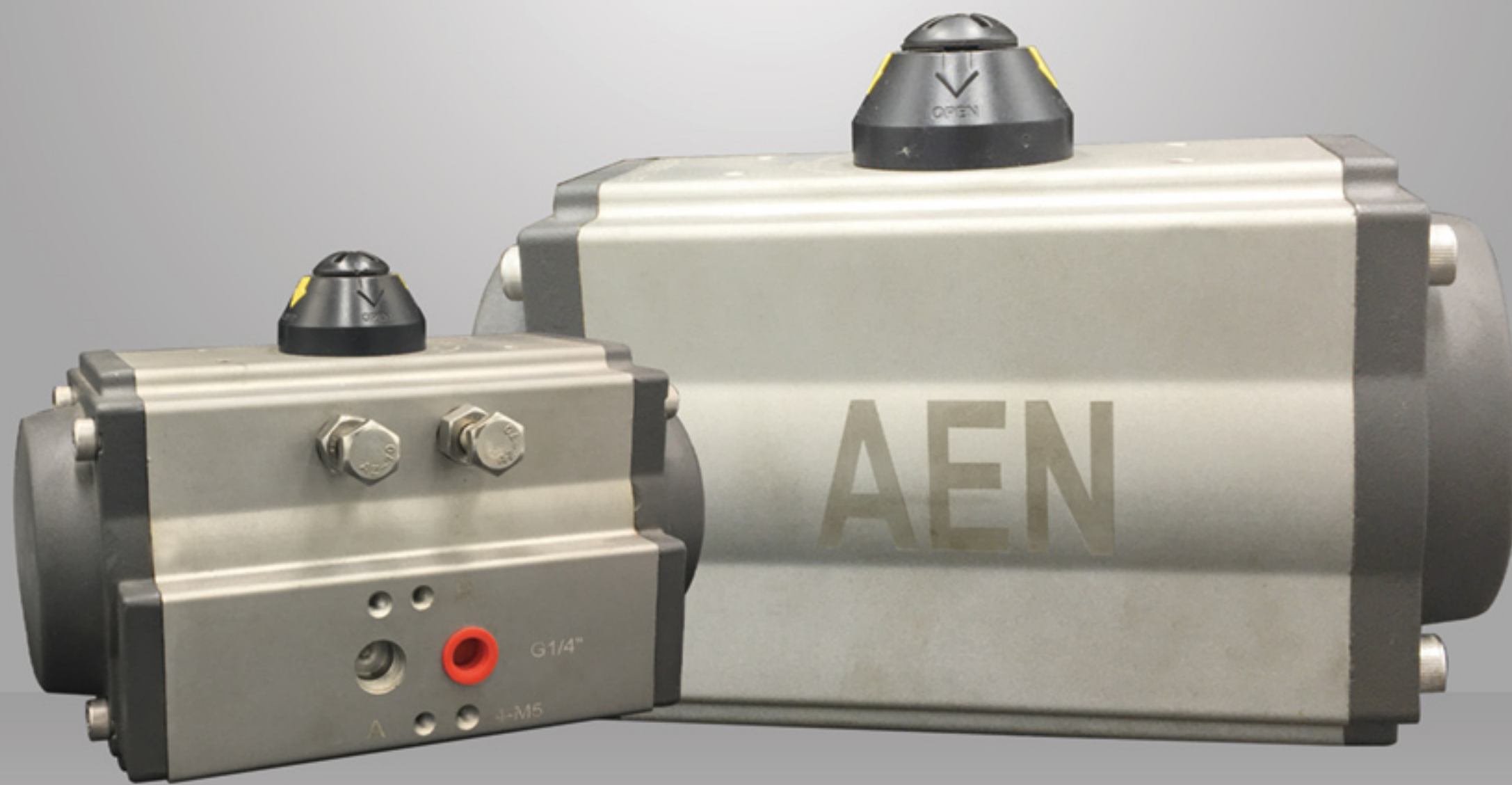


AT Series
AT52/65/83/105/130/140/160/190



AT Series Pneumatic Actuator

The important executive mechanism of industrial automation control system

AT Series

AT New type of gear rack type pneumatic actuator has integrated the latest technology at home and abroad. Its beautiful appearance, compact and modern styling results in the adoption of CAD 3D model innovation and optimized design. Besides, the using of new technology and materials makes the quality and performance of the products more reliable. Specifications selection is more economical, to meet current and future needs, products are in full compliance with the latest international standards of the technical specifications.

