Changzhou Xinneng Automatic Control Equipment Co., Ltd

We strive to provide quality products and excellent services for the development of automation

AUKOMA

CHANGZHOU XINNENG AUTOMATIC CONTROL EQUIPMENT CO., LTO

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Xineng Self-Control Mobile Website

CATALOGUE

CATALOGUE

AUKOMA

Company Profile

Quality Commitment:

Our company's products are guaranteed with triple protection, lifetime warranty, and comprehensive after-sales service.

Changzhou Xinneng Automatic Control Equipment Co., Ltd. is atechnology-based enterprise specialized in research and development. Annual production of electric valve actuators is more than 10,000sets.

In 2006 we passed the IS09001 and obtained the national product flame-proof certificate, explosion-proof certificate, the national industrial products production permit and issued by the national center for MA "mining productssafety sign certificate".

We cooperatie with district technology bureau and established the engineering research center for intelligent digital electric actuators, 16 patent for utility model.

Company product series are complete withthe common type, integrated type, modulateing type, intelligent type, the explosion-proof type (BT4, CT4), MA mining type and so on.

The AK intelligent electric actuator has reached the international leading level, with better control than imported products, and is closer to the actual needs of the oversea market.

40+ Certificate

He has obtained multiple national certificates.

10000 sets

Annual productionand sales of electric valve actuator more than 10,000 sets.

16+ Items

It holds 16 utility model patents.

Our company is committed to product type optimization and quality improvement.

Combined with the market demand, we developed special electric valves for coal mine industry. They had been applicated in thousands of major coal mining groups in China and oversea. We help improve the level of coal mine automation, environmental protection and desulfurization. Our electric valves are widely used in the field of power stations, contributing to environmental protection. AUKOMA explosion-proof series BT4,CT4 actuators are the priority brand of oil, petrochemical, natural gas, gas and other flameproof fields. Inaddition, a large number of supporting products in metalurgy, water treatment, electric power, shipbuilding, fire and other fields, by users – praise. In recent years, our company increased the development of overseas markets, products are exported to Indonesia, Pakistan, Singapore, Nigeria, Malaysia and other countries.

Enterprises adhering to the excellent product quality to occupy the market, to lead the industry with advanced science and technology, to improve the best service to return the customers, and strive to become top level flow control manufacturing enterprises.

Quality commitment: our company's products are guaranteed with triple protection, product life time warranty, and excellent after-sales service.

We strive to provide quality products and excellent services for thdevelopment of automation, looking forward to your sincere cooperation!

Certificates

ISO Certificates

3C Certificates

Explosion-proof certificates

• EXd IIBT4 • EXd IBT4 • EXd IICT4

Coal Mine Safety Certificates

Mineral Product Safety Certificate

Patent Certificates

Electric actuator series

AUKOMA intelligent electric actuator

Product overview

AUKOMA intelligent electric actuator, USES the international top design and manufacturing concept, noninvasive streamline structure, fully digital integrated chips, torque sensor detection technology, magnetoelectric encoder technology, English versions of the liquid crystal display, infrared remote control and wireless communications, bus communication network technology, etc., on the control better than imported brand optimization, closer to the automatic control requirements of the domestic market, is the electric power, petrochemical, environmental protection, smelting gold, the preferred brand for water treatment in areas such as valve control.

Functional features

Absolute magnetic encoder technology and power - off valve position display technology

AUKOMA series adopts the absolute value encoder with independent intellectualproperty rights, which can detect the number of turns up to 4000, the resolution of singleturn is 4096 positions, and the absolute position travel detection with the total number of24 bits. The unique design of low power battery power supply circuit, after the main powersupply power, use battery power supply, continue to show the change of valve position.Absolute value encoder adopts magneto-electric technology, which has the characteristicsof simple structure, stable performance, long service life, high precision and high resolution.The battery is only used to display the valve position after thousands of power consumptionEven if the battery is dead, absolute coding technology is adopted by thousands tocontinuously track the valve position change operated by hand wheel, which greatlyimproves the stability of the system.

Torque and force sensing technology

By adopting the advanced torque pressure sensing technology which is widely used inthe world, AUKOMA electric actuator torque dynamic real-time high-precision detection isrealized.Torque pressure sensing technology is tested and verified by industrypractice.Precise, repeatable torque measurements can be obtained regardless of anychange in frequency, voltage, and temperature.

Dual display LCD technology

The LCD screen adopts customized LCD, and adopts one-screen dualdisplay technology.The upper half of the screen adopts low-power segment type LcD display, which can displaythe valve position and alarm symbol in real time with thousands.The second half of thescreen adopts graphics dot matrix liquid crystal display, which is used to display operationinformation and parameter setting.One-screen dual-display technology solves the problemof stability and reliability of two screens and improves the reliability and availability of thewhole machine.

Bluetooth communication control and monitoring technology

Bluetooth communication remote control mode, to provide you with the convenienceof computer and mobile phone remote control actuator, you can provide intelligent remotecontrol software for local and remote analysis.

Double seal and non - invasive technology

IP68 protection grade, completely waterproof and dustproof."Double seal" ensuresinternal components are protected.Double protection of the knob is operated. Optionalprotective cover is added on the side of the knob panel, providing convenience for outdoorapplication of the protective knob.

All debugging and parameter setting can be completed without opening the cover ofthe box. Parameter setting and debugging can be done through magnetic control knobinfrared remote control or hand-held PDA.

Comprehensive protection and self-diagnosis function

A. Automatic phase sequence correction: automatically adjust the phase sequence toensure that the three-phase motor always has the correct power phase sequence.Toprevent vale damage caused byincorrect power connection.

B. Lack of phase protection: three-phase motor will overheat and burn out whenrunning without phase.The controller monitors the three phases ofthe power supply.When- or multi-phase power supply is lost, if the motor is in motion, stop immediately;If themotor is static, it will be prevented from acting.At the same time, the power failure alarmwill be displayed on the field LcD, and the remote indication information can be obtainedfrom the configuration indicator contact.

C. Torque protection: the user can set different protedion values of over-torque in on and off directions according to the field conditions (the range can be set as rated torque)

When the actual torque borne by the electric actuator reaches or exceeds the setprotection value, immediately stop the motor rotation and alarm.

D. Motor blocking protection: real-time monitoring of motor current can stop motoractionin real time when motor blocking occurs.Protect motor and actuator.

E. Dead valve protection: when the actuator closes the limit and performs the valveopening action, it does not perform the torque protection function with in a fixed period oftime, and opens the valve in the stuck position with the maximum torque provided by themotor. If the valve cannot be opened after this period of time, the power supply to the motor will be cut off.

F. Motor overheating protection: if the coll is overheating, the two temperatureregulators in the motor coll can directly detect the temperature of the motor coll.Anddisconnect the control circuit of the actuator.

G. instantaneous reverse protection: when the actuator receives the instantaneousreverse command, the automatic delay circuit is used to prevent unnecessary wear of thevalve stem and gear box caused by shock load.The circuit can also limit the surge currentthrough a contactor.

H. automatic self-detection and diagnostic function (AsTD): at any time, once theactuator is connected to the power, it will automatically detect the operating circuit.Toensure correct operation.For thousands of rare device failures, it can be diagnosed andautomatically displayed on the screen as an icon.At the same time, the electric operation ofthe vake actuator will be prohibited for easier field maintenance.

I. Data record protection: when the main power supply is off, the valve actuator storesvarious parameters in EEPROM, without loss for 20 years:

J.Anti-surge protection (lightning protection) : ac power anti-surge protection andsignal anti-surge protection can be selected according to needs to achieve lightningprotection of valve actuator.

K. Anti-condensation heating protection: the heating resistance can be opened orclosed according to the temperature in the elecrical cavity to achieve theanti-condensation heating protection of the vawe actuator.

Local control

The AUKOMA actuator provides two non-invasive magnetic control knobs, one for the mode knob, with three positions: "in place", "remote" and "Stop"; The other is the operation button, which has two positions: "on" and "off". When the mode button is in place, turn the operation button to the "on" or "off" position controls the actuator action in the direction of "on" or "off". There are two ways of local control: "inching" and "holding".

The remote control

After the DCS or PLC is connected to the field actuator by hardwired cable, theactuator can be controlled by switch quantity (manual)/current flow (automatic).

Switch quantity control has three input terminals, namely valve opening, valve closing,stop/hold, optional inching and holding mode;In addition, the auxiliary switch quantitycontrol is emergency protection (ESD), valve opening interlock and valve closinginterlock.Remote input adopts photoelectric isolation and can resist 2.5kv surge.

Remote analog control adopts linear optocoupler isolation, and the valve can bepositioned proportionally according to the input analog signal.

Remote analog valve position feedback, valve position can be fed back to DcS or PLcthrough 4-20ma signal;At the same time, remote analog torque feedback can be optionallyprovided.

ESD control

In an emergency, the ESD signal can override any field or remote signal (depending onparameter setting), enabling the actuator to enforce valve closing or valve opening. ESDoperation can be selected as "'valve closing", "valve opening" or "position preserving"

Interlock control

In applications where thousands of high requirements are required, the actuator canbe configured to achieve conditional control.

In this mode, the operation depends on two independent signals.In the case of thevalve closing command, the actuator closes the valve by providing a remote valve closinginput signal and a valve closing interlock input signal.If only one signal is provided or onesignal is lost, the actuator will hold or stop to prevent failure.For applications requiring ESDdedicated ESD input can be used.This input has a high priority of thousands of local orremote control signals.Thus, any current or applied control signals are ignored when suchsignals are applied.

Diverse fieldbus connections

AUKOMA can be seamlessly connected to the fieldbus digital control system.Openfieldbus protocols, such as Profibus, Modbus,Hart, FoundationFieldbus, and DeviceNet are all within AUKEMA's contrOl.AUKOMA also first offers the ability to connect to industrial Ethernet, the industrial Ethernet based onthe MODBUsTCP protocol, saving you PLC and directly connecting to SCADA systems.

By inserting the appropriate AUKOMA manufactured or supervised digitalcommunication circuit board module into the actuator's electrical cavity - usually done atproduction time - it is easy and cost effective to operate. You can use the network test toolforthe selected protocol for module testing and setup.

A)Profibus

In the field of industrial automation and control, Profibus is the most importantnetwork protocol for high-speed data communication in the world.

ProfibusDp interface: compatible with Rs485ProfibusDpvO and V1, DPV2 bus protocolcan be selected according to requirements;Optional single bus or double redundantbus;Fully accord with ec61158-3 standard;Support speed up to 1.5Mbit/s.

B)Modbus

Modbus is the most common serial communication protocol in automatic protocolapplication system.

AUKOMA's Modbus interface card allows the actuator to connect to the dual Rs485network.Thus using ModbusRTU protocol with PLC or DCS

Direct com munication.The network can control and monitor the connected actuators.Modbus interface:Rs485 two-ine RTU communication;International standards foropen systems;Single and double redundant options;The built-in repeater module can beused under necessaryapplication conditions.The maximum speed is 115KB.

It also provides the MODBUsTCP communication based on industrial Ethernet.It can bedirectly connected with SCADA system without PLC or controller connection, which canrealize communication and control.

C)Hart

HART (Highway Addressable Remote Transducer), highway addressable remote sensorchannels open communication protocols, is the United States ROSEMOUNT introduced in 1985 a communication protocol between thousands offield smart meters and control room equipment.

Hart interface: accord with HART7.0 protocol standard. FSK frequency shift keyingsignals of Bell202 standard are supported, with carriers of 1200Hz and 2200Hz andcommunication rate of 1200b/S.

D)Foundation

Foundation Fieldbus is the most widely used process control system in petrochemicalfield. The main features in 1000 can be remotely deployed with DCs control system.

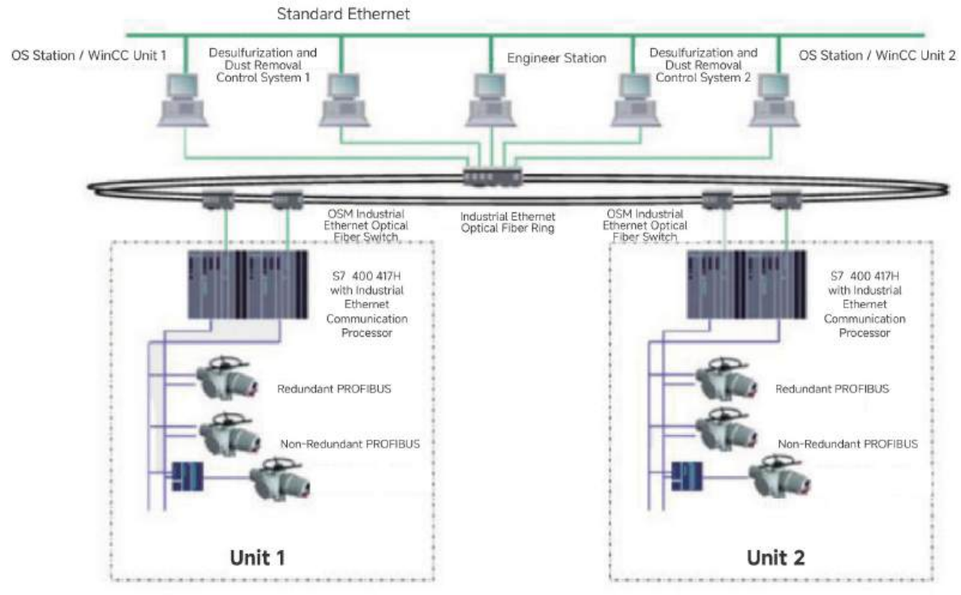
Foundation Fieldbus interface: supports direct connection to the standardFoundationH1 bus system; Fully accord with iec61158-2 standard; LinkMaster and LAsfunctions; Perfect HI field performance.

E)DeviceNet

DeviceNet is an open network standard, which is suitable for communication networkusing CAN bus in industrial environment.

DeviceNet interface: up to 63 devices per network;Four-wire cable (two for signals andtwo for thousands ofpower supplies);allow

Trunk and Drop lines;EDs electronic device description document.



Switching parameters

working power supply：380VAC ±10% three-phase 50/60Hz 1%；220VAC ±10% single-phase 50/60Hz 1%

switch input signal: 24VDC pulse or level signal, minimum duration of pulse signal 100ms;

- switch output signal: s1-s10;Relay output, contact rated capacity: 5a@250vac, 5a@30vdc;
- analog output: 4-20ma position signal;Load capacity up to 7500;Photoelectric isolation;Short circuit protection;Temperature effect of 0.1%/10K
- ambient temperature: -30℃~70℃ (specially customized -60℃~90℃);Humidity≦ 95%
- rated time: 10min,15min,30min
- insulation grade of motor: F
- working mode of motor: S2
- protection grade: IP67, IP68
- explosion-proof type: AK series explosion-proof grade ExdⅡBT4,ExdⅡCT4
- product conformity: GB/ t26155.2-2012 intelligent electric actuators for industrial process measurement and control systems - part 2: methods for performance evaluation
- product conformity: GB/ t28270-2012 intelligent valve electric device

Adjustable type technical parameters

- working power supply: three-phase: 380VAC ±10%, 50/60Hz ±1%;

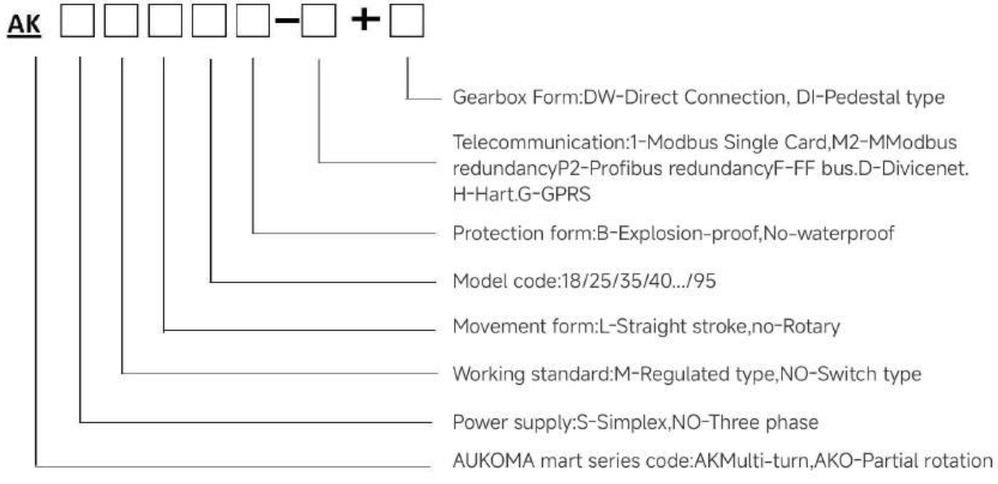
Single-phase:220VAC+10%-15%, single-phase 50/60Hz ±1%

Special voltage: three-phase: 415V, 440V, 460V, 660V, 50/60hz

- analog input signal: 4-20ma;Photoelectric isolation, input impedance,2500
- analog output signal: 4-20ma position signal;Load capacity up to 7500;Photoelectric isolation;Short circuit protection;Temperature affects soil 0.1%/10K
- switch input: 24VDC pulse or level signal with a minimum duration of 100ms
- switch output: s1-s10;Relay output, contact rated capacity: 5a@250vac, 5a@30vdc
- ambient temperature: -60℃~90℃ (specially customized -60℃~90℃);Humidity: 95%
- adjustment times: up to 1200 times per hour
- insulation grade of motor: F
- motor operating system: S4
- basic errors :≦1%
- repeatability error of stroke control mechanism :≦1%
- dead zone: 0.1%-9.9% adjustable

- protection grade: IP67, IP68
- explosion-proof type: AK series explosion-proof grade ExdⅡBT4,ExdⅡCT4
- product conformity: GB/ t26155.2-2012 intelligent electric actuators for industrial process measurement and control systems - part 2: methods for performance evaluation
- product conformity: GB/ t28270-2012 intelligent valve electric device
- working mode of motor: S2
- protection grade: IP67, IP68
- explosion-proof type: AK series explosion-proof grade ExdⅡBT4,ExdⅡCT4
- product conformity: GB/ t26155.2-2012 intelligent electric actuators for industrial process measurement and control systems - part 2: methods for performance evaluation
- product conformity: GB/ t28270-2012 intelligent valve electric device

Description of product model compilation



AUKOMA

常州新能自控设备有限公司
Changzhou Xinneng Automatic Control Equipment Co., Ltd

AK、AKM

Multi-Turn Intelligent Electric Actuator

AUKOMA multi-turn intelligent electric actuators are available in two control types: AK intelligent on-off type and AKM intelligent regulating type.

They are suitable for controlling valves such as globe valves, gate valves, throttle valves and sluice valves, and are recognized as a new generation of valve control specialists.

AK And AKM Three-Phase Actuator Performacne Date

Specifications	Output Torque (Nm)	Output Rotational Speed (Rpm)	Supply Voltage (V)	Number Of Supply Phases (Ph)	Frequency (Hz)	Rated Power (Kw)	Rated Current (A)	Reference Weight (Kg)
AK18	100	18	380	3	50	0.25	0.76	30
		24	380	3	50	0.25	0.76	
		36	380	3	50	0.37	1.07	
		48	380	3	50	0.37	1.07	
	150	18	380	3	50	0.37	1.07	
		24	380	3	50	0.37	1.07	
		36	380	3	50	0.55	1.54	
		48	380	3	50	0.55	1.54	
AK25	200	18	380	3	50	0.55	1.54	46
		24	380	3	50	0.75	1.99	
		36	380	3	50	1.1	2.8	
		48	380	3	50	1.1	2.8	
	300	18	380	3	50	0.75	1.99	
		24	380	3	50	1.1	2.8	
		36	380	3	50	1.5	3.65	
		48	380	3	50	1.5	3.65	
AK35	500	18	380	3	50	1.5	3.65	69
		24	380	3	50	1.5	3.65	
		36	380	3	50	2.2	5.05	
		48	380	3	50	2.2	5.05	
	600	18	380	3	50	1.5	3.65	
		24	380	3	50	1.5	3.65	
		36	380	3	50	2.2	5.05	
		48	380	3	50	2.2	5.05	
AK40	900	18	380	3	50	2.2	5.05	190
		24	380	3	50	2.2	5.05	
		36	380	3	50	3	6.64	
	1200	18	380	3	50	2.2	5.05	
		24	380	3	50	3	6.64	
		36	380	3	50	4	8.62	
AK70	1800	18	380	3	50	4	8.62	200
		24	380	3	50	4	8.62	
		36	380	3	50	5.5	11.5	
AK90	2500	18	380	3	50	4	8.62	203
		24	380	3	50	5.5	11.5	
		36	380	3	50	7.5	15.3	
AK95	3000	18	380	3	50	5.5	11.5	205
		24	380	3	50	7.5	15.3	
		36	380	3	50	10	19.5	

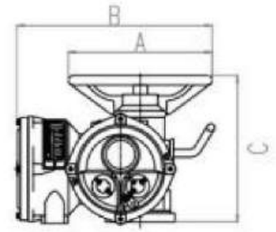
AK and AKM Multi-rotation Intelligent Electric Actuators

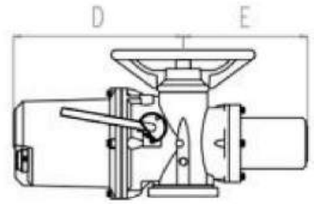
AKS Single-Phase Actuator Performance Data

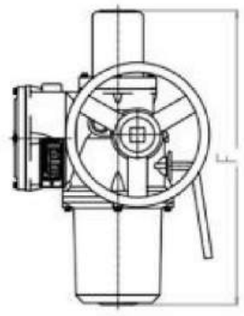
Specifications	Output Torque (Nm)	Output Rotational Speed (Rpm)	Supply Voltage (V)	Number Of Supply Phases (Ph)	Frequency (Hz)	Rated Power (Kw)	Rated Current (A)	Reference Weight (Kg)
AKS18	100	18	220	2	50	0.2	1.7	30
		24	220	2	50	0.2	1.7	
		36	220	2	50	0.2	1.7	
	150	18	220	2	50	0.2	1.7	
		24	220	2	50	0.2	1.7	
		36	220	2	50	0.2	1.7	
AKS25	200	18	220	2	50	0.9	6.5	46
		24	220	2	50	0.9	6.5	
		36	220	2	50	0.9	6.5	
	300	18	220	2	50	1.1	7.7	
		24	220	2	50	1.1	7.7	
		36	220	2	50	1.1	7.7	

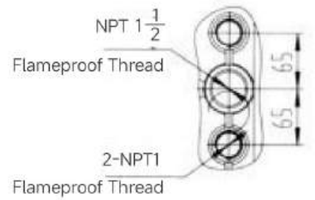
AK, AKM Actuator External Dimensions

AK18-40



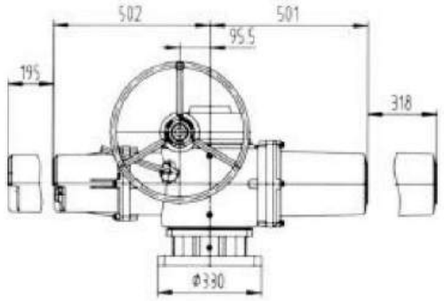


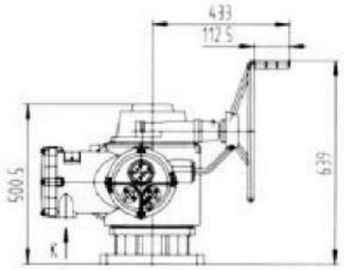


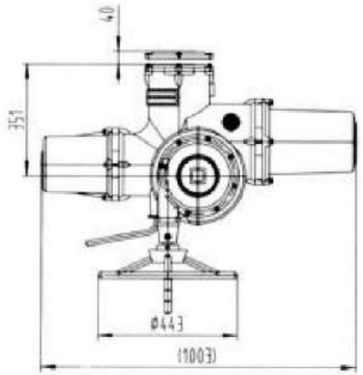


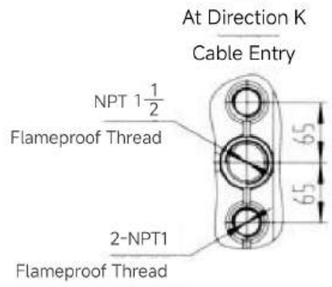
Specifications \ Parameters	A	B	C	D	E	F
AK18	320	425	305	360	270	630
AK25	360	460	330	395	355	750
AK35	420	515	365	400	360	760
AK40	850	785	480	510	480	990

AK70-95









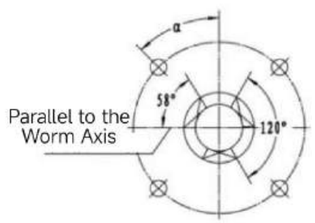
Torque-Type Connection Dimensions (Jb2920)

Parameters / Specifications	D	D1	D2	d1	d2	d	h	h1	f	b
AK18	Φ145	Φ120	Φ90	Φ30	Φ45	4-M10	11.5	2	5	23.5
AK25	Φ185	Φ160	Φ125	Φ42	Φ58	4-M12	10.5	2	5	25
AK35	Φ225	Φ195	Φ150	Φ50	Φ72	4-M16	14	2	5	24
AK40	Φ275	Φ235	Φ180	Φ62	Φ82	4-Φ22	14	2	5	21
AK70-95	Φ330	Φ285	Φ220	Φ72	Φ98	4-Φ26	16	2	6	30

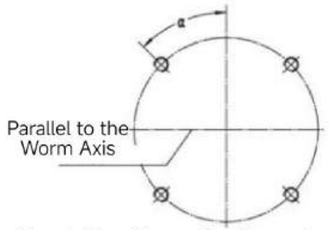
Thrust-Type Connection Dimensions (Gb12222)

Parameters / Specifications	Flange No.	D	D1	D2(f8)	f	d(max)	d	L	n	α
AK18	F10	125	102	70	3	T28	M10	40	4	45°
AK25	F14	175	140	100	4	T36	M16	55		
AK35	F16	210	165	130	5	T44	M20	70		
AK40	F25	300	254	200		T60	M16	90	8	22.5°
AK70-95	F30	350	298	230		T70	M20	110		

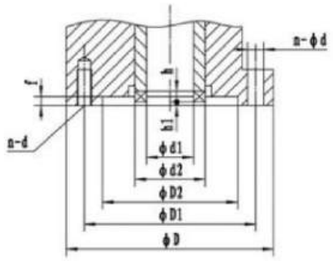
Flange Dimensions For AK And AKM Actuators



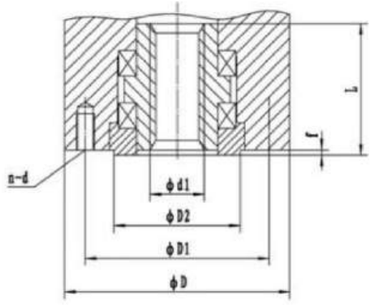
Torque-Type Connection Dimension Drawing



Thrust-Type Connection Dimension Drawing



Torque-Type Connection Dimension Drawing



Thrust-Type Connection Dimension Drawing

AUKOMA

AK And AKM Terminal Comparison Chart

Terminal Serial Number	Definition of wiring terminals	Terminal Serial Number	Terminal Name	Terminal Serial Number	Terminal Name
	Grounding symbol (grounding earth)	16	S7 maintains relay 1 end*	31	
1	380VAC1**	17	S7 maintains relay 2 terminals*	32	
2	380VAC2**	18	S8 maintains relay 1 terminal*	33	Remote shutdown
3	380VAC3**	19	S8 maintains relay 2 terminals*	34	Keep/Stop
4	DC power supply OV (24V DC power supply "_" output terminal)	20	S9 maintains relay 1 terminal*	35	remote open
		21	S9 maintains relay 2 terminals*	36	
5	DC power supply 24V (24V DC power supply "+" output terminal)	22	4-20mA valve position feedback current output+	37	Manual/Automatic High Voltage Common Terminal*
6	S1 relay 1 end (open position)	23	4-20mA valve position feedback current output-	38	Remote high voltage common terminal*
7	S1 relay 2 terminal (open position)				
8	S2 relay 1 end (fully closed)	24		39	Manual/Automatic Low Voltage Common Terminal*
9	S2 relay 2 end (fully closed)	25	Emergency response (ESD)	40	S6 relay common terminal (fault alarm)
10	S3 relay 1 end (open torque)	26	4-20mA valve position control current input+	41	S6 relay terminal 1 (fault alarm)
11	S3 relay 2 terminal (open torque)	27	4-20mA valve position control current input-	42	S6 relay 2 terminal (fault alarm)
12	S4 relay 1 terminal (closing torque)	28	Manual/automatic signal selection terminal	43	
13	S4 relay 2 terminal (closing torque)	29	S10 maintains relay 1 end*		
14	S5 relay 1 end (on-site/remote control)	30	S10 maintains relay 2 terminals*		
15	S5 relay 2 terminal (on-site/remote control)	Warning! Please refer to the rated voltage value on the nameplate of the electric actuator before connecting the power supply. When the power supply is three-phase 380V, connect terminals 1.2.3. When the power supply is single-phase 220V, connect terminal 1.2.			

