KAS Quality Service (Guangzhou) Co., Ltd.
Lab: Chenziwei, Xinsha Village Committee, Muzhou Town,
Xinhui District, Jiangmen, Guangdong 529143, China.
E-mail: service1@kastesting.com

TL-827

**Report Number: J230807003-1**

# EN 1154:1996/A1:2002/AC:2006

## Testing of Controlled Door Closing Devices

A report to:

Guangdong Jinlian'an
Technology Co., Ltd.

| | |
|---|---|
| Issue Date: | 2023/11/9 |
| Revised Date: | — |
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# TEST CONCLUSIONS

Product: Door closer
Manufactured by: Guangdong Jinlian'an Technology Co., Ltd.
Model: J-095

have been tested in accordance with:
EN 1154:1996/A1:2002/AC:2006 Building Hardware - Controlled door closing devices
by KAS Quality Service (Guangzhou) Co., Ltd. which is an IAS accredited Testing Laboratory (NO. TL-827).
At Chenziwei, Xinsha Village Committee, Muzhou Town, Xinhui District, Jiangmen, Guangdong 529143, China.

**Summary of Test Result**

| Clause | Description | Compliance |
|---|---|---|
| **5.1** | **Product information** | **Pass** |
| **5.2** | **Performance** | **Pass** |
| *5.2.1* | *General* | *Pass* |
| *5.2.2* | *Durability* | *Pass* |
| *5.2.3* | *Closing moment* | *Pass* |
| *5.2.4* | *Opening moment* | *Pass* |
| *5.2.5* | *Efficiency* | *Pass* |
| *5.2.6* | *Closing time* | *Pass* |
| *5.2.7* | *Angles of operation* | *Pass* |
| *5.2.8* | *Overload performance* | *Pass* |
| *5.2.9* | *Temperature dependence* | *Pass* |
| *5.2.10* | *Fluid leakage* | *Pass* |
| *5.2.11* | *Damage* | *Pass* |
| *5.2.12* | *Latch control (optional)* | *Pass* |
| *5.2.13* | *Backcheck (optional)* | *Pass* |
| *5.2.14* | *Delayed closing* | *NA* |
| *5.2.15* | *Adjustable closing force (optional)* | *Pass* |
| *5.2.16* | *Zero position (for double action door closers only)* | *NA* |
| *5.2.17* | *Corrosion resistance* | *Pass* |
| *5.2.18* | *Fire/smoke door suitability* | *NA* |
| **8** | **Marking** | **NA** |

No inferences can be made regarding performance against other requirements of this standard.
NOTES.
These tests are covered by the Laboratory IAS accreditation schedule.
Tests marked “NA” were not applicable to the type of device under test.
Tests marked “NT” were not applied to the device under test.
When determining the test result, measurement uncertainty has been considered.
Decision rule for statement(s) of conformity is based on Binary Statement for Simple Acceptance Rule ($w$=0) of ILAC G8: 09/2019.

# TEST CONCLUSIONS

Product: Door closer
Manufactured by: Guangdong Jinlian'an Technology Co., Ltd.
Model: J-095

**Classification achieved**

| Category of use | Durability | Door Closer power size | Fire resistance | Safety | Corrosion resistance |
|---|---|---|---|---|---|
| 3 | 8 | 3<br>5 | 0 | 1 | 2 |

Detail “Classification” information listed as following:
First digit (Category of use): Grade 3 – For closing doors at least from 105° open;
Second digit (Durability): Grade 8 – 500,000 test cycles;
Third digit (Door Closer power size): Grade 3 ~ 5 – With adjustable power size 3 ~ 5;
Fourth digit (Suitability for use on fire/smoke doors): Grade 0 - No evidence shows suitable use on fire-resistant door or smoke-control doors;
Fifth digit (Safety): Grade 1 – All door closers are required to satisfy the Essential Requirement of safety in use;
Sixth digit (Corrosion resistance and temperature): Grade 2 – Moderate resistance: 48h.

