

# Electric Linear Actuator IQL Series



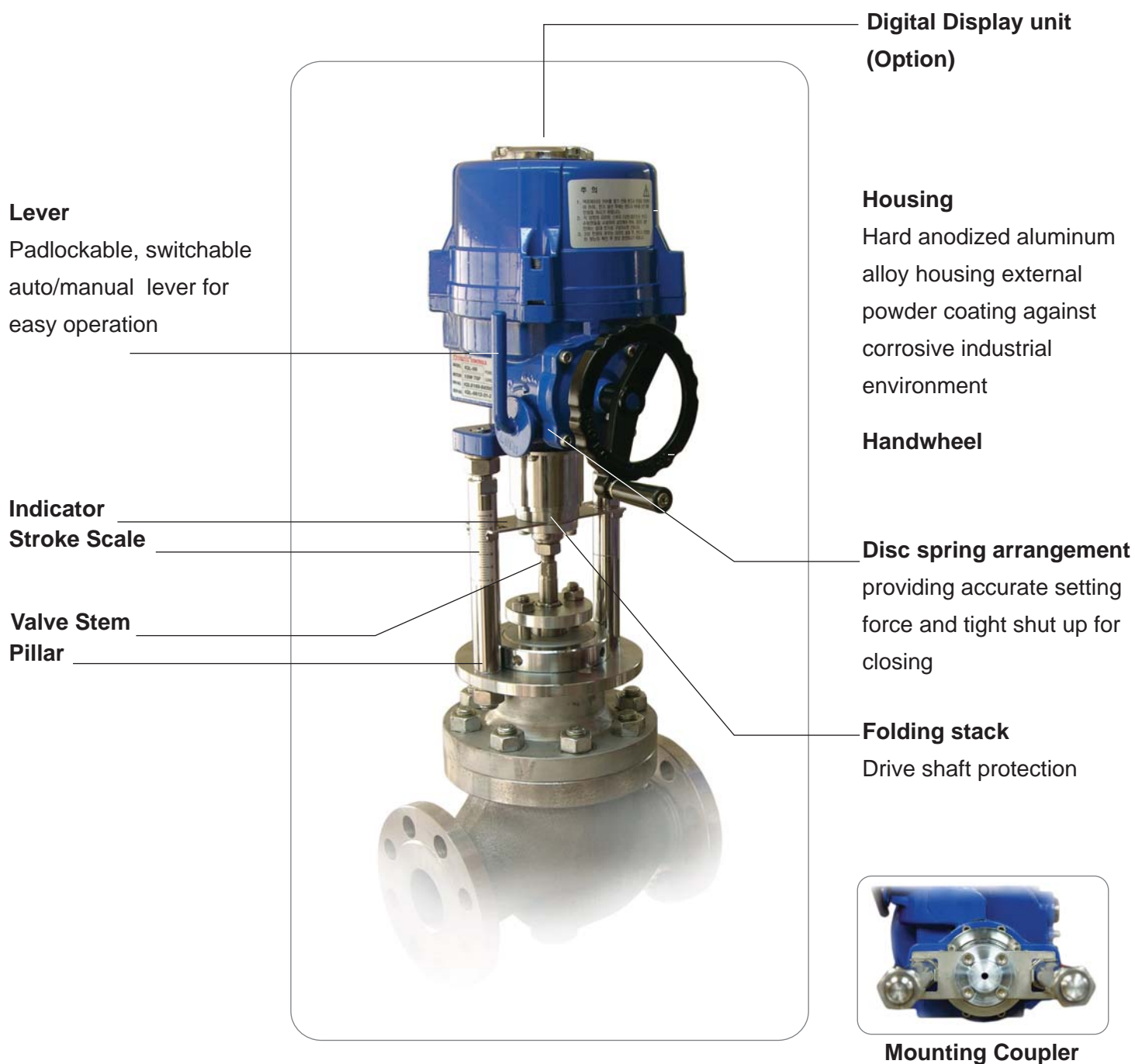
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# IQL LINEAR ELECTRIC ACTUATOR

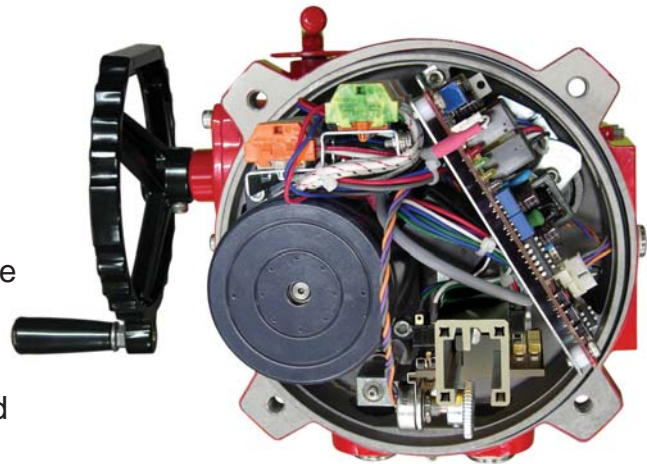
I-tork controls designs, produces and provides high quality electric actuator and services related to industrial valve automation and controls.

