



**QT Series**

QT3/4/6/9/15/19/28/38/50/60/80/100/150/200/250

## **QT Series Electric Actuator**

*Reliable and High Performance*

# QT Series

QT series electric actuators are designed and engineered very robust, and reliable, which are used for quarter turn valves, such as: ball valve; plug valve; butterfly valve. All the features below are added advantages against others in the field of valve automation: the unique reliable motor module; adjustable cam plate limit switch; self-locking mechanism; precision gearing system and ball bearings; the auto declutching mechanism; light force load on the hand wheel; the adaptor drive bushing and bottom as per ISO 5211 mounting dimension.

## Features

### 1. Enclosure

Standard enclosure to water jet proof and water tight proof IP 67, NEMA 4&6.

### 2. Motor

Squirrel cage motor is of encapsulated type, on high stall torque and low inherent force for seating and unseating of valves. All motors are integrated with build in thermal protection.

### 3. Terminal Connection & Wiring

Terminal connection and wiring makes wiring connection very easy and without fuss. Electrical wiring circuit is standardized for single and three phase voltage. Additional termination is available on request.

### 4. Internal Components Arrangement

Internal mechanical and electrical components are designed in modular mounting arrangement, and can be easily removed for maintenance purposes. Besides, optional accessories are also possible.

### 5. Limit Switches

A pair of limit switches are activated by means of simple, reliable and adjustable cam plates, mounted directly onto, and driven by center column. The unique cam plate design does not allow over travel of limit switches.

### 6. Torque Switches

Electric actuators on 100Nm and above, are installed with torque switches for over-load protection.

### 7. Heater

For prevention of condensation due to weather and temperature changes, and also keeps internal components clean and dry, a 20 watt space heater is adopted inside of all the electric actuators.

### 8. Self -Locking Mechanism

Because of the worm gear design system, all the electric actuators are self- locking.

### 9. Hand Wheel

Correct size of hand wheel on the electric actuator ensures adequate strength for safe and efficient emergency operation.

### 10. Manual Over-Ride

Engaged by pulling the lever and turning the hand-wheel. Lever is auto declutched when power supply is switched on, and the hand wheel doesn't turn as extra safety feature.

### 11. Visual Position Indicator

The visual position indicator is directly mounted onto the center drive column to provide the visual position of the valve.

