

# Electric Linear Actuator IQL Series



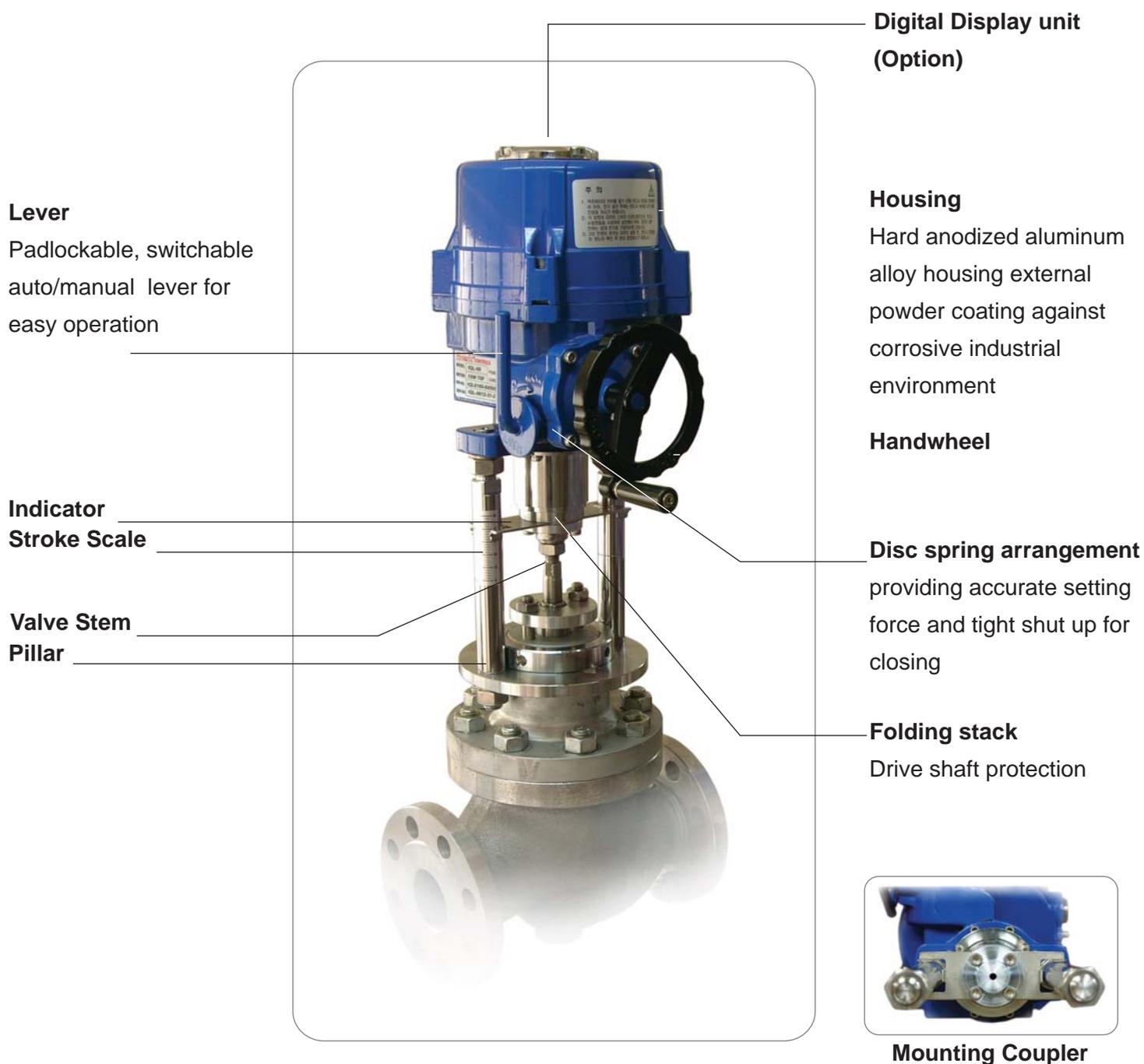
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# IQL LINEAR ELECTRIC ACTUATOR

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.



