 2GD approved

INDICATORS

OPEN/CLOSED 标准旋转角度 90°.
OPEN/CLOSED standard for 90°.



带可变换垫片的指示器适用于 180° 旋转角度和特殊旋转角度

Indicator with changeable inserts for 180° and special rotation.



带有可激活外部传感器金属嵌件的指示器

Indicator with metallic insert to activate external proximity sensors.

弹簧盒：碳钢弹簧，涂有抗腐蚀涂层

Spring cartridges: Springs are carbon steel and coated for corrosion resistance.

齿轮轴：碳钢镀镍齿轮轴（根据需要可选不锈钢材质）

Pinion: Electroless nickel coated carbon steel Pinion (stainless steel available on request).

指示器：标准科技聚合物开关指示器
根据需要可选带可变换垫片的指示器，
以适应180°旋转角度

Indicator:
OPEN/CLOSED standard in techno-polymer.
On request, indicator with changeable inserts for 180° rotation

端盖和活塞：压铸铝合金活塞，表面阳化处理或涂环氧涂层以抗腐蚀；压铸铝合金端盖带有环氧树脂涂层。

End caps and pistons: Die-cast aluminium pistons are anodized or epoxy powder coated for corrosion resistance. Die-cast aluminium end caps are epoxy powder coated.

轴瓦：
科技聚合物材质
接触面积大
强度高
使用寿命长

Bearing pad:
Techno-polymer
Large contact area
High performance
Long life resistance

密封件：标准的丁腈橡胶密封件，适用温度范围为-20° C -+80° C；高温环境可选氟橡胶密封件和科技聚合物活塞导向套和轴承，适用温度可达120° C (250° F)（持续使用）和150° C (300° F)（循环使用）。低温环境可选用硅树脂密封件，适用温度为-50° C (-55° F)。

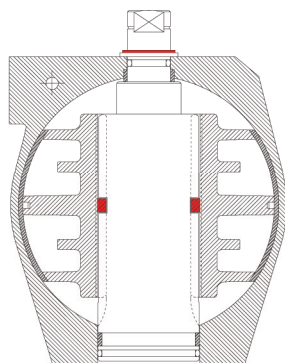
Seals: Temperature range from -20°C to 80°C (-10°F to 176°F) with standard Buna-N nitrile seals. Higher temperature with optional Viton seals and techno-polymer piston guides and bearings: 120°C (250°F) continuous and 150°C (300°F) cyclic. Lower temperature available with silicones seals -50°C (-55°F).

缸体：挤压铝合金（6063或6005），内表面加工光滑，减少摩擦，增加密封件和滑架的使用寿命。内外表面氧化处理以抗腐蚀。内外表面处理可选：阳极硬化处理+PTFE涂层，环氧涂层，无电解镀镍。

Body: Extruded aluminium body (6063 or 6005) is internally machined to exact specifications and lapped to reduce frictions and to increase the life of seals and skates. All internal and external surfaces are anodized for corrosion resistance. Options: hard anodizing with PTFE coating, epoxy powder coated units, electroless nickel plating.

防飞出齿轮轴系统

顶部C型卡簧和活塞上的双键很好的防止齿轮轴飞出。一旦齿轮轴向下运动，双键将会被齿轮轴上的凹槽挡住，因此齿轮轴停止向下运动。



防飞出结构
Anti-blowout system
thru keyway

ANTI-BLOWOUT SYSTEM OF THE PINION

The anti-blowout system of the pinion is ensured thru a double protection: both with an upper c-clip and two keyways casted on the pistons. In case of unusual downward movement of the pinion, the keyways will interfere with the grooves on the pinion and therefore stopping it.

可选的加长行程限位杆，以满足
全程调节的需要

Available extended travel stops
for FULL STROKE adjustment



双向行程限位杆

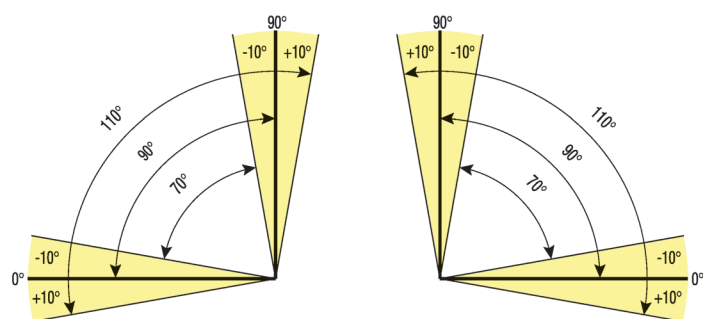
MaxTork 气动执行器的特点是具有双向行程调节的限位杆。侧装的行程限位杆可在 $\pm 10^\circ$ 范围进行调节（国际专利），最具优势的特点是在开关方向可调，从而保证了执行器的行程可调范围在 70° 和 110° 之间。