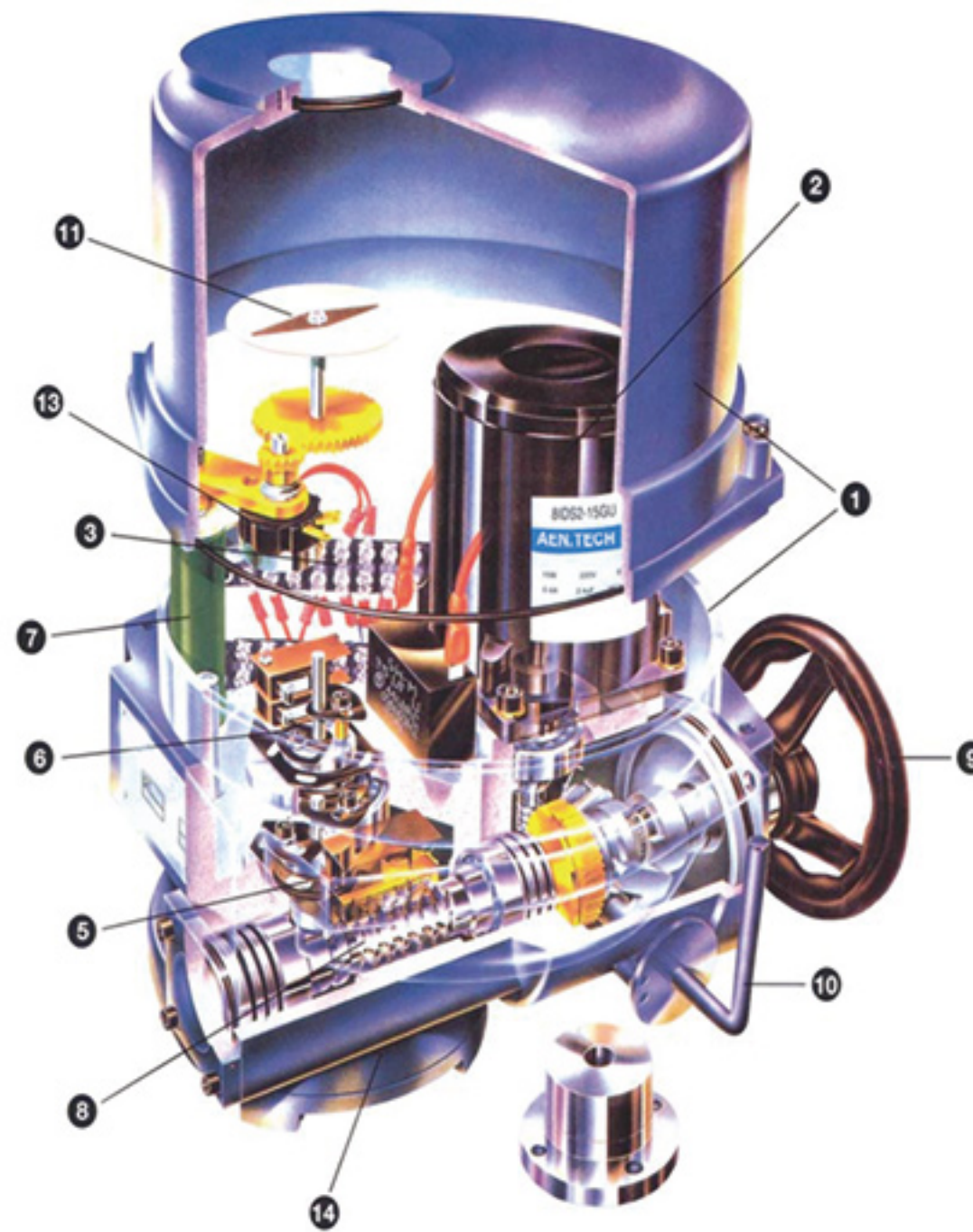
### 12. End Stoppers

Each for open and close position (adjustable) are for over-travel protection.

### 13. Potentiometer

Potentiometer is available on request, which is to provide and transmit remote indication of valve position.

## Structure



Standard Specification	
Housing & cover	Aluminium, Anodized
Enclosure	Watertight IP67, Nema4 and 6
Ambient temp	-30°C to + 70°C
Power supply	110/220VAC, 1 phase 380/440VAC, 3 phase
Control power	110/220VAC, 1 phase, 60/50Hz
Torque switches	2 x SPDT for QT15 and above
Limit switches	2 x SPDT 15A
Stall protection	Built-in thermal protection
Travel angle	90° ± 5°
Indicator	Continuous position indicator
Manual override	Hand/Auto declutching mechanism
Self locking	Provide by means of worm gearing
End stopper	External adjustable screws
Space heater	20W for anti-condensation
Conduit entries	Two G3/4"
Lubrication	MoS2 Lithium base grease
Materials	Steel, aluminium alloy, Al bronze
External coating	Dry powder, epoxy-polyester Munsell No. FJ-002 ALS

## Performance

Type	Max Output Tarque Kg-m	Operating Time 60/50 Hz. 90 Deg.	Max Stem Dia. mm	Motor 30 Min Class F W	Rated Current(mA)				Number of Handle Turn	Weight (Kgs)
					1 Phase		3 Phase			
					110V	220V	380V	440V		
QT3*	3	14/17	14	10	650	300	N/A	N/A	8.5	6
QT4*	4	14/17	14	10	650	300	N/A	N/A	8.5	6
QT6*	6	14/17	22	15	1250	400	N/A	N/A	8.5	9
QT9*	9	14/17	22	25	1500	550	190	400	8.5	10
QT15	15	17/20	22	40	2000	900	280	400	10	12
QT19	19	17/20	22	40	2000	900	280	420	10	13
QT28	28	22/26	32	40	2000	900	280	450	12.75	17
QT38	38	22/26	32	60	2700	1250	400	450	12.75	18
QT50	50	22/26	32	90	3300	1600	600	450	12.75	19
QT60	60	24/29	42	120	5000	2400	800	500	14.5	22
QT80	80	24/29	42	180	5800	2800	1200	850	14.5	23
QT100	100	24/29	42	200	8000	3000	1300	900	14.5	25
QT150	150	75/90	50	180	5800	2800	1200	850	45	33
QT200	200	75/90	50	200	8000	3000	1300	900	45	35
QT250	250	75/90	50	200	8000	3000	1300	900	45	35

