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Name: Electric Actuator

It is made of high strength glass lens
fritting technology,the visual performance
is more artistic and smooth.

It is made of round seam
allowance to match up flameproof
joint,the performance of Exd is
better and more reliable.

Micro Regulation Device of Electric
Limit Stroke makes the adjustment of
electric limit simpler and more precise.

With protection grade IP67,It
solves recurring illness of
conventional Exd products in
low protection grade and poor
performance.

With explosion protection grade
Exd IIBT4,it meets Exd
requirement in more than 90%
explosive gas atmosphere.

The casing with good quality
aluminum alloy and the style with
streamline column makes ingenious
and artistic.
Patent Number.ZL 201030192020.6

The connection of the direct installation
type ISO5211 mounting Plate with valve
is more standard and simpler.

How to perform Anti-explosion?

There are different ways to make electric equipment suitable for an explosive environment, there are detailed descriptions of these ways in standards GB3836,IEC60079,EN50014,etc.

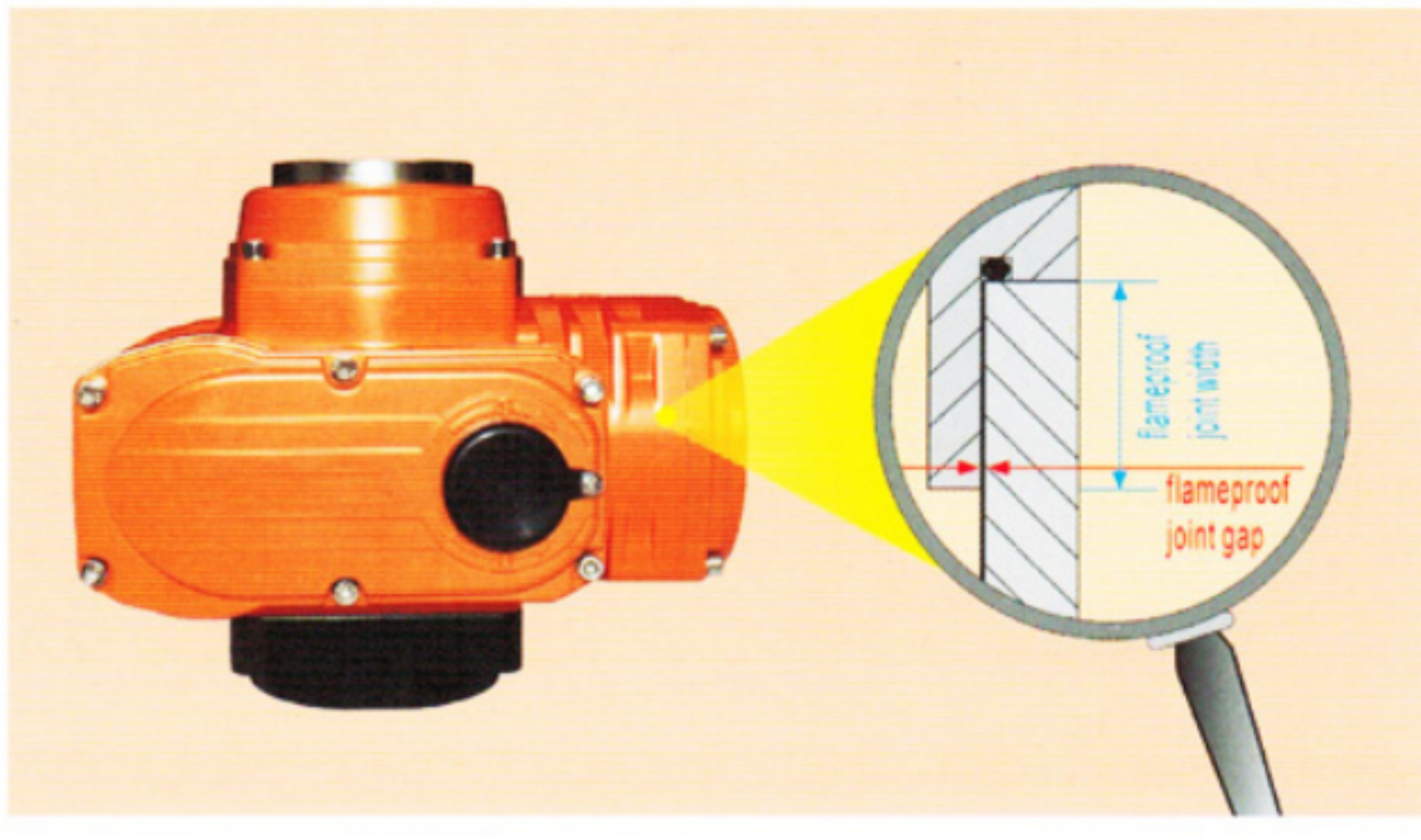
KST anti-explosion series electric actuator is manufactured as a type of Exd and matches up to requirements of standards-GB3836.1-2000,GB3836.2-2000.