行程限位杆吸收执行器最大额定扭矩和最大冲击载荷。

为了增加活塞的阻力，两面的限位杆采用高强度设计，从而可以更加有效地制动活塞。

分别调整左（MAX）和右（0°）调整螺丝，可以完成逆时针和顺时针旋转的调整，以增加或减小输出旋转角度。

可选项：加长的行程限位杆用于全程调节。



BI-DIRECTIONAL PATENTED TRAVEL STOP ILLUSTRATION

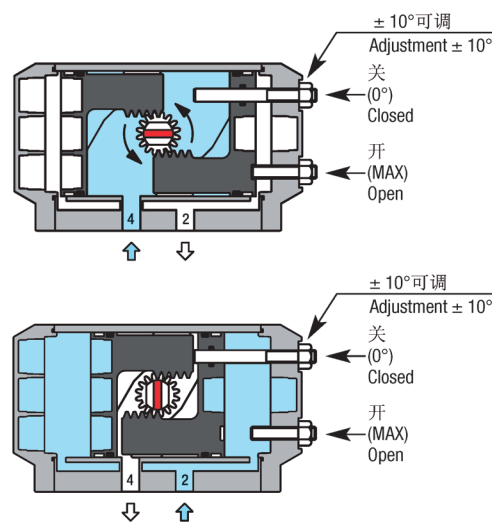
MaxTork actuators feature a bi-directional travel stop (**International Patent**). Side located stops allow a $\pm 10^\circ$ adjustment - **BEST IN THE MARKET** - in both closing and opening directions, so guarantee a **range of adjustment between 70° and 110° of actuator stroke**.

Travel stops are designed to absorb the maximum rated torque of the actuator and the maximum impact load associated with recommended speed stroke.

To increase pistons resistance both travel stops arrest the pistons in their part with the largest mass of material.

Adjustment of the counter clockwise and clockwise rotation is accomplished by turning the respective left (MAX) and right stop (0°) adjustment screws to increase or reduce output rotation.

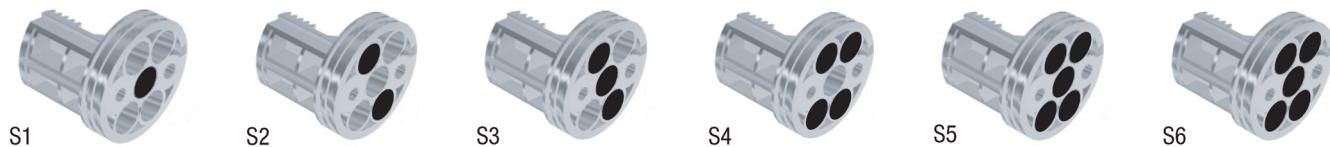
OPTIONAL: extended travel stops for FULL STROKE adjustment



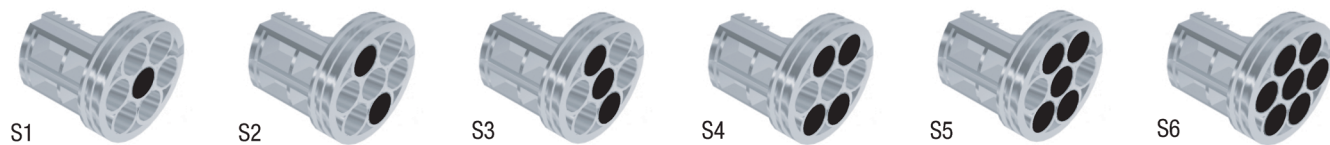
弹簧安装

SPRING ASSEMBLY

右活塞弹簧安装 / SPRING ASSEMBLY RIGHT PISTON

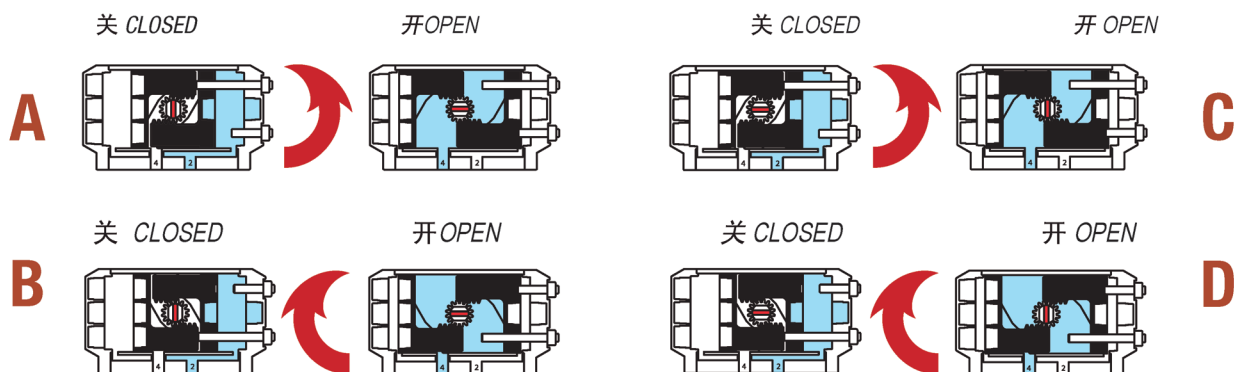


左活塞弹簧安装 / SPRING ASSEMBLY LEFT PISTON



安装形式

MOUNTING VARIATIONS



阳极硬化处理 / ANODIZED

描述 / Description	颜色 Col.	应用/Application
25μ涂层, 坚固 (45-65HRC)耐磨, 很好的抗腐蚀性, 适用于 pH 值4.5-8.5的环境, 并通过了盐雾腐蚀测试。 <i>Uniform coating of 25 μ thickness, extremely hard (45-65 HRC) and resistant to abrasion. Good corrosion resistance in environments with pH from 4.5 to 8.5 and salt fog test.</i>	银灰色 Silver-gray	一般工业用途 不推荐使用 在强酸或强碱环境 <i>Industry general use. Non recommended for Highly acidic or basic environments</i>