1. Indicator

Position indicator with NAMUR is convenient for mounting accessories such as, limit switch box, positioner and so on.

2. Pinion

The pinion is high precision and integrative, made from nickel alloy steel, fully conformed to the latest standards of ISO5211 DIN3337 NAMUR. The dimensions can be customized and also stainless steel is available.

3. Actuator Body

According to the different requirements, the extruded aluminum alloy ASTM6005 Body can be treated with hard anodized, powder polyester painted (different colours is available such as blue, orange, yellow...), PTFE or nickel plated.

4. End Caps

Die-casting aluminum powder polyester painted in different colours .

5. Pistons

The twin rack pistons are made from Die-casting aluminum treated with Hard anodized or made from Cast steel with galvanization. Symmetric mounting position, long cycle life and fast operation, reversing rotation by simply inverting the pistons.

6. Travel Adjustment

The two independent external travel stop adjustment bolts can be adjusted at both open and close directions easily and precisely.

7. High Performance Springs

Preloaded coating springs are made from quality material for resistant to corrosion and longer service life, which can be safely demounted and conveniently to satisfy different requirements of torque by changing the quantities of springs.

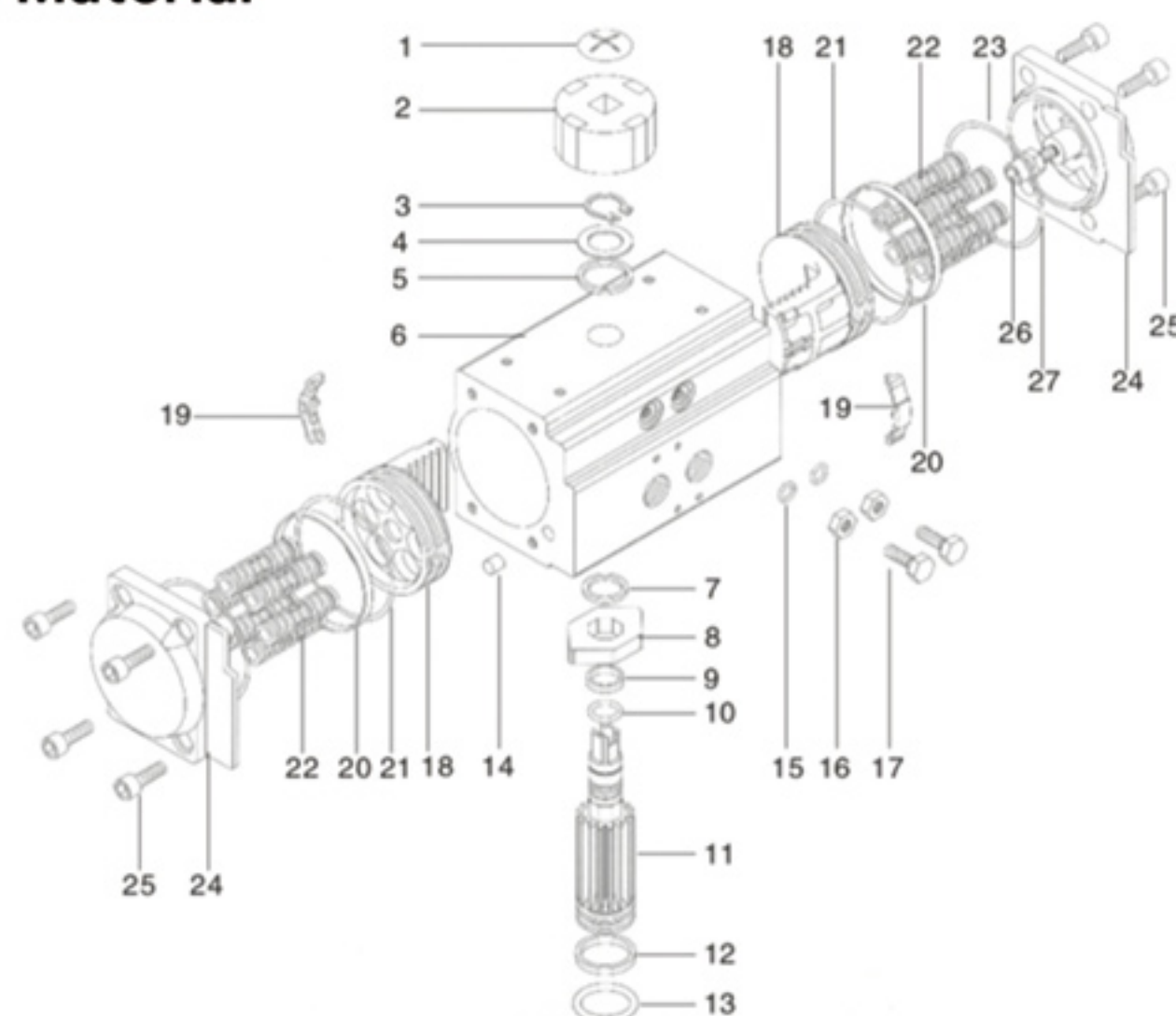
8. Bearings & Guides

Made from low friction and long-life compound material, to avoid the direct contact between metals. The maintenance and replacement are easy and convenient.

9.O-rings

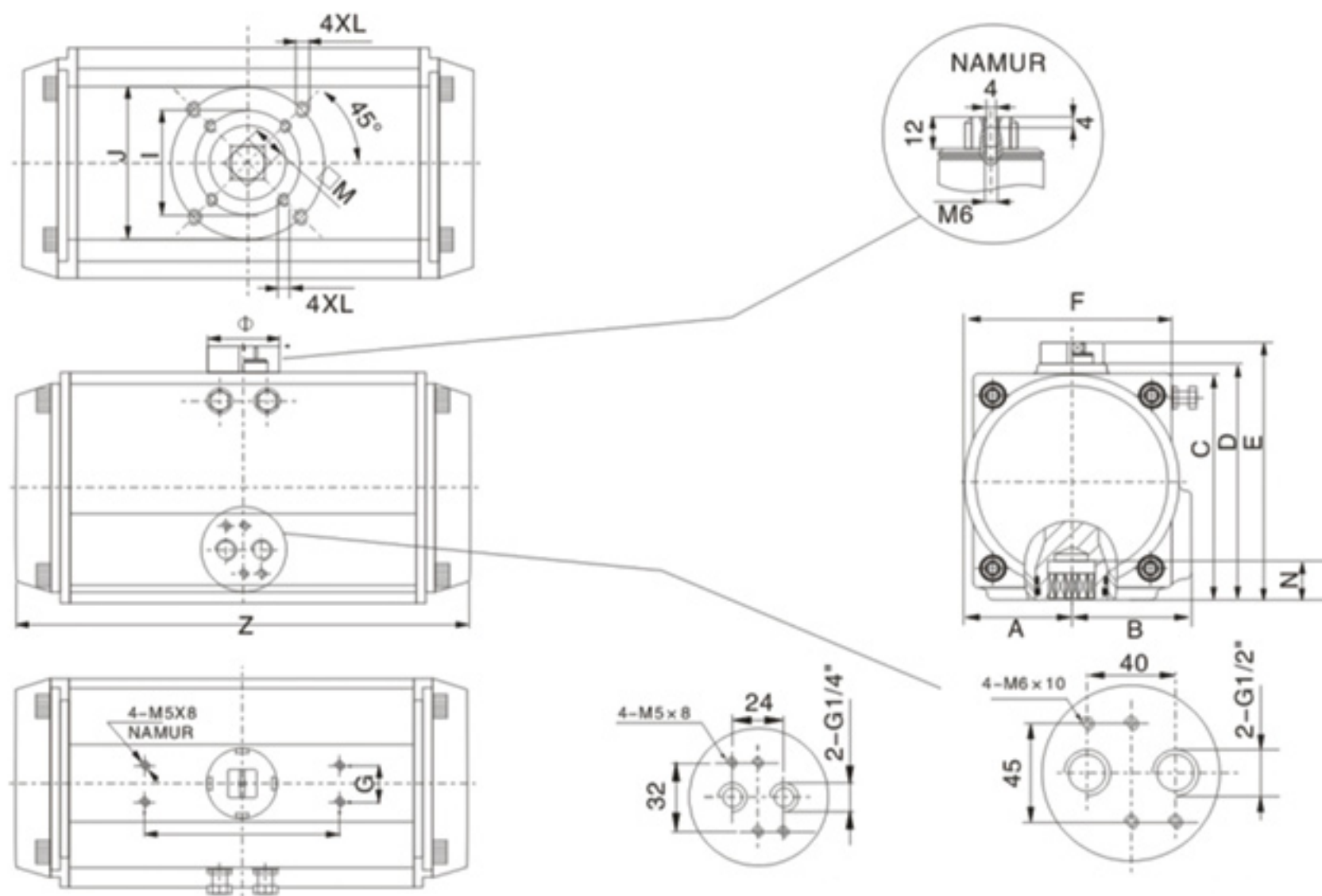
NBR rubber o-rings provide trouble-free operation at standard temperature ranges. For high and low temperature applications viton or Silicone is ok .