IQL series linear actuator has been developed for a wide range of linear applications and to service reliable performance, long trouble free operation, more flexibility and maximized ability to integrate fully into sophisticated control system.



# IQL LINEAR ELECTRIC ACTUATOR

- Robust construction, precise positioning, reliable performance
- Wide range of application
- Compact internal Arrangement
- Modulating control options can be installed on site
- Local control options for easy commissioning and emergency operation in the field



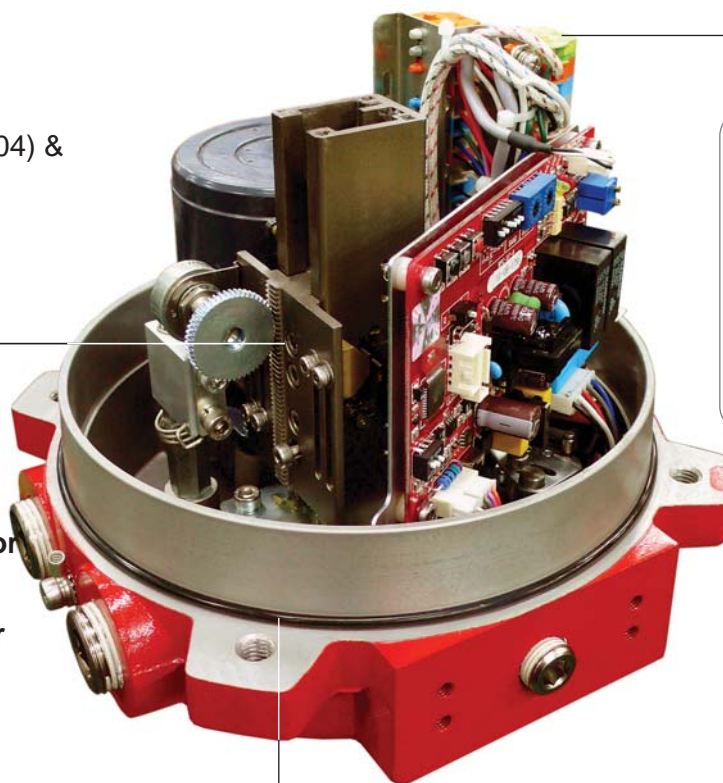
## Electric Operation / Modulating control

- On-off
  - Input : 4-20mA, 0-10VDC, 2~10VDC, 1~5VDC, 0~5VDC
  - Output : 4-20mA  
(Option : 0-10VDC, 2~10VDC, 1~5VDC, 0~5VDC)
  - Auto-calibration
  - 0-10 V or other signal selection
  - Transmitter output 4-20 mA

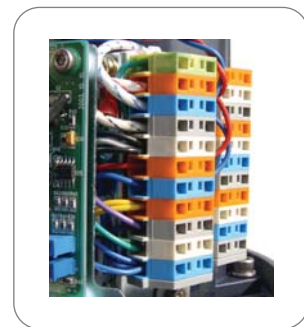
Simple and easier handling and adjustment of Limit (from IQL04) & Signal switches (from IQL08)



Indicator  
Coupler  
Pillar



Terminal



Seals & O-rings  
protection to water proof IP66

## TECHNICAL DATA

Model		IQL 04	IQL 06	IQL 08	IQL 10	IQL 12	IQL 20	IQL 25
Thrust force	kN	4	6	8	10	12	20	25
Stroke	mm	40	40	50	50	50	100	100
Manual override		Handwheel with switchable declutchable lever						
Cable entry		PF 3/4"						
Ambient temperature		-20 ~ +70 °C						
Position indication		Scale on pillar indicated by indicator						
Mounting direction		Any direction except for heading downward						
Housing		Aluminum alloy hard anodized for anti-corrosion						
Positioning speed	mm / sec	Refer to individual technical data sheet						
Power supply		24 VDC, Single phase (110 / 220 VAC), 3phase (380 / 440VAC)						
Current draw		Refer to individual technical data sheet						
Motor protection		Thermal protector (Class F)						
Operating mode	S2	Max. 30 Min					Max. 30 Min	
	S4	50% ED-1200 c/h					50% ED-800 c/h	
Weight	Kgs	7	8	15	16	17	20	22
Valve Stem threads	mm	M20(Max)	M20(Max)	M20(Max)	M20(Max)	M20(Max)	M24(Max)	M24(Max)
PCD on flange	mm	100	100	100	100	100	155	155
Pillar Threads		M16	M16	M16	M16	M16	M20	M20
Pillar material		Stainless steel, carbon steel with special surface treatment						

## CONTROL OPTIONS

Local control _____	LP4 (Single phase), LM4 (3phase)
Fail safe _____	Battery back up
Integral _____	ICM1, ICM2
Modulating _____	RPC
Transmitter (feedback) _____	CT
Explosion proof _____	Exd II B T4

 **CONTROLS Co., Ltd.**

Website : <http://www.i-tork.com>

\* The details of this catalog are subject to change without prior notification.