Specifications of AK Connection Cable Inlet Size:One inlet in the middle is NPT1-$\frac{1}{2}$, and two inlets on both sides are NPT1.

There are 4 three-phase (380VAC/50Hz) power terminals and 3 single-phase (220VAC/50Hz) power terminals, all of which are M5 specification. The total number of signal terminals is 43, with M4 specification.

Intelligent Switch Type: Power cable: 3 cores Control cable: 3 cores Signal cable: 15 cores

Note: Please contact the supplier or our company if you need to expand more status indication contacts, bus control functions, or have other special requirements.

AKML

AKML Linear Stroke Three-Phase Regulating Actuator

AKML Linear Stroke Regulating Intelligent Electric Actuator is suitable for valves requiring linear thrust motion. It consists of an AKM Intelligent Multi-turn Electric Actuator and a linear propulsion device.

It accepts standard analog current control signals or switching control signals, and compares them with the position signals from the valve position sensor simultaneously. Then it positions the output shaft of the electric actuator at the position corresponding to the input signal to achieve positioning control. It can also be positioned at the preset position of the control system according to interlock control and two-wire control.

KML Linear Stroke Three-Phase Regulating Actuator Performance Date

Model	Rated Load (N)	Executor Speed (Rpm)	Linear Velocity (Mm / S)	Optional Straight-Line Travel (Mm)	Voltage (V)	Power Phase (Ph)	Frequency (Hz)	Motor Power (Kw)	Rated Current (A)	Working System
AKML18	4000	24	1.6	10/16/25/40	380	3	50	0.25	0.76	S4(30%)
	6400	24	1.6	10/16/25/40	380	3	50	0.25	0.76	S4(30%)
	10000	24	1.6	16/25/40/60	380	3	50	0.25	0.76	S4(30%)
	16000	24	1.6	25/40/60/100	380	3	50	0.37	1.07	S4(30%)
	25000	24	1.6	40/60/100	380	3	50	0.37	1.07	S4(30%)
AKML25	40000	24	2.8	40/60/100	380	3	50	0.75	1.99	S4(30%)
	50000	24	2.8	40/60/100	380	3	50	0.75	1.99	S4(30%)
	80000	24	2.8	40/60/100	380	3	50	1.1	2.8	S4(30%)

AKSML Linear Stroke Single-Phase Regulating Actuator Performance Data

Model	Rated Load (N)	Executor Speed (Rpm)	Linear Velocity (Mm / S)	Optional Straight-Line Travel (Mm)	Voltage (V)	Power Phase (Ph)	Frequency (Hz)	Motor Power (Kw)	Rated Current (A)	Working System
AKML18	4000	24	1.6	10/16/25/40	220	2	50	0.2	1.7	S4(30%)
	6400	24	1.6	10/16/25/40	220	2	50	0.2	1.7	S4(30%)
	10000	24	1.6	16/25/40/60	220	2	50	0.2	1.7	S4(30%)
	16000	24	1.6	25/40/60/100	220	2	50	0.2	1.7	S4(30%)
AKML25	25000	24	2.8	40/60/100	220	2	50	0.9	6.5	S4(30%)
	40000	24	2.8	40/60/100	220	2	50	1.1	7.7	S4(30%)
	50000	24	2.8	40/60/100	220	2	50	1.1	7.7	S4(30%)

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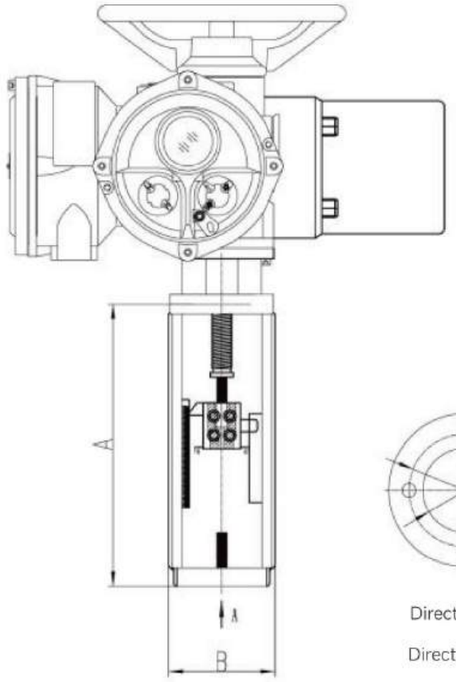
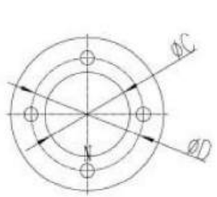
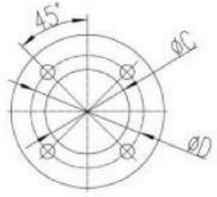
AKML Linear Actuator Structure Dimensions

AKML18

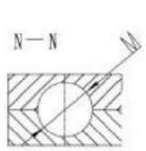




Direction A(1)



Direction A(2)



Direction A: Connection Dimensions to Control Valve

Parameter / Model	A	B	C	D	n-Φd	M
AKML18-40	175	155	60	80	4-Φ10	M10
AKML18-64	310	155	80	105	4-Φ12	M12X1.25
AKML18-100	310	155	95	118	4-Φ14	M16X1.5
AKML18-160	310	155	95	118	4-Φ14	M16X1.5
AKML18-250	310	155	100	130	4-Φ18	M20X1.5
AKML25-400	310	155	100	130	4-Φ18	M20X1.5
AKML25-500	310	155	100	130	4-Φ18	M24X1.5

AK+DW (Direct-Coupled Type) AK+DJ (Base-Mounted Type)

Part-Turn Intelligent Electric Actuator

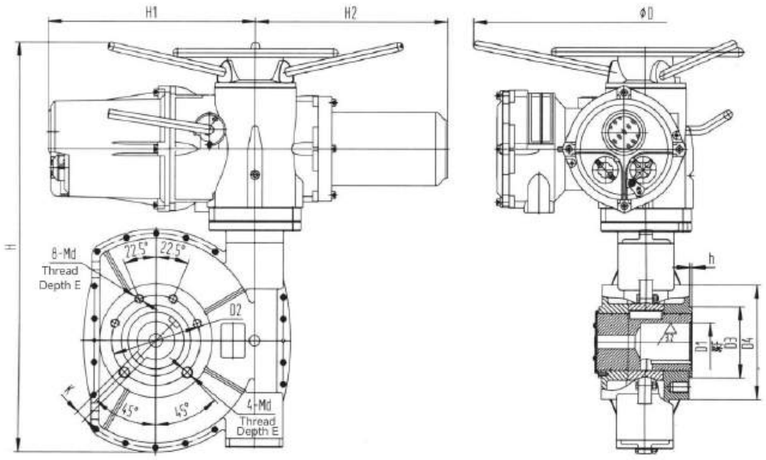
The AK+DW Actuator is developed based on the AK multi-turn actuator with an additional two-stage reducer, and is suitable for 90° rotary valves such as large-caliber, high-torque butterfly valves, ball valves and plug valves. Its output torque ranges from 1000 Nm to 63000 Nm.

The AK+DJ Actuator is developed based on the AK multi-turn actuator with an additional two-stage reducer equipped with a base. It converts input signals into corresponding output angular displacements, and operates dampers, butterfly valves and other valves via crank arms. Its output torque ranges from 1000 Nm to 63000 Nm.

AK+DW
(Direct-coupled Type)

AK+DJ
(Base-mounted Type)

AK+DW Direct-Coupled Type Part-Turn Actuator: Outline And Connection Dimensions



Parameters / Specifications	Output Torque (Nm)	D	D1	D2	D3	D4	E	F	K	H	H1	H2	n-Md	h
AK18+DW1	1000	Φ328	Φ45	Φ125	/	Φ150	20	94	14	558	295	258.5	4-M10	/
AK18+DW2	1600	Φ328	Φ60	Φ140	/	Φ175	25	87	18	603	295	258.5	4-M16	/
AK18+DW3	2500	Φ328	Φ70	Φ165	/	Φ210	25	95.5	20	685	295	258.5	4-M20	/
AK18+DW4	4000	Φ328	Φ70	Φ165	/	Φ210	30	92	20	739	295	258.5	4-M20	/
AK25+DW5	6000	Φ642	Φ70	Φ165	/	Φ218	25	103	2-20	900	324	357	4-M20	/
AK25+DW6	8000	Φ642	Φ75	Φ254	Φ200	/	25	165	2-20	877	324	357	8-M16	5.5
AK25+DW7	10000	Φ780	/	Φ254	Φ200	/	25	165	2-20	1102	338	357	8-M16	5.5
AK25+DW8	15000	Φ780	/	Φ254	Φ200	/	25	165	2-20	1102	338	357	8-M16	5.5

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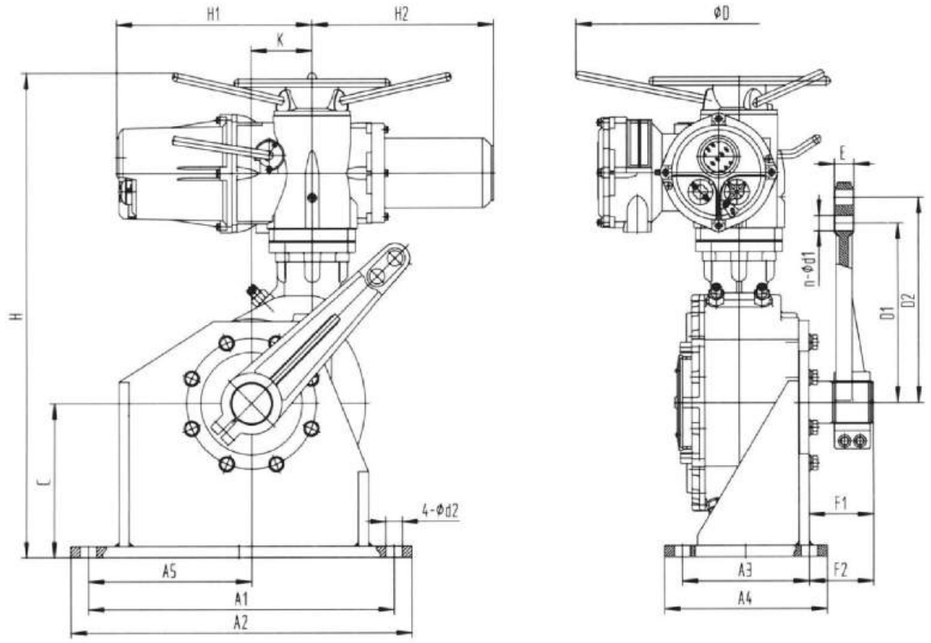
AK+DJ Base-Mounted Type Part-Turn Actuator: Outline And Connection Dimensions



Parameters / Specifications	(Nm)	A1	A2	A3	A4	A5	C	D1	D2	N-Φd1
AK18+DJ1	1000	240	280	150	190	120	170	200	250	2-Φ20
AK18+DJ2	1600	375	435	175	235	195	170	200	250	2-Φ20
AK18+DJ3	2500	500	560	180	240	210	230	200	250	2-Φ30
AK18+DJ4	4000	500	560	180	240	210	230	200	250	2-Φ30
AK25+DJ5	6000	480	540	260	320	200	267	350	/	Φ36
AK25+DJ6	8000	600	670	250	320	320	300	400	/	Φ40
AK35+DJ7	10000	600	670	250	320	320	300	400	/	Φ40
AK35+DJ8	15000	600	670	250	320	320	300	400	/	Φ40

Parameters / Specifications	N-Φd1	D	E	F1	F2	H	H1	H2	K
AK18+DJ1	4-Φ17	0328	30	74	74	604	295	258.5	96
AK18+DJ2	4-Φ22	0328	30	95	95	630	295	258.5	116.5
AK18+DJ3	4-Φ22	0328	30	85	85	754.5	295	258.5	150.5
AK18+DJ4	4-Φ22	0328	38	81	81	779	295	258.5	183
AK25+DJ5	4-Φ22	0642	38	108	108S	921	324	357	120
AK25+DJ6	4-Φ32	0642	40	126	126	945	324	357	120
AK35+DJ7	4-Φ32	0780	40	126	126	1170	338	357	120
AK35+DJ8	4-Φ32	0780	40	126	126	1170	338	357	120

AKQ/AKQM

Series Part Turn Intelligent Actuator

AKQ/AKQM series part turn intelligent actuator has the normal type, the wholetype, the adjustment type, the intelligent type, the explosion-proof type and so onseries.Apply to control butterfly valve, ball valve, plug valve and other valves to do 90degrees of rotation.

This series of products inherits the structural advantages of Q seriessuch as small size, light weight, high protection level, efficient mechanical transmissionsystem, stable performance and beautiful appearance.

Model Range: 100 Nm ~ 500 Nm

AKQ/AKQM Part-Turn Actuator

- Strong structure, double sealing, can effectively waterproof and dust-proof in thefield wiring (IP67/IP68-2m,48 hours)
- Direct drive angle stroke
- Three-phase, single-phase and DC power supply actuators
- Multilingual text display that displays status and settings
- Built-in data logger as a standard function
- Local and remote analysis of the actuator
- Simple,easy to control and indicate function
- Simple torque and position control to enhance reliability
- Integrated control and indication flexibility
- There are waterproof or explosion-proof specifications to choose from
- Direct torque output range from 50Nm (37 ibf ft) to 500Nm (370 ibf ft)

Model Range: 1000 Nm ~ 2000 Nm

AKQ/AKQM Part-Turn Actuator

- Strong structure, double sealing, can effectively waterproof and dust-proof in thefield wiring (IP67/1P68-2m,48 hours)
- Direct drive angle stroke
- Three-phase,single-phase and DC powersupply actuators
- Multilingual text display that displays statusand settings
- Built-in data logger as a standard function
- Local and remote analysis of the actuator
- Simple, easy to control and indicate function
- Simple torque and position control to enhance reliability
- Integrated control and indication flexibility
- There are waterproof or explosion-proof specifications to choose from
- Direct torque output range from 600Nm (890 ibf ft) to 2000Nm (1476 ibf ft)

AKQ Three-Phase Switch type Actuator Performance Data

Model	Speed (Rpm)	Torque (N.m)	Power Supply Voltage (V)	Power Phase (Ph)	Frequency (Hz)	Motor Power (Kw)	Rated Current (A)	Working System	Weight (Kg)
AKQ250	1	250	380	3	50	0.04	0.57	S2(15min)	23
AKQ500	0.5	500	380	3	50	0.04	0.57	S2(15min)	23
AKQ1000	1	1000	380	3	50	0.04	0.57	S2(15min)	37
AKQ2000	0.5	2000	380	3	50	0.04	0.57	S2(15min)	37

AKQS Single-Phase Switch Type Actuator Performance Data

Model	Speed (rpm)	Torque (N.m)	Power supply voltage (V)	Power phase (Ph)	Frequency (Hz)	Motor power (KW)	Rated current (A)	working system	Weight (KG)
AKQ250	1	250	220	1	50	0.04	1.14	S2(10min)	23
AKQ500	0.5	500	220	1	50	0.04	1.14	S2(10min)	23
AKQ1000	1	1000	220	1	50	0.04	1.14	S2(10min)	37
AKQ2000	0.5	2000	220	1	50	0.04	1.14	S2(10min)	37

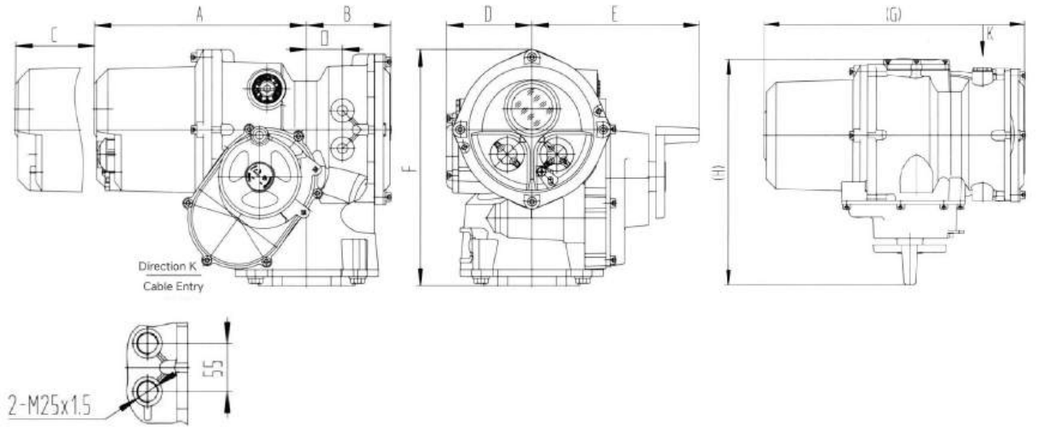
AKQM Three-Phase Regulating Actuator Performance Data

Model	Speed (Rpm)	Torque (N.m)	Power Supply Voltage (V)	Power Phase (Ph)	Frequency (Hz)	Motor Power (Kw)	Rated Current (A)	Working System	Weight (Kg)
AKQ250	1	250	380	3	50	0.04	0.57	S2(30%)	23
AKQ500	0.5	500	380	3	50	0.04	0.57	S2(30%)	23
AKQ1000	1	1000	380	3	50	0.04	0.57	S2(30%)	37
AKQ2000	0.5	2000	380	3	50	0.04	0.57	S2(30%)	37

AKQSM Single-Phase Regulating Actuator Performance Data

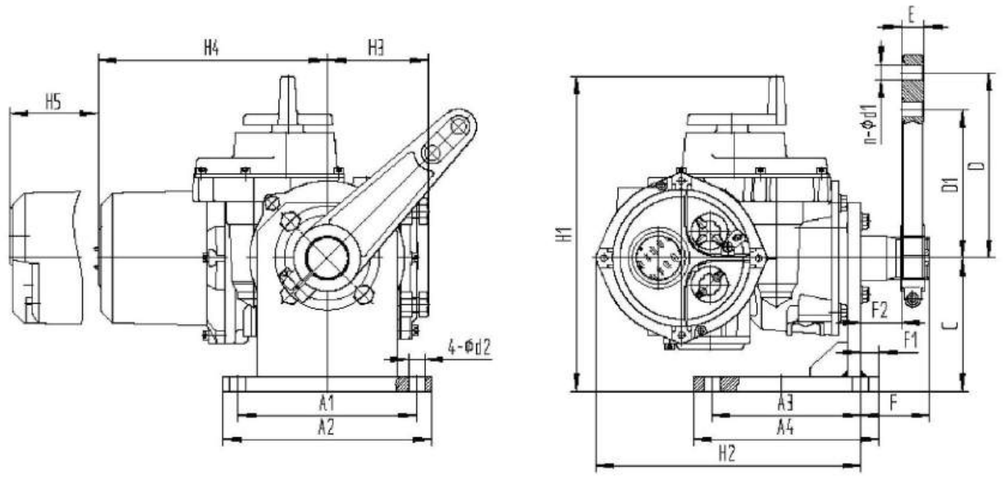
Model	Speed (Rpm)	Torque (N.m)	Power Supply Voltage (V)	Power Phase (Ph)	Frequency (Hz)	Motor Power (Kw)	Rated Current (A)	Working System	Weight (Kg)
AKQ250	1	250	220	1	50	0.04	1.14	S4(30%)	23
AKQ500	0.5	500	220	1	50	0.04	1.14	S4(30%)	23
AKQ1000	1	1000	220	1	50	0.04	1.14	S4(30%)	37
AKQ2000	0.5	2000	220	1	50	0.04	1.14	S4(30%)	37

AKQ Part Turn Intelligent Executive Dimensions



Parameters / Specifications	A	B	C	D	E	F	(G)	(H)	(I)
AKQ125-500	306	124	160	135.5	202.5	277	430	338	54
AKQ600-2000	308	121.5	160	123.5	245	340	428.5	368.5	52

AKQ+DJ Base-Mounted Type Part-Turn Actuator: Outline And Connection Dimensions



Parameters / Specifications	A1	A2	A3	A4	C	D1	D	E	F	F1	F2	H1	H2	H3	H4	H5	n-Φd1	4-Φd2
AKQ+DJ1	240	280	180	220	180	100	100	22	68.5	20	17.5	382	288	124	306	160	18	17.5
AKQ+DJ2	240	280	200	250	180	200	250	30	93	25	55	425	356	136	308	160	2-Φ20	22

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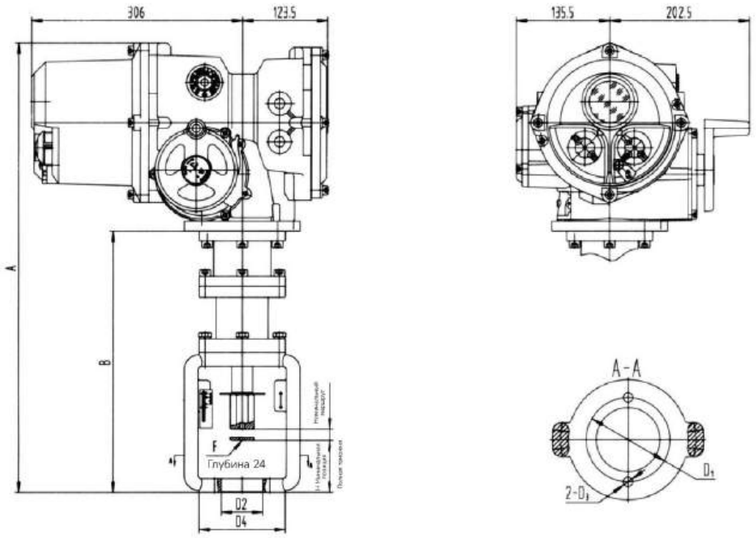
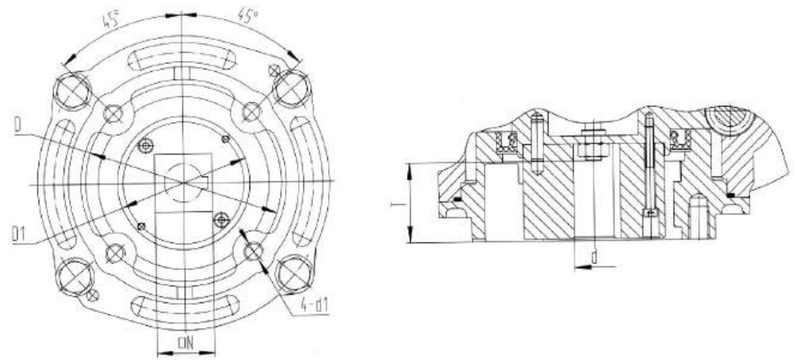
Changzhou Xinneng Automatic Control Equipment Co., Ltd

AKQML Linear Stroke Actuator: Executive Dimensions



Model	Rated Load (N)	Rated Stroke (Mm)	Rated Speed (Mm/S)	Valve Stem Connection Hole F	Flange Connection D1	Flange Inner Hole D2	Flange Hole D3	Connecting Valve Flange D4	A	B	H
AKQML-64/2710	6400	10	0.27	M8x1.25	Φ80	Φ60D11	2-Φ11	Φ125	649	377	81
AKQML-64/2716		16	0.27								75

AKQ Actuator Flange Size



Specifications \ Parameters		D	D1	N(max)	d(max)	T	d1
AKQ125-500	F05	Φ50	Φ38	20	Φ25	Φ50	M6
	F07	Φ70	Φ55	30	Φ35	Φ70	M8
	F10	Φ102	Φ69	30	Φ42	Φ102	M10
AKQ600-1000	F12	Φ125	Φ98	50	Φ65	Φ125	M12
	F14	Φ140	Φ98	50	Φ65	Φ140	M16

Z

Z Type Multi Turn Electric Actuator

Outdoor electric device

Flameproof electric device

Integrated and adjustable outdoor electric devices

Integral and adjustable flameproof electric devices

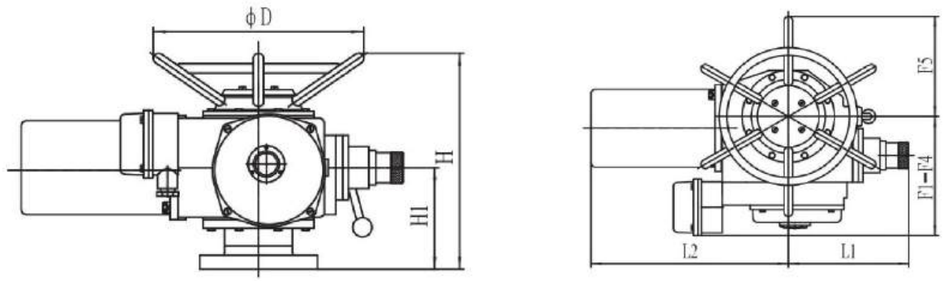
Z Type Multi Turn Electric Actuator Performacne Date