Exd

Exd actuator allows interior explosion,the flameproof joint of the casing is designed to prevent the contact of interior sparks or explosive carrier with the outside.Appropriate flameproof joint gap and adequate flameproof joint width can assure this.At the same time,a hard casing can withstand high pressure caused by interior explosion without being damaged.

The following components of KST anti-explosion series actuator are designed and manufactured by the standard of Exd.

- ◆Electric Motor Cavity
- ◆Electronic Component Cavity
- ◆Connection Cavity



Anti-explosion Grade

The anti-explosion grade of KST anti-explosion series electric actuator is :Exd IIBT4

- Ex—anti-explosion identification
- D—anti-explosion type stands for explosion-proof type;
- II—equipment type stands for the electric equipment designed for other explosive gas atmosphere except for colliery;
- B—magnitude of explosion,it determines the size(width and gap) of each flameproof joint of the actuator;
- T4—temperature group stands for the highest surface temperature allowed of actuator is 135℃.

How to use and maintain the equipment of Anti-Explosion?

Operation such as installation,adjustment,maintenance,repair and replacement must be performed by trained and qualified explosion-proof professional technicians and must be strictly performed according to [Operation Manual] of electric equipment.

Actuator Type	Standard Time/Torque	Optional Time/Torque	Turning Angle (Max.range)	Total Weight	Power Supply	Selected Control Circuit
KST-Ex05	20S/50Nm	4S/20Nm 10S/30Nm 60S/50Nm	0~360° Adjustable	3.0Kg	AC24V AC110V AC220V AC380V	Types of A / B / C / D / E / F / H
KST- Ex10	30S/100Nm	15S/50Nm 60S/100Nm	0~90° Adjustable	5.0Kg	AC24V / AC110V AC220V / AC380V	Types of A / B / C / D / E / F / H
KST- Ex20	30S/200Nm	15S/100Nm 60S/200Nm	0~90° Adjustable	5.5Kg	AC110V AC220V AC380V	
KST- Ex40	30S/400Nm	15S/200Nm 60S/400Nm	0~90° Adjustable	9.5Kg	AC110V AC220V AC380V	Types of A / B / C / D / E / F / H
KST- Ex60	45S/600Nm		0~90° Adjustable	10Kg		

Valve Match (For Reference Only)

Actuator Type	Butterfly Valve (≤PN1.0MPa)	Ball Valve (≤PN1.6MPa)	Vent Valve (≤PN0.1MPa)
KST-Ex05	DN50~60	DN40	DN50~80
KST- Ex10	DN80~100	DN50~65	DN100~200
KST- Ex20	DN125~150	DN80~100	DN250~300
KST- Ex40	DN200	DN125	DN350~450
KST- Ex60	DN250	DN150	DN500~600

Note: The datum of electric actuator and valve listed in the table above are only for reference. The actual datum shall base on the torque values provided by valve manufacturer.

Due to many categories of valve, the torque values are different from each other. Even if the same type with same specification, it would exist some difference as manufacturing technology, quality level, structural form and quality of material of valves are difference. It would be so happened that the opening torque of valve changes greatly with the differences of medium types, site conditions and working characteristics, and pressure fluctuation as well. In order to ensure the actuator to work stably and reliably, it is necessary to have enough allowance in selection. It is suggested to have 1.1 ~ 1.3 times allowance factor, which is: output torque/torque of valve tested with pressure ≥ 1.1 ~ 1.3 times.