阳极硬化处理+环氧涂层 / ANODIZED WITH EPOXY COATING

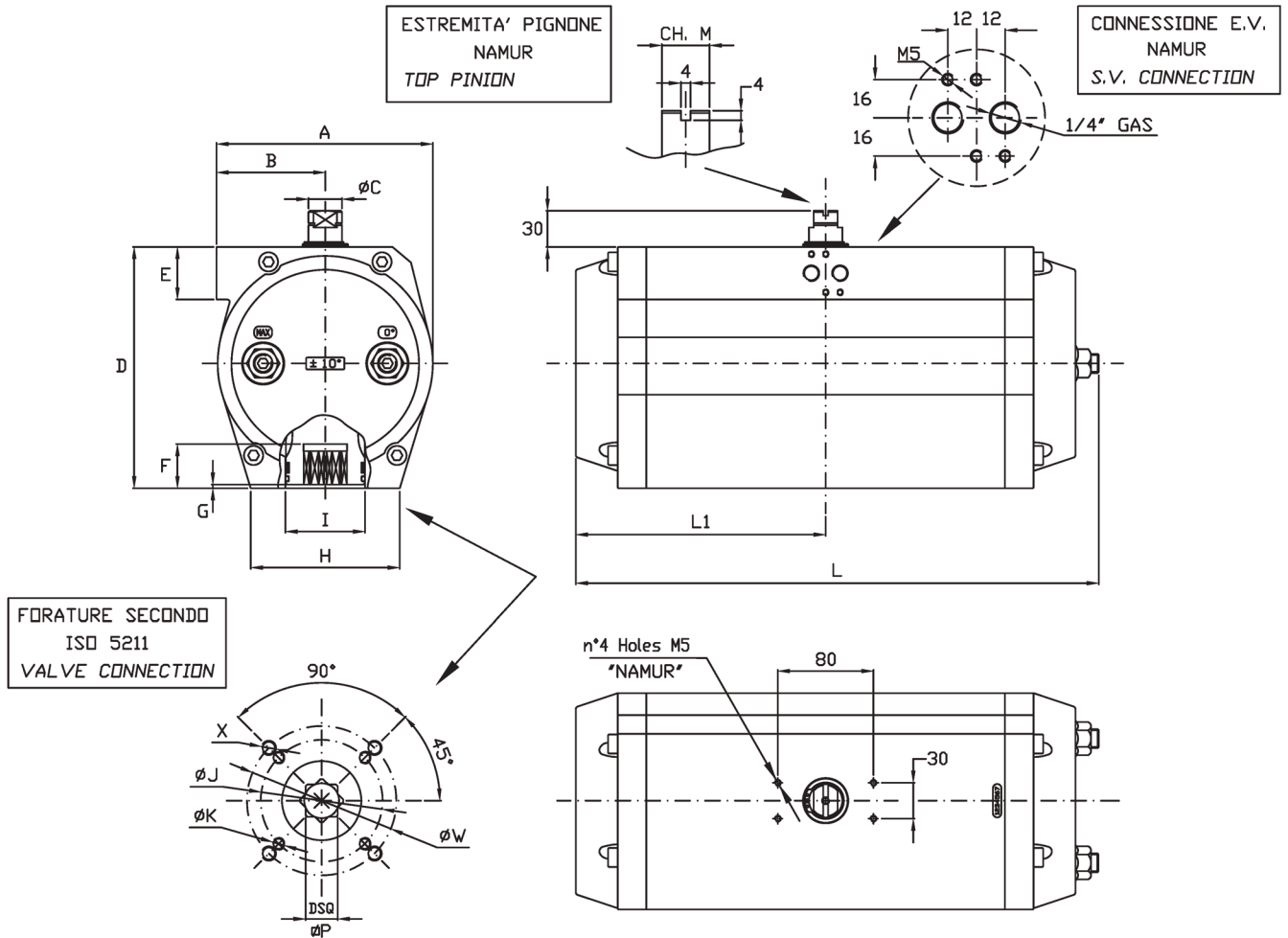
描述 / Description	颜色 Col.	应用/Application
80-100 μ厚度的粉末涂层, 创造了一个可以 抵抗多种化学物质腐蚀的屏障。此表面处理方法比环氧涂层更能抵抗腐蚀。盐雾腐蚀测试良好。 <i>Thick powder coating (80 - 100 μ) which creates a barrier against many of the chemicals which anodizing alone can not adequately resist. It will resist more acidic or basic environments than anodizing alone. Good results in salt fog test.</i>	黑色 (标准) 可选其它颜色 Black (standard) other col. available	一般工业用途 适用于低浓度的碱溶液中。 不能抵抗强酸和强碱。 <i>Industry general use. Suitable for low concentrations of caustic washdown solution. Will not withstand high acids and alkali.</i>