**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)	0.7 / 0.90 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**

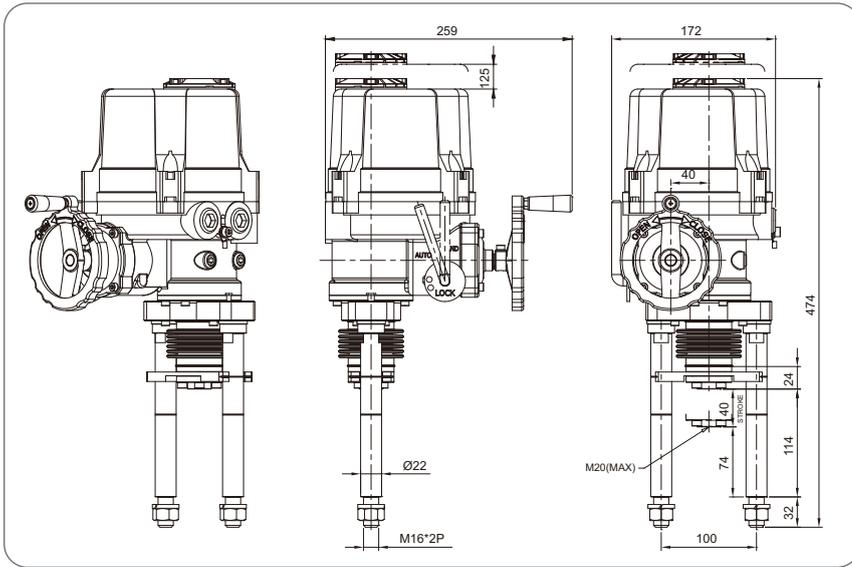
Remote position control	RPC	4-20mA input/output, Selectable other signal
Potentiometer	PK	0~1Kohm feedback
Current transmitter	CT	4-20mA output
AC/DC Converter	ADC 16	AC to DC converter

**Local control**

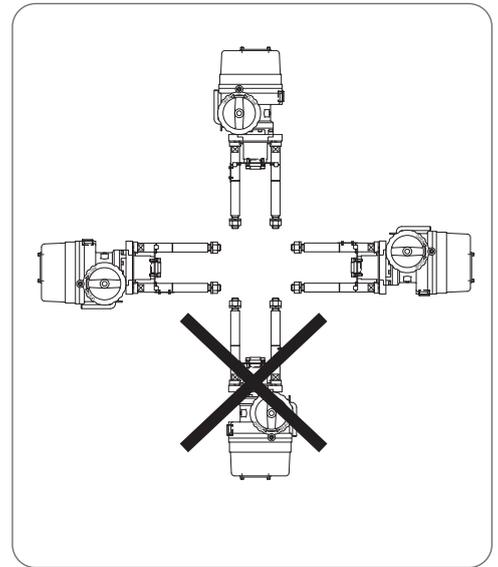
Local control (1phase)	LP4	Local control unit
Explosion proof Exd IIB T4	Nepsi	



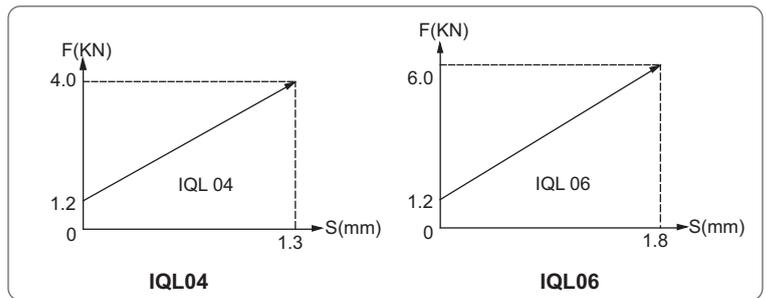
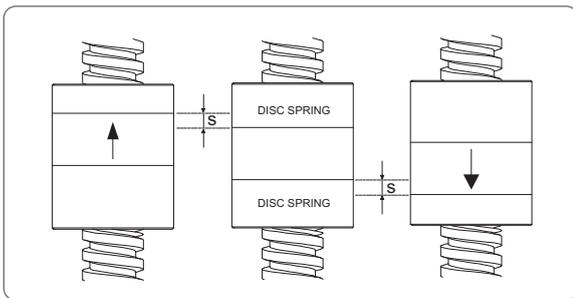
## Dimensions(mm)