Model	Rated Torque (N.м)	Nominal Thrust (Kn)	Maximum Valve Stem Diameter (Mm)	Maximum Number Of Rotations (Turns)	Manual Speed Ratio	Output Speed (R/Min)	Motor Power (Kw)	Reference Weight (Kg)
Z5	50	20	28	60	1:1	12	0.12	28
Z10	100	40	28	60	1:1	24/36	0.25/0.37	45
Z15	150					24/36	0.37/0.55	50
Z20	200	100	40	60	1:1	18/24	0.37/0.55	55
Z30	300					18/24	0.55/0.75	58
Z45	450	150	48	120	1:1 (20:1)	24/36	1.1/1.5	110
Z60	600					24/36	1.5/2.2	120
Z90	900	200	60	120	1:1 (25:1)	24/36	2.2/3	139
Z120	1200					24/36	3/4	142
Z180	1800	325	70	150	22.5:1	18/24	4/5.5	250
Z250	2500					18/24	5.5/7.5	255
Z350	3500	700	80	150	20:1	18/24	7.5/10	330
Z500	5000					18/24	10/15	350

Note 1: Other speeds are available upon user request: 12/18/24/30/36/42/48/60 (r/min)

Note 2: When the product provides a four-layer counter, the maximum number of rotations is the number of rotations in Table 1 multiplied by 10

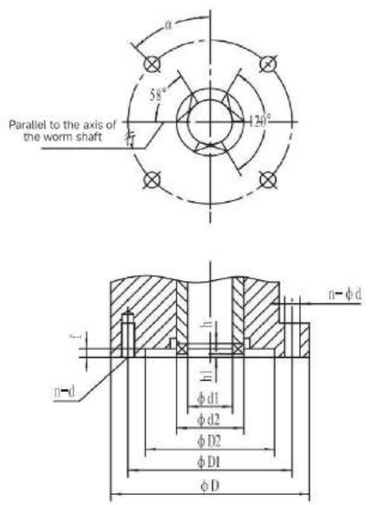
Z Type Multi Turn Electric Actuator Dimension



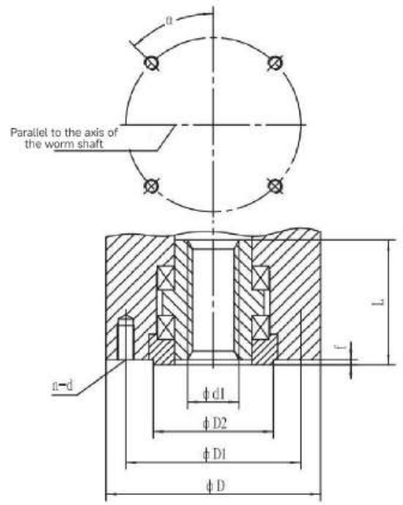
Specifications	H	H1	L1	L2	F1	F2	F3	F4	F5	ΦD
Z5	230	95	140	250	215	-	-	-	120	170
Z10/Z30	320	130	200	315	255	320	350	375	175	350
Z45/Z60	415	195	280	430	275	395	370	395	235	470
Z90/Z120	455	195	285	490	310	430	405	430	250	500
Z180/Z250	585	250	320	530	360	480	455	480	295	320
Z350/Z500	720	280	400	1080	420	445	420	545	440	565

Tip: F1-Outdoor electric device; F2-Flameproofelectric device; F3-Integral /regulated outdoor electric device; F4-ntegral /regulated Flameproof electric device

Z Type Multi Turn Electric Actuator Flange Size



Connection diagram of Torque-type



Connection diagram of Thrust-type

Connection Size Of Torque-Type

Specifications	Torque-Type Jb2920											
	Flange	D	D1	D2(H9)	H1	F	H	D1	D2	D	N	A
Z5/10/15	2	145	120	90	2	4	8	30	45	M10	4	45°
	2I	115	95	75			6	26	39	M8		
Z20/30	3	185	160	125			10	42	58	M12		
	3I	145	120	90			8	30	45	M10		
Z45/60	4	225	195	150		5	12	50	72	Φ18		
Z90/120	5	275	235	180			14	62	82	Φ22		
	5I	230	195	150			12	50	72	Φ18		
Z180/250	7	330	285	220	3	6	16	72	98	Φ26		
Z350/500	8	380	340	280			20	83	118	Φ22	8	22.5°

Connection Size Of Thrust-Type

Specifications	Thrust-Type Gb12222									
	Flange	D	D1	D2(F8)	F	D1 Max	D	L	N	A
Z 5/10/15	F10	125	102	70	3	T28	M10	40	4	45°
Z 20/30	F14	175	140	100	4	T36	M16	55		
Z 45/60	F16	210	165	130	5	T44	M20	70		
Z 90/120	F25	300	254	200		T60	M16	90	8	22.5°
Z 180/250	F30	350	298	230		T70	M20	110		
Z 350/500	F35	415	356	260		T80	M30	150		

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Q

Q Type Part Turn Electric Actuato

Outdoor electric device

Flameproof electric device

Integral / regulated outdoor electric device

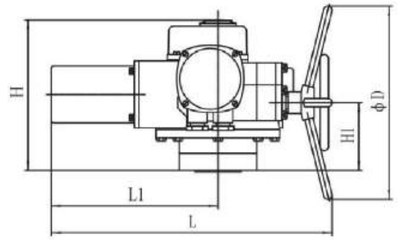
Integral/regulated Flameproof electric device

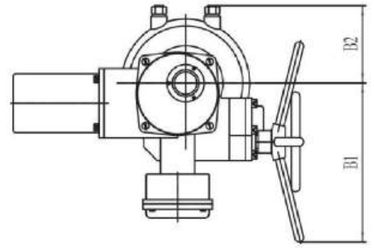
Q Type Part Turn Electric Actuator Performance Date

Specifica Tions	Nominal Torque (N.m)	Maximum Diameter (Mm)	Manual Speed Ratio	Output Speed(R/Min)						Reference Weight (Kg)
				0.5	1	1.5	2	3	4	
				Power Of Motor(Kw)						
Q10	100	28	88	0.03	0.06	0.09	0.09	0.18	0.18	30
Q20	200	28	88	0.06	0.09	0.12	0.12	0.25	0.25	30
Q30	300	28	88	0.06	0.12	0.18	0.18	0.37	0.37	35
Q40	400	28	88	0.09	0.18	0.25	0.25	-	-	38
Q60	600	42	74	0.18	0.18	0.25	0.25	0.55	0.55	65
Q90	900	42	74	0.18	0.25	0.37	0.37	0.75	0.75	70
Q120	1200	42	74	0.18	0.37	0.55	0.55	1.1	1.1	75
Q200	2000	60	67	0.37	0.55	0.75	1.1	-	-	100
Q250	2500	60	67	0.55	0.55	0.75	1.1	-	-	100
Q300	3000	60	67	0.55	0.75	1.1	-	-	-	100
Q400	4000	60	67	0.55	0.75	-	-	-	-	100
Q500	5000	60	67	0.75	1.1	-	-	-	-	105

- **Tip:**Thicken up for regular supply

Q Type Part Turn Electric Actuator Outer Dimension

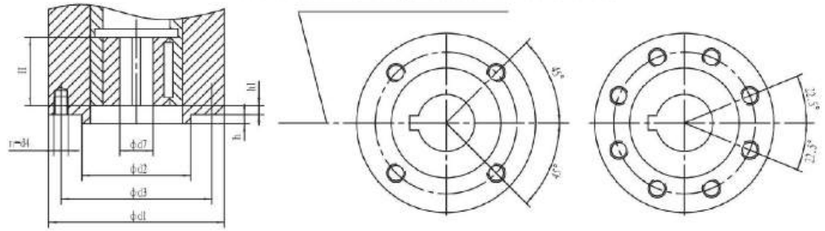




Specifications	B1	B2	H1	H2	L	L1	ΦD
Q10-40	210	100	230	390	480	260	200
Q10-40B	315	100	265	445	530	310	200
Q60-120	255	145	295	455	550	325	375
Q60-120B	360	145	340	510	585	365	375
Q200- 500	285	180	315	460	665	390	510
Q200- 500B	390	180	350	495	665	390	510

Q Type Part Turn Electric Actuator Flange Size

The full shutdown time is parallel to the axis of the motor.



Flange	Specifications	D1	D2(F8)	D3	N-D4	D7		H	H	H1
						Ex-Factory	Max			
F05	Q10	65	35	50	4-M6	/	22	40	3	3
F07	Q20	90	55	70	4-M8	/	28	45	3	3
F10	Q30	125	70	102	4-M10	/	28	45	3	3
	Q40									
	Q60					/	42	65		
F12	Q90	150	85	125	4-M12	/	42	65	3	3
F14	Q120	175	100	140	4-M16	/	42	65	3	3
	Q200					60 key18	60	80		2
	Q250									
F16	Q300	210	130	165	4-M20	60 key18	60	80	3	2
	Q400									
	Q500									
F25	Q500	300	200	254	8-M16	60	60	100	3	2

Tip: The connection size can be customized as required by the user.

Q type partial rotating valve electric device

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Changzhou Xinneng Automatic Control Equipment Co., Ltd

CND-Z

CND-Z Multi Turn Intelligent Electric Actuator

CND-Z series is a Multi Turn intelligent non-invasive electric device, with theintroduction of the latest analog anddigitaltechnology,advancedintegratedchipdesign,andall-chinese menu operation interface,which makes its perfect function andexcellentperformance.

Productappearance lightweight,convenientdebugging, simple operation.Suitable for thousands of valve disc to do linear movement ofthe valve, such as globe valve, gate valve, throttle valve, diaphragm valve, gate, etc., widelyused in thousands of electric power, steel, petroleum, chemical, oil pipeline, watertreatment, food and other control fields.

CND-Z Multi Turn Intelligent Electric Actuator Performance Date

Specifications	Nominal Torque (N.m)	Nominal Thrust (Kn)	Maximum Diameter (Mm)	Maximum Number Of Cycles	Manual Speed Ratio	Output Speed (R/Min)	Power Of Motor (Kw)	Referenc E Weight (Kg)
CND-Z5(T)	50	20	28	60	1:1	12	0.12	28
CND-Z10(T)	100	40	28	60	1:1	24/36	0.25/0.37	45
CND-Z15(T)	150					24/36	0.37/0.55	50
CND-Z20(T)	200	100	40	60	1:1	18/24	0.37/0.55	55
CND-Z30(T)	300					18/24	0.55/0.75	58
CND-Z45(T)	450	150	48	120	1:1 (20 : 1)	24/36	1.1/1.5	110
CND-Z60(T)	600					24/36	1.5/2.2	120
CND-Z90(T)	900	200	60	120	1:1 (25 : 1)	24/36	2.2/3	139
CND-Z120(T)	1200					24/36	3/4	142
CND-Z180(T)	1800	325	70	150	22.5 : 1	18/24	4/5.5	250
CND-Z250(T)	2500					18/24	5.5/7.5	255
CND-Z350(T)	3500	700	80	150	20 : 1	18/24	7.5/10	330
CND-Z500(T)	5000					18/24	10/15	350

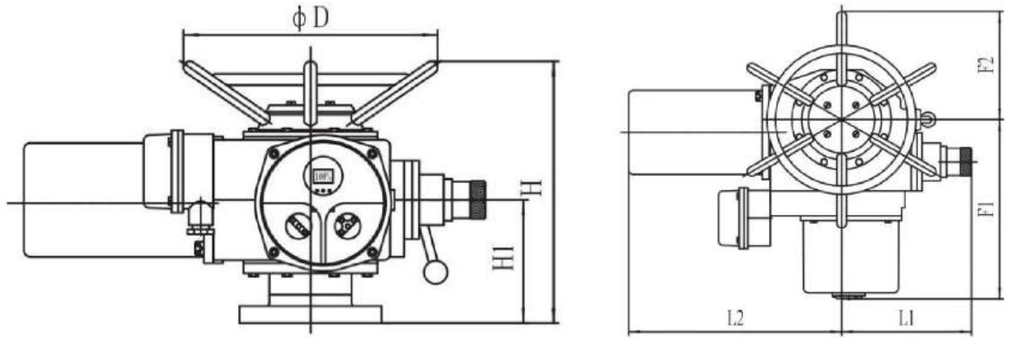
Tip1: Additional speeds can be provided at the request of the user:12/18/24/30/36/42/48/60(r/min)

Tip2: When the product provides a four-tier counter, the maximum number ofcircles is the number of circles in the table multiplied by 10

Tip3: With T to represent inteligent adjustment type, without T to representintelligent switch type

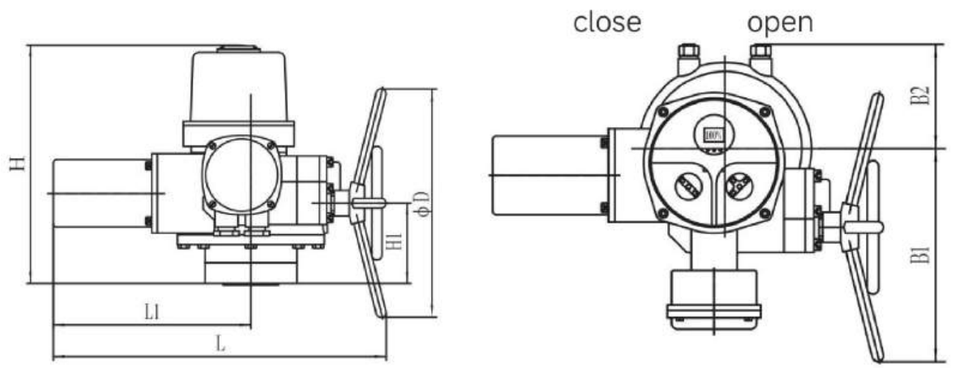
CND-Z multi-rotation intelligent electric device

CND-Z Multi Turn Intelligent Electric Actuator Outer Dimension



Specifications	H	H1	L1	L2	F1	F2	Φd
CND-Z5(T)	230	95	140	250	335	120	170
CND-Z10～Z30(T)	320	130	200	315	375	175	350
CND-Z45～Z60(T)	415	195	280	430	395	235	470
CND-Z90～Z120(T)	455	195	285	490	430	250	500
CND-Z180～Z250(T)	585	250	320	530	480	295	320
CND-Z350～Z500(T)	720	280	400	1080	545	440	565

CND-Q Part Turn Inteligent Electric Actuator Outer Dimension



Specifications	B1	B2	H1	H	L1	L	Φd
CND-Q10-30 (T)	315	100	90	445	310	530	200
CND-Q60-120 (T)	360	145	130	510	365	585	375
CND-Q200～500 (T)	390	180	120	495	390	665	510

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CND-Q

CND-Q Part Turn Intelligent Electric Actuator

CND-Q series is part of the rotary intelligentnon-invasive electric devices, the introduction ofthe latest analog and digital technology, advancedintegrated chip design,Chinese menu operationinterface, created its perfect function, excellentperformance.Product appearance lightweightconvenient debugging, simple operation.It is widelyused in the fields of electric power, iron and steel,petroleum, chemical industry, oil pipeline, water treatment, food and so on.Is a newgeneration of valve control experts.

CND-Q Part Turn Intelligent Electric Actuator Performance Data

Specifications	Nominal Torque (N.m)	Maximum Diameter (Mm)	Manual Speed Ratio	Output Speed(R/Min)						Reference Weight (Kg)
				0.5	1	1.5	2	3	4	
				Power Of Motor(Kw)						
CND-Q10(T)	100	28	88	0.03	0.06	0.09	0.09	0.18	0.18	30
CND-Q20(T)	200	28	88	0.06	0.09	0.12	0.12	0.25	0.25	35
CND-Q30(T)	300	28	88	0.06	0.12	0.18	0.18	0.37	0.37	35
CND-Q40(T)	400	28	88	0.09	0.18	0.25	0.25	-	-	43
CND-Q60(T)	600	42	74	0.18	0.18	0.25	0.25	0.55	0.55	70
CND-Q90(T)	900	42	74	0.18	0.25	0.37	0.37	0.75	0.75	75
CND-Q120(T)	1200	42	74	0.18	0.37	0.55	0.55	1.1	1.1	80
CND-Q200(T)	2000	60	67	0.37	0.55	0.75	1.1	-	-	110
CND-Q250(T)	2500	60	67	0.55	0.55	0.75	1.1	-	-	110
CND-Q300(T)	3000	60	67	0.55	0.75	1.1	-	-	-	110
CND-Q400(T)	4000	60	67	0.55	0.75	-	-	-	-	110
CND-Q500(T)	5000	60	67	0.75	1.1	-	-	-	-	115

· **Tip:** Thicken up for regular supply

ZL

ZL Model Multi Ture Lectric Actuator

ZL series multi-turn valve electric actuator is an improved and perfected structure based on the original mature products, with optimized protection performance and key components. It is a driving device that realizes intelligent opening, closing and regulating control of valves. This series of actuators has the characteristics of full functions, reliable performance, advanced control system, small size, light weight, easy use and maintenance, etc.

ZL series actuators are suitable for valves with linear motion of opening and closing parts, such as gate valves, stop valves, diaphragm valves, plunger valves, intercept valves, sluice gates, etc. They can be used for rising stem valves and concealed stem valves. When matched with turbine boxes, they can be used for ball valves, butterfly valves and dampers, etc. They can perform local control, remote control and automatic control on valves, and are widely used in industries such as electricity, metallurgy, petroleum, chemical industry, pharmaceuticals, water services, and agricultural irrigation.

Working environment and main technical conditions

1.Power supply: three-phase AC380V, 50Hz;

Optional power supply: three-phase AC400V, 415V, 660V (50Hz, 60Hz);Single-phase AC220V, 110V (50HZ, 60HZ);DC24V,48V,84V

2.Ambient temperature: -20°C~+60°C;

Optional temperature: -40°C~+70°C

3.Relative humidity: no more than 95% (at 25°C)

4.Working environment: The ordinary type is used in places without flammable, explosive and highly corrosive media; the flameproof type (ExdIIBT4) is used in environments of IIA,Explosive gas mixtures of class IIB, groups T1-T4

5.Protection level: IP65, IP67 (IP68 for special order)

6.The motor is of short-time duty type: rated operating time is 10 minutes (15-30 minutes for special orders), and Class F insulation.

7. Anti-corrosion coating: high temperature electrostatic spray anti-corrosion epoxy plastic powder.

Main functional features of intelligent electric actuators

- Mechatronic design, small size and light weight
- It adopts digital integrated chip, with powerful functions and high precision.
- With non-intrusive design, parameter setting and debugging can be done through knobs or infrared remote control without opening the box cover. The operation is simple and fast, and the sealing is higher.
- The stroke displacement adopts an absolute encoder, the valve position will not be lost, the anti-interference ability is strong, the accuracy is higher, and the service life is long.
- The LCD subtitles are available in Chinese or English.
- It has functions such as travel limit protection, torque protection, stall alarm, overheat protection, signal failure protection, power phase loss protection, and automatic phase sequence identification and correction.
- Intelligent types include intelligent switch type, intelligent adjustment type, and advanced intelligent type.

Intelligent switch type input signal

- **Input signal:** 24VDC pulse or level signal.
- **Output signal:** Relay output, contact rated capacity: 5A, 250VAC; 5A, 30VDC.
- **Output position analog signal:** 4-20mA.

Intelligent adjustment type

- **Analog input signal:** 4-20mA
- **Analog output signal:** 4-20mA
- **Switching input signal:** 24VDC pulse or level signal.
- **Switching output signal:** relay output, rated contact capacity: 5A, 250VAC, 5A, 30VDC.
- **Basic error:** ⩽ 1

Advanced intelligent type

- It can support ESD emergency override protection, bus communication, Bluetooth, wireless control and other functions.

Specifications & Parameters

Model	Nominal Torque Nm	Output Speed R/Min	Output Shaft Revolutions (Turns)	Motor Power (Kw)	Manual Speed Ratio	Maximum Stem Diameter (Mm)	Reference Weight (Kg)
ZL5	50	18	180	0.12	1:1	30	20
ZL10	100	18	180	0.18	1:1	30	20
		24	180	0.25	1:1	30	20
		36	180	0.37	1:1	30	20
		48	180	0.55	1:1	30	20
ZL15	150	18	180	0.25	1:1	30	20
		24	180	0.37	1:1	30	20
		36	180	0.55	1:1	30	20
		48	180	0.75	1:1	30	20
ZL20	200	18	180	0.37	1:1	40	29
		24	180	0.55	1:1	40	30
		36	180	0.75	1:1	40	34
		48	180	1.1	1:1	40	35
ZL30	300	18	180	0.55	1:1	40	30
		24	180	0.75	1:1	40	34
		36	180	1.1	1:1	40	35
		48	180	1.5	1:1	40	35
ZL45	450	18	1300	0.75	1:1	50	45
		24	1300	1.1	1:1	50	45
		36	1300	1.5	1:1	50	45
		48	1300	2.2	1:1	50	45
ZL60	600	18	1300	1.1	1:1	50	45
		24	1300	1.5	1:1	50	45
		36	1300	2.2	1:1	50	45
		48	1300	3	1:1	50	45
ZL90	900	18	5500	1.5	1:4	60	62
		24	5500	2.2	1:4	60	62
		36	5500	3	1:4	60	62
		48	5500	4	1:4	60	62
ZL120	1200	18	5500	2.2	1:4	60	63
		24	5500	3	1:4	60	63
		36	5500	4	1:4	60	63
		48	5500	5	1:4	60	63

Note: The above parameters are for normal supply. If you have special requirements , please indicate them when ordering .

ZL model electric actuator

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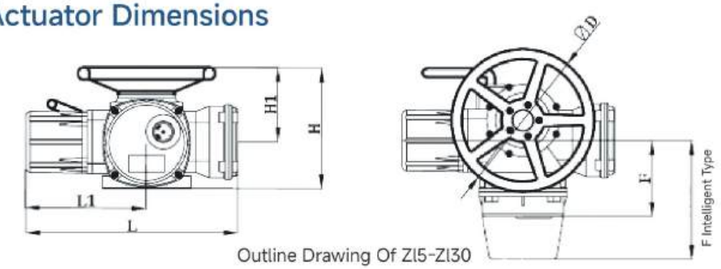
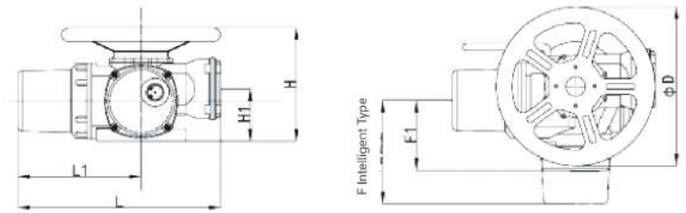
Zl Electric Actuator Dimensions



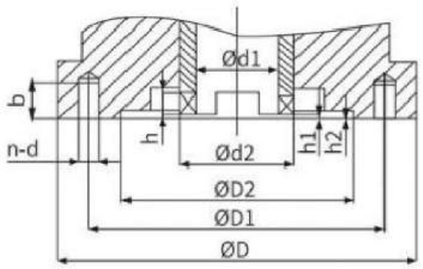
Outline Drawing Of Zl5-Zl30

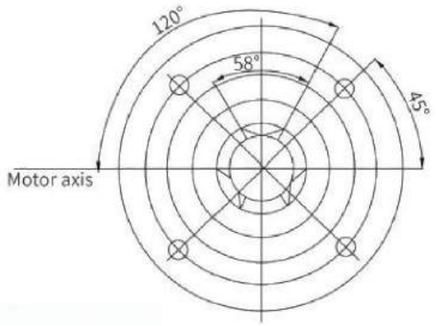


Zl45-Zl120 Outline Drawing

Model	L	L1	H	H1	F	F (Smart Model)	D
ZL 05-15	430	252	230	97	159	227	298
ZL 20-30	443	252	250	97	159	227	298
ZL 45-60	520	330	300	150	250	318	395
ZL 90-120	670	460	430	270	450	518	550

Flange Structure And Connection Dimensions





Zl Actuator Interface Dimensions (Torque Type)

Actuator Model	Flange Model	Actuator Output Interface Size Details (Torque Type Jb 292 0)										
		D	D1	D2	D1	D2	N-D	B	Screw Hole Direction	H	H1	H2
ZL05 ZL10 ZL15	2i	115	95	75	26	39	4-M8	20	45°	6	2	5
	2	145	120	90	30	45	4-M10	20	45°	8	2	5
ZL20 ZL30	3i	145	120	90	30	45	4-M10	20	45°	8	2	5
	3	185	160	125	42	58	4-M12	20	45°	10	2	5
ZL45 ZL60	4	225	195	150	52	68	4-M16	27	45°	12	2	5
ZL90 ZL120	5i	225	195	150	52	68	4-M16	27	45°	12	2	5
	5	275	235	180	62	80	4-M20	40	45°	14	2	5

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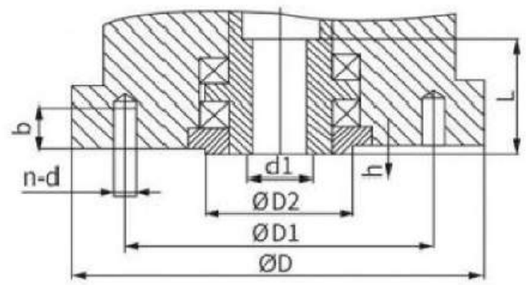
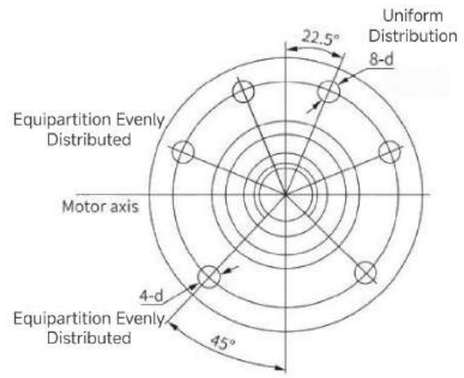




ZL Actuator Interface Dimensions (Thrust Type)

Actuator Model	Flange Model	Actuator Output Interface Size Details (Thrust Type Gb12222)								
		D	D1	D2	D1 Trapezoidal Thread (Max)	N-D	B	Screw Hole Direction	H	L
ZL05 / ZL10 /Z15	F10	125	102	70	Tr28	4-M10	16	45°	3	40
ZL20 / ZL30	F14	175	140	100	Tr36	4-M16	25	45°	4	55
ZL45 / ZL60	F16	210	165	130	Tr44	4-M20	35	45°	5	70
ZL90 / ZL120	F25	300	254	200	Tr60	8-M16	30	22.5°	4	90

QL

QL Series Partial Rotary Electric Actuator

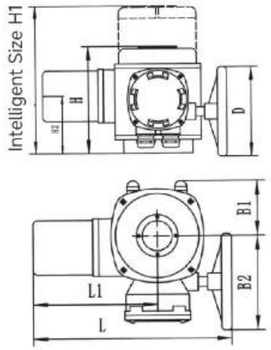
The QL series of rotary valve electric devices includes ordinary, integral, regulating, intelligent, explosion-proof and other series. Suitable for controlling butterfly valves, ball valves, plug valves, and other valves that rotate 90 degrees.