**General technical data**

		IQL 04	IQL 06
Force (Max)	[KN]	4	6
Stroke (Max)	[mm]	40	40
Positioning speed		0.7 / 0.83 mm/sec (50/60Hz)	
Manual override		Handwheel with switchable declutchable lever	
Enclosure	EN60529	IP66	
Cable entry		2 - PF 3/4" TAP	
Position indicator		Gradulation on pillar pointed by carrier plate	
Housing		Aluminum alloy hard anodized for anti-corrosion	
Painting		Epoxy powder coated	
Ambient temperature	[°C]	-20 °C ~ +70 °C	
Operating mode IEC34-1, 8		S2 30 Min	S4 1200 c/h 50%ED
Weight	[Kgs]	9	9

**Actuator speed and electric data**

Rated current (A)		1 Phase				3 Phase				AC/DC
		110VAC		220VAC		380VAC		440VAC		
		50Hz	60Hz	50Hz	60Hz	50Hz	60Hz	50Hz	60Hz	24V
	IQL 04	0.95	1.00	0.26	0.25	0.3	0.31	0.28	0.40	3.0
	IQL 06	0.98	1.10	0.29	0.28	0.32	0.33	0.30	0.42	3.5
Motor protection		Thermal switch, Class F insulation								
Space heater		5 W (110/220VAC) for anti condensation								
Limit switch		1 each for open/close (SPDT 10A 250VAC rating)								

**Valve mounting**

Valve stem threads	mm	M20 (Max)	M20 (Max)
PCD on flange	mm	100	100
Pillar Threads		M16	M16
Mounting direction		Any direction except for heading downward	
Pillar material		Non corrosive material	

**Available optional controls**

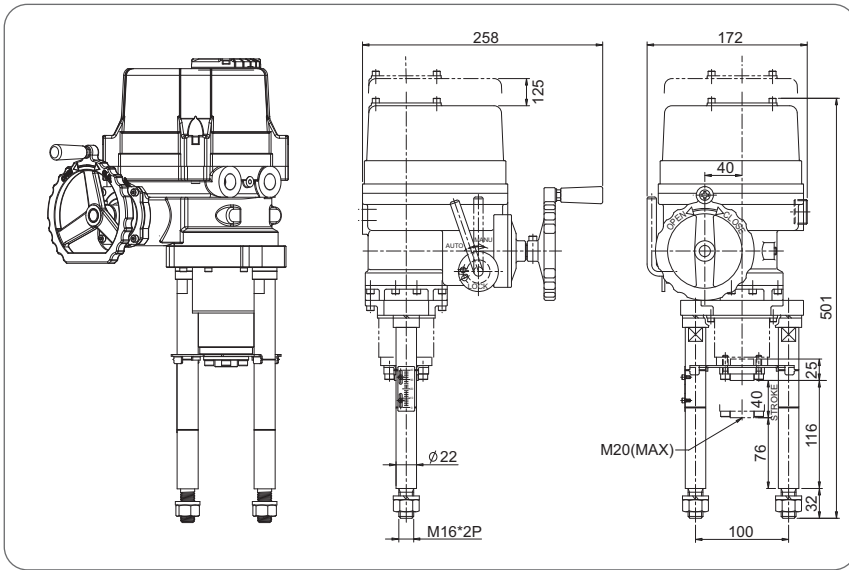
Remote position control	RPC	4-20mA input/output, Selectable other signal
Potentiometer	PK	0~1Kohm feedback
Current transmitter	CT	4-20mA output
AC/DC Converter	ADC 16	AC to DC converter

**Local control**

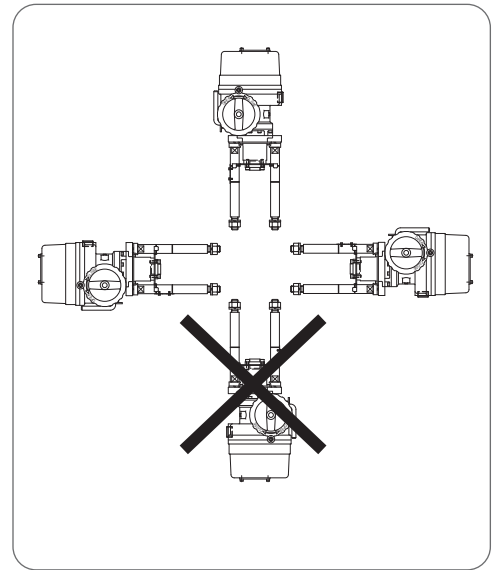
Local control (1phase)	LP4	Local control unit
Local control (3phase)	LM4	LP4 with reversing contactor and transformer
Explosion proof Exd IIB T4	Nepsi	



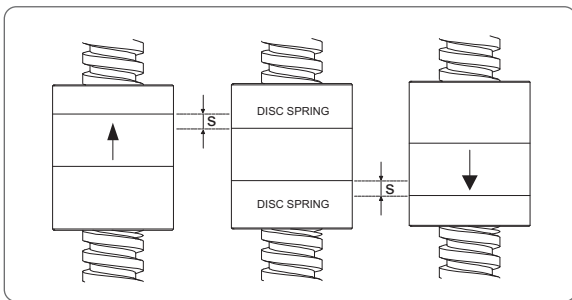
## Dimensions(mm)