# SIGNATURES

Tests performed by:

Frank Feng

Name: Frank Feng
Date: 09-Nov-23
Title: Project Engineer
KAS Quality Service

Report authorised by:

Credy Chen

Name: Credy Chen
Date: 09-Nov-23
Title: Technical Manager
KAS Quality Service

# TEST DETAILS

**Applicant Information**

| | |
|---|---|
| Applicant Name: | Guangdong Jinlian'an Technology Co., Ltd. |
| Applicant Address: | New Central District of Jinli Town, Gaoyao District, Zhaoqing City |

**Sample Information**

| | |
|---|---|
| Product: | Door closer |
| Trade Mark: | / |
| Model and/or type reference: | J-095 |
| Manufacturer: | Guangdong Jinlian'an Technology Co., Ltd. |
| Manufacturer Address: | New Central District of Jinli Town, Gaoyao District, Zhaoqing City |
| Sample ID: | S230807003-01~06 |
| Date of receipt of test item: | 2023/8/7 |
| Situation of receipt samples: | Good |

**Testing Information**

| | |
|---|---|
| Standard: | SS 332:2018+A1:2022 Clause 6 - Annex C & EN 1154:1996/A1:2002/AC:2006 |
| Non-standard method or requirement: | / |
| Rating(s): | 3 8 35 0 1 2 |
| Testing Laboratory name: | KAS Quality Service (Guangzhou) Co., Ltd. |
| Address: | Chenziwei, Xinsha Village Committee, Muzhou Town, Xinhui District, Jiangmen, Guangdong 529143, China. |
| Date (s) of performance of tests: | 2023/8/21 ~ 2023/10/21 |
| Other reports to be used in conjunction with this report: | / |

# TEST SAMPLE DESCRIPTION

General product information:
Surface mounting door closer, Model: J-095, full mechanical test based on regular mounting according to manufacturer's instruction.

| Model No. | Body Material | Body Size | Speed Valve | Latch control | Back Check | Delay Action | Double action | Hold open | Power size |
|---|---|---|---|---|---|---|---|---|---|
| J-095 | Aluminum | 233 x 62 x 42 mm | Yes | Yes | Yes | No | No | No | Adjustable size 3 - 5 |

# TEST RESULTS

Test procedure: Sample A - Operation at extremes of temperature

Test sample No.: S 2 3 0 8 0 7 0 0 3 - 0 1

Model: J-095 Power Size: 3

| Req. Clause | Test Clause | Requirement Details | Result | P = PASS F = FAIL |
|---|---|---|---|---|
| 5.1 | 7.2.1 | Product information<br>A door closer manufactured to this standard shall be supplied with clear, detailed instructions for its installation, regulation and maintenance, which shall include any limitations of opening angle. Where a door closer is recommended for fitting in other than a standard application, these instructions shall clearly define the door closer power size for each application of fitting position stated. | limitations of opening angle: 145°<br>Refer to installation instruction | P |
| 8 | 7.2.1 | Marking | | |
| 8.1 | 7.2.1 | Each door closer and separately supplied accessory manufactured to this standard shall be marked with the following:<br>a) the manufacturer's name or trademark, or other means of identification;<br>b) product model identification;<br>c) the classification according to Clause 4;<br>d) the number of this European Standard;<br>e) the year and week of manufacture.<br>In the case of concealed door closers, the above information shall be readily visible after removal of the cover plate.<br>For accessories (where there may be insufficient space to provide the information given in the clause), only item a) is mandatory.<br>Accessories claiming compliance with Annex A, shall be marked with the information a) to e) above. In preferential order the information shall be placed:<br>1) on the product itself; or<br>2) on a label attached to it; or<br>3) on the installation instructions; or<br>4) on its packaging. | No marking | NA |
| 5.2.9 | 7.2.2 | Temperature dependence<br>A set closing time of 5 seconds at an ambient temperature of 20°C, shall not increase to more than 25 seconds or decrease to less than 3 seconds when tested at -15°C and 40°C : | Power size 3,<br>Door mass: 60 kg<br>Closing time:<br>At 20 °C: 5"02<br>At -15 °C: 23"49<br>At 40 °C: 4"88 | P |
| 5.2.16 | 7.2.3 | Zero position (for double action door closers only)<br>The amount of free play at the zero position of a new door closer shall not exceed 3 mm, and after 500,000 test cycles shall not exceed 6 mm : | The specimen was not double action door closer | NA |