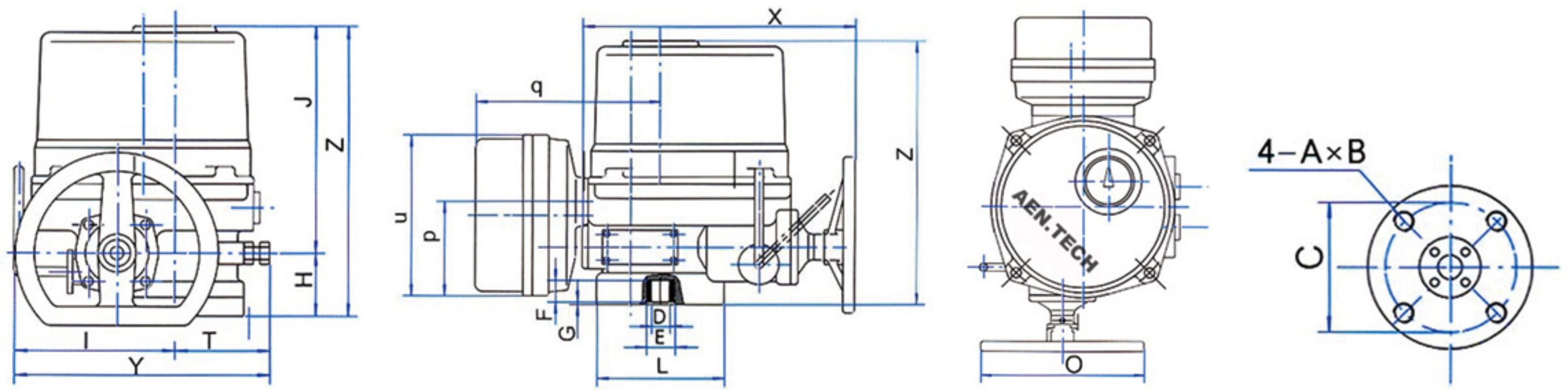
\* Without torque switches

### 14. Mounting & Adaptation

Bottom flange mounting dimension conforms to ISO 5211. An adaptor drive bushing is provided for every electric actuator, which is removable and for machining to suite valve stem size.