## Correct mounting direction



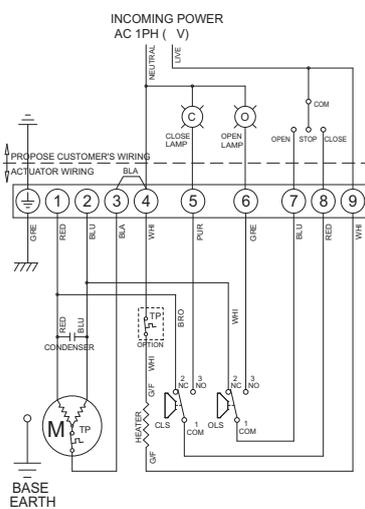
## Setting closing(opening) force



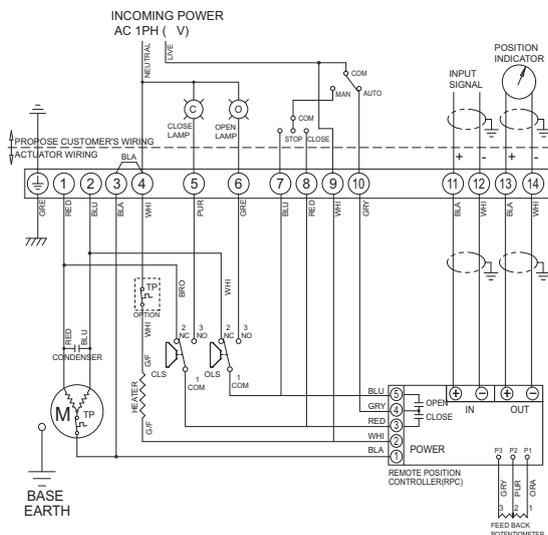
Disc spring arrangement

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

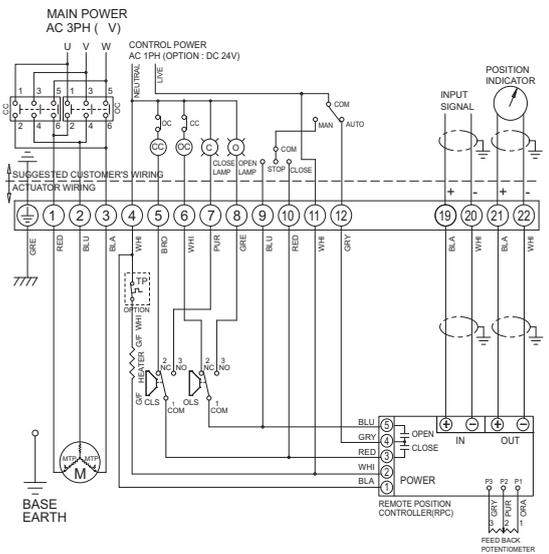
## Standard wiring



**IQL04-70000-F**  
AC 110V/220V, 50/60Hz, 1PH  
OPEN-CLOSE



**IQL04-70500-F**  
AC 110V/220V, 50/60Hz, 1PH  
Modulating : RPC



**IQL04-80500-F**  
AC 380V/440V, 50/60Hz, 3PH  
Modulating : RPC

**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		Carbon steel with special surface treatment		

**Available optional controls**

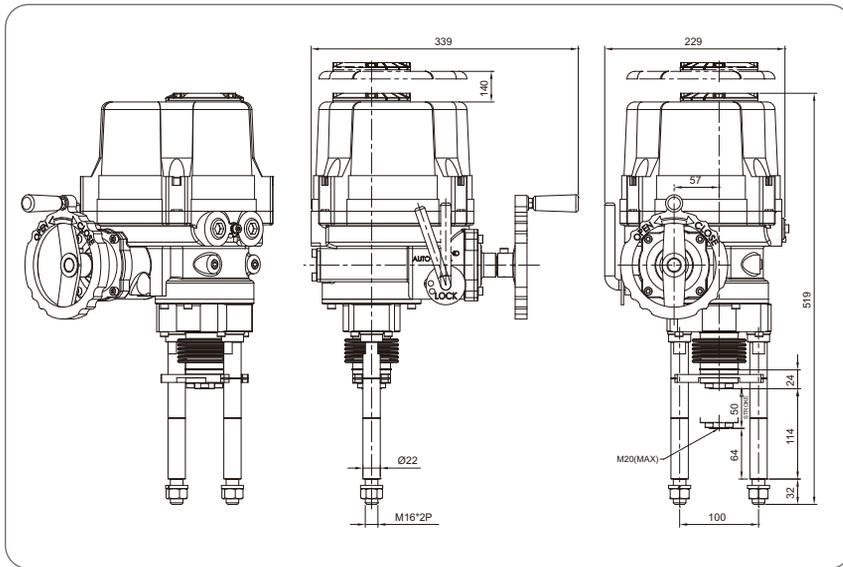