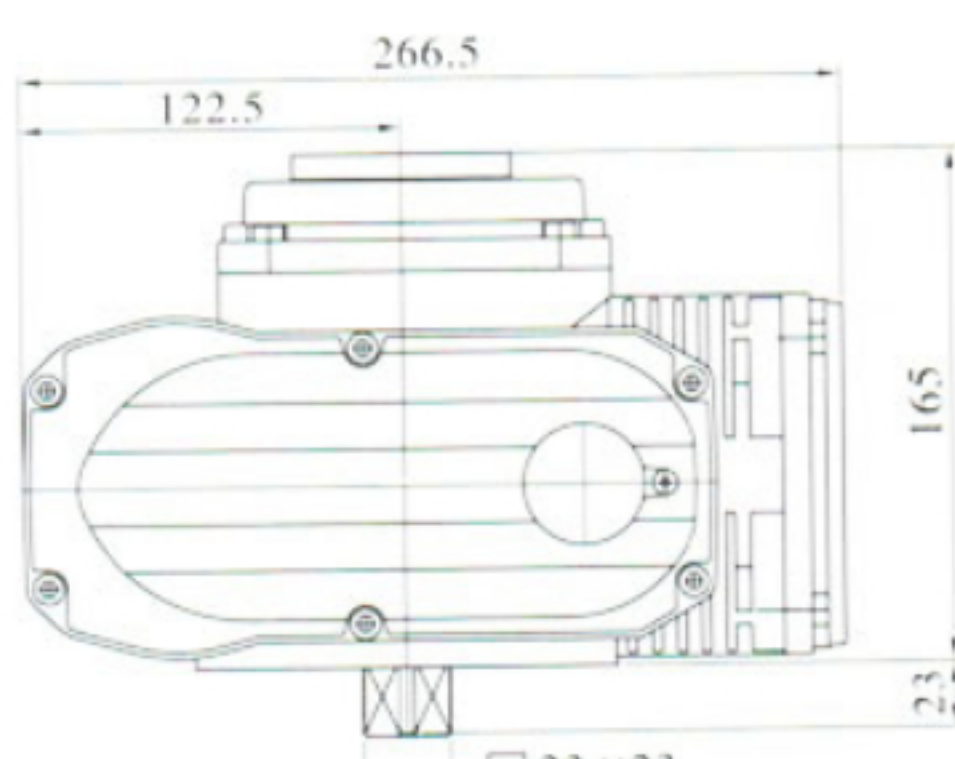
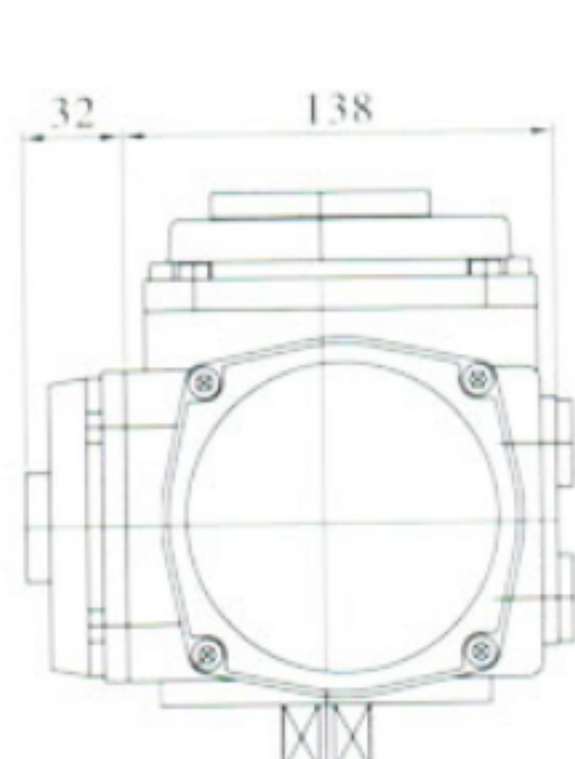
Explosion-proof standard type