This series of products inherits the structural advantages of the Q series, with small size, light weight, high protection level, efficient mechanical transmission system, stable performance, and beautiful appearance.

Model Specifications And Main Performance Parameters

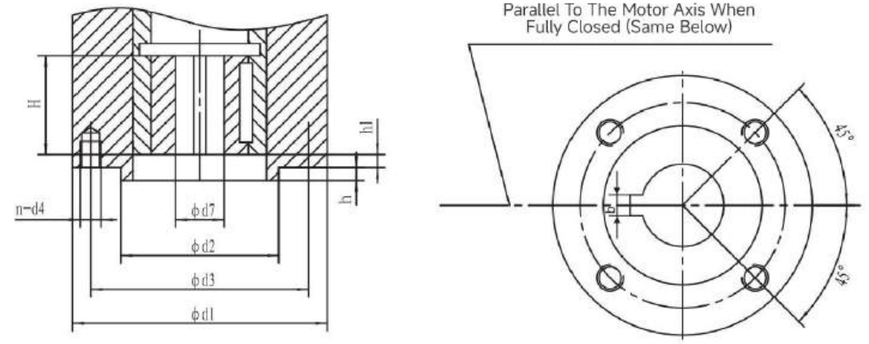
Model	Torque N.m	Speed R/Min	Voltage 380v		Voltage 220v		Manual Speed Ratio	Maximum Valve Stem	Reference Weight (Kg)
			Power W	Current A	Power W	Current A			
QL05	50	1	45	0.16	60	0.29	60 : 1	19	8
QL10	100	1	60	0.18	75	0.32	60 : 1	19	8
QL15	150	1	75	0.22	90	0.43	60 : 1	19	8
QL20	200	1	90	0.26	120	0.50	90 : 1	28	13
QL30	300	1	120	0.32	150	0.64	90 : 1	28	13
QL40	400	1	150	0.37	180	0.83	90 : 1	28	13
QL60	600	1	180	0.72	250	1.40	87 : 1	38	26
QL90	900	1	250	1.00	370	2.00	87 : 1	38	26
QL120	1200	1	250	1.00	370	2.00	87 : 1	38	26
QL150	1500	1	370	1.65	550	3.15	87 : 1	38	26
QL200	2000	0.5	370	1.65	550	3.15	348 : 1	55	35
QL300	3000	0.5	370	1.65	550	3.15	348 : 1	55	35
QL400	4000	0.5	550	2.7	-	-	348 : 1	55	35
QL500	5000	0.5	550	2.7	-	-	348 : 1	55	35

QL Appearance And Connection Dimensions



Model	B1	B2	H	H1	H2	L	L1	D
Q05/15	68	114	156	270	73	250	157	140
Q20/40	91	157	191	273	103	332	208	160
Q60/150	143	203	227	309	126	424	232	250
Q200/500	143	203	291	373	190	424	232	250

QL Appearance And Connection Dimensions



Model	Optional Flange Number	d1	d2	d3	n-d4	d7 (max)	b	H	h	H1
Q5-15	F05	92	/	50	4-M6	19	5	35	0	2
	F07	92	/	70	4-M8	19	5	35	0	2
Q20-40	F07	125	/	70	4-M8	28	8	42	0	3
	F10	125	/	102	4-M10	28	8	42	0	3
Q60-120	F10	150	/	102	4-M10	38	10	60	0	3
	F12	150	/	125	4-M12	38	10	60	0	3
	F14	197	/	140	4-M16	38	10	60	0	3
Q150	F14	197	/	140	4-M16	38	10	60	0	3
Q200-500	F14	215	/	140	4-M16	55	16	80	0	5
	F16	215	/	165	4-M20	55	16	80	0	5

AUKOMA

QC

QC Series Part Turn Electric Actuator

Compared with similar products, QC series valve electric actuators have excellent performance and indisputable advantages. Their appearance is delicate and small, beautiful and generous, with unique internal design, tough and wear-resistant, not easy to damage.

Small size: only 35% of similar products;Light and pleasant: weight equivalent to one third of a thousand similar products;

Beautiful and generous: die-casting aluminum alloy shell, fine and smooth appearance and reduce electromagnetic interference;Full functions: switch type, passive contact type, proportional type, intelligent adjustment type everything;

Precision wear-resistant: the perfect combination of worm gear and worm gear, harmonious linkage, the integration of worm gear output effectively reduces the connection gap, greatly improving the transmission precision;Easy to use: no spot inspection, no refueling, rust and waterproof, installation at any Angle;

Multiple protection: electrical limit, mechanical limit, overheating protection, overload protection, dehumidification protection speed: 5 seconds, 8 seconds, 15 seconds, 30 seconds, 50 seconds, 100 seconds;

CNC adjustment: highly integrated intelligent module, highly accurate digital setting, digital setting, self-diagnosis, no locator, automatic control, one machine and multiple functions;Safety guarantee: AC1500V withstand voltage test, H class highly insulated motor, to ensure the safety of the body and production;

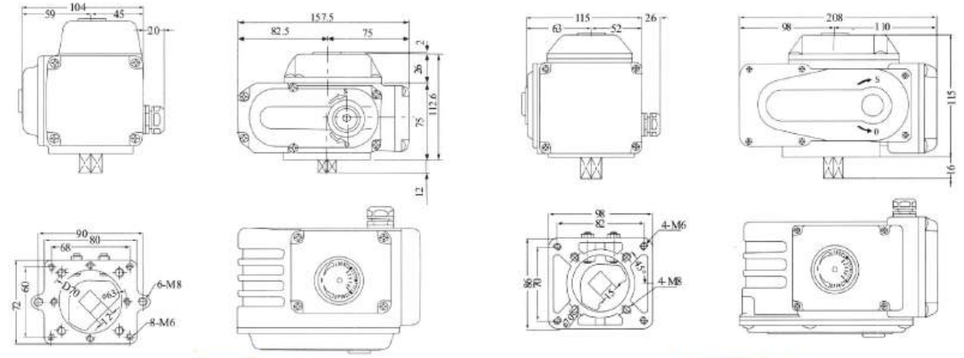
Supporting simple: single-phase, three-phase, dc power supply, simple external line

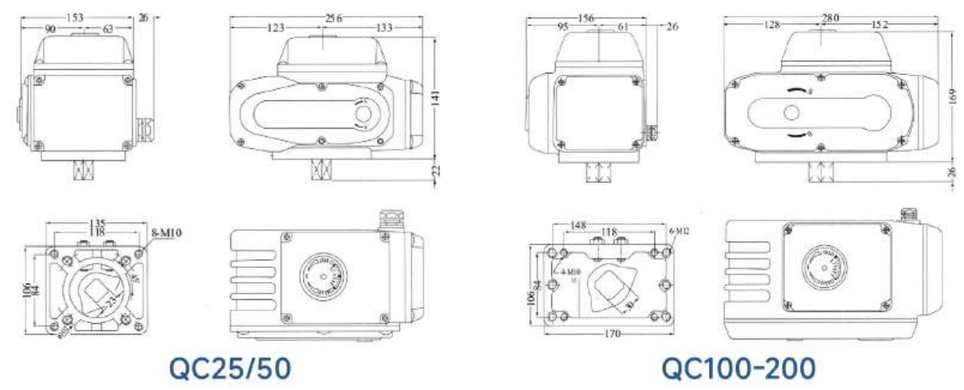
QC Series Part Turn Electric Actuator Performance Date

Model	QC-5	QC-10	QC-16	QC-25	QC-50	QC-100	QC-200
Power Supply	AC220 50/60HZ (AC24V, AC110V, AC380V,DC24V, DC220V)						
Torque	50N.M	100N.M	160N.M	250N.M	500N.M	1000N.M	2000N.M
Time	5,10,30	5,10,30,60	5,15,30,60	5,15,30,60	5,15,30,60	60	100
Motor	15W/H	23W/H	23W/H	50W/H	90W/H	100W/H	100W/H
Operating Current	0.25A	0.6A	0.7A	0.8A	1.2A	1.3A	1.3A
Weight	2.5KG	3.7KG	3.7KG	6.8KG	8.0KG	12KG	12KG
Rotation Angle	0~360°	0~90°					
Ambient Temperature	-30°C~ +60°C						
Voltage Resistance Value	1500VAC/1min						
Protection Level	IP-65						
Limit	Electrical machinery						
Manual Operation	Attached handle						
Installation Angle	Arbitrary angle						

- **Tip1:** "time"- The time it takes to form from 0 to 90 degrees "rotation angle"-The angle is adjustable
- **Tip2:** Selection and installation function: 1.Heating dehumidifier; 2.Over-torqueprotector; 3.4-20mA,0-10V,1-5Vintelligent regulating type

QC Series Part Turn Electric Actuator Dimension





AUKOMA

ZB

ZB Series Mining Explosion-Proof Valve Electric Actuator

The ZB series mining explosion-proof valve electric device is specially designed and manufactured for the use conditions in coal mines. Valves suitable for linear motion of valve plates, such as gate valves, distribution valves, and water gates; After adding a two-stage reduction gearbox, it can also be used for valves with a 90 degree rotation of the valve plate, such as butterfly valves, dampers, etc.

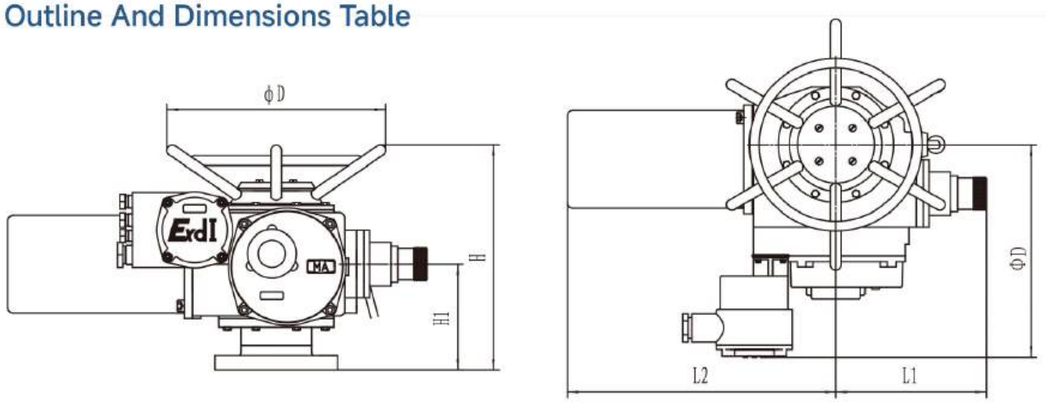
After being matched with the KXBC mining explosion-proof valve electric device control box, it can be connected with the DCS system to achieve automation control.

Design And Manufacturing Standards For ZB Series Mining Explosion Proof Valve Electric Actuator

Q/3204CN001-2011	Technical Specifications for Explosion proof Valve Electric Devices for Mining Applications
GB3836.1-2010	Electrical equipment for explosive gas atmospheres - Part 1: General requirements
GB3836.2-2010	Electrical equipment for explosive gas atmospheres - Part 2: Explosion proof type "d"

The explosion-proof type is mining explosion-proof type, with the explosion-proof mark of Exd I Mb.

Outline And Dimensions Table



Model	H	H1	L1	L2	F	ΦD
ZB10/ZB15/ZB20/ZB30	320	130	200	295-400	320	350
ZB45/ZB60	415	195	280	395-545	395	470
ZB90/ZB120	455	195	285	412-565	430	500
ZB180/ZB250/ZB350	585	250	320	475-700	480	320

ZBY

ZBY Series Mining Explosion-Proof Integrated Valve Electric Actuator

The ZBY series mining explosion-proof integrated valve electric device (hereinafter referred to as the electric device) is a new generation of intelligent control mechanism for mining valves. It comes with an intelligent control unit and is designed with an electromechanical integration mechanism, which can achieve on-site control, centralized control, and remote control of mining valves without the need for a dedicated control box. Modbus, Profibus and other bus communication can be configured, with 485 bus interface to achieve data communication.

This series of electric devices is very convenient for users to install, debug, and maintain, which can greatly save installation costs and shorten installation cycles. It is specially designed and manufactured for the use conditions and intelligent development of coal mines.

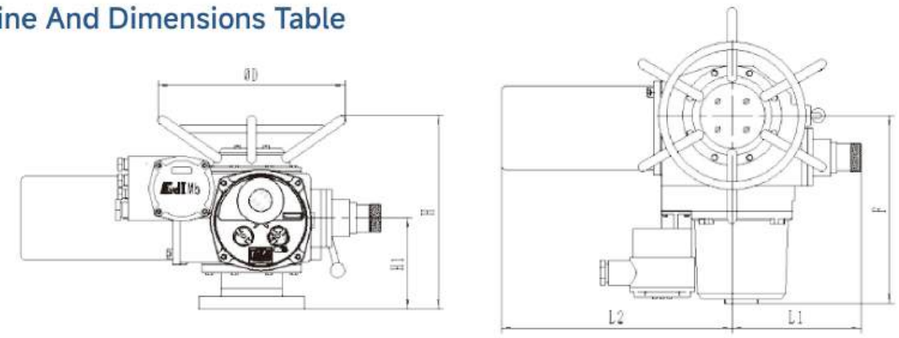
ZBY electric installation is suitable for valves with linear motion of valve plates, such as gate valves, water distribution valves, water gate valves, etc; After adding a two-stage reduction gearbox, it can also be used for valves with a 90 degree rotation of the valve plate, such as butterfly valves, dampers, etc.

Design And Manufacturing Standards For ZBY Series Mining Explosion Proof Integrated Valve Electric Actuator

Q/3204CN 004-2019	Technical Specifications for Explosion proof Integrated Valve Electric Device for Mining Applications
GB3836.1-2010	Explosive Atmosphere Part 1: Equipment Communication Requirements
GB3836.2-2010	Explosive Atmosphere Part 2: Equipment Protected by Explosion proof Type "d"

Explosion proof type: mining explosion-proof type, explosion-proof mark is Exdl Mb.

Outline And Dimensions Table



Model	H	H1	L1	L2	F	ΦD
ZBY10/ZBY15/ZBY20/ZBY30	300	130	200	295-385	410	350
ZBY45/ZBY60	430	195	280	440	435	470
ZBY90/ZBY120	440	195	285	530	465	500

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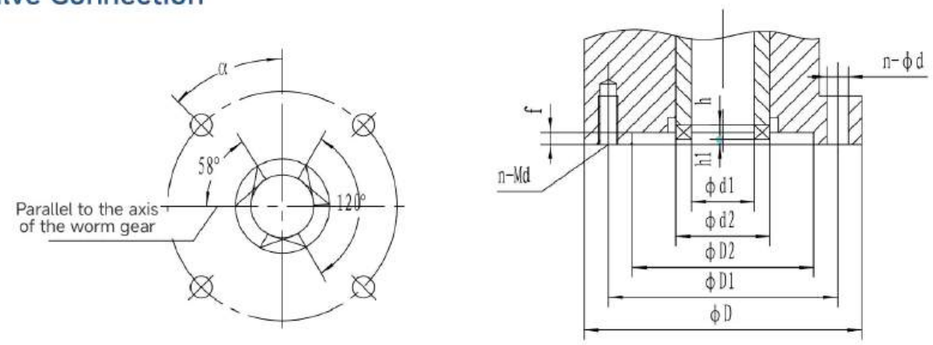
ZB/ZBY Model Specifications And Main Performance Parameters

Model	Rated Torque (N·m)	Maximum Valve Stem Diameter (Mm)	Maximum Number Of Turns (Circle)	Manual Speed Ratio	Output Speed (R/Min)	Motor Power (Kw)	Motor Current (A)		Reference Weight (Kg)
							660v	380v	
ZB/ZBY10	100	28	400	1:1	24	0.25	0.75	1.3	64
ZB/ZBY15	150	28	400	1 :1	24	0.37	0.92	1.6	65
ZB/ZBY20	200	40	400	1 :1	24	0.55	1.4	2.4	67
ZB/ZBY30	300	40	400	1:1	24	0.75	1.8	3.0	69
ZB/ZBY45	450	48	400	1:1	24	1.1	1.9	3.4	114
ZB/ZBY60	600	48	400	1:1	24	1.5	2.6	4.5	120
ZB/ZBY90	900	60	400	1:1	24	2.2	3.8	6.5	144
ZB/ZBY120	1200	60	400	1:1	24	3	4.7	8.2	147
ZB180	1800	70	400	22.5 :1	24	5.5	7.5	13	264
ZB250	2500	70	400	22.5:1	24	7.5	9.5	16.5	269
ZB350	3500	75	400	22.5 :1	24	11	12.1	21	275

Note: Other speeds can be provided to meet user needs.

Structural Schematic Diagram And Dimensions Of ZB/ZBY And Valve Connection



Model	Torque Type Jb920											
	Flange Number	D	D1	D2(H9)	H1	F	H	D1	d2	d	n	α
ZB/ZBY10/15	2	145	120	90	2	4	8	30	45	M10	4	45°
ZB/ZBY20/30	3	185	160	125			10	42	58	M12		
ZB/ZBY45/60	4	225	195	150		5	12	50	72	Φ18		
ZB/ZBY90/120	5	275	235	180			14	62	82	Φ22		
ZB180/250	7	330	285	220	3	6	16	72	98	Φ26		
ZB350	8	380	340	280			20	83	118	Φ22	8	22.5°

QB

QB Series Mining Explosion-Proof Valve Electric Actuator

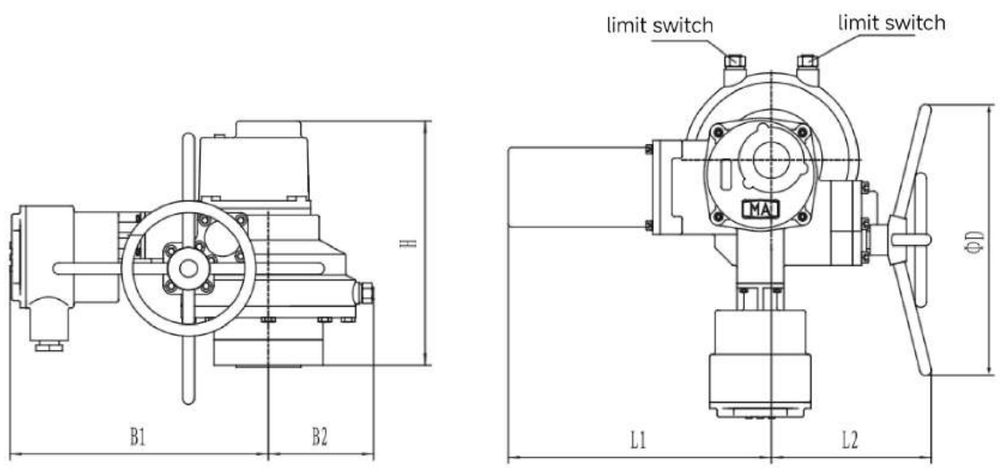
The QB series mining explosion-proof valve electric device is specially designed and manufactured for the use conditions in coal mines. Suitable for valves with 90 degree rotation of valve plates, such as butterfly valves, dampers, etc.

After being matched with the KXBC mining explosion-proof valve electric device control box, it can be connected with the DCS system to achieve automation control.

Q/3204CN001-2011	Technical Specifications for Explosion proof Valve Electric Devices for Mining Applications
GB3836.1-2010	Electrical equipment for explosive gas atmospheres - Part 1: General requirements
GB3836.2-2010	Electrical equipment for explosive gas atmospheres - Part 2: Explosion proof type "d"

The explosion-proof type is mining explosion-proof type, with the explosion-proof mark ExdIMb.

Outline And Dimensions Table



Model	H	B1	B2	L1	L2	ΦD
QB10-QB40	265	315	100	310	220	200
QB60-QB120	380	355	145	340	230	375
QB200-QB500	350	385	180	455	260	510

QBY

QBY Series Mining Explosion-Proof Integrated Valve Electric Actuator

QBY Partial Rotary Mining Explosion proof Integrated Valve Electric Device (hereinafter referred to as the electric device) is a new generation of intelligent control mechanism for mining valves. It comes with an intelligent control unit and is designed with an electromechanical integration mechanism. It can achieve on-site control, centralized control, and remote control of mining valves without the need for a dedicated control box.

Modbus, Profibus and other bus communication can be configured, with 485 bus interface to achieve data communication. This series of electric devices is very convenient for users to install, debug, and maintain, which can greatly save installation costs and shorten installation cycles. It is specially designed and manufactured for the use conditions and intelligent development of coal mines.

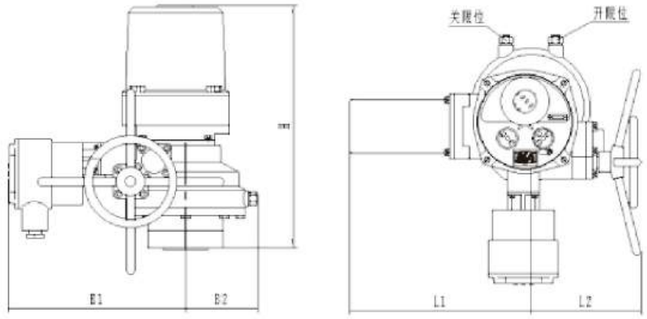
QBY electric installation is suitable for valves with 90 degree rotation of valve plates, such as butterfly valves, dampers, etc.

QBY Series Mining Explosion-Proof Integrated Valve Electric Actuator

Q/3204CN 004-2019	Technical Specifications for Explosion proof Integrated Valve Electric Device for Mining Applications
GB3836.1-2010	Explosive Atmosphere Part 1: General Requirements for Equipment
GB3836.2-2010	Explosive Atmosphere Part 2: Equipment Protected by Explosion proof Type "d"

The explosion-proof type is mining explosion-proof type, with the explosion-proof mark of Exd I Mb.

Outline And Dimensions Table



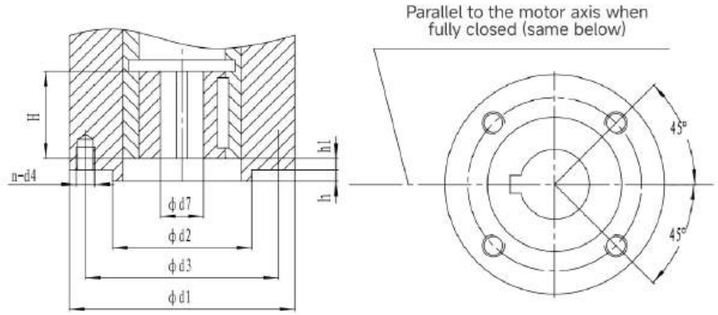
Model	H	B1	B2	L1	L2	ΦD
QBY10-QBY40	490	290	110	300	180	280
QBY60-QBY120	550	355	150	330	230	330

QB/QBY Model Specifications And Main Performance Parameters

Model	Rated Torque (N·m)	Maximum Stem Diameter (Mm)	Manual Speed Ratio	Output Speed (R/Min)	Switch Travel Time (S)	Motor Power (Kw)	Motor Current (A)		Reference Weight (Kg)
							660v	380v	
QB/QBY10	100	28	88	1	15	0.18	0.55	0.9	47
QB/QBY20	200	28	88	1	15	0.18	0.55	0.9	47
QB/QBY30	300	28	88	1	15	0.18	0.55	0.9	47
QB/QBY40	400	28	88	1	15	0.18	0.55	0.9	47
QB/QBY60	600	42	74	1	15	0.18	0.55	0.9	74
QB/QBY90	900	42	74	1	15	0.25	0.75	1.3	75
QB/QBY120	1200	42	74	1	15	0.37	0.92	1.6	75
QB200	2000	60	67	0.5	30	0.37	0.92	1.6	102
QB300	3000	60	67	0.5	30	0.55	1.4	2.4	104
QB500	5000	60	67	0.5	30	0.75	1.8	3.0	107

Note: Other speeds can be provided to meet user needs.

Structural Schematic Diagram And Dimensions Of QB/QBY And Valve Connection



Flange Number	Electric Installation Model	D1	D2 (F8)	D3	N-D4	D7		H	H	H1
						Ex-Factory	Maximum			
F05	QB/QBY10	65	35	50	4-M6	/	22	40	3	3
F07	QB/QBY20	90	55	70	4-M8	/	28	45	3	3
F10	QB/QBY30	125	70	102	4-M10	/	28	45	3	3
	QB/QBY40									
	QB/QBY60						42	65		
F12	QB/QBY90	150	85	125	4-M12	/	42	65	3	3
F14	QB/QBY120	175	100	140	4-M16		42	65	3	3
	QB200						60	80		2
F16	QB300	210	130	165	4-M20	60 Key 18	60	80	3	2
	QB500									

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QMB

QMB Mining Explosion Proof Small Valve Electric Actuator

The QMB mining explosion-proof small valve electric device is specially designed and manufactured for the use conditions in coal mines.

Suitable for controlling valves such as ball valves and butterfly valves, when paired with high-pressure small-diameter specialized valves, it is suitable for automatic control of coal mine fire protection, dust reduction, underground central water pump room jet pumps, and vacuum pumps.

The QMB type valve electric device has a small volume and light weight, and can be directly connected to the DCS system to achieve automation control,

Design and Manufacturing Standards for QMB Mining Explosion proof Small Valve Electric Actuator

Q/3204CN003-2011	Technical Specifications for QMB Mining Explosion proof Small Valve Electric Device
GB3836.1-2010	Electrical equipment for explosive gas atmospheres - Part 1: General requirements
GB3836.2-2010	Electrical equipment for explosive gas atmospheres - Part 2: Explosion proof type "d"

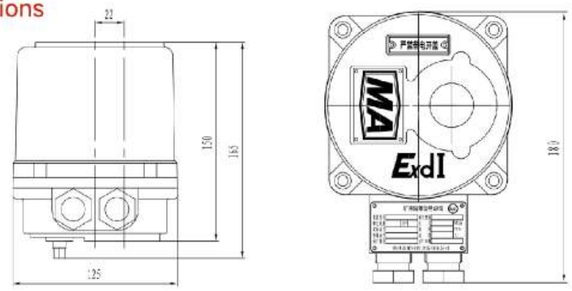
The explosion-proof type is mining explosion-proof type, with the explosion-proof mark of Exd I Mb.