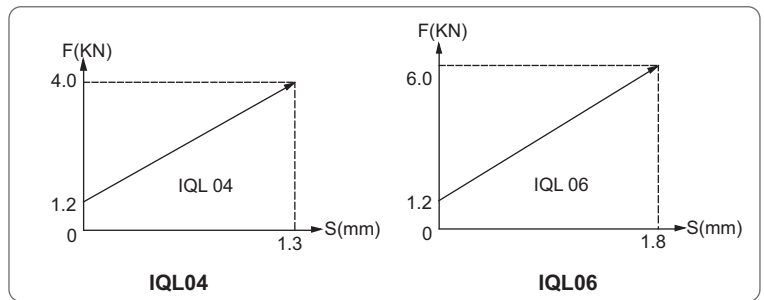
## Correct mounting direction



## Setting closing(opening) force

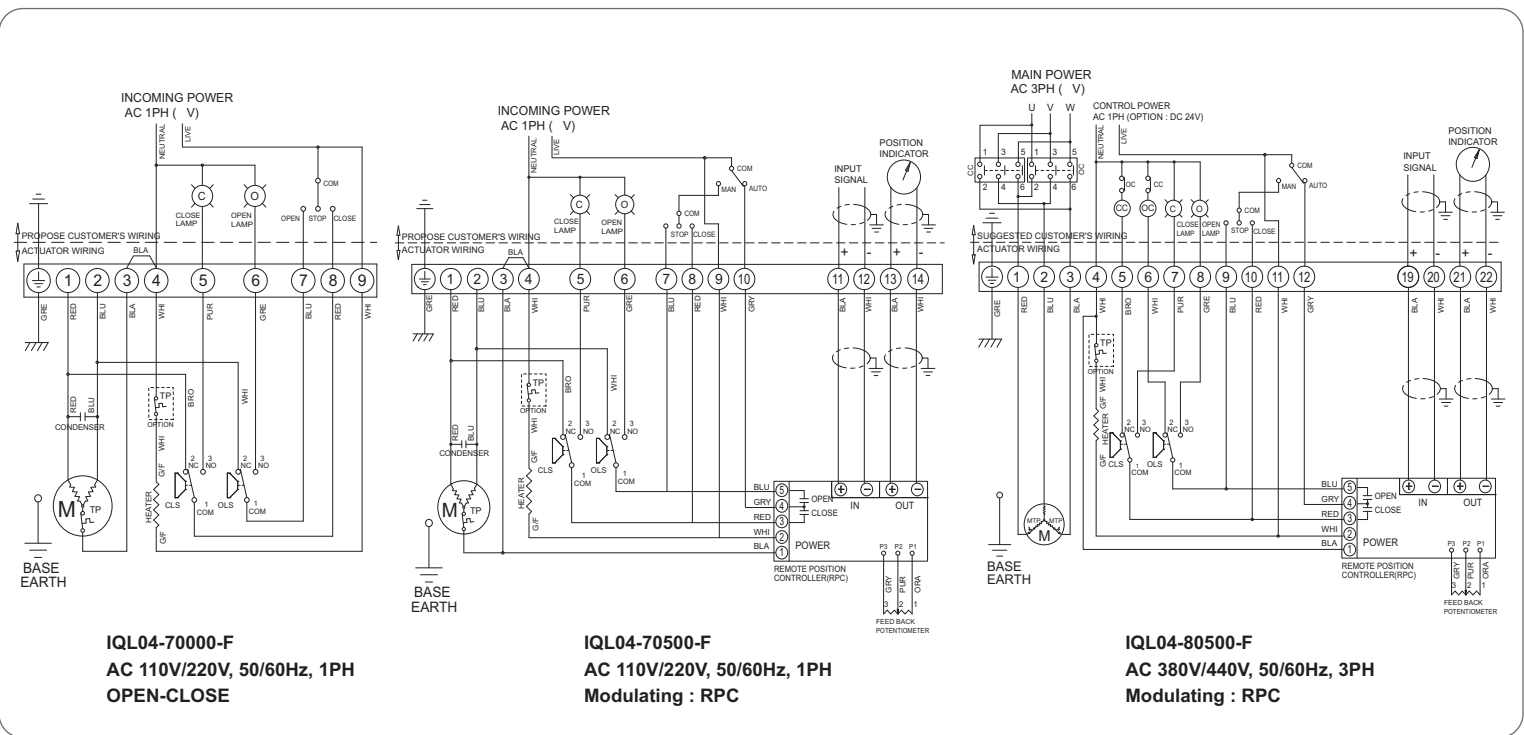


Disc spring arrangement



F : Closing(opening) force S : Amount of disc spring compression

## Standard wiring



## General technical data

		IQL 08	IQL 10	IQL 12
Force (Max)	[KN]	8	10	12
Stroke (Max)	[mm]	50	50	50
Positioning speed		0.9 / 1.1 mm/sec (50/60Hz)	0.9 / 1.1 mm/sec (50/60Hz)	0.9 / 1.1 mm/sec (50/60Hz)
Manual override		Handwheel with switchable declutchable lever		
Enclosure	EN60529	IP66		
Cable entry		2 - PF 3/4" TAP		
Position indication		Graduation on pillar pointed by carrier plate		
Housing		Aluminum alloy hard anodized for anti-corrosion		
Painting		Epoxy powder coated		
Ambient temperature	[°C]	-20 °C ~ +70 °C		
Operating mode IEC34-1, 8		S2 30 Min	S4 1200 c/h 50%ED	
Weight	[Kgs]	18	18	18

