Electric Linear Actuator
IQL Series
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.
**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)

Seals & O-rings protection to water proof IP66

Terminal
**TECHNICAL DATA**

<table>
<thead>
<tr>
<th>Model</th>
<th>Thrust force</th>
<th>Stroke</th>
<th>Manual override</th>
<th>Cable entry</th>
<th>Ambient temperature</th>
<th>Position indication</th>
<th>Mounting direction</th>
<th>Housing</th>
<th>Positioning speed</th>
<th>Power supply</th>
<th>Current draw</th>
<th>Motor protection</th>
<th>Operating mode</th>
<th>Weight</th>
<th>Valve Stem threads</th>
<th>PCD on flange</th>
<th>Pillar Threads</th>
<th>Pillar material</th>
</tr>
</thead>
<tbody>
<tr>
<td>IQL 04</td>
<td>4 kN</td>
<td>40 mm</td>
<td></td>
<td>PF 3/4&quot;</td>
<td>-20 ~ +70 °C</td>
<td>Scale on pillar indicated by indicator</td>
<td>Any direction except for heading downward</td>
<td>Aluminum alloy hard anodized for anti-corrosion</td>
<td>mm/sec</td>
<td>24 VDC, Single phase (110 / 220 VAC), 3phase (380 / 440VAC)</td>
<td>Refer to individual technical data sheet</td>
<td>Refer to individual technical data sheet</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>IQL 06</td>
<td>6 kN</td>
<td>40 mm</td>
<td></td>
<td>PF 3/4&quot;</td>
<td>-20 ~ +70 °C</td>
<td>Scale on pillar indicated by indicator</td>
<td>Any direction except for heading downward</td>
<td>Aluminum alloy hard anodized for anti-corrosion</td>
<td>mm/sec</td>
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<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>IQL 08</td>
<td>8 kN</td>
<td>50 mm</td>
<td></td>
<td>PF 3/4&quot;</td>
<td>-20 ~ +70 °C</td>
<td>Scale on pillar indicated by indicator</td>
<td>Any direction except for heading downward</td>
<td>Aluminum alloy hard anodized for anti-corrosion</td>
<td>mm/sec</td>
<td>24 VDC, Single phase (110 / 220 VAC), 3phase (380 / 440VAC)</td>
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<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>IQL 10</td>
<td>10 kN</td>
<td>50 mm</td>
<td></td>
<td>PF 3/4&quot;</td>
<td>-20 ~ +70 °C</td>
<td>Scale on pillar indicated by indicator</td>
<td>Any direction except for heading downward</td>
<td>Aluminum alloy hard anodized for anti-corrosion</td>
<td>mm/sec</td>
<td>24 VDC, Single phase (110 / 220 VAC), 3phase (380 / 440VAC)</td>
<td>Refer to individual technical data sheet</td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>IQL 12</td>
<td>12 kN</td>
<td>50 mm</td>
<td></td>
<td>PF 3/4&quot;</td>
<td>-20 ~ +70 °C</td>
<td>Scale on pillar indicated by indicator</td>
<td>Any direction except for heading downward</td>
<td>Aluminum alloy hard anodized for anti-corrosion</td>
<td>mm/sec</td>
<td>24 VDC, Single phase (110 / 220 VAC), 3phase (380 / 440VAC)</td>
<td>Refer to individual technical data sheet</td>
<td>Refer to individual technical data sheet</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>IQL 20</td>
<td>20 kN</td>
<td>100 mm</td>
<td></td>
<td>PF 3/4&quot;</td>
<td>-20 ~ +70 °C</td>
<td>Scale on pillar indicated by indicator</td>
<td>Any direction except for heading downward</td>
<td>Aluminum alloy hard anodized for anti-corrosion</td>
<td>mm/sec</td>
<td>24 VDC, Single phase (110 / 220 VAC), 3phase (380 / 440VAC)</td>
<td>Refer to individual technical data sheet</td>
<td>Refer to individual technical data sheet</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>IQL 25</td>
<td>25 kN</td>
<td>100 mm</td>
<td></td>
<td>PF 3/4&quot;</td>
<td>-20 ~ +70 °C</td>
<td>Scale on pillar indicated by indicator</td>
<td>Any direction except for heading downward</td>
<td>Aluminum alloy hard anodized for anti-corrosion</td>
<td>mm/sec</td>
<td>24 VDC, Single phase (110 / 220 VAC), 3phase (380 / 440VAC)</td>
<td>Refer to individual technical data sheet</td>
<td>Refer to individual technical data sheet</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<td></td>
</tr>
</tbody>
</table>

**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

* The details of this catalog are subject to change without prior notification.
Electric linear actuator

General technical data

<table>
<thead>
<tr>
<th></th>
<th>IQL 04</th>
<th>IQL 06</th>
</tr>
</thead>
<tbody>
<tr>
<td>Force (Max) [KN]</td>
<td>4</td>
<td>6</td>
</tr>
<tr>
<td>Stroke (Max) [mm]</td>
<td>40</td>
<td>40</td>
</tr>
<tr>
<td>Positioning speed</td>
<td>0.7 / 0.83 mm/sec (50/60Hz)</td>
<td>0.7 / 0.90 mm/sec (50/60Hz)</td>
</tr>
<tr>
<td>Manual override</td>
<td>Handwheel with switchable declutchable lever</td>
<td></td>
</tr>
<tr>
<td>Enclosure</td>
<td>EN60529</td>
<td>IP66</td>
</tr>
<tr>
<td>Cable entry</td>
<td>2 - PF 3/4&quot; TAP</td>
<td></td>
</tr>
<tr>
<td>Position indicator</td>
<td>Gradulation on pillar pointed by carrier plate</td>
<td></td>
</tr>
<tr>
<td>Housing</td>
<td>Aluminum alloy hard anodized for anti-corrosion</td>
<td></td>
</tr>
<tr>
<td>Painting</td>
<td>Epoxy powder coated</td>
<td></td>
</tr>
<tr>
<td>Ambient temperature</td>
<td>[-20 °C ~ +70 °C]</td>
<td></td>
</tr>
<tr>
<td>Operating mode</td>
<td>IEC34-1, 8</td>
<td></td>
</tr>
<tr>
<td>Weight [Kgs]</td>
<td>9</td>
<td>9</td>
</tr>
</tbody>
</table>