Model specifications and main performance parameters

Model	Rated torque (N·M)	Maximum stem diameter (mm)	manual speed ratio	output speed (r/min)	switch travel Time (S)	motor power (W)	Motor current (A)	Reference weight (Kg)
QMB3.5-1.25G	35	□11x11	46	1.25	12	10	0.6	8
QMB5-1.25G	50	□11x11	46	1.25	12	15	0.6	8
QMB9-0.85G	90	28	46	0.85	18	40	1	20
QMB15-0.6G	150	28	46	0.6	25	40	1	20
QMB25-0.6G	250	28	46	0.6	25	60	1.2	20

Appearance and connection dimensions

QMB3.5/5 external dimensions



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MSB

MSB Mining Jet Pump Assembly

The MSB mining jet pump assembly consists of an SB type jet pump, an MGQ mining small-diameter high-pressure electric valve, positive and negative pressure sensors, pipelines, and fittings. Mainly used for large and medium-sized water pumps to suction water after removing the bottom valve, thus achieving pump operation without a bottom valve.

It can reduce labor intensity and achieve significant energy-saving effects, saving about 5% to 27% of electricity consumption per ton.

MSB-II Jet Pump Assembly Configuration Table (Single Pump Configuration)

serial number	Device Name	Model	Quantity	Remark
1	Jet pump	SB	1 unit	
2	Small caliber high-pressure electric valve for mining	MGQ	3 units	
3	manual valve		2 pieces	
4	Mining positive and negative pressure sensor		1 each	MSB-I type is a mechanical pressure gauge
5	Pipes and pipe fittings		According to on-site configuration	

Pipe diameter (mm): DN15, DN20, DN25

Pipeline pressure: 1.6MPa~16MPa.

FBG

FBG Mining Explsion-proof Electric Butterfly Valve for Gas Pipeline

FBG mining explosion-proof gas pipeline electric butterfly valve, hereinafter referred to as gas butterfly valve, is a specialized valve designed specifically for gas characteristics. It has been tested by the National Explosion proof Center and obtained the "Mining Product Safety Mark Certificate" issued by the National Safety Standards Center. It is currently the only product in China that has obtained gas valve safety certification.

FBG gas butterfly valve body inner wall integral vulcanization special formula rubber, containing various specialized characteristic components, has the characteristics of flame retardant, anti-static, corrosion-resistant, wear-resistant, high rebound, strong sealing, etc. Effectively prevent corrosion and wear of the valve body caused by gas, and extend the service life of the valve. The characteristics of flame retardancy and anti-static make gas pipelines safer and more reliable.

The structural design of bidirectional pressure bearing and bidirectional sealing, as well as the high rebound sealing formula, ensure that the gas valve has excellent sealing performance, truly achieving zero leakage and meeting the requirements for long-term safe operation of coal mines.

FBG electric gas butterfly valve is applied in gas extraction pump stations, gas power stations, coalbed methane transmission pipelines and other projects. 4) FBG electric gas butterfly valve has two types: split type and integrated type:

After being used in conjunction with the KXBC mining explosion-proof valve electric device control box, the split type electric gas butterfly valve can be connected to the DCS system to achieve automatic control of gas pipelines;

The integrated electric gas butterfly valve comes with a control system, which can be switched on or off remotely on the body, achieving remote switching or adjustment without the need for a separate control box.

Electric gas butterfly valve model	FBG
Optional forms of electric gas butterfly valve	Split type, integrated type
Optional functions of electric gas butterfly valve	Explosion proof switch type, explosion-proof regulating type
Electric gas butterfly valve suitable for medium and temperature	Methane, gas, and coal seam explosive hazardous gases; ≤120°C
voltage	380/660V
Nominal Diameter	DN50~DN1200
Nominal Pressure	PN1.0MPa~PN1.6MPa

Selection Table for Connection Sizes and Related Mining Explosion proof Valve Electric Actuator

Main Dimensions Of Gas Butterfly Valve (Mm)								Main Parameters Of Mining Explosion-Proof Electric Device		
Dn	L	Pn10			Pn16			Specification Model	Voltage (V)	Power Kw
		Φd	Φd1	N-Φd	Φd	Φd1	N-Φd			
DN50	108	165	125	8-Φ19	165	125	8-Φ19	QB/QBY10	380/660	0.18
DN65	112	185	145	8-Φ19	185	145	8-Φ19	QB/QBY10	380/660	0.18
DN80	114	200	160	8-Φ19	200	160	8-Φ19	QB/QBY10	380/660	0.18
DN100	127	220	180	8-Φ19	220	180	8-Φ19	QB/QBY20	380/660	0.18
DN125	140	250	210	8-Φ19	250	210	8-Φ19	QB/QBY20	380/660	0.18
DN150	140	285	240	8-Φ23	285	240	8-Φ23	QB/QBY30	380/660	0.18
DN200	152	340	295	8-Φ23	340	295	12-Φ23	QB/QBY60	380/660	0.18
DN250	165	395	350	12-Φ23	405	355	12-Φ28	QB/QBY90	380/660	0.25
DN300	178	445	400	12-Φ23	460	410	12-Φ28	ZB/ZBY10	380/660	0.25
DN350	190	505	460	16-Φ23	520	470	16-Φ28	ZB/ZBY15	380/660	0.37
DN400	216	565	515	16-Φ28	580	525	16-Φ31	ZB/ZBY20	380/660	0.55
DN450	222	615	565	20-Φ28	640	585	20-Φ31	ZB/ZBY30	380/660	0.75
DN500	229	670	620	20-Φ28	715	650	20-Φ34	ZB/ZBY30	380/660	0.75
DN600	267	780	725	20-Φ31	840	770	20-Φ37	ZB/ZBY45	380/660	1.1
DN700	292	910	840	24-Φ31	910	840	24-Φ37	ZB/ZBY45	380/660	1.1
DN800	318	1015	950	24-Φ34	1025	950	24-Φ41	ZB/ZBY60	380/660	1.5
DN900	330	1115	1050	28-Φ34	1125	1050	28-Φ40	ZB/ZBY90	380/660	2.2
DN1000	410	1230	1160	28-Φ37	1255	1170	28-Φ43	ZB/ZBY90	380/660	2.2
DN1100	450	1345	1270	32-Φ37	1355	1270	32-Φ44	ZB/ZBY120	380/660	3
DN1200	470	1455	1380	32-Φ40	1485	1390	32-Φ49	ZB/ZBY120	380/660	3

FBG Mining Explsion-proof Electric Butterfly Valve for Gas Pipeline

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Changzhou Xinneng Automatic Control Equipment Co., Ltd

FBGA

FBGA Mining Pneumatic Gas Butterfly Valve

FBGA mining pneumatic gas butterfly valve is a specialized valve designed specifically for gas characteristics, used in gas pipelines that require quick opening and closing. The inner wall of the gas butterfly valve body is made of a special formula rubber for overall vulcanization, which contains various specialized characteristic components and has the characteristics of flame retardancy, anti-static, corrosion resistance, wear resistance, high rebound, and strong sealing. Effectively prevent corrosion and wear of the valve body caused by gas, and extend the service life of the valve. The characteristics of flame retardancy and anti-static make gas pipelines safer and more reliable.

The structural design of bidirectional pressure bearing and bidirectional sealing, as well as the high rebound sealing formula, ensure that the gas valve has excellent sealing performance, truly achieving zero leakage and meeting the requirements for long-term safe operation of coal mines. FBGA pneumatic gas butterfly valve is applied in gas extraction pump stations, gas power stations, coalbed methane transmission pipelines and other projects.

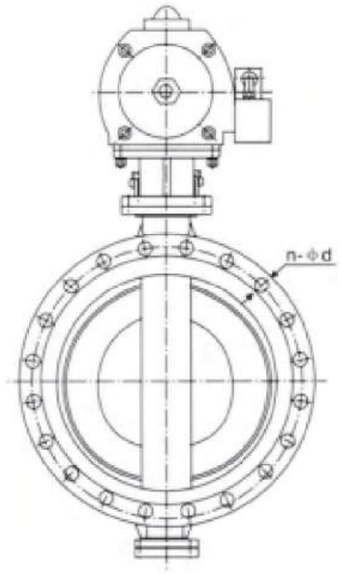
Execution Standard

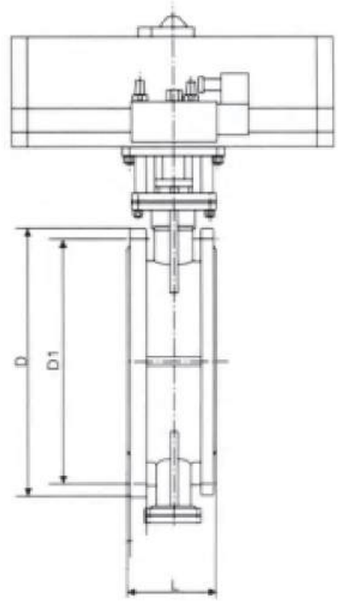
Design And Manufacturing	GB/T 12221-2005 GB/T1222-2005JB/T12238-2008
Pipeline Connection	GB9113.1~GB9113.4-2000
Inspection And Testing	GB/T 13927-2008 JB/T9092-1999

Main Technical Parameters

Pneumatic Gas Butterfly Valve Optional Form	Double acting, single acting
Optional Functions Of Pneumatic Gas Butterfly Valve	Explosion proof switch type, explosion-proof regulating type
Electromagnetic Valve/Positioner/Voltage	AC24V,DC24V,AC110V,AC220V
Air Supply Pressure	2bar~8bar
Nominal Diameter	DN50~DN1200
Nominal Pressure	PN1.0MPa~PN1.6MPa

Structural Diagram





Main Connection Dimensions

DN	L	PN10			PN16		
		ΦD	ΦD1	n-Φd	ΦD	ΦD1	n-Φd
DN100	127	220	180	8-Φ19	220	180	8-Φ19
DN125	140	250	210	8-Φ19	250	210	8-Φ19
DN150	140	285	240	8-Φ23	285	240	8-Φ23
DB200	152	340	295	8-Φ23	340	295	12-Φ23
DN250	165	395	350	12-Φ23	405	355	12-Φ28
DN300	178	445	400	12-Φ23	460	410	12-Φ28
DN350	190	505	460	16-Φ23	520	470	16-Φ28
DN400	216	565	515	16-Φ28	580	525	16-Φ31
DN450	222	615	565	20-Φ28	640	585	20-Φ31
DN500	229	670	620	20-Φ28	715	650	20-Φ34
DN600	267	780	725	20-Φ31	840	770	20-Φ37
DN700	292	910	840	24-Φ31	910	840	24-Φ37
DN800	318	1015	950	24-Φ34	1025	950	24-Φ41
DN900	330	1115	1050	28-Φ34	1125	1050	28-Φ40
DN1000	410	1230	1160	28-Φ37	1255	1170	28-Φ43
DN1100	450	1345	1270	32-Φ37	1355	1270	32-Φ44
DN1200	470	1455	1380	32-Φ40	1485	1390	32-Φ49

FBGA Mining Pneumatic Gas Butterfly Valve

AUKOMA

常州新能自控设备有限公司
Changzhou Xinneng Automatic Control Equipment Co., Ltd

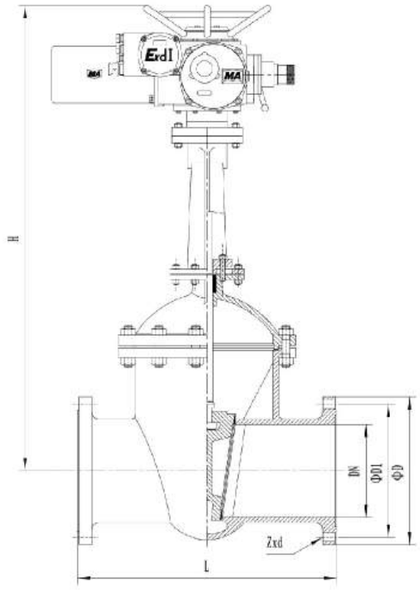
MZ

MZ Mining Electric Sniffing Valve

MZ mining electric gate valve is applied to the inlet and outlet pipelines of the water pump in the underground water pump room. There are two types: split type and integrated type. The split type electric gate valve is matched with the KXBC mining explosion-proof valve electric device control box and can be connected with the DCS system to achieve automatic control of the coal mine underground water pump room. The integrated electric gate valve comes with a control system, which can be switched on and off on the body or remotely, realizing remote switching or adjustment without the need for a separate control box.

Modbus, Profibus and other bus communication can be configured, with 485 bus interface to achieve data communication.

The MZ series mining electric gate valve is easy to install, with no installation direction requirements, bi-directional sealing, convenient maintenance, and long service life. 4) The existing manual valves in coal mines can be directly transformed into electric valves to improve automation control and not affect the normal production of coal mines



Execution Standard

Design And Manufacturing	GB/T 12221-2005GB/T 12222-2005/GB/T 12224-2005GB/T 12234-2007
Pipeline Connection	GB9113.1~GB9113.4-2000
Inspection And Testing	GB/T 13927-2008JB/T9092-1999

Selection Table For Connection Sizes And Related Mining Explosion Proof Valve Electric Actuator

MZ941H-16 Mining Electric Gate Valve

Main Dimensions Of Valve (Mm)						Main Parameters Of Mining Explosion-Proof Type/Mining Explosion-Proof Integrated Valve Electric Device			
Dn	L	D	D1	Zxd	H	Model	Torque (N·m)	Speed (R/Min)	Motor Power (Kw)
50	250	160	125	4xΦ18	615	ZB/ZBY10	100	24	0.25
65	265	180	145	4xΦ18	625	ZB/ZBY15	150	24	0.37
80	280	195	160	8x Φ18	700	ZB/ZBY15	150	24	0.37
100	300	215	180	8x Φ18	760	ZB/ZBY20	200	24	0.55
125	325	245	210	8x Φ18	825	ZB/ZBY20	200	24	0.55
150	350	280	240	8xΦ23	920	ZB/ZBY30	300	24	0.75
200	400	335	295	12x Φ23	1075	ZB/ZBY30	300	24	0.75
250	450	405	355	12x Φ25	1265	ZB/ZBY45	450	24	1.1
300	500	460	410	12x Φ25	1480	ZB/ZBY60	600	24	1.5
350	550	520	470	16xΦ25	1660	ZB/ZBY90	900	24	2.2
400	600	580	525	16x Φ30	1930	ZB/ZBY90	900	24	2.2
450	650	640	585	20xΦ30	2000	ZB/ZBY120	1200	24	3

MZ941H-25 Mining Electric Gate Valve

Main Dimensions Of Valve (Mm)						Main Parameters Of Mining Explosion-Proof Type/Mining Explosion-Proof Integrated Valve Electric Device			
Dn	L	D	D1	Zxd	H	Model	Torque (N·m)	Speed (R/Min)	Motor Power (Kw)
50	250	160	125	4xΦ18	625	ZB/ZBY10	100	24	0.25
65	265	180	145	8xΦ18	630	ZB/ZBY15	150	24	0.37
80	280	195	160	8xΦ18	710	ZB/ZBY15	150	24	0.37
100	300	230	190	8xΦ23	745	ZB/ZBY20	200	24	0.55
125	325	270	220	8xΦ25	860	ZB/ZBY20	200	24	0.55
150	350	300	250	8xΦ25	925	ZB/ZBY30	300	24	0.75
200	400	360	310	12xΦ25	1155	ZB/ZBY30	300	24	0.75
250	450	425	370	12xΦ30	1360	ZB/ZBY45	450	24	1.1
300	500	485	430	16xΦ30	1465	ZB/ZBY60	600	24	1.5
350	550	550	490	16xΦ34	1670	ZB/ZBY90	900	24	2.2
400	600	610	550	16xΦ34	1930	ZB/ZBY120	1200	24	3.0
450	650	660	600	20xΦ34	2150	ZB/ZBY120	1200	24	3.0

MZ mining electric sniffing valve

MZ941H-40 Mining Electric Gate Valve

Main Dimensions Of Valve (Mm)						Main Parameters Of Mining Explosion-Proof Valve Electric Device			
Dn	L	D	D1	Zxd	H	Model	Torque (N·m)	Speed (R/Min)	Motor Power (Kw)
50	250	160	125	4xΦ18	685	ZB/ZBY10	100	24	0.25
65	280	180	145	8xΦ18	725	ZB/ZBY15	150	24	0.37
80	310	195	160	8xΦ18	755	ZB/ZBY15	150	24	0.37
100	350	230	190	8xΦ18	805	ZB/ZBY20	200	24	0.55
125	400	270	220	8xΦ25	840	ZB/ZBY20	200	24	0.55
150	450	300	250	8xΦ25	960	ZB/ZBY30	300	24	0.75
200	550	375	320	12xΦ30	1100	ZB/ZBY45	450	24	1.1
250	650	445	385	12xΦ34	1440	ZB/ZBY45	450	24	1.1
300	750	510	450	16xΦ34	1500	ZB/ZBY60	600	24	1.5
350	850	570	510	16xΦ34	1750	ZB/ZBY120	1200	24	3.0
400	950	655	585	16xΦ41	1800	ZB180	1800	24	5.5

MZ941H-64 Mining Electric Gate Valve

Main Dimensions Of Valve (Mm)						Main Parameters Of Mining Explosion-Proof Valve Electric Device			
Dn	L	D	D1	Zxd	H	Model	Torque (N·m)	Speed (R/Min)	Motor Power (Kw)
50	250	175	135	4xΦ23	680	ZB/ZBY10	100	24	0.25
65	280	200	160	8xΦ23	700	ZB/ZBY15	150	24	0.37
80	310	210	170	8x Φ23	725	ZB/ZBY20	200	24	0.55
100	350	250	200	8xΦ25	805	ZB/ZBY20	200	24	0.55
125	400	295	240	8xΦ30	840	ZB/ZBY30	300	24	0.75
150	450	340	280	8xΦ34	960	ZB/ZBY30	300	24	0.75
200	550	405	345	12xΦ34	1100	ZB/ZBY60	600	24	1.5
250	650	470	400	12xΦ41	1350	ZB/ZBY90	900	24	2.2
300	750	530	460	16xΦ41	1650	ZB/ZBY90	900	24	2.2
350	850	595	525	16xΦ41	1960	ZB/ZBY120	1200	24	3.0
400	950	670	585	16xΦ48	2040	ZB180	1800	24	5.5

PXW

PXW Mining Water Drain Valve

The PXW series mining water distribution valve is mainly used for water distribution in various suction wells of underground pump rooms in coal mines, and can also be used for mineral processing, water treatment tank discharge, etc. The PXWI series manual water distribution valve is an improved design based on the original water distribution valve PZ1, which has the characteristics of good sealing performance, easy cleaning, flexible operation, and labor-saving.

The PXWI electric water distribution valve is a mining explosion-proof valve electric device added to the PXWI manual water distribution valve. There are two types: split type and integrated type:

After being used in conjunction with the KXBC mining explosion-proof valve electric device control box, the split type electric water distribution valve can be connected to the DCS system to achieve automatic control of the underground water pump room in coal mines

The integrated electric water distribution valve comes with a control system, which can be switched on and off or remotely controlled on the body without the need for a separate control box. It can be configured with bus communication such as Modbus and Profibus, with a 485 bus interface for data communication.

Main Performance Specifications

Model	PXWI(I)-400	PXWI(I)-500	PXWII(I)-600	PXWII(I)-800	PXWI(I)-1000	PXWII(I)-1200
Nominal Diameter (Mm)	400	500	600	800	1000	1200
Applicable Medium And Temperature	Water, ≤ 80 °C					
Operating Stroke (Mm)	220	220	290	300	350	350
Nominal Pressure (Mpa)	0.1 (test pressure 0.25)					
Model Of Explosion-Proof Valve Electric Device For Distribution Mine	ZB20-24 ZBY20-24	ZB20-24 ZBY20-24	ZB30-24 ZBY30-24	ZB30-24 ZBY30-24	ZB45-24 ZBY45-24	ZB60-24 ZBY60-24
Motor Power (Kw)	0.55	0.55	0.75	0.75	1.1	1.5

Main Connection Dimensions And Related Parameters

Valve Model	DN	D	D1	D2	D3	d	H1	h1	h2	h3	h4
PXWI(I)400	400	540	495	90	120	35	1066	250	462	523	1250
PXWI(I)500	500	640	600	90	120	35	1066	300	512	673	1250
PXWI(I)600	600	760	705	90	135	45	1066	350	602	768	1250
PXWI(I)800	800	960	920	90	135	45	1066	450	702	868	1250
PXWI(I)1000	1000	1160	1120	110	160	50	1315	550	842	1119	1500
PXWI(I)1200	1200	1450	1380	110	160	50	1315	600	1010	1300	1500

Valve Model	a1	a2	b1	b2	C	C1	C2	n-d1	n-d2	n-d3	n-d4
PXWI(1)400	300	300	400	400	410	260	70	4xΦ19	2xΦ15	4xΦ17	16xΦ23
PXWH(I)500	300	300	400	400	470	340	70	4xΦ19	2xΦ15	4xΦ17	16xΦ23
PXWH(I)600	300	300	400	400	520	360	80	4xΦ19	2xΦ19	4xΦ17	20xΦ25
PXWH(I)800	300	300	400	400	625	460	80	4xΦ19	2xΦ19	4xΦ17	24xΦ30
PXWI(I)1000	400	400	500	500	720	560	100	4xΦ19	2xΦ19	6xΦ22	27xΦ30
PXWI(I)1200	400	400	500	500	820	660	100	4xΦ19	2xΦ19	6xΦ22	30xΦ30

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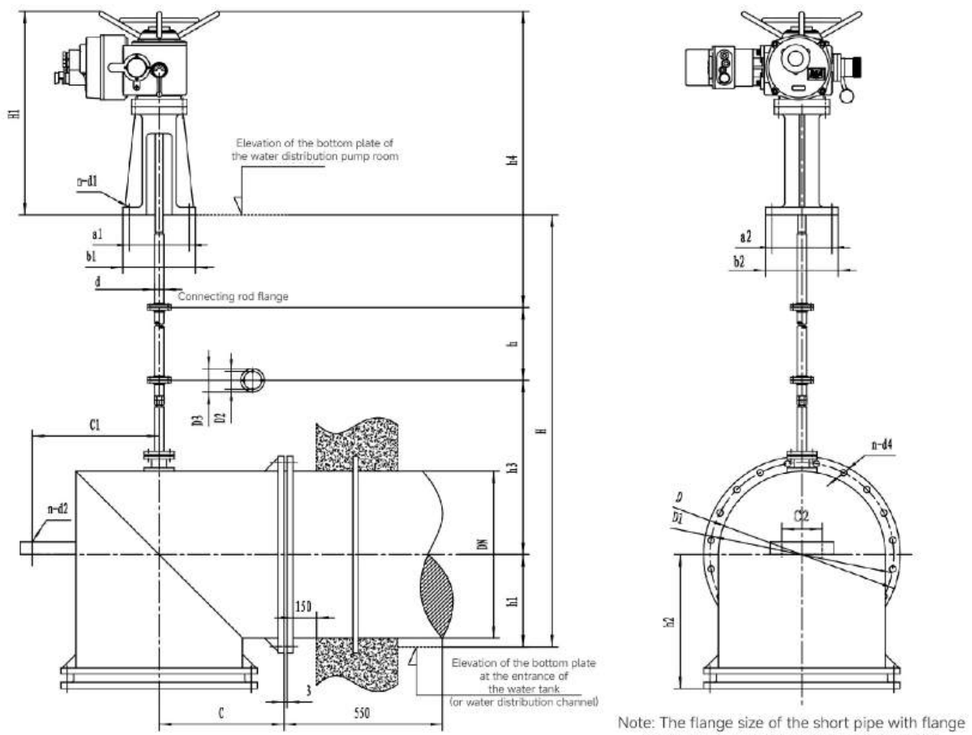
Instructions For Using Elevation Dimensions

The height difference H between the bottom plate elevation of the water pump room and the inlet elevation of the water tank (or water distribution channel), as well as the length h of the connecting rod, are considered in this design for four different scenarios, and the user unit will choose according to the actual situation.

If the value of h can be specified when placing an order, manufacture according to the requirements of the ordering unit. If unable to provide, the length of the connecting rod shall be supplied at h=5000mm, and the flange at one end of the connecting rod shall be welded on site according to actual needs.

H (mm)		5000	4500	4000	3500
H (mm)	PXW I (I)-400/500	3765	3265	2765	2265
	PXW I (I)-600/800	3497	2997	2497	1997
	PXWII(I)-1000/1200	3100	2600	2100	1600

Structural Diagram



Note: The flange size of the short pipe with flange is the same as the flange size of the valve

Mining Check Valve

Check valves are also known as reverse flow valves, check valves, back pressure valves, and check valves. This type of valve is automatically opened and closed by the force generated by the flow of the medium itself in the pipeline, and belongs to an automatic valve. The main function of check valves used in pipeline systems is to prevent medium backflow.

Swing check valve

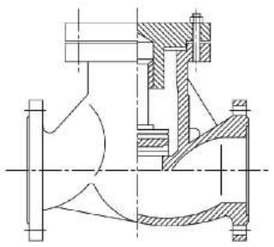
There are various design structures for check valves, suitable for different installation forms of pipelines. H41H lift check valve can only be used for horizontal pipeline installation: H44H single disc swing check valve can be used for both horizontal and vertical pipeline installation. The HH44H rotary check valve with a slow closing device can effectively prevent water hammer caused by power outages.

Micro resistance slow closing check valve

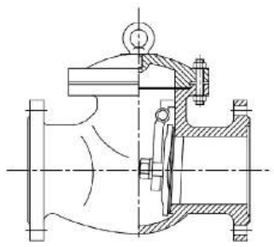
Execution Standards And Main Performance Specifications

Design And Manufacturing	GB/T 12221-2005 GB/T1222-2005 JB/T12238-2008			
Pipeline Connection	GB9113.1-GB9113.4-2000			
Inspection And Testing	GB/T 13927-2008 JB/T9092-1999			
Nominal Pressure	Inspection and testing pressure			
	Housing	Sealed (liquid)	Sealing (gas)	Seal
PN(MPa)	1.5PN	1.1PN	0.6MPa	1.1PN

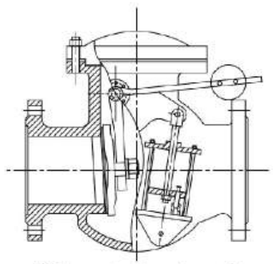
Structural Diagram



Lift check valve



Single swing check valve



Rotary check valve with slow closing device

Main Performance Parameters

Pressure (MPa)	Diameter range (mm)
PN16	DN40~DN400
PN25	DN40~DN400
PN40	DN40~DN400
PN64	DN40~DN300
PN100	DN40~DN300
PN160	DN40~DN300

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KXBC

KXBC Mining Explosion-Proof Actuator Control Box

With the improvement of coal mine automation level, manual valves are difficult to adapt to the needs of modern development, and electric valves are widely used in newly designed mines or the renovation of old mines. Our company's mining explosion-proof valve electric device is specially developed to improve the automation system of coal mine valves, and the KXBC explosion-proof valve electric device control box is a control product that is matched with the mining explosion-proof valve electric device.