# TEST RESULTS

Test procedure: Sample A2 - Operation at extremes of temperature

Test sample No.: S 2 3 0 8 0 7 0 0 3 - 0 2

Model: J-095 Power Size: 5

| Req. Clause | Test Clause | Requirement Details | Result | P = PASS F = FAIL |
|---|---|---|---|---|
| 5.1 | 7.2.1 | Product information<br>A door closer manufactured to this standard shall be supplied with clear, detailed instructions for its installation, regulation and maintenance, which shall include any limitations of opening angle. Where a door closer is recommended for fitting in other than a standard application, these instructions shall clearly define the door closer power size for each application of fitting position stated. | limitations of opening angle: 155°<br>Refer to installation instruction | P |
| 8 | 7.2.1 | Marking | | |
| 8.1 | 7.2.1 | Each door closer and separately supplied accessory manufactured to this standard shall be marked with the following:<br>a) the manufacturer's name or trademark, or other means of identification;<br>b) product model identification;<br>c) the classification according to Clause 4;<br>d) the number of this European Standard;<br>e) the year and week of manufacture.<br>In the case of concealed door closers, the above information shall be readily visible after removal of the cover plate.<br>For accessories (where there may be insufficient space to provide the information given in the clause), only item a) is mandatory.<br>Accessories claiming compliance with Annex A, shall be marked with the information a) to e) above. In preferential order the information shall be placed:<br>1) on the product itself; or<br>2) on a label attached to it; or<br>3) on the installation instructions; or<br>4) on its packaging. | No marking | NA |
| 5.2.9 | 7.2.2 | Temperature dependence<br>A set closing time of 5 seconds at an ambient temperature of 20°C, shall not increase to more than 25 seconds or decrease to less than 3 seconds when tested at -15°C and 40°C : | Power size 5,<br>Door mass: 100 kg<br>Closing time:<br>At 20 °C: 4"99<br>At -15 °C: 22"48<br>At 40 °C: 4"78 | P |
| 5.2.16 | 7.2.3 | Zero position (for double action door closers only)<br>The amount of free play at the zero position of a new door closer shall not exceed 3 mm, and after 500,000 test cycles shall not exceed 6 mm : | The specimen was not double action door closer | NA |

# TEST RESULTS

Test procedure: Sample B1 - Mechanical performance and durability

Test sample No.: S 2 3 0 8 0 7 0 0 3 - 0 3

Model: J-095 Power Size: 3

<table>
<tr><th>Req. Clause</th><th>Test Clause</th><th>Requirement Details</th><th>Result</th><th>P = PASS<br>F = FAIL</th></tr>
<tr><td>5.2.15</td><td>7.1.2</td><td>Adjustable closing force (optional)<br>If provided with an adjustable closing function, the door closer shall comply with the performance at both the minimum and maximum power settings claimed by manufacture :</td><td>Adjustable closing force,<br>Minimum power size: 3<br>Maximum power size: 5</td><td>P</td></tr>
<tr><td>5.2</td><td colspan="4">Performance<br>Table 1
<table>
<tr><th rowspan="2">Door closer Power size</th><th colspan="3">Closing moment</th><th rowspan="2">Opening moment 0° to 60°</th><th rowspan="2">Door closer efficiency 0° to 4°</th></tr>
<tr><th colspan="2">0° to 4°</th><th>88° to 92°</th><th>Any other angle</th></tr>
<tr><th></th><th>Nm min.</th><th>Nm max</th><th>Nm min.</th><th>Nm min.</th><th>Nm max.</th><th>% min.</th></tr>
<tr><td>1</td><td>9</td><td>< 13</td><td>3</td><td>2</td><td>26</td><td>50</td></tr>
<tr><td>2</td><td>13</td><td>< 18</td><td>4</td><td>3</td><td>36</td><td>50</td></tr>
<tr><td>3</td><td>18</td><td>< 26</td><td>6</td><td>4</td><td>47</td><td>55</td></tr>
<tr><td>4</td><td>26</td><td>< 37</td><td>9</td><td>6</td><td>62</td><td>60</td></tr>
<tr><td>5</td><td>37</td><td>< 54</td><td>12</td><td>8</td><td>83</td><td>65</td></tr>
<tr><td>6</td><td>54</td><td>< 87</td><td>18</td><td>11</td><td>134</td><td>65</td></tr>
<tr><td>7</td><td>87</td><td>< 140</td><td>29</td><td>18</td><td>215</td><td>65</td></tr>
</table></td></tr>
<tr><td>N/A</td><td>7.3.1<br>7.3.3</td><td>Pre-cycle<br>Conduct a total of 5 000 pre-cycles.</td><td>Followed</td><td>P</td></tr>
<tr><td>5.2.3</td><td>7.3.4.1</td><td>Closing moment<br>After 5 000 pre-cycles the measured closing moments shall be not less than the value stated in Table 1 :</td><td>Grade 3,<br>Door mass: 60 kg<br>After 5 000 pre-cycles, closing moment:<br>0° to 4°: 24.19 Nm<br>88° to 92°: 19.01 Nm<br>Any other angle: 14.59 Nm</td><td>P</td></tr>
<tr><td>5.2.4</td><td>7.3.4.1</td><td>Opening moment<br>After 5 000 pre-cycles the maximum measured opening moment shall be not more than the value stated in Table 1 for the particular power size of closer being tested:</td><td>Grade 3,<br>After 5 000 pre-cycles, opening moment:<br>0° to 60°: 35.73 Nm</td><td>P</td></tr>
<tr><td>5.2.5</td><td>7.3.4.2</td><td>Efficiency<br>After 5000 pre-cycles the measured efficiency shall be not less than value stated in Table 1:</td><td>Grade 3,<br>After 5 000 pre-cycles, opening moment: 0° to 4°: 35.28 Nm<br>efficiency= 68.57%</td><td>P</td></tr>
<tr><td>5.2.6</td><td>7.3.4.3</td><td>Closing time<br>After 5000 pre-cycles, the closing time, from a door opening angle of 90 degree, shall be capable of adjustment to 3 seconds or less, and 20 seconds or more.</td><td>After 5 000 test cycles, the adjusted time:<br>Time min.: 1"80<br>Time max.: >20s</td><td>P</td></tr>
<tr><td>5.2.7</td><td>N/A</td><td>Angles of operation<br>The door closer shall permit the test door to open according to its grade, and on closing, shall control the door from a minimum angle of 70 degree :</td><td>Maximum opening angle: 145°<br>Control angle: 140°</td><td>P</td></tr>
</table>