无电解镀镍 / ELECTROLESS NICKEL INFUSED

描述 / Description	颜色 Col.	应用/Application
整体20-30 μ涂层, 包括棱角、孔和螺纹都镀镍, 表面硬度 45-55HRC, 耐磕碰。 涂层可以 增强酸性环境下耐腐蚀性, 但是不能抵抗强碱介质的侵害。 <i>Uniform coating of 20 - 30 μ , also on sharp corners, holes and threads, with 45-55 HRC hardness and therefore resistant to incidental damages. The coating will provide enhanced corrosion protection in very acidic environments but will not withstand attack from strong alkaline media.</i>	亮银色 类似于 不锈钢 的颜色 Shiny silver, similar to stainless steel	一般工业用途 适用于低中浓度的碱溶液中, 也适用于低浓度的碱溶液和 食品添加剂、以及卫生清洁剂。 <i>Industry general use. Suitable for low to medium concentrations of caustic washdown solutions. Also suitable for low alkaline solutions and detergents in food and sanitary applications.</i>

阳极硬化处理+PTFE涂层 / ANODIZED WITH PTFE COATING

描述 / Description	颜色 Col.	应用/Application
此涂层提供完整的表层覆盖和很好的耐腐蚀性, 适用范围广 <i>This coating provides complete surface coverage and exhibits excellent corrosion resistance properties in a wide variety of applications</i>	黑色 Black	这些涂层能抵抗执行器安装的任何环境。只要表面涂层是完整的, 就能够抵抗各种各样的化工环境、弱酸和弱碱环境、海洋环境、甚至高温环境。 <i>These coatings are resistant to any environment into which an actuator would be installed. Provided the integrity of the surface is intact, the coating can resist a broad array of chemical environments, low alkaline and low acid solutions, marine environment, even at high temperature</i>



外型尺寸										DIMENSIONS									
										ISO CONNECTION									
型号 /TYPE	A	B	ØC	D	E	F	G	H	ØI	L	L1	M	ØJ	K	ØW	X	DSQ P	ISO 5211	
MT05	67	40	12	71	45	12,5	1,5	47	22	119	59,5	10	36 42	M5X9 M5X9	50 --	M6X9 --	11	F03/F05 F04	
MT15	81	47	12	81	45	19	2	62	33	175	82,5	10	42 50	M5X9 M6X9	70 70	M8X12 M8X12	14	F04/F07 F05/F07	
MT17	81	47	12	81	45	19	2	62	33	207	98,5	10	42 50	M5X9 M6X9	70 70	M8X12 M8X12	14	F04/F07 F05/F07	
MT20	96	54	14	98	45	19	2	76,5	35	186	88,5	10	50	M6X9	70	M8X12	17	F05/F07	
MT25	96	54	14	98	45	19	2	76,5	35	248	119,5	10	50	M6X9	70	M8X12	17	F05/F07	
MT30	114	62	19,5	117	45	23	2	90,5	40,5	241	115	14	50	M6X9	70	M8X12	17	F05/F07	
MT35	131	66	19,5	154	45	30	3	95,5	40,5	261	123	14	70	M8X12	102	M10X15	22	F10/F07	
MT40	131	66	19,5	154	45	30	3	95,5	45	305	145	14	70	M8X12	102	M10X15	22	F10/F07	
MT45	145	73	28	168,5	45	30	3	98,5	56,5	367	175,5	20	70	M8X12	102	M10X15	22	F10/F07	
MT50	181	91	28	202	45	35	3	110	54	380,5	180,5	20	102	M10X15	125	M12X20	27	F10/F12	
MT55	181	91	28	202	45	35	3	124,5	66,5	437,5	209	20	102	M10X15	125	M12X20	27	F10/F12	
MT60	232	114	28	257	45	40	4	160,5	62	467	222	20	102 125	M10X15 M12X20	140 --	M16X24 --	36 36	F10/F14 F12	
MT65	232	114	28	257	45	40	4	160,5	80	525	251	20	102 125	M10X15 M12X20	140 --	M16X24 --	36 36	F10/F14 F12	
MT70	332	166	28	332	65	64	5	160	105	587	293	20	165 140	M20X32 M16X24	-- --	-- --	46 46	F16 F14	
MT75	332	166	28	332	65	64	5	160	140	677	338	20	165	M20X32	--	--	46	F16	