### Application

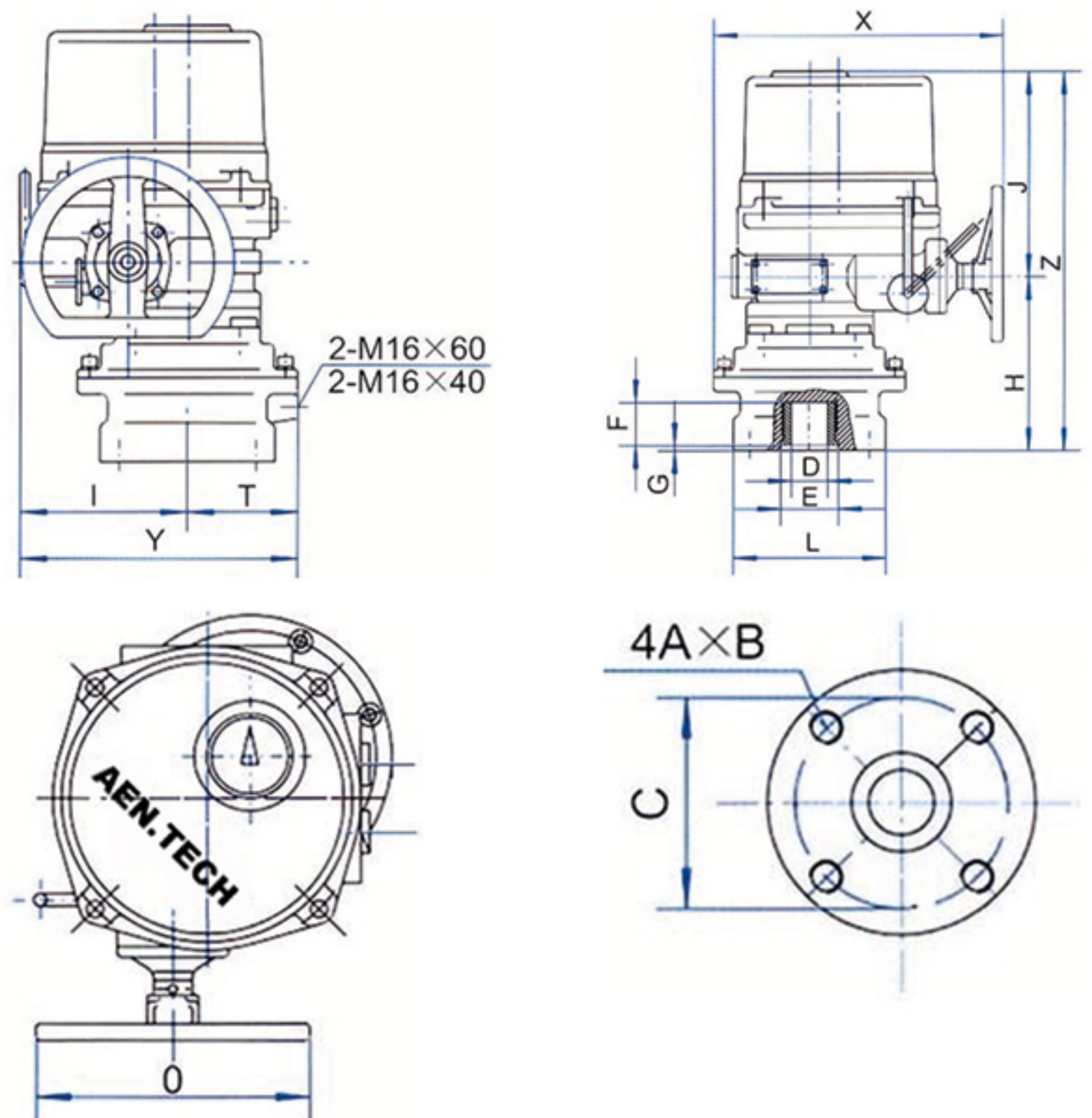
For quarter turn valves, automation used in heating and ventilation, air conditioning, water treatment works, power generation, petrochemical plants, oil storage facilities, chemical plants, effluent treatment works, pulp and paper mills and shipbuilding industry.



### Dimensions

Type	QT3	QT4	QT6	QT9	QT15	QT19	QT28	QT38	QT50	QT60	QT80	QT100
Flange ISO5211	F05	F05	F07	F07	F07	F07	F10	F10	F10	F10 F12	F10 F12	F10 F12
	F07	F07	-	-	F10	F10	F12	F12	F12	F14	F14	F14
C	50	50	50	50	102	102	102	102	102	125	125	125
A	M6	M6	M8	M8	M10	M10	M10	M10	M10	M12	M12	M12
B	10	10	14	14	14	14	17	17	17	19	19	19
D(Max)	14	14	22	22	22	22	32	32	32	42	42	42
E	40	40	55	55	57	57	75	75	75	85	85	85
F	25	25	35	35	35	35	42	42	42	50	50	50
G	5	5	5	5	5	5	5	5	5	5	5	5
H	60	60	60	60	64	64	70	70	70	78	78	78
I	133	133	133	133	154	154	174	174	174	191	191	191
J	196	196	196	196	199	199	228	228	228	264	264	264
L	102	102	102	102	125	125	145	145	145	175	175	175
O	200	200	200	200	250	250	350	350	350	350	350	350
T	75	75	75	75	85	85	100	100	100	115	115	115
X	241	241	241	241	272	272	290	290	290	331	331	331
Y	208	208	208	208	239	239	274	274	274	306	306	306
Z	256	256	256	256	263	263	298	298	298	342	342	342
P	72	72	72	72	72	72	72	72	72	72	72	72
q	166	166	166	166	187	187	192	192	192	209	209	209
U	170	170	170	170	170	170	170	170	170	170	170	170

Type	QT150	QT200	QT250
Flange	F16	F16	F16
ISO5211	F14	F14	F14
C	160	160	160
A	M20	M20	M20
B	30	30	30
D(Max)	50	50	50
E	95	95	95
F	60	60	60
G	4	4	4
H	241	241	241
I	191	191	191
J	264	264	264
L	210	210	210
O	350	350	350
T	132	132	132
X	357	357	357
Y	323	323	323
Z	505	505	505



# 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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