Actuator speed and electric data

<table>
<thead>
<tr>
<th>Rated current (A)</th>
<th>1 Phase</th>
<th>3 Phase</th>
<th>AC/DC</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>110VAC</td>
<td>220VAC</td>
<td>380VAC</td>
</tr>
<tr>
<td></td>
<td>50Hz</td>
<td>60Hz</td>
<td>50Hz</td>
</tr>
<tr>
<td>IQL 04</td>
<td>0.45</td>
<td>0.44</td>
<td>0.26</td>
</tr>
<tr>
<td>IQL 06</td>
<td>0.49</td>
<td>0.48</td>
<td>0.29</td>
</tr>
</tbody>
</table>

- 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

<table>
<thead>
<tr>
<th>Valve stem threads</th>
<th>mm</th>
</tr>
</thead>
<tbody>
<tr>
<td>PCD on flange</td>
<td>100</td>
</tr>
<tr>
<td>Pillar Threads</td>
<td>M16</td>
</tr>
<tr>
<td>Mounting direction</td>
<td>Any direction except for heading downward</td>
</tr>
<tr>
<td>Pillar material</td>
<td>Non corrosive material</td>
</tr>
</tbody>
</table>

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 (Neysi)
**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
### Electric linear actuator

**General technical data**

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

**Actuator speed and electric data**

<table>
<thead>
<tr>
<th>Model</th>
<th>1 Phase</th>
<th>3 Phase</th>
<th>AC/DC</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>110VAC</td>
<td>220VAC</td>
<td>380VAC</td>
</tr>
<tr>
<td></td>
<td>50Hz</td>
<td>60Hz</td>
<td>50Hz</td>
</tr>
<tr>
<td>IQL 08</td>
<td>0.92</td>
<td>0.88</td>
<td>0.48</td>
</tr>
<tr>
<td>IQL 10</td>
<td>0.95</td>
<td>0.91</td>
<td>0.50</td>
</tr>
<tr>
<td>IQL 12</td>
<td>0.98</td>
<td>0.94</td>
<td>0.52</td>
</tr>
</tbody>
</table>

**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

<table>
<thead>
<tr>
<th>Metric</th>
<th>mm</th>
<th>M20 (Max)</th>
<th>M20 (Max)</th>
<th>M20 (Max)</th>
</tr>
</thead>
<tbody>
<tr>
<td>PCD on flange</td>
<td></td>
<td>100</td>
<td>100</td>
<td>100</td>
</tr>
<tr>
<td>Pillar Threads</td>
<td></td>
<td>M16</td>
<td>M16</td>
<td>M16</td>
</tr>
<tr>
<td>Mounting direction</td>
<td></td>
<td>Any direction except for heading downward</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pillar material</td>
<td></td>
<td>Stainless steel, carbon steel with special surface treatment</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### 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:
Electric linear actuator

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
Electric linear actuator

General technical data

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

Electric data

<table>
<thead>
<tr>
<th>Rated current (A)</th>
<th>1 Phase 110VAC 50Hz 60Hz</th>
<th>220VAC 50Hz 60Hz</th>
<th>3 Phase 380VAC 50Hz 60Hz</th>
<th>440VAC 50Hz 60Hz</th>
<th>AC/DC 24V</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1.75 1.68 0.93 0.89 0.3 0.3</td>
<td>0.32 0.32 0.34 0.33</td>
<td>0.32 0.34 0.31 6.0</td>
<td>6.0</td>
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</tr>
<tr>
<td>IQL 20</td>
<td>1.75 1.68 0.93 0.89 0.3 0.3</td>
<td>0.32 0.32 0.34 0.33</td>
<td>0.32 0.34 0.31 6.0</td>
<td>6.0</td>
<td></td>
</tr>
<tr>
<td>IQL 25</td>
<td>1.8 1.72 0.95 0.92 0.32 0.32</td>
<td>0.34 0.33 0.32 0.34</td>
<td>0.32 0.34 0.31 6.0</td>
<td>6.0</td>
<td></td>
</tr>
</tbody>
</table>

| 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

<table>
<thead>
<tr>
<th>Valve stem threads [mm]</th>
<th>M24 (Max)</th>
<th>M24 (Max)</th>
</tr>
</thead>
<tbody>
<tr>
<td>PCD on flange [mm]</td>
<td>155</td>
<td>155</td>
</tr>
<tr>
<td>Pillar Threads [mm]</td>
<td>M20</td>
<td>M20</td>
</tr>
<tr>
<td>Mounting direction</td>
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<td></td>
</tr>
<tr>
<td>Pillar material</td>
<td>Stainless steel, carbon steel with special surface treatment</td>
<td></td>
</tr>
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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)
Electric linear actuator

Dimensions (mm)

Correct mounting direction

Setting closing (opening) force

Disc spring arrangement

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

Standard wiring

IQLO8-70000-F
AC 110V/220V, 50/60Hz, 1PH
OPEN-CLOSE

IQLO8-70500-F
AC 110V/220V, 50/60Hz, 1PH
Modulating: RPC

IQLO8-80500-F
AC 380V/440V, 50/60Hz, 3PH
Modulating: RPC

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