Remote position control	RPC	4-20mA input/output, Selectable other signal
Potentiometer	PK	0~1Kohm feedback
Current transmitter	CT	4-20mA input / output, Optional others
AC/DC Converter	ADC 16	AC to DC converter

**Local control**

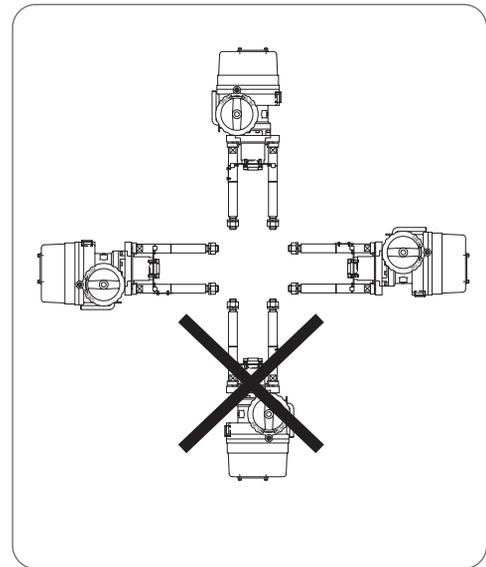
Local control (1phase)	LP4	Local control unit
Local control (3phase)	LM4	LP4 with reversing contactor and transformer
Integral unit	ICM1/2	Local controller with phase discriminator
Battery back up unit	BP	Fail safe (Fail position either open/close/stay put)
Explosion proof Exd IIB T4	Nepsi	



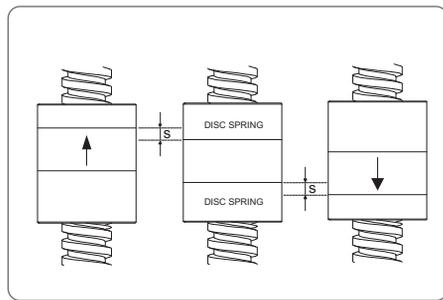
## Dimensions(mm)



