Low-cost and handy actuator
Dustproof and waterproof design compliant with IP55 standard
Compliant with the RoHS Directives

For details, visit THK at www.thk.com

Product information is updated regularly on the THK website.
Rod Actuator CRES

**COMPACT**
All actuator components are concealed

**RIGID**
Splash-Proof construction, complies with IP55 standard

**ECONOMICAL**
Low cost, simple structure due to the use fewer components

**STYLISH**
A soft design that blends into various environments

Lightweight and sturdy resin rod
Both stroke ends contain a limit switch

Incorporated with a DC brush motor

A robot cable is adopted

Highly oil-resistant resin

CRES Lineup

- **High-Speed Type:** CRES 200
  - Rated thrust: 196 N; rated speed: 55 mm/s

- **High-Power Type:** CRES 500
  - Rated thrust: 490; rated speed: 15 mm/s
Rod Actuator CRES is used in many applications including equipment familiar to everyday use. It is optimal for situations where simple operations with simple control are required.
Rise-and-fall wash basin
Prefabricated kitchen
Motorized louver for light control
Roof box
Roof box

Parking gate

Road construction vehicle

Metered Parking
PDP pan, tilting unit

Dispenser / Injector

Projector stand

Carrier truck
External Dimensions of CRES

---

CRES Model Number Coding

**CRES 200 – 130 – 12 – E**

1. Model number: CRES
2. Representative thrust: 200: 196 N (20 kgf) 500: 490 N (50 kgf)
3. Stroke length: 50 mm, 100 mm, 130 mm
4. Motor voltage: 12: 12 VDC 24: 24 VDC
5. Special option: No symbol: none E: Connector, etc. (mounted at THK) S: Contact THK for details.

* Standard cable has a length of 1,000 mm (with wire end Pre-Soldered).

CRES Lot Number Indication Details

<table>
<thead>
<tr>
<th>Item</th>
<th>Year of manufacture</th>
<th>Month of manufacture</th>
<th>Date of manufacture</th>
<th>Type 1</th>
<th>Type 2</th>
<th>Type 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Indication</td>
<td>05: 2005</td>
<td>1: January</td>
<td>01: 1st</td>
<td>1: CRES 500 - 12V</td>
<td>05: stroke 50</td>
<td>0: standard</td>
</tr>
<tr>
<td></td>
<td>06: 2006</td>
<td>2: February</td>
<td>02: 2nd</td>
<td>2: CRES 200 - 12V</td>
<td>10: stroke 100</td>
<td>E: special option</td>
</tr>
<tr>
<td></td>
<td>07: 2007</td>
<td>•</td>
<td>•</td>
<td>3: CRES 500 - 24V</td>
<td>13: stroke 130</td>
<td>S: special option</td>
</tr>
<tr>
<td></td>
<td></td>
<td>•</td>
<td>•</td>
<td>4: CRES 200 - 24V</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>•</td>
<td>9: September</td>
<td>09: 9th</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>•</td>
<td>X: October</td>
<td>10: 10th</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>•</td>
<td>•</td>
<td>11: 11th</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>•</td>
<td>Y: November</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>•</td>
<td>Z: December</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Example of lot number indication: CRES 200 - 130 - 12 - E (manufactured May 1, 2007)