Parts and Material



NO.	Description	Oty	Standard Meterial	Protection	Optional Meterial
01	Indicator screw	1	Plastic		
02	Indicator	1	Plastic		
03	Spring clip	1	Stainless steel		
04	Thrust washer	1	Stainless steel		
05	Outside washer	1	engineering plastics		
06	Body	1	Extruderd alluminum alloy	Hard anodized etc	
07	Inside washer	1	engineering plastics		
08	Cam	1	Alloy steel		
09	O-ring(pinion top)	1	NBR		Viton/Silicone
10	Bearing(pinion top)	1	engineering plastics		
11	Pinion	1	Alloy steel	Nickel plated	Stainless steel
12	O-ring(pinion bottom)	1	engineering plastics		
13	Bearing(pinion bottom)	1	NBR		Viton/Silicone
14	Plug	2	NBR		Viton/Silicone
15	O-ring(adjust screw)	2	NBR		Viton/Silicone
16	Washer(adjust screw)	2	Stainless steel		
17	Nut(Adjust screw)	2	Stainless steel		
18	Adjust screw	2	Stainless steel		
19	Piston	2	Cast alluminum/casting	Anodized/Zine galvanized	Stainless steel
20	Guide(pinion)	2	engineering plastics		
21	Bearing(Pinion)	2	engineering plastics		
22	O-ring(Pinion)	2	NBR		Viton/Silicone
23	Spring	0~12	Spring steel	dip coating	
24	O-ring(End cap)	2	NBR		Viton/Silicone
25	End cap	2	Cast alluminum	powder polyster painted etc	
26	Cap screw	8	Stainless steel		
27	Stop screw	2	Stainless steel		
28	Nut(Stop screw)	2	Stainless steel		