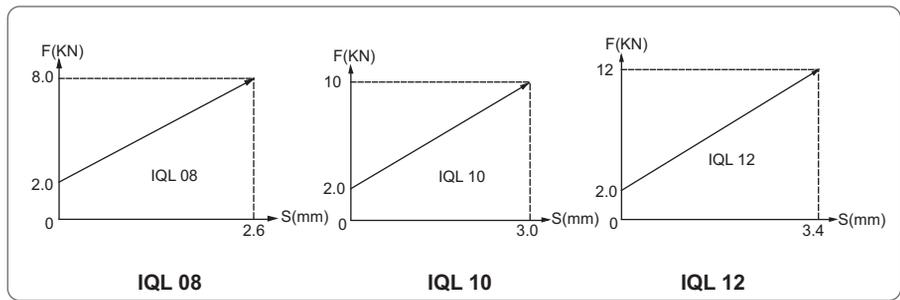
## Correct mounting direction



## Setting closing(opening) force

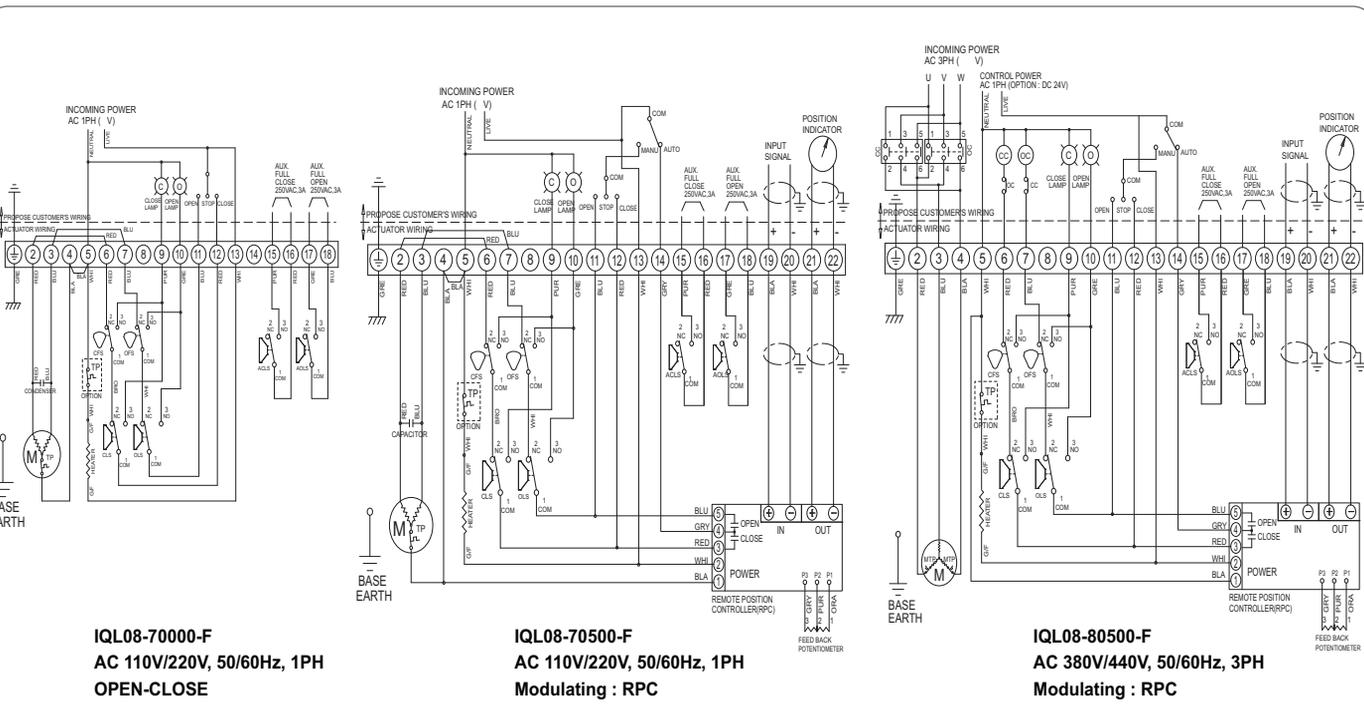


Disc spring arrangement



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

## Standard wiring



**IQL08-70000-F**  
AC 110V/220V, 50/60Hz, 1PH  
OPEN-CLOSE

**IQL08-70500-F**  
AC 110V/220V, 50/60Hz, 1PH  
Modulating : RPC

**IQL08-80500-F**  
AC 380V/440V, 50/60Hz, 3PH  
Modulating : RPC

## 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		Carbon steel with special surface treatment	

## Available optional controls

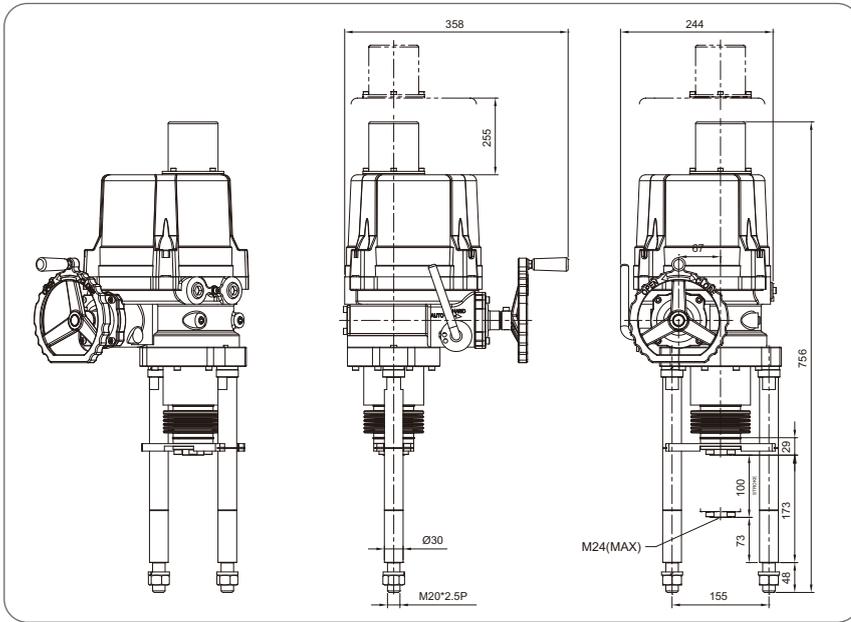