The KXBC mining explosion-proof valve electric device control box has the function of connecting with the DCS system interface, making the application of the control box in automation systems more extensive and reliable. On this basis, the control box has functions such as short circuit protection, overload protection, undervoltage protection, leakage protection, over torque protection, phase failure protection, and automatic correction of phase sequence identification. It also has switching functions for stroke control and remote/local control, making its practical functions more complete.

The exterior design of the KXBC mining explosion-proof valve electric device control box not only ensures explosion-proof performance, but also has mechanical and electrical interlocking functions to prevent misoperation, making the equipment safe and reliable to use. On this basis, in order to monitor the operation of the equipment, this product also sets various operation monitoring indicators, such as power indicator, valve opening indicator, valve closing indicator, over torque indicator, fault indicator, and valve position opening display.

KXBC-1
(One Control One)

KXBC-3
(one control three)

Model representation method

KX B C □×□/□ DZ

- DZ stands for electric device
- Rated voltage: 660 (380), unit V
- Rated current: expressed in Arabic numerals, unit A
- Number of branches: represented by Arabic numerals
- C represents air type
- B represents explosion-proof type
- KX stands for electric control box

Working conditions and working environment

working conditions	Power supply voltage	380V/660V50Hz
	Control voltage	AC36V、AC24V; DC24V
	Rated current	9~15A
working environment	aAmbient temperature	- 20°C ~ + 40°C
	Relative humidity	< 95% (time 25°C)
	Usage environment	In coal mines containing explosive gases such as methane and coal dust (excluding mining faces), in areas without significant shaking or shock vibration; The installation inclination with the horizontal plane should not exceed 15 degrees.
Explosion-proof marking		Exd I Mb

Design and Manufacturing Standards for KXBC Series Mining Explosion proof Valve Electric Device Control Box

Q/3204CN002-2011	Technical Conditions for Control Box of Mining Explosion proof Valve Electric Device
GB3836.1-2010	Electrical equipment for explosive gas atmospheres - Part 1: General requirements
GB3836.2-2010	Electrical equipment for explosive gas atmospheres - Part 2: Explosion proof type "d"
GB3836.3-2010	Electrical equipment for explosive gas atmospheres - Part 3: Equipment protected by increased safety type "e"

Technical performance of control box

- 1. The control box has multiple protection functions such as short circuit, phase failure, overload, etc.
- 2. There is a switch stop button, on-site/remote switch, LCD display valve opening and status output switch in place signal, fault signal, remote control signal, and 4-20mA valve position feedback signal to the remote control box.
- 3. Signal level (DC): 5V, 24V
- 4. Output impedance ≤ 700 Ω
- 5. Output maximum signal current DC36mA
- 6. After the motor rotation direction is determined, the phase sequence of the three-phase power supply can be automatically corrected, and users can freely connect to the three-phase power supply of the electric control box.
- 7. The control mode can be selected by the dip switch:

  (1) Conventional control mode: jog mode; Or maintain the way.

  (2) Two line control mode: with signal on/without signal off; Or there may be a barrier or no opening.
- 8. Adopting a quick opening door structure and a modular internal circuit structure, it is convenient for on-site maintenance and repair.
- 9. Can be reliably connected to various self-control systems:

  (1) Provide dry contacts by the user and use the+24 VDC power supply on the module.

  (2) The user provides a+24VDC power supply, and at this time, the negative pole of the user's+24VDC power supply is connected in parallel with the negative pole of the module power supply. The positive pole of the power supply is input to various functional terminals of the module to achieve various control functions.
- 10. Both input and output signals are optically isolated, with strong anti-interference ability.
- 11. Valve opening, closing, electronic interlocking, and mechanical interlocking ensure that the open and closed AC contactors cannot be simultaneously closed.
- 12. The undervoltage protection value is negative 15% of the rated voltage.
- 13. It can be configured for bus communication such as MOdbus and Profibus, with a 485 bus interface to achieve data communication.

KXBC mining explosion-proof valve actuation device control box

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Changzhou Xinneng Automatic Control Equipment Co., Ltd

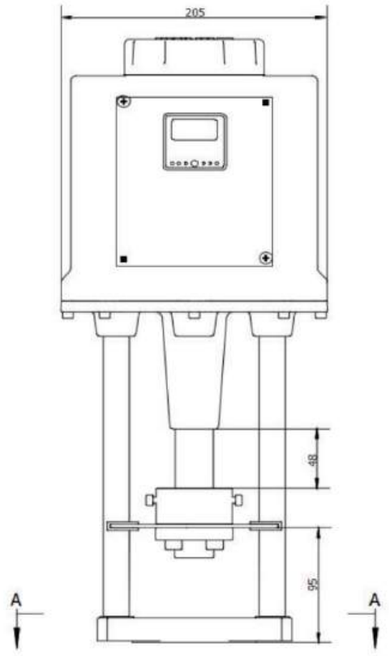
DLC

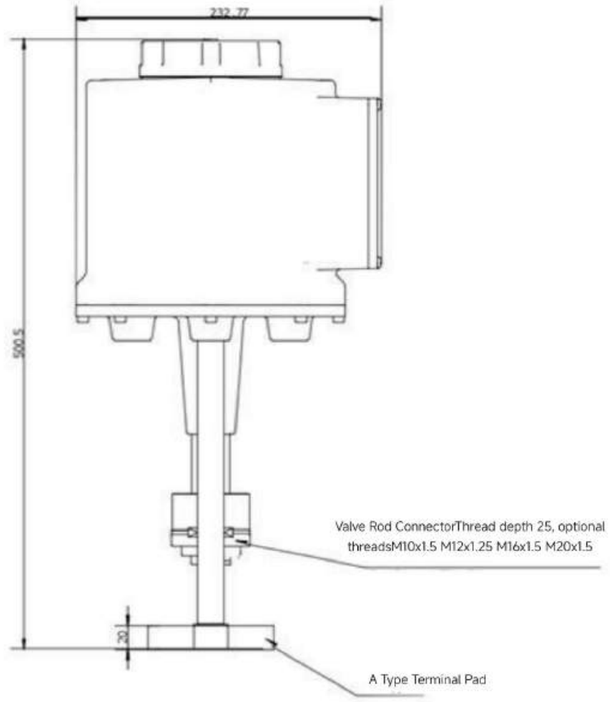
DLC Digital Intelligent Straight Stroke Electric Actuators

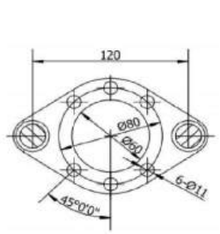
Primarily designed for industrial applications, this device features the A8 intelligent valveactuator control system developed independently by THKU, boasting robust expansioncapabilities and dependable stability.

- **Max. Strokes:**30mm,60mm, and 100mm.
- **Operating Voltages:** Standard configurations include AC220. AC380V. AC24V, and DC24V, with optional configurations available for other voltages.
- **Adjustable Operating Speed:** The operating speed can be adjusted from 30% to1 00% ofthe maximum speed.
- **Control Signals:** Standard configurations feature 4-20mA, 0-10V, and switchingvalue signals. Optional configurations offer RS485, wireless (NB, LoRa, 4G)capabilities.
- **Valve Position Feedback:** Standard configurations encompass 4-20mA and 0-10V feedback options. Optional configurations extend to RS485, relay feedback.and wireless (NB, LoRa, 4G)capabilities.
- **Control Accuracy:** Default accuracy is 0.5% for 4-20mA signals, with anadjustable range down to 0.1%. Default accuracy is 1% for 0-10V signals withan adjustable range from 1% to 20%. For 485 bus communication, accuracy isless than 0.03%.
- **Resetting:** Standard configuration includes off-signal mode, with power-offmode available as an optional configuration.
- **Regulating Characteristic:** Linear (optional equal proportion).
- **Stroke Setting:** Automatic stroke verification or digital stroke adjustment.
- **Thrust:** 1000N-26000N.
- **Status Display:** LED Indicator.
- **Ambient Temperature:**-20-70°C.
- **IP Rating:** IP65.
- **Shell:** Constructed ofdurable aluminum alloy with electrostatic sprayingcoating.

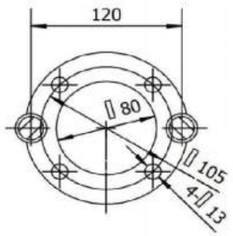
Dimensions



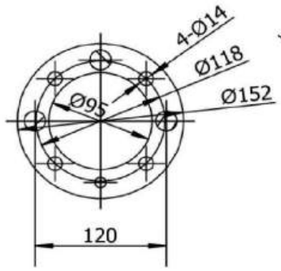




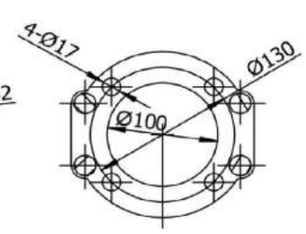
Terminal Pad A



Terminal Pad B



Terminal Pad C



Terminal Pad D

DLC Digital Intelligent Straight Stroke Electric Actuators

Dimensions

Terminal Pad	Stroke	B (Min. Valve RodHeight)	Valve Rod Connector	Electrical Interface
A Type	30	95	M10*1.5	M16*1.5
B Type	60	130	M12*1.25	
C Type	60	130	M16*1.5	
D Type	100	160	M20*1.5	

Note: Customization is available for other types of terminal pads.

Parameters

Model	Max. Stroke	Thrust	Terminal Pad	Weight
DLC310	30	1000N	A Type	12KG
DLC320	30	2000N	A Type	
DLC330	30	3000N	A Type	
DLC350	30	5000N	Optional for A Type and B Type	12KG/13KG
DLC365	30	6500N	A/B Type	
DLC3100	30	10000N	B Type	13.2KG
DLC3160	30	16000N	C/D Type	25KG
DLC3260	30	26000N	D Type	
DLC630	60	3000N	Optional for A Type and B Type	13KG
DLC650	60	5000N	Optional for B Type	
DLC665	60	6500N	Optional for B Type and C Type	
DLC6100	60	10000N	Optional for B Type and C Type	
DLC6160	60	16000N	Optional for C Type and D Type	21.5KG
DLC6260	60	26000N	Optional for C Type and D Type	
DLC10160	100	16000N	Optional for C Type and D Type	25.5KG
DLC10260	100	26000N	D Type	

Note: Customization service is available for products requiring over 100 strokes.

DLC Models

DLC □ □

Thrust: Code X100N
Optional:10203050651001602002 60

Stroke: Code X10mm
Optional: 3 46 10 Customization is available for products requiring other strokes

Common Models:
DLC310,DLC320,DLC330,DLC350,DLC365,DLC3100,DLC3160,DLC3260,DLC630,DLC650,DLC665,
DLC6100,DLC6160,DLC6260,DLC10160,DLC10260

Notes:

1、For power-off reset, add "F" after the corresponding model number, for example: DLC330F

2、For 485 communication/Modbus protocol. add "M" after the corresponding model number: for exampleDLC330M:

3、For switching value feedback, add "K" after the corresponding model number, for example: DLC330K;

4、Ifall three fumnctions are required, the model can be represented as, for example DLC330KMF.

DLC Digital Intelligent Straight Stroke Electric Actuators

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Changzhou Xinneng Automatic Control Equipment Co., Ltd

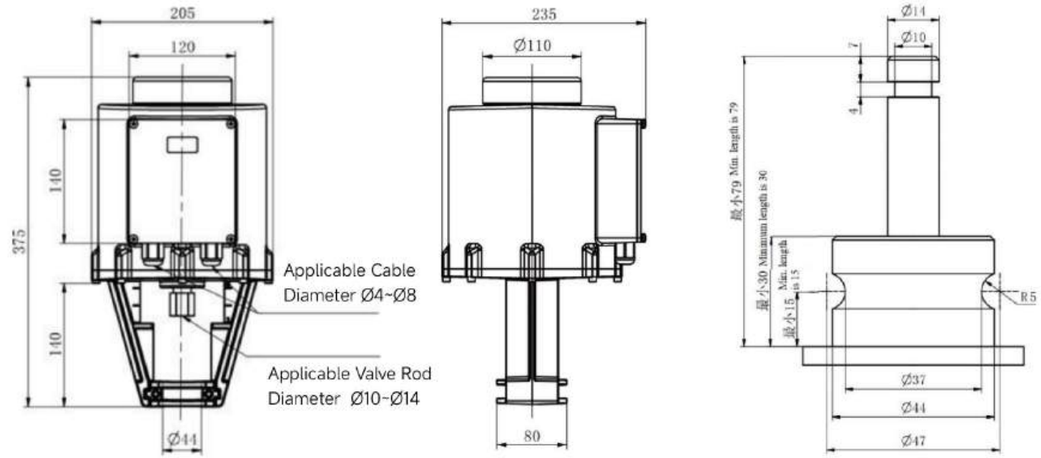
DLB

DLB Digital Intelligent Straight Stroke ElectricActuators

It is primarily utilized in HVAC systems and various industrial applications. Featuringthe A8 intelligent valve actuator control system developed independently by THKU, itoffers robust expansion capabilities and reliable stability.

- **Max. Stroke:** 40mm.
- **Operating Voltage:** Standard configurations include AC220V,AC380,VAC24V,and DC24V, while other voltages are available as optionalconfigurations.
- **Control Signal:** Standard configurations include 4-20mA, 0-10V, andswitching value signals. Optional configurations offer RS485, wireless (NB,LoRa, 4G) capabilities.
- **Valve Position Feedback:** Standard configurations include 4-20mA and 0-10Vfeedback options. Optional configurations extend to RS485, relay feedback.and wireless (NB, LoRa,4G)capabilities.
- **Control Accuracy:** The default accuracy is 0 5% for 4-20mA signals with anadjustable range of0.1%.It is 1% by default for 0-10V signals, with anadjustable range of 1% to 20%.For 485 communications, the accuracy is lessthan 0.03%.
- **Resetting:** The standard configuration includes off-signal mode, while thepower-off mode can be provided as an optional configuration.
- **Regulating Characteristic:** Linear (optional equal proportion).
- **Stroke Setting:** Automatic stroke verification or digital stroke setting.
- **Thrust:** 1000N-26000N.
- **Status Display:** LED Indicator.
- **Ambient Temperature:**-20-70°C.
- **IP Rating:** IP65.
- **Shell:** Constructed of durable aluminum alloy with electrostatic sprayingcoating.

Dimensions



Models

Model	Max. Stroke	Thrust	Eleetrieal Interface	Weight
DLB410	40	1000N	M16*1.5	10.5KG
DLB430	40	3000N		
DLB465	40	6500N		11KG
DLB4100	40	10000N		
DLB4120	40	12000N		
DLB4160	40	16000N		11.8KG
DLB4200	40	20000N		
DLB4260	40	26000N		

DLB Models

DLB □ □

Thrust: Code X100N
Optional:10 20 30 50 65 100 160 200 260

Stroke:Code X10mm
Optional: 3 4 6 10 Customization is available for products requiring other strokes

Common Models:

DLB410,DLB430,DLB465,DLB4100,DLB4120,DLB4160,DLB4200,DLB4260

Notes:

1、For power-off reset, add "F" after the corresponding model number, for example: DLC330F.
2、For 485 communication/Modbus protocol, add "M" after the corresponding model number, for exampl: DLC330M;
3、For switching value feedback, add "K" after the corresponding model number, for example: DLC330K.
4、Ifall three functions are required, the model can be represented as, for example DLC330KMF.

DLB Digital Intelligent Straight Stroke ElectricActuators

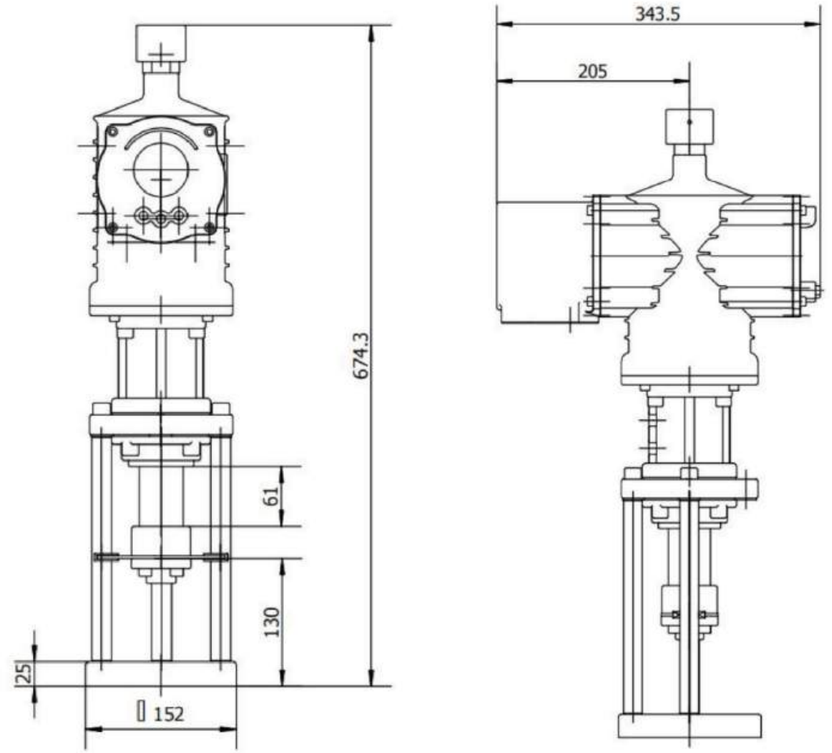
CT5-EX

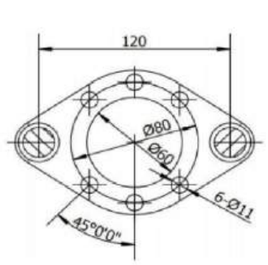
CT5-EX Digital Intelligent Explosion-Proof Straight Stroke Electric Actuators

It is primarily utilized in various industrial applications. Featuring the A8 intelligentvalve actuator control system developed independently by THKU, it offers robustexpansion capabilities and reliable stability.

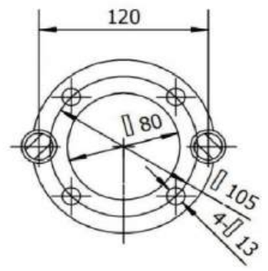
- **Max.Strokes:**30mm, 40mm, and 60mm.
- **Operating voltages:** AC220V,AC380V, AC24V,DC24V are available asstandard configurations, with other voltages offered as optionalconfigurations.
- **Control Signal:** Standard configurations include 4-20mA, 0-10V,andswitching value signals. Optional configurations offer RS485, wireless (NBLoRa, 4G)capabilities.
- **Valve Position Feedback:** Standard configurations include 4-20mA and 0-10V feedback options. Optional configurations extend to RS485, relayfeedback, and wireless (NB, LoRa, 4G)capabilities.
- **Control Accuracy:** The default accuracy is 0.5% for 4-20mA signals with anadjustable range of0.1% It is 1% by default for 0-10V signals, with anadjustable range of 1% to 20%. For 485 communications. the accuracy isless than 0.03%.
- **Resetting:** The standard configuration includes off-signal mode.
- **Regulating Characteristic:** Linear (optional equal proportion).
- **Stroke Setting:** Automatic stroke verification or digital stroke setting.
- **Thrust:** 1000N-8000N.
- **Status Display:** LED Indicator.
- **Ambient Temperature:** -20-70°C.
- **IP Rating:** Standard configuration includes IP67, while the optionalconliguation provides IP68.
- **Explosion-proof Rating:** ExdIICTs Gb.Shell: Constructed of durable aluminum alloy with electrostatic sprayingcoating.

Dimensional and Interface Overview

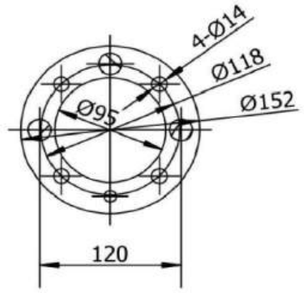




Terminal Pad A



Terminal Pad B



Terminal Pad C

CT5-EX Digital Intelligent Explosion-ProofStraight Stroke Electric Actuators

AUKOMA

常州新能自控设备有限公司
Changzhou Xinneng Automatic Control Equipment Co., Ltd

Dimensions

Terminal Pad	Stroke	B (Min. Valve Rod Height)	Valve Rod Connector	Electrical Interface
A Type	30	95	M10*1.5	M25*1.5
B Type	40	130	M12*1.25	
C Type	60	130	M16*1.5	

Note: Customization options are available for other types of terminal pads.

Parameters

Model	Max. Stroke	Thrust	Terminal Pad	Weight
CT5-EX-20	30	1000N	A Type	12KG
CT5-EX-20	30	2000N	A Type	
CT5-EX-20	30	3000N	A Type	
CT5-EX-40	30	5000N	Optional for A Type and B Type	16.3KG
CT5-EX-40	30	6500N	Optional for A Type and B Type	
CT5-EX-40	30	8000N	Optional for A Type and B Type	
CT5-EX-40	40	5000N	Optional for B Type and C Type	
CT5-EX-40	40	6500N	Optional for B Type and C Type	
CT5-EX-40	40	8000N	Optional for B Type and C Type	
CT5-EX-40	60	5000N	Optional for B Type and C Type	21KG
CT5-EX-40	60	6500N	Optional for B Type and C Type	
CT5-EX-40	60	8000N	Optional for B Type and C Type	

Note: Customization service is available for products requiring over 100 strokes.

CT5-EX Model

CT5-EX- □ □

Thrust
Optional: 20 (1000N,2000N,3000N) 40 (5000N,6500N,8000N)

Stroke: Code X10mm
Optional: 3 4 6 Customization is available for products requiring other strokes

Common Models: CT5-EX-20,CT5-EX-40

Notes:

1、For 485 communication/Modbus protocol, add "M" alter the corresponding model number, for example;DLC330M;

2、For switching value feedback, add "K" after the corresponding model number, for example: DLC330K;

3、If all three functions are required, the model can be represented as, for example DLC330KMF.

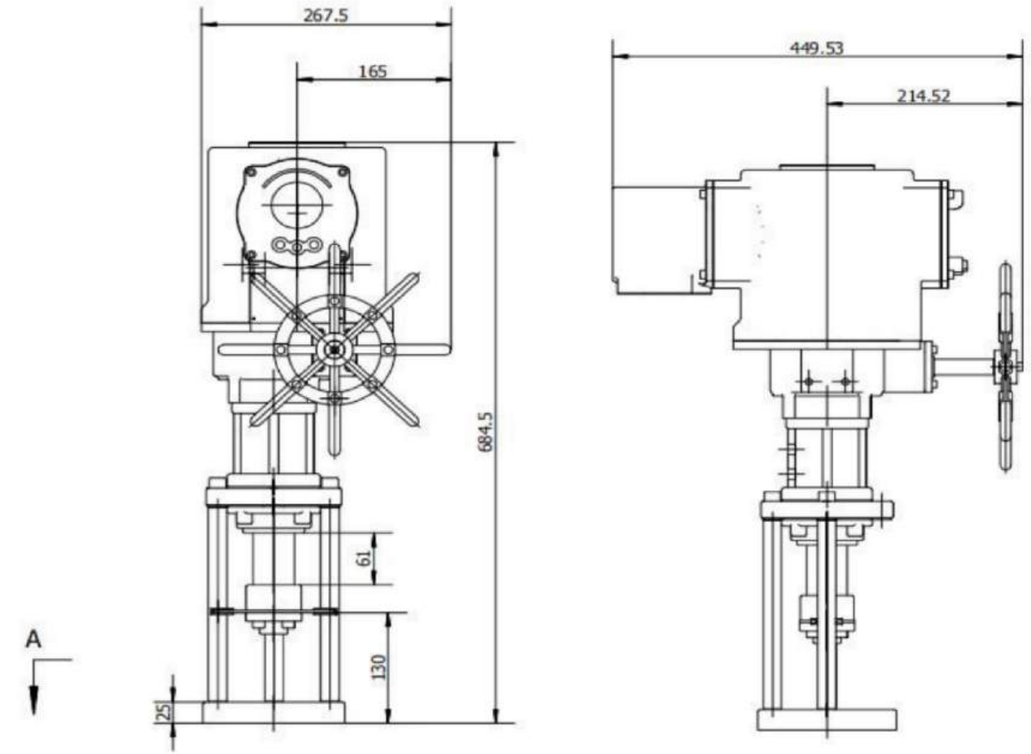
DSL-EX

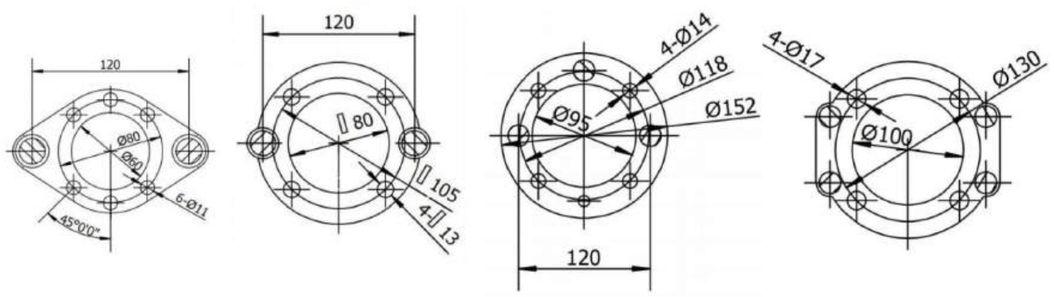
DSL-EX Digital Intelligent Explosion-Proof Straight Stroke Electric Actuators

It is primarily utilized in various industrial applications, Featuring the A8 intelligentvalve actuator control system developed independently by THkU, it offers robustexpansion capabilities and reliable stability.

- **Max.Strokes:**30mm,40mm, 60mm, and 100mm.
- **Operating Voltage:** Standard configurations include AC220V, AC380V.AC24V, and DC24V, while other voltages are available as optionalconfigurations.
- **Control Signal:** Standard configurations include 4-20mA.0-10V, andswitching value signals. Optional configurations offer RS485, wireless (NBLoRa, 4G) capabilities.
- **Valve Position Feedback:** Standard configurations include 4-20mA and 0-10Vfeedback options. Optional configurations extend to RS485, relay feedback,and wireless (NB, LoRa, 4G)capabilities.
- **Control Accuracy:** The default accuracy is 0.5% for 4-20mA signals with anadjustable range of0.1%. It is 1% by default for 0-10V signals, with anadjustable range of 1% to 20%. For 485 communications, the accuracy is lessthan 0.03%
- **Resetting:** The standard configuration includes of-signal mode, while thepower-off mode can be provided as an optional configuration.
- **Regulating Characteristic:**Linear (optional equal proportion).
- **Stroke Setting:** Automatic stroke verification or digital stroke setting.
- **Thrust:** 1000N -26000N.
- **Status Display:** LED Indicator.
- **Ambient Temperature:** -20-70C.
- **IP Rating:** Standard configuration includes IP67, while the optionalconfiguration provides IP68.
- **Explosion-proofRating:** ExdICT6 Gb.
- **Shell:** Constructed of durable aluminum alloy with electrostatic sprayingcoating.