耗气量										AIR CONSUMPTION									
Modello/Type	MT05	MT15	MT17	MT20	MT25	MT30	MT35	MT40	MT45	MT50	MT55	MT60	MT65	MT70	MT75				
DA	N Lt	0,22	0,41	0,55	0,71	1,10	1,40	2,45	3,05	4,40	4,60	9,00	12,50	16,60	27,10	31,40			
	Cu-In	13,50	25,60	34,30	44,40	68,70	88,90	153,10	190,60	275,00	287,50	565,50	781,30	1037,50	1693,80	1962,50			
SR 7X5	N Lt	0,13	0,18	0,25	0,29	0,48	0,65	1,20	1,60	1,85	2,50	4,10	6,50	7,10	9,60	11,70			
	Cu-In	8,00	11,20	15,60	18,10	30,00	40,60	75,00	100,00	115,60	156,25	256,30	406,20	443,80	600,00	731,30			

重量										WEIGHT									
Modello/Type	MT05	MT15	MT17	MT20	MT25	MT30	MT35	MT40	MT45	MT50	MT55	MT60	MT65	MT70	MT75				
DA	Kg	0,91	1,60	1,92	2,35	3,25	4,15	6,80	8,10	11,17	12,42	19,90	27,95	38,40	66,80	81,60			
	Lbs	2,00	3,52	4,22	5,17	7,15	9,13	14,96	17,82	24,60	27,34	43,78	61,50	84,48	146,96	179,52			
SR 7X5	Kg	0,99	1,79	2,16	2,73	3,77	4,88	8,24	9,78	13,73	15,78	24,72	37,73	48,00	82,96	98,00			
	Lbs	2,18	3,94	4,75	6,00	8,30	10,74	18,13	21,52	30,20	34,72	54,38	83,05	105,60	182,51	215,60			

双作用执行器选型

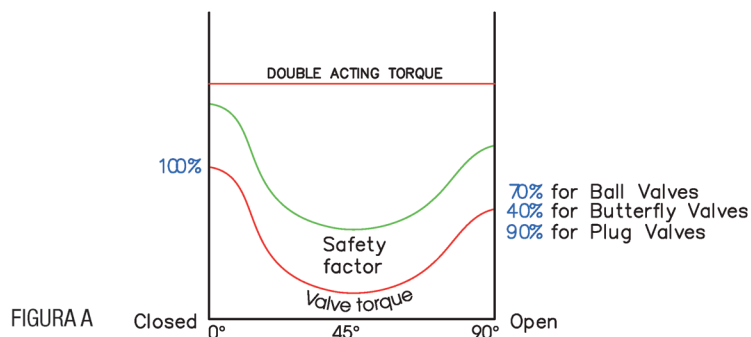
齿轮齿条执行器输出扭矩恒定（图A）。输出扭矩大小取决于缸体内径和气源压力：提高一个或两个因素，扭矩提高

阀的操作扭矩不是固定的，不同类型的阀需要不同的扭矩

DOUBLE ACTING ACTUATOR SIZING

Rack & Pinion actuator produces a constant torque output (Fig A) that depends on the internal diameter and the air supply pressure: increasing one or both factors, torque increases.

Valve's operation torque is not constant but presents a trend different depending on valve's type



初次选阀需要以下信息和数据：

- 阀的类型和额定扭矩
- 气源压力

选型步骤如下：

1. 确定阀门开启的最大扭矩，加5%-50%（这取决于工况）安全系数。
2. 扭矩确定，根据气源压力，在扭矩图中找出相应的扭矩值。
3. 再根据扭矩值，在表的左侧找到相应的执行器型号。

Prior to sizing it's necessary to obtain the following information and data:

- Type of valve and rated torque
- Air supply pressure

The sizing is as follows:

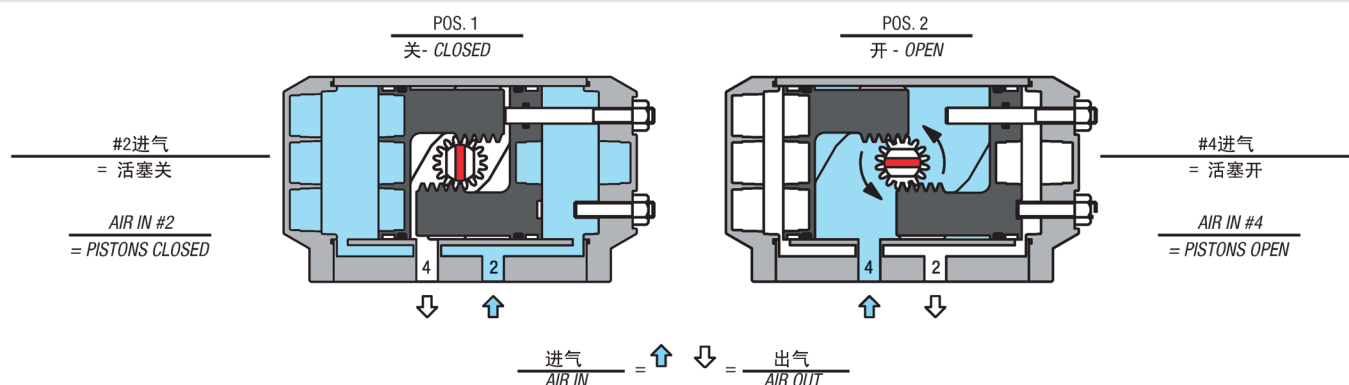
1. Define the maximum torque of the valve to automate, increasing to 5% - 50% the rated torque of the valve (according to the type of valve working conditions).
2. Once the necessary torque value is set, with the torque chart, and, in relation to the corresponding air pressure, find the torque value exact or exceeding.
3. Once the torque value is set, the left column of the torque summary table will show the required