Remote position control	RPC	4-20mA input/output, Selectable other signal
Potentiometer	PK	0~1Kohm feedback
Current transmitter	CT	4-20mA output
AC/DC Converter	ADC 16	AC to DC converter

### Local control

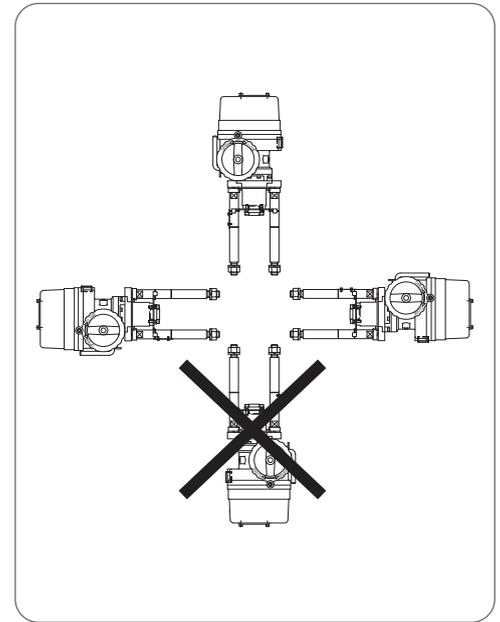
Local control (1phase)	LP4	Local control unit
Local control (3phase)	LM4	LP4 with reversing contactor and transformer
Integral unit	ICM1/2	Local controller with phase discriminator
Battery back up unit	BP	Fail safe (Fail position either open/close/stay put)