## Actuator speed and electric data

Rated current (A)		1 Phase				3 Phase				AC/DC
		110VAC		220VAC		380VAC		440VAC		
		50Hz	60Hz	50Hz	60Hz	50Hz	60Hz	50Hz	60Hz	
IQL 08	IQL 08	0.92	0.88	0.48	0.46	0.18	0.17	0.17	0.16	24V
	IQL 10	0.95	0.91	0.50	0.48	0.19	0.18	0.18	0.17	3.20
	IQL 12	0.98	0.94	0.52	0.50	0.20	0.19	0.19	0.18	3.50
Motor protection		Thermal switch, Class F insulation								
Space heater		5 W (110/220VAC) for anti condensation								
Limit switch		2 each for open/close (SPDT 10A 250VAC rating)								
Force switch		1 each for open/close (SPDT 10A 250VAC rating)								

## Valve mounting

Valve stem threads	mm	M20 (Max)	M20 (Max)	M20 (Max)
PCD on flange	mm	100	100	100
Pillar Threads		M16	M16	M16
Mounting direction		Any direction except for heading downward		
Pillar material		Stainless steel, carbon steel with special surface treatment		

## Available optional controls

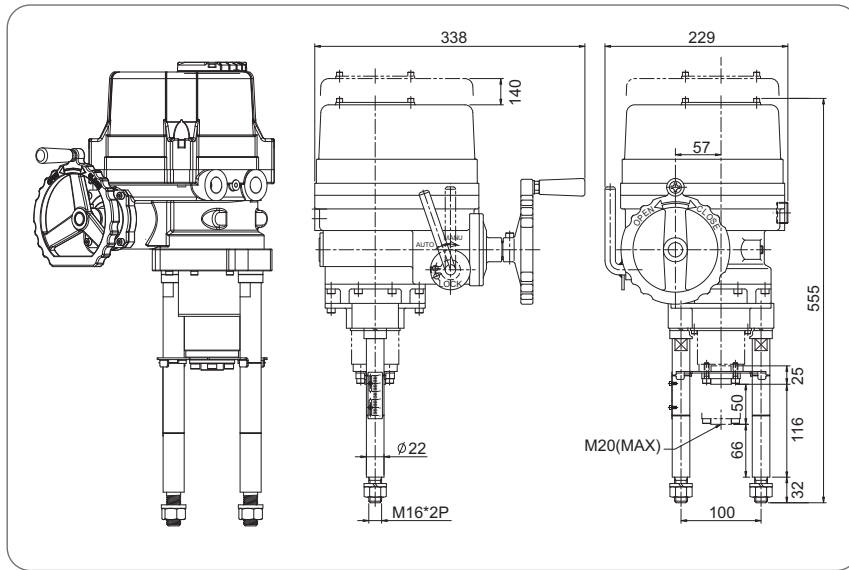
Remote position control	RPC	4-20mA input/output, Selectable other signal
Potentiometer	PK	0~1Kohm feedback
Current transmitter	CT	4-20mA input / output, Optional others
AC/DC Converter	ADC 16	AC to DC converter

### Local control

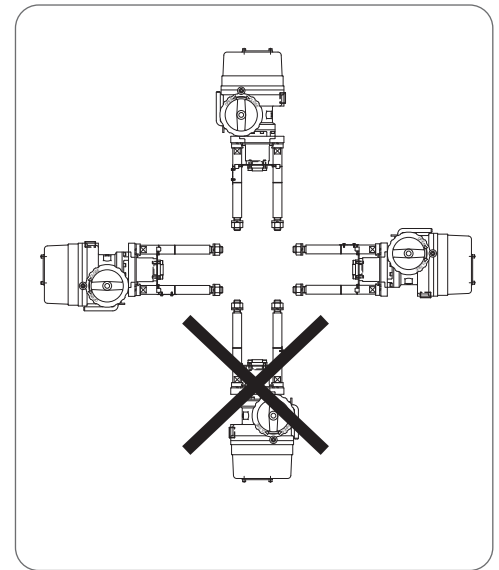
Local control (1phase)	LP4	Local control unit
Local control (3phase)	LM4	LP4 with reversing contactor and transformer
Integral unit	ICM1/2	Local controller with phase discriminator
Battery back up unit	BP	Fail safe (Fail position either open/close/stay put)
Explosion proof Exd IIB T4	Nepsi	