双作用执行器扭矩表

DOUBLE ACTING ACTUATORS TORQUE CHART IN NM

型号/TYPE	2 Bar	3 Bar	4 Bar	5 Bar	5,62 Bar	6 Bar	7 Bar	8 Bar	9 Bar	10 Bar
MT05	5,0	7,6	10,1	12,6	14,1	15,1	17,6	20,2	22,7	25,2
MT15	11,0	16,5	22,0	27,5	30,9	33,0	38,5	44,0	49,5	55,0
MT17	14,5	21,7	29,0	36,2	40,6	43,5	50,7	58,0	65,2	72,5
MT20	20,0	30,0	40,0	50,0	56,5	60,0	70,0	80,0	90,0	100,0
MT25	30,2	45,3	60,4	75,5	84,5	90,6	105,7	120,8	135,9	151,0
MT30	40,0	60,3	80,4	100,5	112,7	120,6	140,7	160,8	180,9	201,0
MT35	64,4	96,6	128,8	161,1	180,4	193,3	225,5	257,7	289,9	322,1
MT40	80,6	120,9	161,2	201,5	225,7	241,8	282,2	322,5	362,8	403,1
MT45	125,8	188,7	251,6	314,5	352,7	377,4	440,3	503,2	566,1	629,0
MT50	181,2	271,8	362,4	453,0	509,2	543,6	634,2	724,8	815,4	906,0
MT55	241,6	362,3	483,1	603,9	676,4	724,7	845,5	966,3	1087,1	1207,8
MT60	366,4	549,6	732,8	916,0	1029,6	1099,2	1282,4	1465,6	1648,8	1832,0
MT65	483,2	724,8	966,4	1208,0	1357,8	1449,6	1691,2	1932,8	2174,4	2416,0
MT70	946,0	1419,0	1892,0	2365,0	2658,0	2838,0	3311,0	3784,0	--	--
MT75	1268,0	1903,0	2537,0	3171,0	3564,0	3805,0	4439,0	5074,0	--	--

扭矩表指南 - TORQUE TABLE GUIDE



单作用执行器选型

单作用执行器在整个行程中，有一个递减的扭矩（图B）。在开向时，扭矩递减是因为弹簧压缩，反向活塞运动，抵消能量。在关向时，弹簧释放它的能量。

扭矩规定有4个值：

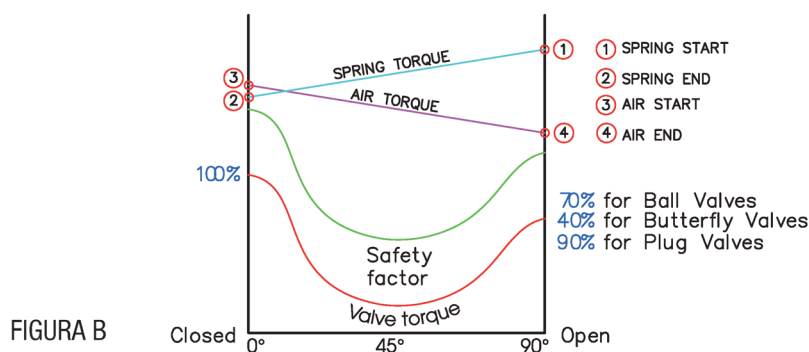
- 开向起点 /Pos. 2
- 开向终点 /Pos. 2
- 关向起点 /Pos. 1
- 关向终点 /Pos. 1

SPRIN RETURN ACTUATOR SIZING

The spring return actuator has a decreasing torque output throughout the stroke (Fig B). During the opening phase, the torque decreases, because the springs are compressed, and, working against the piston's stroke, absorb energy. In the closing phase instead, the springs release this energy.

So the torque is stated with 4 values:

- Opening Start/Pos. 2
- Opening End/Pos. 2
- Close Start/Pos. 1
- Close End/Pos. 1



选型步骤如下：

1. 确定阀门开启的最大扭矩，加25%-50%安全系数（取决于工况和额定扭矩）。
2. 在表中End/Pos. 1列，选出等于或大于所需的扭矩值。
3. 根据气源压力，在End/Pos. 2列，选出等于或大于所需的扭矩值

示例：

球阀扭矩25Nm，失气关。

安全系数：30%

所需扭矩：(25 + 30%) = 32.5 Nm

气源压力：6 Bar

使用此表，在表中End/Pos. 1列，找出关扭矩值比32.5Nm大

MT25S5给出关扭矩值(End/Pos. 1列)为34.9Nm，开扭矩值(End/Pos. 2列)为35.2Nm。

此型号执行器可以选择。

To size and choose an actuator, proceed as follows:

1. To determine the needed torque, increase of 25% - 50%, depending on the type of the valve and working conditions, the value of the rated valve torque.
2. Using the "Spring return 90°" table, locate the **End/Pos. 1** column, with the torque value either exact or exceeding the needed torque.
3. According to the air pressure supply, locate the **End/Pos. 2** column, with the torque value either exact or exceeding the needed torque.