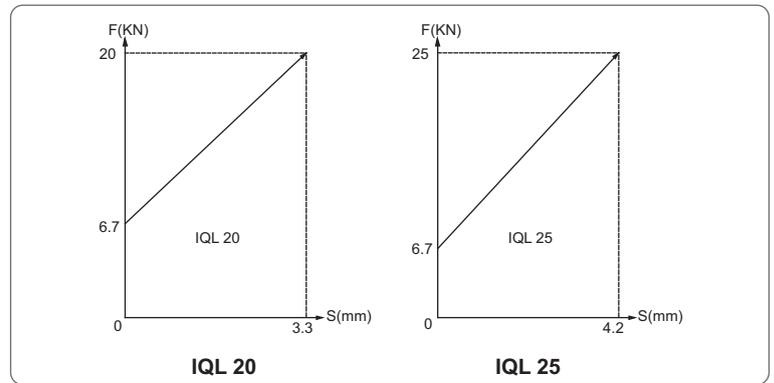
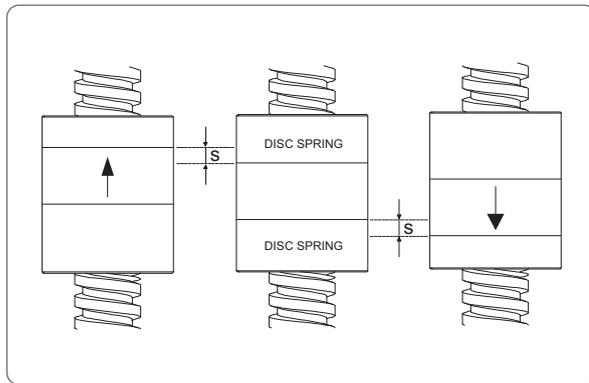
## Dimensions(mm)