Dimensional and Interface Overview





Terminal Pad A　Terminal Pad B　Terminal Pad C　Terminal Pad D

Dimensions

Terminal Pad	Stroke	B (Min. Valve Rod Height)	Valve Rod Connector	Electrical Interface
A Type	30	95	M10*1.5	M25*1.5
B Type	40	130	M12*1.25	
C Type	60	130	M16*1.5	
D Type	100	160	M20*1.5	

Note: Customization available for other types of terminal pads.

Parameters

Model	Max. Stroke	Thrust	Terminal Pad	Weight
DSL-1-EX310	30	1000N	A Type	21KG
DSL-1-EX320	30	2000N	A Type	
DSL-1-EX330	30	3000N	A Type	
DSL-1-EX350	30	5000N	A Type	
DSL-1-EX450	40	5000N	Optional for B Type and C Type	21.5KG
DSL-1-EX465	40	6500N	Optional for B Type and C Type	
DSL-1-EX4100	40	10000N	Optional for B Type and C Type	
DSL-1-EX650	60	5000N	Optional for B Type and C Type	29.7KG
DSL-1-EX665	60	6500N	Optional for B Type and C Type	
DSL-1-EX6100	60	10000N	Optional for B Type and C Type	
DSL-1-EX1065	100	6500N	Optional for C Type and D Type	33.1KG
DSL-1-EX10100	100	10000N	Optional for C Type and D Type	
DSL-2-EX10160	100	16000N	D Type	
DSL-2-EX10260	100	26000N	D Type	

Note: Customization service is available for products requiring over 100 strokes.

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DSL-EX Models

DSL-EX □ □

Trust: Code x100N
Optional:10 20 30 50 65 100 160 200 260

Stroke: Code X10mm
Optional:3 4 6 10 Customization is available for products requiring other strokes

Common Models:
DSL-1-EX310,DSL-I-EX320,DSL-I-EX330,DSL--EX350,DSL-I-EX450,DSL-I-EX465,DSL-1-EX4100,
DSL-1-EX650,DSL-1-EX665,DSL-1-EX6100,DSL-1-EX1065,DSL-1-EX10100,DSL-2-EX10160,
DSL-2-EX10260

Notes:

1、For power-off reset, add "F" after the corresponding model number, for example: DLC330F;

2、For 485 communication/Modbus protocol, add "M" after the corresponding model number; for example; DLC330M.

3、For switching value feedback, add "K" after the corresponding model number, for example: DLC330K;

4、If all three functions are required, the model can be represented as, for example DLC330KMF.

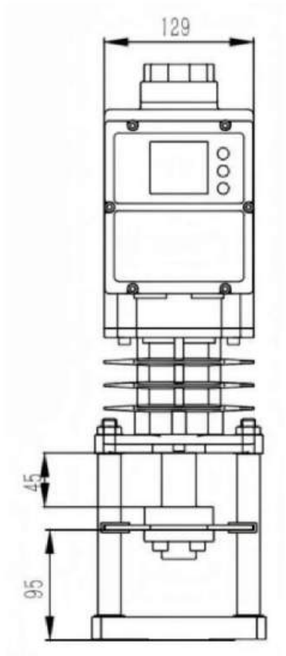
DLE

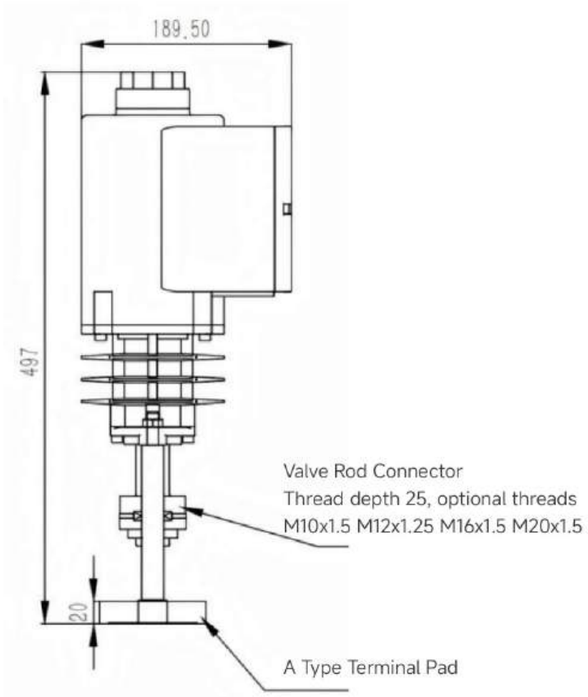
DLE Digital Intelligent Straight Stroke Electric Actuators

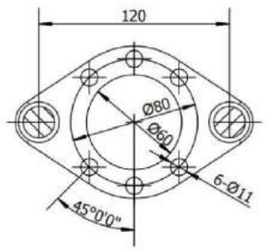
Primarily designed for industrial applications, this device features the A8 intelligent valveactuator control system developed independently by THKU, boasting robust expansioncapabilities and dependable stability.

- **Max. Strokes:** 30mm, 60mm
- **Operating Voltages:** Standard configurations include AC220V.AC380VAC24V, and DC24V, with optional configurations available for other voltages.
- **Adjustable Operating Speed:** The operating speed can be adjusted from 30% to100% of the maximum speed.
- **Control Signals:** Standard configurations feature 4-20mA, 0-10V, and switchingvalue signals. Optional configurations offer RS485, wireless (NB, LoRa, 4G)capabilities.
- **Valve Position Feedback:** Standard configurations encompass 4-20mA and0-10V feedback options. Optional configurations extend to RS485. relayfeedback, and wireless (NB, LoRa, 4G)capabilities.
- **Control Accuracy:** Default accuracy is 1% for 4-20mA signals, with anadjustable range from 0.1% to 20%.Default accuracy is 1% for 0-10V signals.with an adjustable range from 1% to 20%.For 485 bus communication, accuracyis less than 0.03%.
- **Resetting:** Standard configuration includes off-signal mode, with
- power-off mode available as an optional configuration.
- **Regulating Characteristic:** Linear (optional equal proportion).
- **Stroke Setting:** Automatic stroke verification or digital stroke adjustment.
- **Thrust:** 1000N-10000N.
- **Status Display:** LED and LCD Indicator.
- **Ambient Temperature:** -20~+70°C.
- **IP Rating:** IP67.
- **Shell:** Constructed of durable aluminum alloy with electrostatic sprayingcoating.

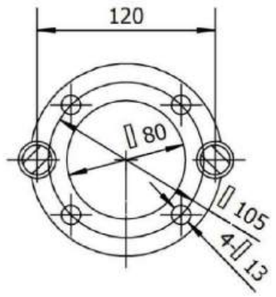
Dimensions



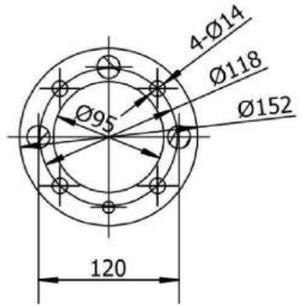




Terminal Pad A



Terminal Pad B



Terminal Pad C

Dimensions

Terminal Pad	Stroke	B (Min. Valve Rod Height)	Valve Rod Connector	Electrical Interface
A Type	30	95	M10*1.5	M16*1.5
B Type	60	130	M12*1.25,M16*1.5	
C Type	60	130	M16*1.5	
Note: Customization available for other types of terminal pads				

Parameters

Model	Thrust（N）	Speed (mm/s)	Max.Travel (mm)	Voltage	Power
DLE340-X	1000	1	30	AC/DC24V or AC(200~450)V	60W
	2000		30		
	3000		30		
	4000		30		
DLE640-X	1000		60		
	2000		60		
	3000		60		
	4000		60		
DLE6100-X	5000		60		
	6500		60		
	8000		60		
	10000		50		
Notes:Customization service is available for products requiring over 100 strokes.					

DLE Models

DLE □ □ □—□

Terminal Pad
Optional:A B C

Add Function:
K: add switching value feedback function
M: add Modbus-RTU function
F: add power-off reset function(Provide this function with only AC/DC24V power supply)
Y:add infrared remote control function

Thrust: Code X100N
Optional:40 100

Stroke: Code X10mm
Optional:3 6 Customization is available for products requiring other strokes

Notes:

1、For power-offreset, add "F" after the corresponding model number, for example. DLE340F;

2、For 485 communication/Modbus protocol, add "y" after the corresponding model number;for example:DLE340M;

3、For switching value feedback, add "K" after the corresponding model number;for example:DLE340K;

4、If all three functions are required, the model can be represented as, for example DLE340KMF.

DLE Digital Intelligent Straight Stroke ElectricActuators

AUKOMA

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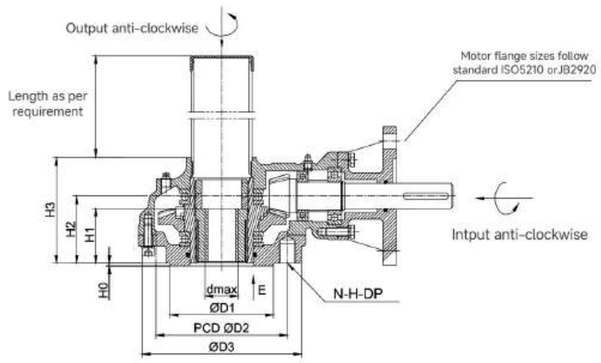
Changzhou Xinneng Automatic Control Equipment Co., Ltd

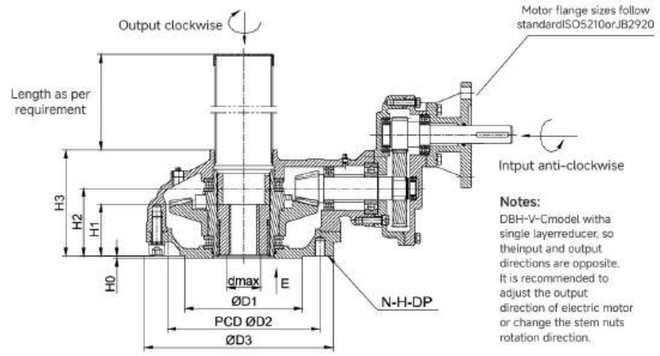
DBH-V

(Motorised operation) DBH-V SERIES BEVEL GEAR BOX

Type: A
Single stage
This model DBH-V

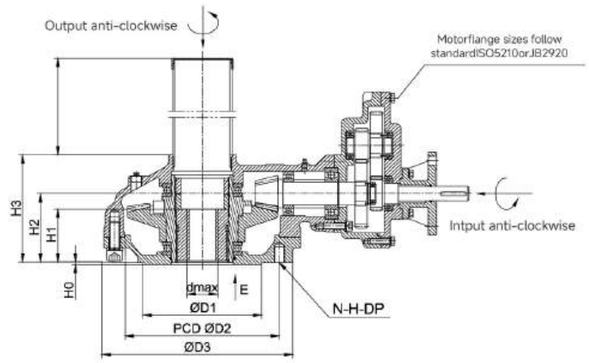


Type: B
Double stages
This model DBH-V-C

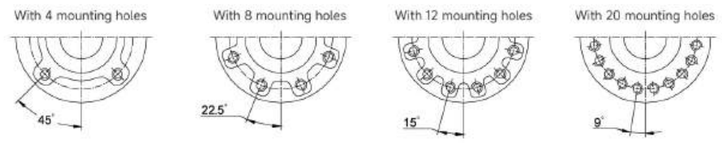


Notes:
DBH-V-Cmodel witha single layerreducer, so theinput and output directions are opposite. It is recommended to adjust the output direction of electric motor or change the stem nuts rotation direction.

Type: C
Double stages
This model DBH-V-S



Side



Para. / Model	Technical Parameters											Base Part					External Part		
	Output torque	Ratio	Input Nm	M.A. ± 10%	Optional speed ratio range	Max. Bore dia. Mm	Max. Thrust KN	Electric actuator connection		Valve connection acc. ISO5211		D1	P.C.D		D3	H0	H1	H2	H3
								ISO5210	JB2920	Standard Mounting	Optional Mounting		D2	N-H-DP					
DBH-VS10	220	2.5:1	105	2.1	-	22	75	F10	Z10	F10	-	70	102	4-M10-15	125	2	47	70	104
DBH-VS20	350	3:1	140	2.5	-	28	113	F10	Z10	F12	F10	85	125	4-M12-18	150	3	49	70	113
DBH-V0	550	3:1	215	2.5	-	36	127	F10-F14	Z10-Z20-Z30	F14	F12	100	140	4-M16-24	175	3	58	78	124
DBH-V1	900	3.6:1	295	3	-	42	141	F10-F14	Z20-Z30	F16	F14	130	165	4-M20-30	210	3	69	85	133
DBH-V2	1400	4.1:1	405	3.5	-	50	190	F10-F14	Z30-Z45	F20	F14-F16 -F25	140	205	8-M16-24	250	4	69	87	145
DBH-V2-1C*		9.6:1	195	7.3	6.5-9.6			F10-F14-F16	Z20-Z30-Z45										
DBH-V2-1S		13.3:1	150	9.6	8.5-18.4			F10-F14	Z10-Z20-Z30										
DBH-V3	2500	4.5:1	655	3.8	-	60	268	F10-F14-F16	Z30-Z45-Z60	F25	F16-F20	200	254	8-M16-24	300	4	82	95	159
DBH-W3-1C*		10.5:1	315	8	7.2-10.5			F10-F14-F16	Z20-Z30-Z45-Z60										
DBH-V3-1S		199:1	175	14.3	9.9-27			F10-F14	Z10-Z20-Z30										
DBH-V35	4000	5.2:1	905	4.4	-	70	308	F14-F16-F25	Z45-Z60-Z90	F30	F2	230	298	8-M20-30	350	4	103	133	208
DBH-V35-1C*		12.2:1	435	9.3	8.3-12.2			F10-F14-F16	Z30-Z45-Z60										
DBH-V35-1S		23:1	245	16.5	11.5-31.3			F10-F14	Z10-Z20-Z30-Z45										
DBH-V4	5000	5.7:1	1030	4.8	-	80	402	F14-F16-F25	Z60-Z90-Z120	F35	F25-F30	260	356	8-M30-45	415	5	146	149	246
DBH-V4-1C*		18.3:1	360	13.9	10.7-18.3			F14-F16-F25	Z30-Z45-Z60-Z90										
DBH-V4-1S		38.5:1	180	27.7	20.3-51.3			F10-F14-F16	Z20-Z30-Z45										
DBH-V5	8000	6.3:1	1500	5.3	-	95	512	F16-F25-F30	Z90-Z120-Z180	F35	F25-F30	260	356	8-M30-45	415	5	159	172	276
DBH-V5-1C*		20.3:1	525	15.4	11.8-20.3			F14-F16-F25	Z45-Z60-Z90-Z120										
DBH-V5-1S		42.8:1	260	30.8	22.4-56.7			F10-F14-F16	Z20-Z30-Z45-Z60										
DBH-V6	13000	6.3:1	2430	5.3	-	110	1110	F16-F25-F30	Z180-Z250	F40	F30-F35	300	406	8-M36-54	475	5	174	209	348
DBH-V6-1C*		20.3:1	850	15.4	11.8-20.3			F14-F16-F25	Z60-Z90-Z120-Z180										
DBH-V6-1S		42.8:1	425	30.8	22.4-56.7			F10-F14-F16	Z20-Z30-Z45-Z60										
DBH-V7	20000	5.9:1	4000	5	-	120	1310	F25-F30-F35	Z250-Z350-Z500	F48	F40	370	483	12-M36-54	560	6	196	219	346
DBH-V7-1C*		19:1	1390	14.4	11.8-20.3			F14-F16-F25	Z90-Z120-Z180-Z250										
DBH-V7-1S		94.4:1	295	67.9	22.4-56.7			F14-F16	Z30-Z45-Z60										
DBH-V8	30000	7:1	5050	5.9	-	140	2140	F30-F35	Z350-Z500	F60	F48	470	603	20-M36-54	700	6	217	237	382
DBH-V8-1C*		31.9:1	1240	24.2	11-19			F16-F25-F30	Z120-Z180-Z250-Z350										
DBH-V8-1S		112:1	375	80.6	36.9-94.4			F14-F16	Z30-Z45-Z60										
DBH-V9	50000	7:1	8500	5.9	-	180	4000	F30-F35	Z500-Z800-Z1000	F60	-	470	603	20-M36-54	805	6	242	260	445
DBH-V9-1C*		31.9:1	2070	24.2	13.9-31.9			F25-F30-F35	Z180-Z250-Z350-Z500										
DBH-V9-1S		143.5:1	485	103.3	78.6-143.5			F14-F16-F25	Z45-Z60-Z90										

Notes:
For the model with "*", the input rotation directionisopposite to the outputrotation direction, such as DBH-V35-1c, whenthe inputrotation is clockwise, the output rotation is anti-clockwise.

(Motorised operation)DBH-V SERIES BEVEL GEAR BOX

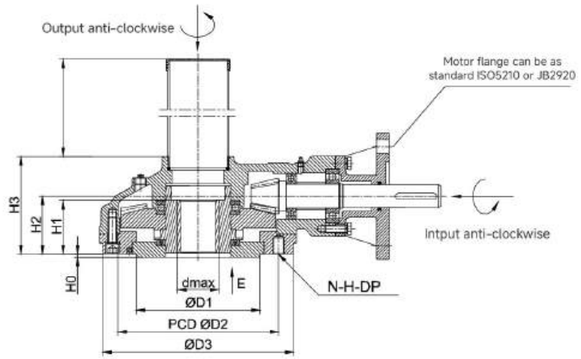
AUKOMA

常州新能自控设备有限公司
Changzhou Xinneng Automatic Control Equipment Co., Ltd

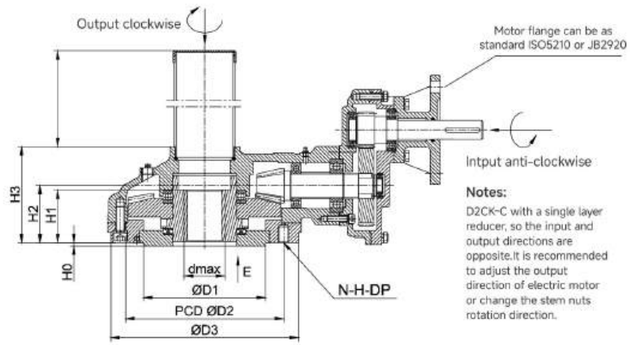
DRK&D2CK

(Motorised operation) DRK&D2CK SERIES BEVEL GEAR BOX

Type: A
Single stage
This model DRK&D2CK

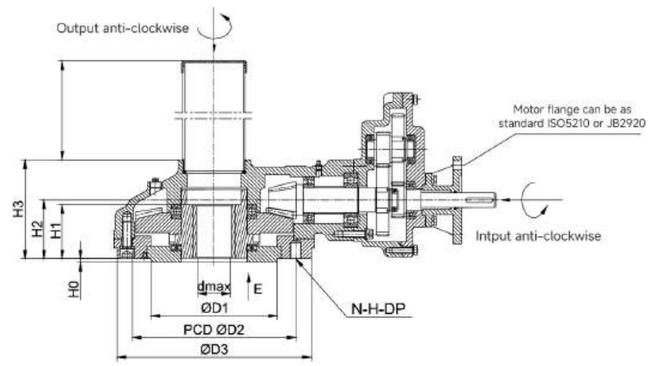


Type: B
Double stages
This model D2CK-C

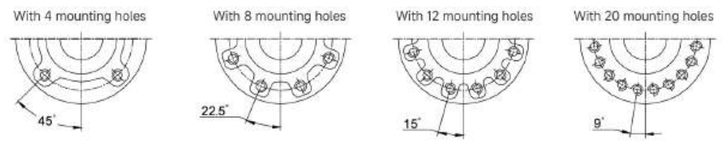


Notes:
D2CK-C with a single layer reducer, so the input and output directions are opposite.It is recommended to adjust the output direction of electric motor or change the stem nuts rotation direction.

Type: C
Double stages
This model D2CK-S



Side



Para. / Model	Technical Parameters											Base Part					External Part		
	Output torque	Ratio	Input Nm	M.A. ± 10%	Optional speed ratio range	Max. Bore dia. Mm	Max. Thrust KN	Electric actuator connection		Valve connection acc. ISO5211		D1	P.C.D		D3	H0	H1	H2	H3
								IS05210	JB2920	Standard Mounting	Optional Mounting		D2	N-H-DP					
DRK03	350	4:1	105	3.4	-	40	93	F10	Z10	F12	F10	85	125	4-M12-18	150	3	53	68	109
DRK05	550	4:1	165	3.4	-	52	127	F10-F14	Z10-Z20-Z30	F14	F12	100	140	4-M16-24	175	3	65	78	125
DRK1	900	4:1	265	3.4	-	60	141	F10-F14	Z10-Z20-Z30	F16	F14	130	165	4-M20-30	210	4	73	91	138
D2CK2	1400	4.2:1	395	3.5	-	65	190	F10-F14	Z30-Z45	F20	F16	140	205	8-M16-24	250	4	77	81	140
D2CK2-1C*		9.8:1	190	7.4	6.7-9.8			F10-F14-F16	Z20-Z30-Z45										
D2CK2-1S		13.6:1	145	9.8	8.7-18.8			F10-F14	Z10-Z20-Z30										
D2CK3	2500	4.1:1	720	3.5	-	75	268	F10-F14-F16	Z30-Z45-Z60	F25	F16	200	254	8-M16-24	300	4	86	88	152
D2CK3-1C*		9.6:1	345	7.3	6.6-9.6			F10-F14-F16	Z20-Z30-Z45-Z60										
D2CK3-1S		18:1	195	13	9-24.6			F10-F14	Z10-Z20-Z30										
D2CK5	4000	5.2:1	905	4.4	-	90	308	F14-F16-F25	Z45-Z60-Z90	F30	F25	230	298	8-M20-30	350	4	102	108	181
D2CK5-1C*		12.2:1	435	9.3	8.3-12.2			F10-F14-F16	Z30-Z45-Z60										
D2CK5-1S		23:1	245	16.5	11.5-31.3			F10-F14	Z10-Z20-Z30-Z45										
D2CK8	6000	5.6:1	1270	4.7	-	110	377	F16-F25-F30	Z90-Z120-Z180	F35	F30	260	356	8-M30-45	420	5	132	141	238
D2CK8-1C*		18:1	440	13.7	10.5-18			F14-F16-F25	Z30-Z45-Z60-Z90										
D2CK8-1S		37.9:1	220	27.3	20-50.4			F10-F14-F16	Z20-Z30-Z45-Z60										
D2CK10	8000	6.3:1	1500	5.3	-	130	427	F16-F25-F30	Z90-Z120-Z180	F40	F35	300	406	8-M36-50	475	6	138	168	270
D2CK10-1C*		20.3:1	525	15.4	11.8-20.3			F14-F16-F25	Z45-Z60-Z90-Z120										
D2CK10-1S		42.8:1	260	30.8	22.4-56.7			F10-F14-F16	Z20-Z30-Z45-Z60										

Notes:
For the model with "*",theinput rotation direction is opposite rotation direction, such as D2CK2-1c, when the input rotation is clockwise, the output rotation is anti-clockwise.