Explosion-proof Direct Installation Type

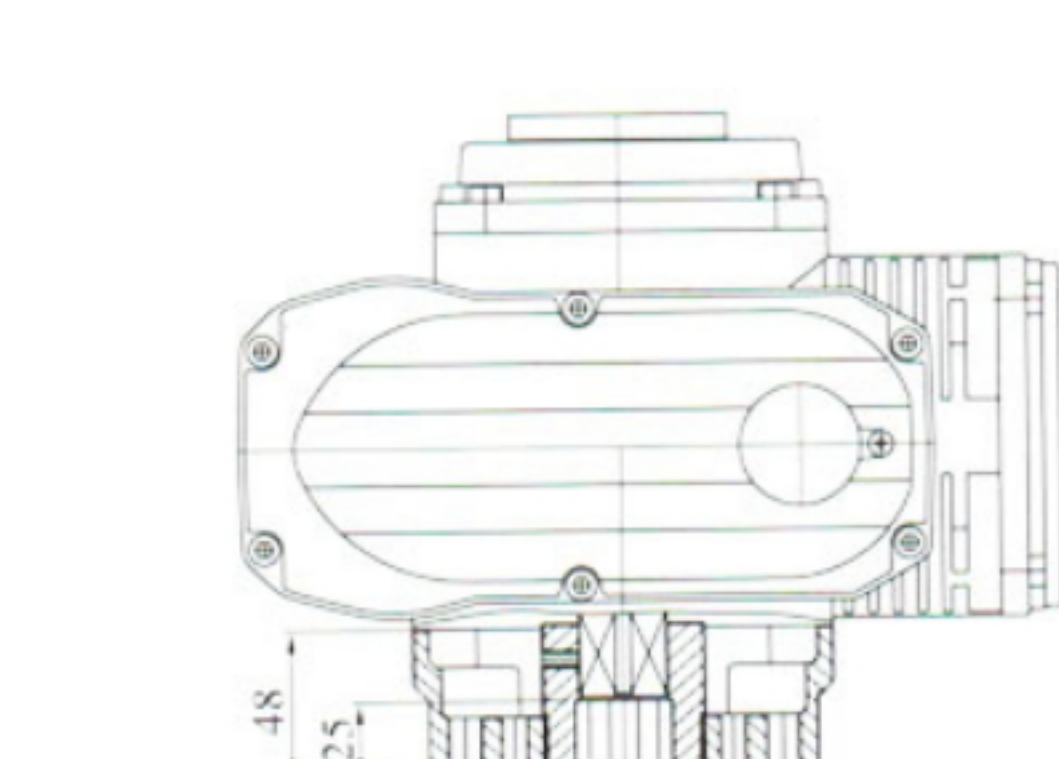
Type Power Performance Parameters	KST—Ex40			KST—Ex60					
	AC110V	AC380V	AC220V	AC110V	AC380V	AC220V			
Motor Power	90W	40W	90W	90W	40W	90W			
Rated Current	1.12A	0.29A	0.64A	1.18A	0.29A	0.67A			
Standard Time/Torque	30S/400Nm			45S/600Nm					
Optional Time/Torque	15S/200Nm		15S/200Nm 60S/400Nm						
Turning Angle	0 ~ 90° Adjustable								
Available Control Circuit	Types of A、B、C、D、E、F、H								
Total Weight	9.5kg			10.0kg					
Insulating Resistance	AC110V/AC220V/AC380V: 100 MΩ/500VDC								
Withstand Voltage Class	AC110V/AC220V:1500VAC 1minutes、AC380V:1800VAC 1minutes								
Protection Class	IP67								
Explosive-proof grade	Exd II BT4								
Installation Angle	360° at any angle								
Electric Interface	2-G1/2 explosion-proof plug, clients should install corresponding explosion-proof cable connector when using according to the cable selected								
Ambient Temperature	-20℃ ~ +60℃								
Optional Function	◆ Over-torque Protector ◆ Heater for eliminating moisture								

Explosion-proof standard type

Explosion-proof Direct Installation Type



Parameters for direct installation		
Square	□ 17 × 17	□ 22 × 22
Flange	F07 F10	
Valve stem	Height ≤ 25mm	



Parameters	Type	Ex05E	Ex10E	Ex20E	Ex40E	Ex60E
	Power	AC110V/AC220V				
Output Torque		50Nm	100Nm	200Nm	400Nm	600Nm
Acting Time		20S	30S	30S	30S	45S
Turning Angle		0 ~ 90°	0 ~ 90°	0 ~ 90°	0 ~ 90°	0 ~ 90°
Motor Power		10W	25W	40W	90W	90W
Rated Current		0.24/0.15A	0.57/0.30A	0.63/0.35A	1.12/0.64A	1.18/0.67A
Total Weight		3.0kg	5.0kg	5.5kg	9.5kg	10.0kg
Input Signal		4~20mADC, 1~5VDC				
Output Signal		4~20mADC				
Basic Error		not more than ± 1%				
Reciprocating Error		Less than 1%				
Dead Space		0.5% - 5.0% adjustable				
Damping Characteristic		0 times				
Repeating Error in Actuator		0%				
Insulating Resistance		100 MΩ/500VDC				
Withstand Voltage Class		1500VAC 1minutes				
Protection Class		IP67				
Explosive-proof grade		Exd IIBT4				
Installation Angle		360° at any angle				
Electric Interface		2-G1/2 explosion-proof plug, clients should install corresponding explosion-proof cable connector when using according to the cable selected.				
Ambient Temperature		-20℃ ~ +60℃				
Optional Function		◆Over-torque Protector ◆Dehumidify Heater ◆Passive contact switch				