Marking: **07501213E**
### Specifications of CRES

#### Basic specifications

<table>
<thead>
<tr>
<th>Item</th>
<th>Unit</th>
<th>CRES200</th>
<th>CRES500</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rated thrust</td>
<td>N</td>
<td>196±10%</td>
<td>490±10%</td>
</tr>
<tr>
<td>Average speed (at rated thrust)</td>
<td>mm/s</td>
<td>55±10%</td>
<td>15±10%</td>
</tr>
<tr>
<td>Screw lead</td>
<td>mm</td>
<td>6</td>
<td>2</td>
</tr>
<tr>
<td>Rated voltage</td>
<td>DCV</td>
<td>12±15% / 24±15%</td>
<td></td>
</tr>
<tr>
<td>Rated current</td>
<td>A</td>
<td>4.3 (12V) / 2.2 (24V)</td>
<td></td>
</tr>
<tr>
<td>Service temperature environment</td>
<td></td>
<td>-10 to 60°C (20 to 80% RH or less)</td>
<td>-20 to 70°C (20 to 80% RH or less)</td>
</tr>
<tr>
<td>Storage temperature environment</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Maximum stroke (at point where the limit switch is activated)</td>
<td>mm</td>
<td>50 / 100 / 130</td>
<td></td>
</tr>
<tr>
<td>Duty cycle</td>
<td>%</td>
<td>10</td>
<td>10</td>
</tr>
<tr>
<td>Service life time (during operation at 10% duty and rated thrust)</td>
<td>h</td>
<td>400</td>
<td></td>
</tr>
<tr>
<td>Mass</td>
<td>g</td>
<td>700 or less</td>
<td></td>
</tr>
</tbody>
</table>

* The axial holding thrust of CRES200 is 100 N (factory initial value).

#### Thrust-speed characteristic

![Thrust-speed characteristic graph]

#### Thrust-current characteristic

![Thrust-current characteristic graph]

### Traveling Direction of CRES

If a positive current is applied to the while cable, the actuator will extend.

### Example of Wiring CRES

![Example of Wiring CRES]

In the above figure, if a positive current is applied to "a," and "c" is connected to the white cable of the actuator and "d" to the black cable, and then the toggle switch is turned on with 2-1 and 5-4, the actuator will extend.
For inquiries such as use of the actuator in a special environment, change of the motor’s rated voltage and handling of the connector, contact THK.

**Precautions on Use**

- Do not apply a moment load to the rod.
- The current of the power supply must not exceed 8 A in case of 12 V or 4 A in case of 24 V. Exceeding these values will generate heat or cause fire.
- The stroke is controlled end to end at 0 to 50, 100 and 130. If you desire to stop the actuator between the stroke ends, externally provide a switch.
- At the work site, do not damage CRES by applying external force to it, cause mechanical interference with it, hinder its operation, or apply external force to it other than in the load direction.
- Use a SELV power supply. In addition, observe the maximum power consumption indication.
- In case of emergency or an anomaly with the main body, an excessive current will temporarily flow in the motor, which may damage the actuator. To prevent such damage, attach a protective device such as a fuse to the actuator before using it.
- Equip the machine system with a protective device in case a load greater than the maximum permissible load is applied to the actuator.
- The actuator does not assume use in a special environment such as at high altitude exceeding 1,500 m above sea level, in a high temperature environment, in a corrosive gas environment and under the influence of radiation.
- When changing the travel direction of the actuator, be sure to secure down time and avoid instantaneous reverse rotation. Failure to do so may shorten the service life.
- The duty cycle of the actuator is set at 10% (e.g., the actuator can operate for up to 2 minutes during a 20 minute period).
- Be sure to store the instruction manual provided with CRES in a place where the user can easily find it.

---

**Warning**

- **No impact to the product**
  Take care not to drop the product or cause impact to it when storing, transporting, installing or using it. Doing so may cause injury or product failure.

- **Prohibition of disassembly**
  Do not disassemble, alter or repair the product by yourself. Doing so may cause fire, electric shock or product failure. In addition, if you open the cover of the product, we will not provide warranty.

- **Do not use the product other than at the designated voltage**
  Do not use the product other than at the designated supply voltage. Doing so may cause fire or electric shock.

- **Unplug the power cable in case of anomaly**
  If you notice any abnormal state such as abnormal noise, smoke or unusual odor, unplug the power cable. Using the product in an abnormal state may cause fire, electric shock or product failure.

- **Do not touch the moving part**
  Do not touch the moving part during operation. Take particular care not to let children touch it. Failure to observe it may cause injury or product failure.