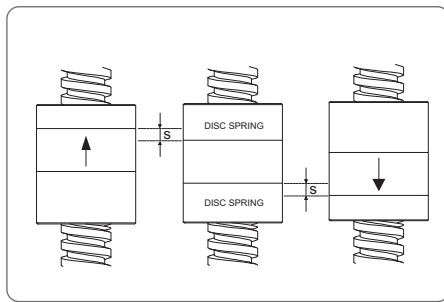
## Dimensions(mm)



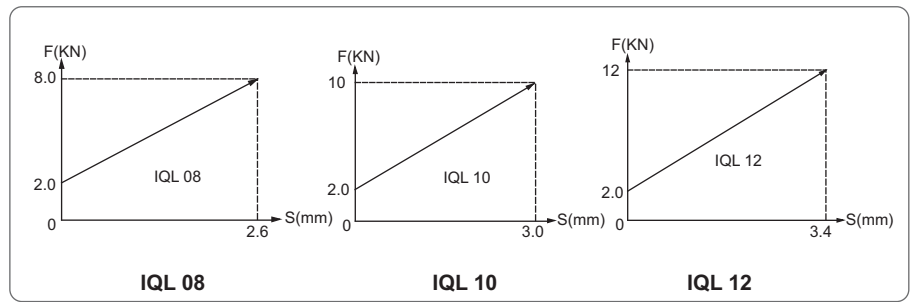
## Correct mounting direction



## Setting closing(opening) force

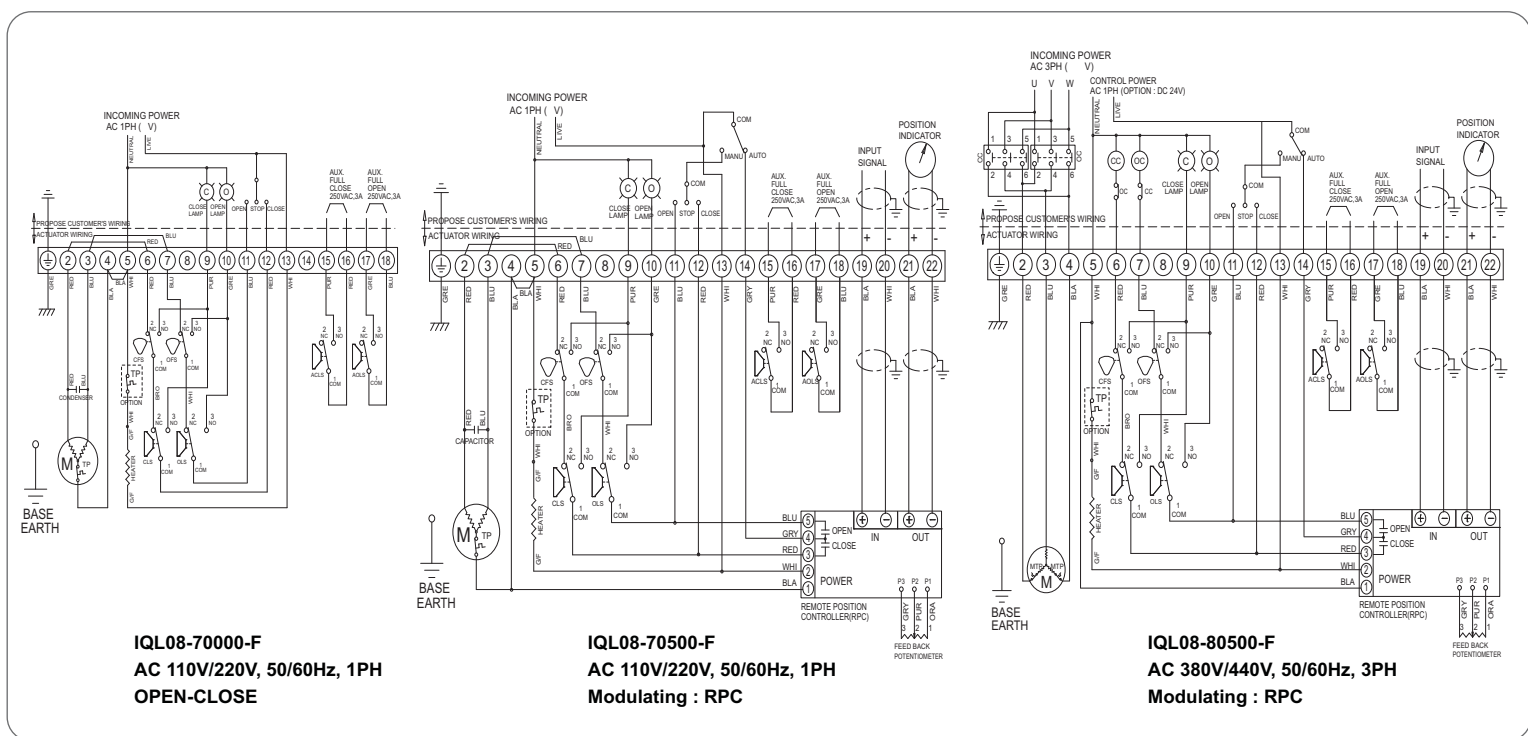


Disc spring arrangement



F : Closing(opening) force    S : Amount of disc spring compression

## Standard wiring



## General technical data

		IQL 20	IQL 25
Force (Max)	[KN]	20	25
Stroke (Max)	[mm]	100	100
Positioning speed		0.9 / 1.1 mm/sec (50/60Hz)	0.9 / 1.1 mm/sec (50/60Hz)
Manual override		Handwheel with switchable declutchable lever	
Enclosure	EN60529	IP66	
Cable entry		2 - PF 3/4" TAP	
Position indication		Gradulation on pillar pointed by carrier plate	
Housing		Aluminum alloy hard anodized for anti-corrosion	
Painting		Epoxy powder coated	
Ambient temperature	[°C]	-20 °C ~ +70 °C	
Operating mode IEC34-1, 8		S2 30 Min	S4 1200 c/h 50%ED
Weight	[Kgs]	23	24

## Electric data

Rated current (A)		1 Phase				3 Phase				AC/DC