Example:

Ball valve with 25 Nm, fail close.

Safety factor: 30%

Needed torque: (25 + 30%) = 32,5 Nm

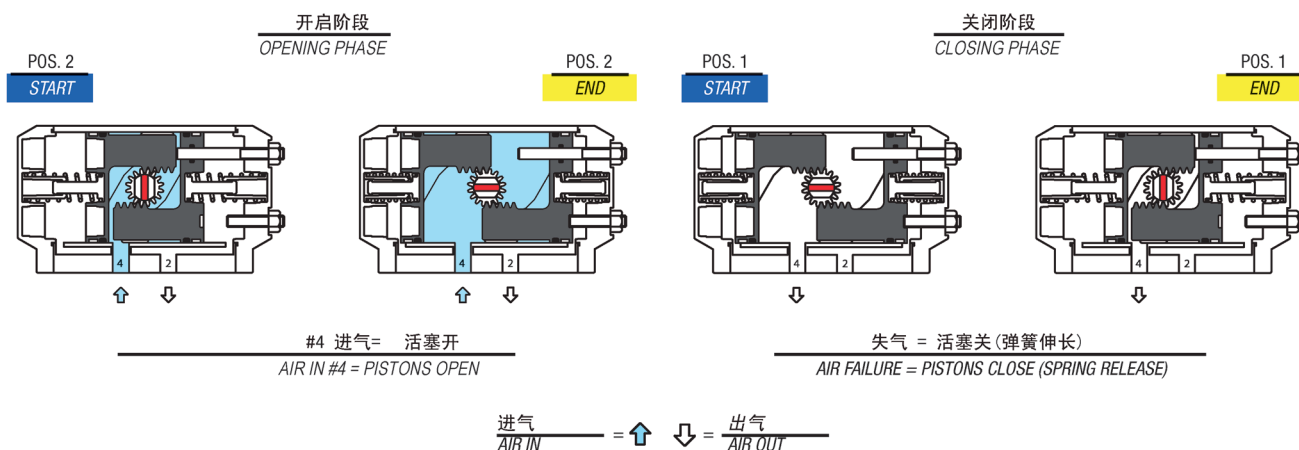
Air pressure: 6 bar

Using the table, find a closing torque value **End/Pos. 1**, which should be bigger than 32,5 Nm.

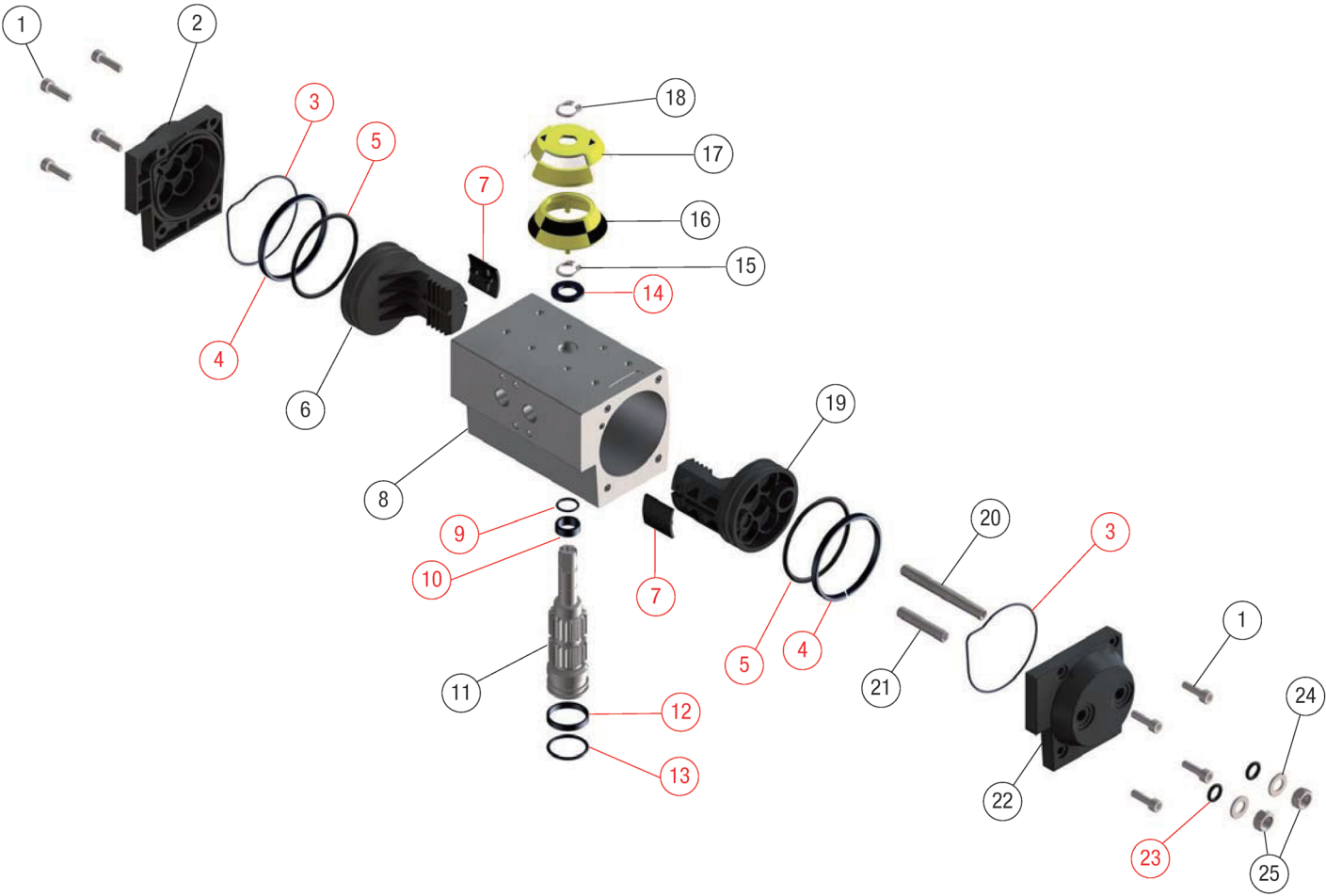
The **MT25S5** gives a closing torque (**End/Pos.1**) of 34,9 Nm and an opening torque (**End/Pos. 2**) of 35,2 Nm.