(Motorised operation)DRK&D2CK SERIES BEVEL GEAR BOX

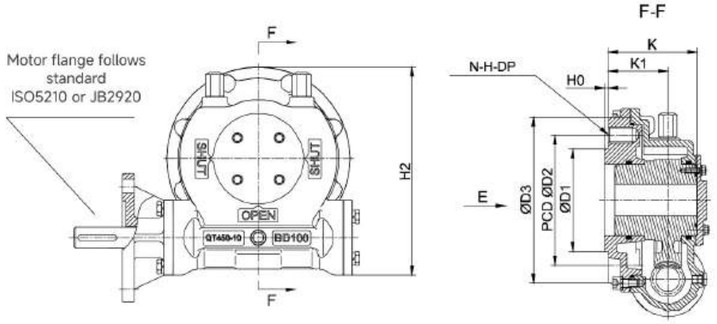
AUKOMA

常州新能自控设备有限公司
Changzhou Xinneng Automatic Control Equipment Co., Ltd

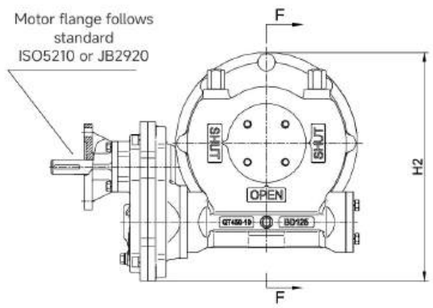
DBD

DBD SERIES MOTORISED WORM GEAR BOX

Type: A
Single stage
This model DBD

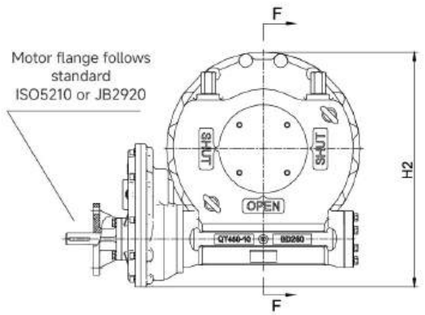


Type: B
Double stages
This model DBD-M21/M22/
V353S/V64S/V94S



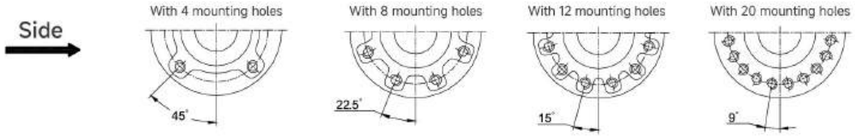
此图配 M21 M22 V353S V64S V94S

Type: C
Double stages
This model DBD-M30/M31/M32/
M33/M34/V9



此图配M30 M31 M32 M33 M34 V9

Side



Para. / Model	Technical Parameters									Standard flange size							
	Output torque	Ratio	Input Nm	M.A. ± 10%	Optional ratio range	Electric actuator connection		Valve connection acc. ISO5211		Max. Bore dia. mm	D1	P.C.D		D3	H0	H2	K	K1
						ISO5210	JB2920	Standard Mounting	Optional Mounting			D2	N-H-DP					
DBD80	1800	50:1	130	14	-	F10	Z10-Z20	F14	F10-F12	50	100	140	4-M16-24	175	3	217	101	66
DBD100	3800	40:1	270	14	-	F10-F14	Z10-Z20-Z30	F16	F12-F14	60	130	165	4-M20-30	210	3	263	112	75
DBD100+M21		82:1	160	23	64~116	F10-F14	Z10-Z20-Z30									309		
		116:1	115	33.3														
DBD125	5800	53:1	315	18	-	F10-F14	Z10-Z20-Z30	F20	F16-F25	70	140	205	8-M16-24	250	3	316	117	80
DBD125+M21		108:1	185	32.4	85~153	F10-F14	Z10-Z20-Z30									361		
		153:1	130	45														
DBD140	8500	51:1	510	16.8	-	F14-F16	Z30-Z45-Z60	F25	F16	90	200	254	8-M16-24	300	4	368	133	90
DBD140+M22		162:1	190	45.3	100~207	F10-F14-F16	Z10-Z20-Z30-Z45									443		
		207:1	150	57														
DBD140+M30		306:1	110	79.5	196~500	F10-F14	Z10-Z20-Z30									405		
		500:1	65	130														
DBD160	14000	53:1	800	17.5	-	F14-F16-F25	Z45-Z60-Z90	F30	F25	105	230	298	8-M20-30	350	4	410	153	101
DBD160+M22		215:1	235	60	104~215	F10-F14-F16	Z20-Z30-Z45-Z60									478		
DBD160+M31		292:1	185	75.9	203~519	F10-F14-F16	Z10-Z20-Z30									459		
		382:1	140	99														
DBD180	18000	60:1	970	18.6	-	F14-F16-F25	Z60-Z90-Z120	F30	F25	105	230	298	8-M20-30	350	4	445	163	106
DBD180+M22		243:1	285	63	118~243	F10-F14-F16	Z20-Z30-Z45-Z60									511		
DBD180+M31		264:1	280	66	230~588	F10-F14-F16	Z10-Z20-Z30									494		
		432:1	170	108														
DBD200	25000	56:1	1350	18.4	-	F16-F25	Z90-Z120	F35	F25-F30	120	260	356	8-M30-45	415	4	500	189	129
DB200+V353S		130:1	690	36.4	89~130	F14-F16	Z45-Z60-Z90									533		
DBD200+M32		583:1	165	151.5	241~784	F10-F14-F16	Z20-Z30-Z45									552		
DBD225	36000	64:1	1720	21	-	F16-F25	Z90-Z120-Z180	F35	F25-F30	140	260	356	8-M30-45	415	5	548	195	130
DB225+V64S		206:1	630	57.6	119~206	F14-F16-F25	Z45-Z60-Z90-Z120									630		
DBD225+M32		666:1	210	173	275~896	F10-F14-F16	Z20-Z30-Z45									619		
DBD250	48000	61:1	2400	20	-	F25-F30	Z180-Z250	F40	F30-F35	165	300	406	8-M36-54	475	5	608	206	139
DBD250+V64S		196:1	880	54.8	114~196	F14-F16-F25	Z60-Z90-Z120-Z180									680		
DBD250+M33		856:1	215	222.5	382~1287	F10-F14-F16	Z20-Z30-Z45-Z60									669		
DBD280	60000	69:1	2730	20	-	F25-F30	Z180-Z250-Z350	F40	F30-F35	165	300	406	8-M36-54	475	5	668	213	145
DBD280+V64S		222:1	1000	59.9	153~350	F16-F25-F30	Z90-Z120-Z180									740		
DBD280+M33		969:1	245	251.8	519~2314	F10-F14-F16	Z20-Z30-Z45-Z60									729		
DBD315	80000	68:1	3560	22.4	-	F30	Z250-Z350	F48	F35-F40	190	370	483	12-M36-54	560	5	765	246	168
DBD315+V64S		219:1	1310	61	127~219	F16-F25-F30	Z120-Z180-Z250									820		
DBD315+M34		1278:1	240	332	457~2044	F14-F16	Z20-Z30-Z45-Z60									835		
DBD355	100000	77:1	4100	24.6	-	F30	Z350-Z500	F48	F35-F40	190	370	483	12-M36-54	560	5	840	254	172
DBD355+V949		350:1	1060	94.5	153~350	F16-F25-F30	Z90-Z120-Z180-Z250									980		
DBD355+M34		1447:1	270	376	519~2314	F14-F16	Z20-Z30-Z45-Z60									910		
DBD400	150000	68:1	7200	21	-	F30-F35	Z500-Z800-Z1000	F60	F40-F48	220	470	603	20-M36-54	686	5	950	290	187
DBD400+V94S		310:1	1870	80.6	135~310	F25-F30-F35	Z180-Z250-Z350-Z500									1070		
DBD400+V9		1395:1	435	348.7	764~1395	F14-F16-F25	Z45-Z60-Z90-Z120									1002		

DBD SERIES MOTORISED WORM GEAR BOX

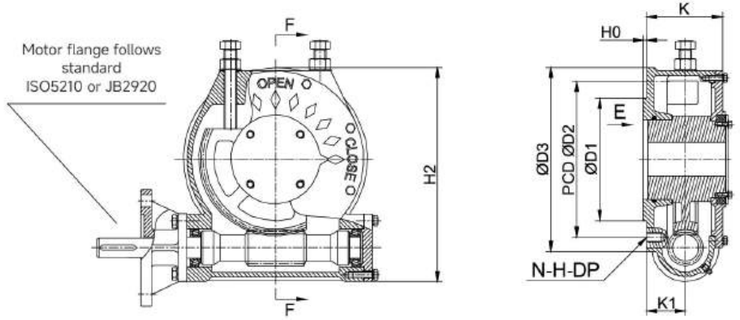
AUKOMA

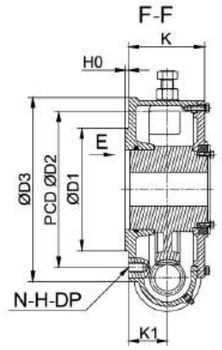
常州新能自控设备有限公司
Changzhou Xinneng Automatic Control Equipment Co., Ltd

DKB

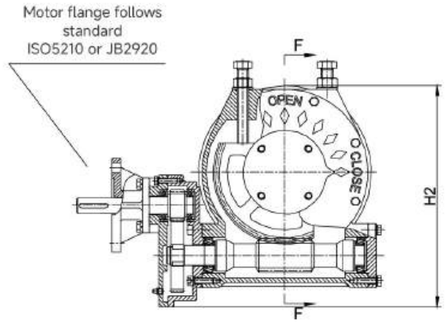
DKB SERIES MOTORISED WORM GEAR BOX

Type: A
Single stage
This model DKB

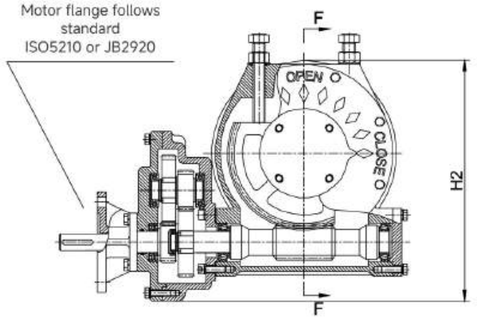




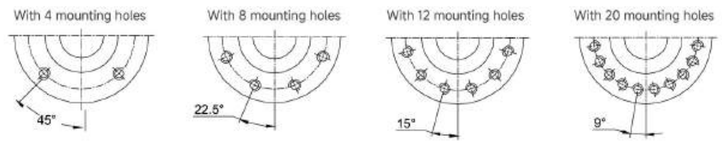
Type: B
Double stages
This model DKB-1S



Type: C
Double stages
This model DKB-1SD/2SD/3SD



Side



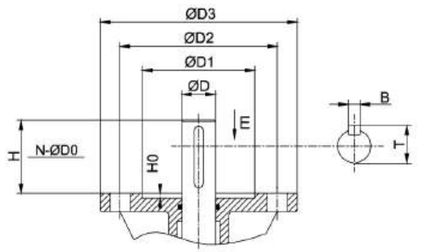
Model	Output torque	Ratio	Input Nm	M.A. ± 10%	Optional ratio range	Electric actuator connection		Valve connection acc. ISO5211		Max. Bore dia. mm	Standard flange size							
						ISO5210	JB2920	Standard Mounting	Optional Mounting		D1	P.C.D		D3	H0	H2	K	K1
												D2	N-H-DP					
DKB-0	1000	39:1	85	11.7	-	F10	Z10	F12	F10	40	85	125	4-M12-18	150	3	181	91	48
DKB-0-1S		63:1	65	15.7	-	F10	Z10									204		
DKB-01	1850	46:1	135	13.8	-	F10	Z10	F14	F16-F12	50	100	140	4-M16-24	175	3	203	94	48
DKB-01-1S		74:1	100	18.5	-	F10	Z10									225		
DKB-02	3000	49:1	205	14.7	-	F10-F14	Z10-Z20-Z30	F16	F14-F12	60	130	165	4-M20-30	210	4	245	110	64
DKB-02-1S		129:1	95	32.2	-	F10-F14	Z10-Z20									286		
DKB-03	4200	60:1	235	18	-	F10-F14	Z10-Z20-Z30	(F20)	F16	70	140	205	8-M16-24	250	4	284	112	58
DKB-03-1S		158:1	110	39.5	-	F10-F14	Z10-Z20									325		
DKB-04	8000	68:1	435	18.3	-	F14-F16	Z20-Z30-Z45	F25	F16	90	200	254	8-M16-24	300	4	349	124	63
DKB-04-1S		179:1	180	44.7	-	F10-F14	Z10-Z20-Z30									383		
DKB-04-1SD		220:1	160	50.6	140-304	F10-F14	Z20-Z30									389		
DKB-05	15000	59:1	850	17.7	-	F14-F16-F25	Z45-Z60-Z90	F30	F25	105	230	298	8-M20-30	350	4	400	143	71
DKB-05-1S		177:1	340	44.2	-	F10-F14-F16	Z20-Z30-Z45									453		
DKB-05-1SD		260:1	250	59.8	130-354	F10-F14	Z20-Z30-Z45-Z60									440		
DKB-05-2SD		399:1	165	91.7	210-531	F10-F14-F16	Z20-Z30-Z45									455		
DKB-06	22000	67:1	1100	20	-	F14-F16-F25	Z60-Z90-Z120	F35	F30-F25	120	260	356	8-M30-45	415	4	473	169	91
DKB-06-1S		201:1	440	50.2	-	F10-F14-F16	Z20-Z30-Z45									525		
DKB-06-1SD		295:1	325	67.8	148-402	F10-F14	Z20-Z30-Z45-Z60									512		
DKB-06-2SD		453:1	215	104	238-603	F10-F14-F16	Z20-Z30-Z45									528		
DKB-07	32000	63:1	1700	18.9	-	F16-F25	Z120-Z180	F40	F35-F30	140	300	406	8-M36-54	475	5	535	190	101
DKB-07-1S		202:1	635	50,5	118-202	F14-F16-F25	Z45-Z60-Z90-Z120									619		
DKB-07-1SD		567:1	250	130.4	224-567	F10-F14-F16	Z20-Z30-Z45-Z60									583		
DKB-07-2SD		881:1	160	202.6	605-881	F10-F14	Z20-Z30									603		
DKB-08	40000	76:1	1900	21	-	F16-F25-F30	Z180-Z250	F40	F35-F30	165	300	406	8-M36-50	475	5	590	201	102
DKB-08-1SD		514:1	340	118	270-684	F10-F14-F16	Z20-Z30-Z45-Z60									627		
DKB-08-2SD		1062:1	165	244	729-1062	F10-F14	Z20-Z30									640		
DKB-08-1S	52000	244:1	855	61	142-244	F14-F16-F25	Z60-Z90-Z120-Z180									668		
DKB-08-3SD		1216:1	190	279	475-1216	F10-F14-F16	Z20-Z30-Z45-Z60									666		
DKB-09	75000	73:1	3450	21.9	-	F25-F30-F35	Z350-Z500	F48	F40-F35	190	370	483	12-M36-54	560	5	730	232	116
DKB-09-1S		234:1	1290	58.5	136-234	F14-F16-F25	Z90-Z120-Z180-Z250									790		
DKB-09-1SD		1168:1	280	268	457-1168	F10-F14-F16	Z20-Z30-Z45-Z60									777		
DKB-09-2SD	90000	333:1	1085	83	145-333	F16-F25-F30	Z90-Z120-Z180-Z250									791		
DKB-10	165000	70:1	7860	21	-	F30-F35	Z800-Z1000	F60	F48	250	470	603	20-M36-54	686	6	893	282	140
DKB-10-1S		319:1	2070	79.7	139-319	F16-F25-F30	Z180-Z250-Z350-Z500									1018		
DKB-10-1SD		1517:1	475	348.9	786-1517	F14-F16-F25	Z45-Z60-Z90									958		
DKB-11	250000	71:1	11800	21.3	-	F35	Z1000	F60	/	300	470	603	20-M36-54	686	6	1015	338	160
DKB-11-1S		323:1	3100	80.7	147-323	F25-F30-F35	Z250-Z350-Z500									1105		
DKB-11-1SD		696:1	1570	160	469-1016	F16-F25-F30	Z120-Z180-Z250									1050		

DKB SERIES MOTORISED WORM GEAR BOX

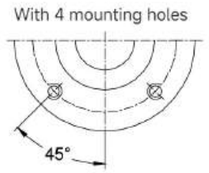
AUKOMA

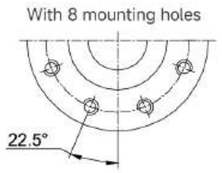
RECOMMENDED SIZE OF FLANGE FOR ELECTRIC ACTUATOR

Flange according to ISO5210



Side

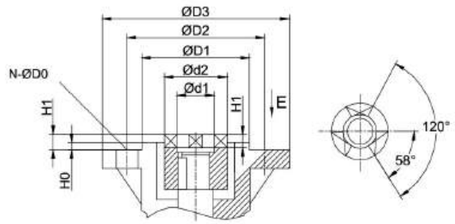




Electric F

Flange sizes for connecting with actuator according to IS05210								
Flange size	D3	D2	D1xH0	N-D0	D	B	H	T
F10	125	102	70x3	4-Φ12	20	6	45	22.5
F14	175	140	100x4	4-Φ18	30	8	65	33
F16	210	165	130x5	4-Φ22	30	8	65	33
					40	12	80	43
F25	300	254	200x5	8-Φ16	40	12	80	43
					50	14	100	53.5
F30	350	298	230x5	8-Φ22	50	14	100	53.5
					60	18	120	64

Flange according toJB2920



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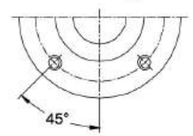

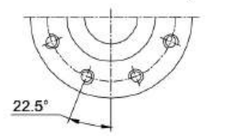

Electric three claws

Flange sizes for connecting with actuator according to JB2920									
Frame number	Motor Model	D3	D2	D1xH0	N-D0	H1	d1	d2	h2
2	Z05/Z10	145	120	90x4	4-Φ12	10	30	45	8
3	Z20/Z30	185	160	125x4	4-Φ14	12	42	58	10
4	Z451Z60	225	195	150x5	4-Φ18	14	46	72	12
5I	Z120	230	195	150x5	4-Φ18	14	46	72	12
5	Z90/Z120	275	235	180x5	4-Φ22	16	58	82	14
7	Z180/Z250	330	285	220x6	4-Φ26	19	65	98	16
8	Z350/Z500	380	340	280x6	8-Φ22	23	80	118	20
9	Z650/Z800	430	380	300x8	8-Φ26	28	128	85	25
10	Z1000	510	450	360x8	8-Φ33	33	105	158	30

常州新能自控设备有限公司
Changzhou Xinneng Automatic Control Equipment Co., Ltd

RECOMMENDED SIZE OF FLANGE FOR ELECTRIC ACTUATOR

Actuators Chosen Chart

Electric actuator and gate valve

Pressure: 0.098 MPa (kgf/cm²)
Diameter: mm Torque: 9.8N.m (kgf/m)

DN / Model / PN	40	50	65	80	100	125	150	200	250	300	350	400	450	500	600	700	800	900	1000	1200	1400
2.5	Z5	Z5	Z5	Z5	Z10	Z10	Z15	Z15	Z20	Z20	Z30	Z30	Z45	Z45	Z60	Z60	Z60	Z90	Z90	Z120	Z180
6	Z5	Z5	Z5	Z10	Z15	Z15	Z15	Z20	Z20	Z30	Z30	Z45	Z45	Z60	Z60	Z60	Z90	Z120	Z120	Z180	Z180
10	Z5	Z10	Z10	Z10	Z15	Z15	Z15	Z20	Z20	Z30	Z45	Z45	Z60	Z60	Z90	Z90	Z120	Z120	Z180	Z250	Z250
16	Z5	Z10	Z10	Z15	Z20	Z20	Z20	Z30	Z30	Z45	Z90	Z120	Z120	Z180	Z180	Z350	Z350	Z500			
25	Z5	Z10	Z10	Z15	Z20	Z20	Z20	Z30	Z30	Z60	Z90	Z120	Z120	Z180	Z250	Z500	Z500	Z800			
40	Z5	Z10	Z10	Z15	Z20	Z20	Z30	Z30	Z45	Z60	Z90	Z120	Z180	Z250	Z500	Z800					
64	Z10	Z10	Z10	Z20	Z20	Z30	Z30	Z45	Z60	Z90	Z120	Z180	Z250	Z500	Z500	Z800					
100	Z10	Z15	Z20	Z20	Z30	Z45	Z60	Z90	Z120	Z180	Z250	Z500	Z500	Z800							
160	Z15	Z15	Z20	Z30	Z30	Z60	Z90	Z120													
320	Z20	Z20	Z45	Z60	Z90																

Electric device for writing rubber sealing butterfly valve

Pressure: 0.098 MPa (kgf/cm²)
Diameter: mm Torque: 9.8N.m (kgf/m)

DN / Model / PN	80	100	125	150	200	250	300	350	400	450	500	600	700	800	900	1000	1100	1200	1400	1600	1800
2.5	Q10	Q10	Q10	Q10	Q10	Q30	Q90	Q90	Q90	Q120 Z10	Q200 Z15	Q250 Z20	Q250 Z30	Q500 Z45	Q500 Z60	Z60	Z60	Z60	Z90	Z120	Z120
6	Q10	Q10	Q15	Q15	Q30	Q40	Q90	Q90	Q120 Z15	Q200 Z15	Q300 Z20	Q400 Z30	Q500 Z45	Z45	Z60	Z60	Z90	Z90	Z120	Z120	
10	Q10	Q10	Q20	Q20	Q40	Q60	Q120 Z15	Q120 Z15	Q200 Z20	Q250 Z20	Q400 Z30	Q500 Z30	Z45	Z60	Z90	Z90	Z120	Z120			
16	Q10	Q20	Q20	Q30	Q60	Q90 Z10	Q120 Z15	Q120 Z15	Q400 Z20	Q500 Z30	Q500 Z30										

Electric actuator and knife gate valve/slurry valve

Pressure: 0.098 MPa (kgf/cm²)
Diameter: mm Torque: 9.8N.m (kgf/m)

Nominal diameter	50	65	80	100	125	150	200	250	250	300	350	400	450	500	600	700	800	900	1000
Torque	Z10	Z10	Z10	Z10	Z10	Z10	Z15	Z20	Z20	Z20	Z30	Z30	Z45	Z45	Z45	Z60	Z90	Z120	Z120

Electric actuator and metal-sealed butterfly valve

Pressure: 0.098 MPa (kgf/cm²)
Diameter: mm Torque: 9.8N.m (kgf/m)

DN / Model / PN	80	100	125	150	200	250	300	350	400	450	500	600	700	800	900	1000	1100	1200	1400	1600	1800
1	Q5	Q5	Q10	Q10	Q20	Q30	Q60	Q60	Q90	Q120 Z10	Q200 Z15	Q250 Z15	Q350 Z20	Q400 Z20	Q500 Z30	Z45	Z60	Z60	Z90	Z120	Z180
2.5	Q10	Q10	Q10	Q20	Q60	Q60	Q90	Q120 Z10	Q120 Z10	Q200 Z15	Q200 Z15	Q400 Z20	Q500 Z30	Z45	ZA5	Z60	Z90	Z90	Z120	Z180	Z250
6	Q10	Q10	Q20	Q20	Q60	Q90	Q120 Z10	Q200 Z10	Q200 Z15	Q250 Z15	Q300 Z20	Q500 Z30	Z45	Z60	Z90	Z90	Z90	Z120	Z180	Z250	Z350
10	Q10	Q20	Q20	Q30	Q90	Q120 Z10	Q200 Z15	Q250 Z15	Q300 Z20	Q400 Z20	Q500 Z30	Z45	Z60	Z90	Z90	Z120	Z120	Z180	Z250	Z350	
16	Q10	Q20	Q30	Q60	Q90 Z10	Q150 Z10	Q200 Z15	Q300 Z20	Q400 Z20	Q500 Z30	Z30	Z60	Z90	Z90	Z120	Z120	Z180	Z250	Z350		
25	Q20	Q20	Q30	Q60	Q150 Z10	Q200 Z15	Q250 Z20	Q400 Z20	Q500 Z30	Q500 Z30	Z45	Z90	Z90	Z120	Z180	Z250	Z250	Z350			
40		Q20	Q60	Q90	Q200 Z15	Q250 Z15	Q400 Z20	Z30	Z45	Z45	Z60	Z90	Z180	Z180							
64			Q120	Q200 Z15	Q250 Z20	Q300 Z20	Q500 Z30	Z45	Z60	Z90	Z90	Z180	Z250								
100			Q120 Z10	Q200 Z15	Q300 Z20	Q400 Z20	Z45	Z60	Z90	Z90	Z120	Z250									

Electric actuator and high-temperature welding gate valve

Pressure: 0.098 MPa (kgf/cm²)
Diameter: mm Torque: 9.8N.m (kgf/m)

Model	Nominal Diameter DN(mm)	Pressure pN (MPa)	Denso model	Model	Nominal Diameter DN(mm)	Pressure pN (MPa)	Denso model	Model	Nominal Diameter DN(mm)	Pressure pN (MPa)	Denso model
Z960Y-200	175	20	DZW120	Z960Y-320 Z962Y-320	125	32	DZW120	Z962Y-P_{54}140V	250	14	DZW250
	225		DZW80		175		DZW180	Z962Y-P_{54}140V	125	14	DZW90
	250		DZW80		225		DZW250		175		DZW120
Z962Y-250	125	25	DZW120	Z960Y-P_{54}100V	176	10	DZW90	Z962Y-P_{54}170V	225	17	DZW180
	175		DZW120		225		DZW120		100		DZW90
	225		DZW180		250		DZW120		125		DZW90
Z960Y-250	100	25	DZW90		300		DZW60		150		DZW120
	125		DZW120	Z962Y-P_{54}100V	150	10	DZW120		175		DZW120
	150		DZW120		225		DZW120		225		DZW180
	175		DZW120		250		DZW120	Z962Y-P_{54}-170V	175	17	DZW120
	225		DZW180	Z962Y-P_{54}140V	125	14	DZW90		225		DZW80
Z960Y-300	225	30	DZW250		175		DZW120		250		DZW250
	300		DZW500		225		DZW180		300		DZW350

Electric actuator and globe valve

Pressure: 0.098 MPa (kgf/cm²)
Diameter: mm Torque: 9.8N.m (kgf/m)

DN / Model / PN	15	20	25	32	40	50	65	80	100	125	150	200	250	300	350	400
10	Z5	Z5	Z5	Z5	Z5	Z5	Z5	Z10	Z15	Z20	Z30	Z45	Z60	Z90	Z120	Z250
16	Z5	Z5	Z5	Z5	Z5	Z5	Z10	Z20	Z20	Z30	Z45	Z60	Z120	Z180	Z250	Z350
25	Z5	Z5	Z5	Z5	Z5	Z10	Z10	Z20	Z20	Z30	Z45	Z60	Z180	Z250		
40	Z5	Z5	Z5	Z5	Z5	Z10	Z10	Z20	Z30	Z45	Z60	Z90				
64	Z5	Z5	Z5	Z5	Z10	Z10	Z20	Z30	Z45	Z90	Z120					
100	Z5	Z5	Z5	Z10	Z10	Z20	Z30	Z45	Z60	Z120	Z180					
160	Z5	Z10	Z10	Z30	Z30	Z30	Z45	Z90	Z120	Z180						
320	Z5	Z10	Z10	Z45	Z45	Z45	Z90	Z120	Z250	Z500						

Electric actuator and soft seal ball valve

Pressure: 0.098 MPa (kgf/cm²)
Diameter: mm Torque: 9.8N.m (kgf/m)

DN / Model / PN	15	20	25	32	40	50	65	80	100	125	150	200	250	300	350	400	450	500	600	700
16	Q5	Q5	Q5	Q5	Q5	Q5	Q10	Q20	Q30	Q60	Q90 Z10	Q120 Z15	Q200 Z20	Q300 Z30	Z45	Z45	Z60	Z60	Z90	Z120
25	Q5	Q5	Q5	Q5	Q5	Q10	Q20	Q30	Q60	Q90	Q120 Z10	Q200 Z20	Q250 Z20	Q400 Z30	Z45	Z60	Z60	Z90	Z120	Z180
40	Q5	Q5	Q5	Q5	Q10	Q10	Q20	Q30	Q60	Q90	Q120 Z10	Q250 Z10	Q400 Z30	Q500 Z45	Z60	Z90	Z90	Z120	Z180	Z250
64	Q5	Q5	Q5	Q10	Q10	Q20	Q30	Q60	Q90 Z10	Q200 Z10	Q200 Z10	Q300 Z10	Q500 Z30	Z45	Z60	Z90	Z90	Z120	Z180	Z250
100	Q5	Q5	Q5	Q10	Q10	Q20	Q60	Q90	Q200 Z10	Q300 Z20	Q300 Z20	Q500 Z30	Z45	Z45	Z120	Z120	Z180	Z180	Z250	Z350

Electric device and ventilation butterfly valve

Pressure: 0.098 MPa (kgf/cm²)
Diameter: mm Torque: 9.8N.m (kgf/m)

Diameter	50	60	80	100	125	150	200	250	300	350	400	450	500	600	700	800	900	1000	1100	1200	1400	1600	1800	2000
Torque	Q10	Q10	Q10	Q10	Q10	Q10	Q10	Q10	Q10	Q20	Q20	Q20	Q20	Q40	Q40	Q80	Q120 Z20	Q200 Z20	Q250 Z20	Q300 Z30	Q400 Z30	Q400 Z45	Z45	Z60

RECOMMENDED SIZE OF FLANGE FOR ELECTRIC ACTUATOR