		110VAC		220VAC		380VAC		440VAC		
		50Hz	60Hz	50Hz	60Hz	50Hz	60Hz	50Hz	60Hz	24V
	IQL 20	1.75	1.68	0.93	0.89	0.3	0.3	0.32	0.31	6.0
	IQL 25	1.8	1.72	0.95	0.92	0.32	0.32	0.34	0.33	7.0
Motor protection		Thermal switch, Class F insulation								
Space heater		5 W (110/220VAC) for anti condensation								
Limit switch		2 each for open/close (SPDT 10A 250VAC rating)								
Force switch		1 each for open/close (SPDT 10A 250VAC rating)								

## Valve mounting

Valve stem threads	mm	M24 (Max)	M24 (Max)
PCD on flange	mm	155	155
Pillar Threads		M20	M20
Mounting direction		Any direction except for heading downward	
Pillar material		Stainless steel, carbon steel with special surface treatment	

## Available optional controls

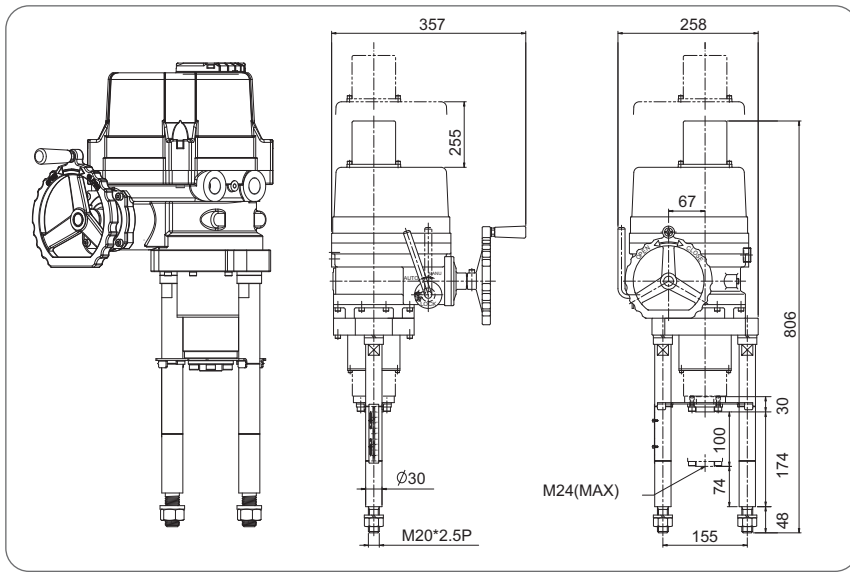
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Potentiometer	PK	0~1Kohm feedback
Current transmitter	CT	4-20mA output
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### Local control