Outline and Main Sizes



Model	A	B	C	D	E	F	G	H	I	J	K	L	M	N	Z	Φ	Air connection
AT52	30	41.5	65.5	72	95	65	30	80		Φ50		M6×10	11	14	147	Φ40	NAMUR G1/4"
AT65	36	47	81	89	107.5	72	30	80	Φ50	Φ70	M6×10	M8×13	14	18	168	Φ40	NAMUR G1/4"
AT83	46	57	98.5	108.7	128.7	92	30	80	Φ50	Φ70	M6×10	M8×13	17	21	204	Φ40	NAMUR G1/4"
AT105	57.5	64	122.5	133	153	109.5	30	80	Φ70	Φ102	M8×13	M10×16	22	26	268	Φ40	NAMUR G1/4"
AT130	67.5	74.5	145.5	160	175	127.5	30	80	Φ70	Φ102	M8×13	M10×16	22	26	301	Φ55	NAMUR G1/4"
AT140	75	77	161	172	192	137.5	30	80	Φ102	Φ125	M10×16	M12×20	27	31	390	Φ55	NAMUR G1/4"
AT160	87	87	184	197	217	158	30	80	Φ102	Φ125	M10×16	M12×20	27	31	458	Φ55	NAMUR G1/4"
AT190	103	103	216	230	260	189	30	130		Φ140		M16×25	36	50	525	Φ80	NAMUR G1/4"
AT210	113	113	235.5	255	285	210	30	130		Φ140		M16×25	36	50	532	Φ80	NAMUR G1/4"

Sizing: Spring return actuators

The suggested safety factor for spring return actuator under normal working conditions is 30%-50%

Example:

The torque needed by valve = 80N.m
 The torque consider safety factor(1+30%)= 1040N.m
 Air Supply= 5Bar
 According to the table of spring return actuators' output, we find output torque of RT435SR K7 is:
 Air stroke 0° =308N.m
 Air stroke 90° =247N.m
 Spring stroke 90° =181 N.m
 Spring stroke 0° =120N.m
 All the output torque is larger than what we need.

Attention:

During the restoration, the spring return actuators' output torque will not be affected by the inputing air from the port B. On the contrary, it will help the restoration of springs.

Operating conditions:

1. Operating media

Dry or lubricated air, or the non-corrosive gases The maximum particle diameter must less than 30 μm

2. Air supply pressure

The minimum supply pressure is 2.5Bar
 The maximum supply pressure is 8Bar

3. Operating temperature

Standard: -20°C-+80°C
 Low temperature: -35°C-+80°C
 High temperature: -15°C-+150°C

4. Travel adjustment

Have adjustment range of ± 5° for the rotation at 0° and 90°

5. Application

Either indoor or outdoor

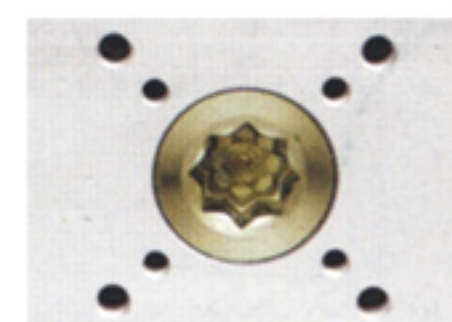
Operating type Double acting and spring return



Air supply connection is designed in accordance with NAMUR standard to install solenoid valves.



The Namur drive pinion and the Namur top mounting connection permit direct installation of accessories such as limit switch box and positioner.



Bottom mounting connection is designed in accordance with ISO5211 and DIN3337 standards for direct mounting with valve gear boxes or mounting brackets.

ABOUT

AEN.TECH is an integrated machinery manufacturing group company. It has 18 years of development history since its first plant was put into operation. Currently, it has three factories in China and mainly produces various types of valves and machined products. Over the years, the products have been widely used in metallurgy, chemical industry, sewage treatment, heating and construction, gas, and other fields, and AEN committed to providing customers with a full range of industrial valve solutions.



World Headquarters, Anshan, China

The factory has advanced processing equipment and the products are produced in accordance with API, ANSI, JIS, ISO, BS, JB, and GB standards. The production technology is advanced and the testing methods are perfect.

Over the years, the company has served the world's industrial sectors with its advantages of good reputation, stable product quality, modern enterprise management, automated processing equipment and advanced technology.

The main products: valves, pipe fittings.

Worldwide Sales and Services Network



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