## Correct mounting direction



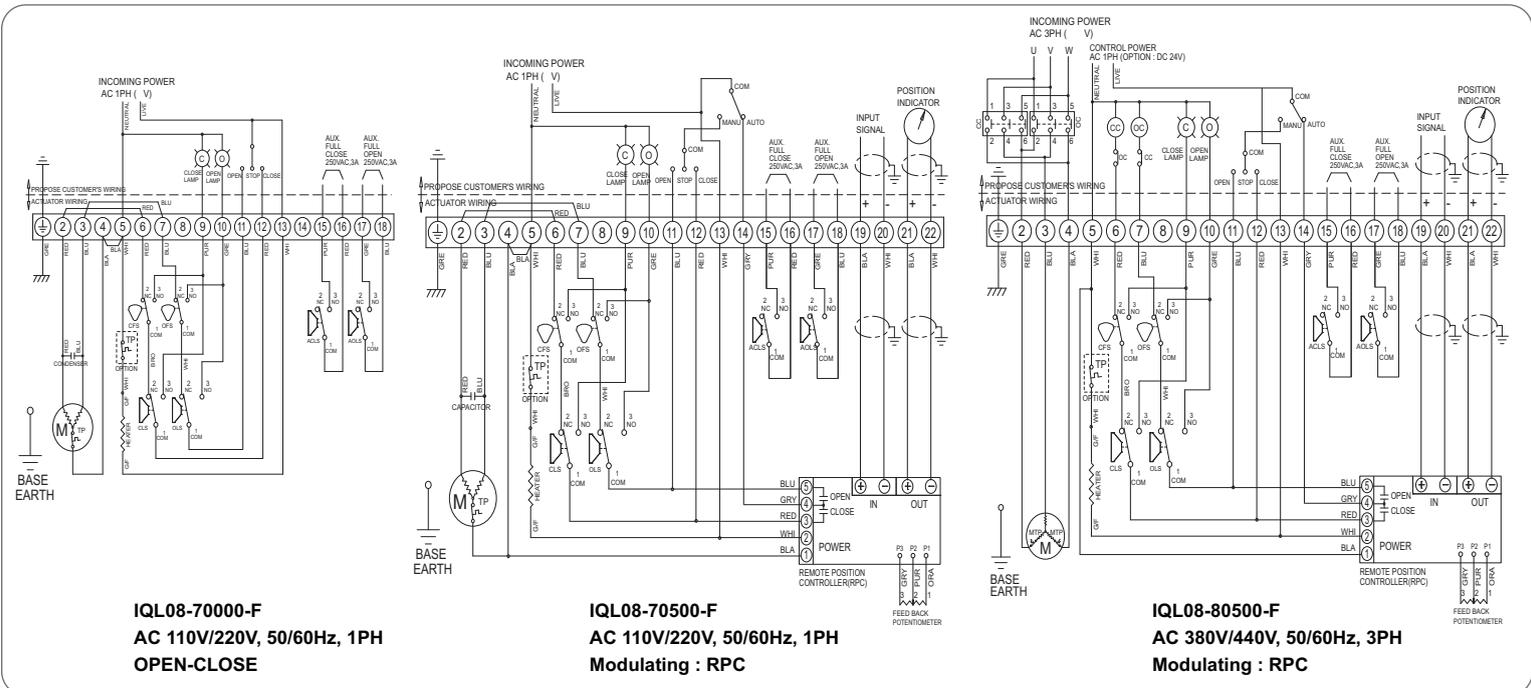
## Setting closing(opening) force



Disc spring arrangement

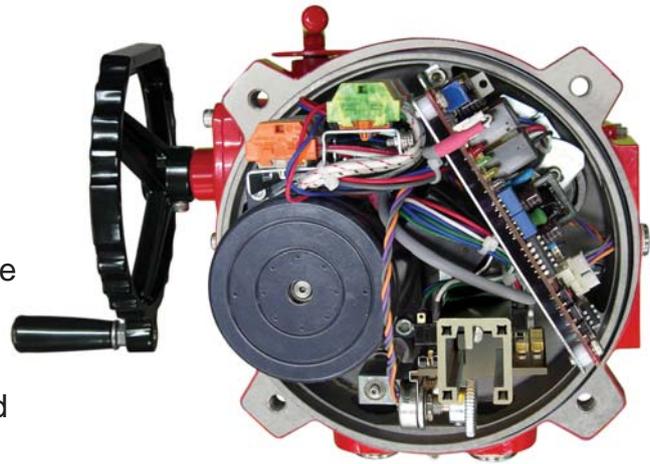
F : Closing(opening) force S : Amount of disc spring compression

## Standard wiring



# 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

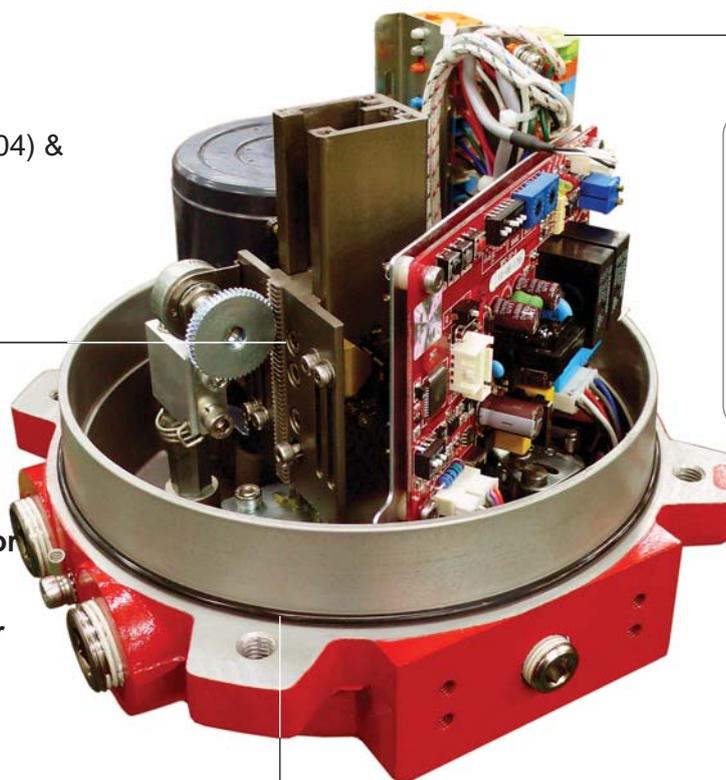
Simple and easier handling  
and adjustment of Limit (from IQL04) &  
Signal switches (from IQL08)



Indicator

Coupler

Pillar



Terminal



Seals & O-rings

protection to water proof IP66

# IQL LINEAR ELECTRIC ACTUATOR

## TECHNICAL DATA

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