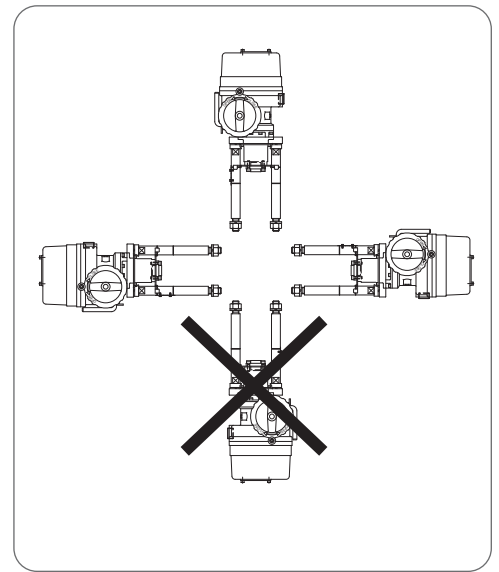
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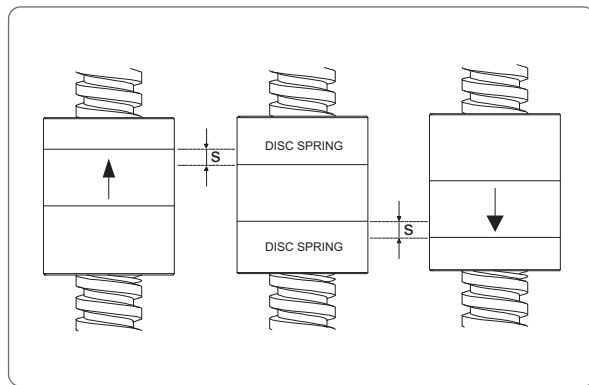
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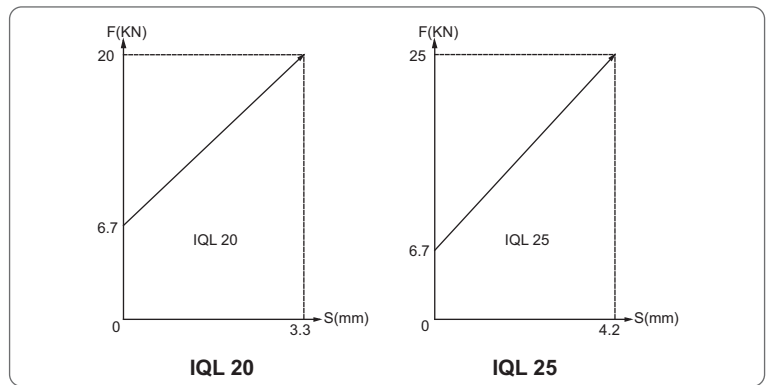
## Correct mounting direction



## Setting closing(opening) force

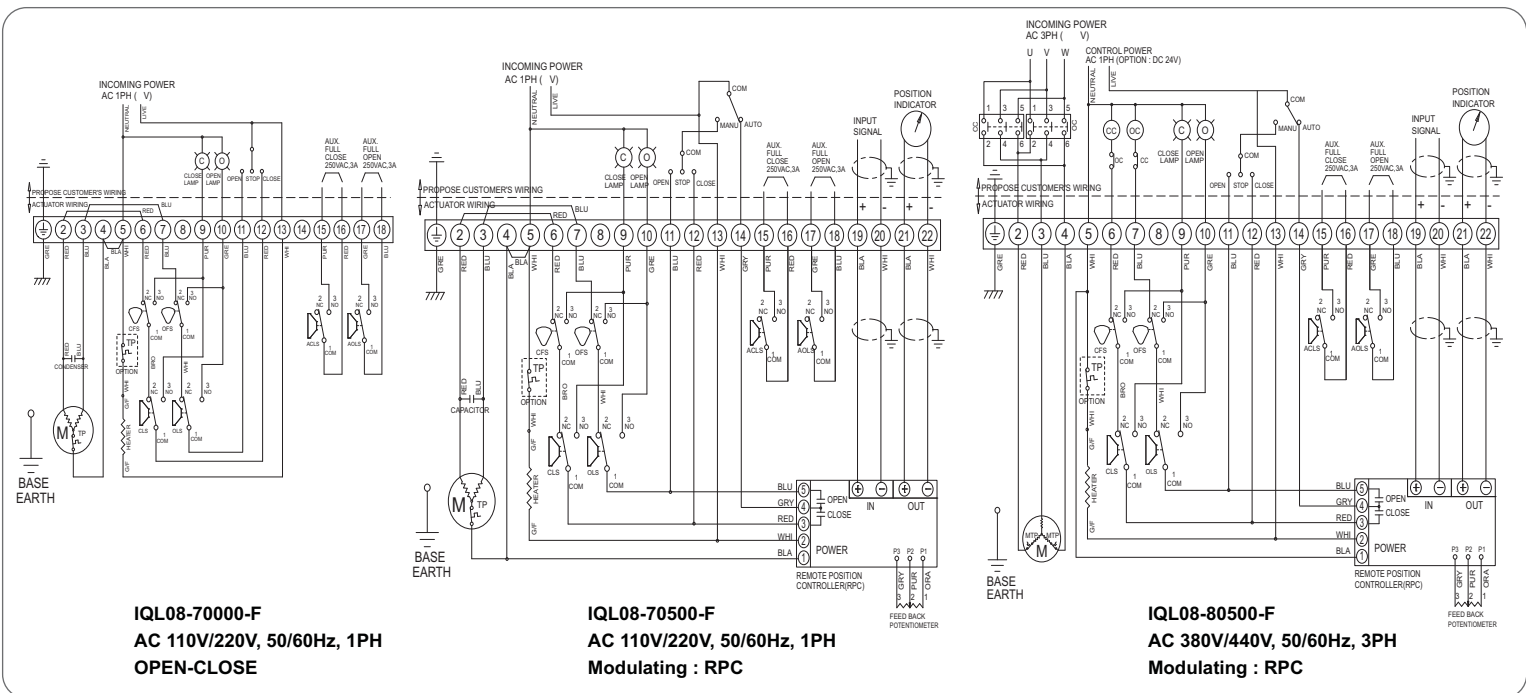


Disc spring arrangement



F : Closing(opening) force    S : Amount of disc spring compression

## Standard wiring



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