This is the actuator to be chosen.

扭矩表指南 - TORQUE TABLE GUIDE



注: 对于不同的压力和弹簧配置, 请联系我们 / NOTE: For different pressures and spring configurations, please contact Emme Technology Srl



零部件明细

ACTUATOR PARTS

序号	部件名称	材质	DESCRIPTION	MATERIAL
1	端盖螺栓	AISI 304不锈钢	END CAP SCREW	AISI 304 STAINLESS STEEL
2	左端盖	压铸铝合金 UN15076	LEFT END CAP	DIE CAST ALUMINUM UNI 5076
3	端盖O型圈	丁腈橡胶	END CAP O RING	BUNA-N
4	导向环	科技聚合物	GUIDE RING	TECHNO-POLYMER
5	活塞O型圈	丁腈橡胶	PISTON O RING	BUNA-N
6	左活塞	压铸铝合金UN15076	LEFT PISTON	DIE CAST ALUMINUM UNI 5076
7	活塞轴瓦	科技聚合物	PISTON SKATE	TECHNO-POLYMER
8	缸体	挤压铝合金 (6063或6005)	ACTUATOR BODY	EXTRUDED ALUMINUM (6063 or 6005)
9	齿轮轴上O型圈	丁腈橡胶	UPPER PINION O RING	BUNA-N
10	齿轮轴上轴承	科技聚合物	UPPER PINION BEARING	TECHNO-POLYMER
11	齿轮轴	碳钢镀镍 (可选不锈钢)	PINION	NICKEL PLATED CARBON STEEL (optional STAINLESS STEEL)
12	齿轮轴下轴承	科技聚合物	LOWER PINION BEARING	TECHNO-POLYMER
13	齿轮轴下O型圈	丁腈橡胶	LOWER PINION O RING	BUNA-N
14	上弹簧座	科技聚合物	UPPER WASHER	TECHNO-POLYMER
15	卡簧	AISI 304不锈钢	C CLIP	AISI 304 STAINLESS STEEL
16	指示器 (固定部分)	科技聚合物	INDICATOR (FIX PART)	TECHNO-POLYMER
17	指示器 (旋转部分)	科技聚合物	INDICATOR (ROTATING PART)	TECHNO-POLYMER
18	卡簧	AISI 304不锈钢	C CLIP	AISI 304 STAINLESS STEEL
19	右活塞	压铸铝合金 UN15076	RIGHT PISTON	DIE CAST ALUMINUM UNI 5076
20	内调整螺栓	AISI 304不锈钢	INTERNAL REGULATION SCREW	AISI 304 STAINLESS STEEL
21	行程螺栓杆	AISI 304不锈钢	STOP BOLT	AISI 304 STAINLESS STEEL
22	右端盖	压铸铝合金 UN15076	RIGHT END CAP	DIE CAST ALUMINUM UNI 5076
23	行程杆O型圈	丁腈橡胶	TRAVEL STOP O RING	BUNA-N
24	垫圈	AISI 304不锈钢	WASHER	AISI 304 STAINLESS STEEL
25	行程杆螺母	AISI 304不锈钢	TRAVEL STOP BOLT	AISI 304 STAINLESS STEEL

■ 易损件 / wear parts

序号为20、21、23、24、25不适用于MT05 / ITEM 20, 21, 23, 24 AND 25 NOT AVAILABLE FOR MT05