# TEST RESULTS

Test procedure: Sample B1 - Mechanical performance and durability

Test sample No.: S 2 3 0 8 0 7 0 0 3 - 0 3

Model: J-095 Power Size: 3

| Req. Clause | Test Clause | Requirement Details | Result | P = PASS F = FAIL |
|---|---|---|---|---|
| 5.2.8 | 7.3.4.4 | Overload performance<br>The door closer shall be capable of withstanding the closing overload tests : | Applied 21 kg overload weight 10 times, no damage or deformation or fluid leakage, function normal after 5 000 pre-cycles. | P |
| 5.2.12 | N/A | Latch control (optional)<br>Accelerated closing shall be effective over a maximum range of 15 degree from the closed position, and shall be adjustable : | Have a latch control valve, latch control could be adjustable to enable accelerated closing control angle from 0 to 15°. | P |
| 5.2.14 | 7.3.4.5 | Delay closing (optional)<br>The delay time shall not be less than 20 seconds.<br>The delay zone shall not extend below the 65 degree open position.<br>The moment required to override manually the delay action shall not exceed 150 Nm.<br>The delay time at the conclusion of 500 test cycles shall be between 10 seconds to 30 seconds : | No delayed closing function | NA |
| 5.2.13 | 7.3.5.2 | Backcheck (optional)<br>The door closer shall be capable of arresting the test door before 90 degree position : | After 100,000 cycles for incorporating backcheck function, the door closer was capable arresting the test door before 90 degree position. | P |
| 5.2.2 | 7.3.1 | Durability<br>The door closer shall be able to close a test door conforming to 6.1.1 and 6.2 from an opening angle of 90°, for a minimum of 500, 000 test cycles : | Initial setting close time from 90° to 0°: 5"00 | — |
| 5.2.6 | 7.3.6.1<br>7.3.6.3 | Closing time<br>After 500,000 test cycles, the closing time, from a door opening angle of 90 degree, shall be capable of adjustment to 3 seconds or less, and 20 seconds or more.<br>After 500,000 test cycles, the closing time set at 5000 test cycles shall not have increased by more than 100%, or decreased by more than 30 % : | After 100,000 cycles for backcheck function and 400, 000 cycles for normal cycles, total 500,000 test cycles:<br>The closing time: 6"29<br>The adjusted time:<br>Time min: 1"86<br>Time max: > 20s | P |
| 5.2.3 | 7.3.6.2 | Closing moment<br>After 500,000 test cycles the measured closing moments shall be not less than the value stated in Table 1: | After 500,000 test cycles, closing moment:<br>0° to 4°: 25.12 Nm<br>88° to 92°: 17.44 Nm<br>Any other angle: 15.33 Nm | P |

# TEST RESULTS

Test procedure: Sample B1 - Mechanical performance and durability

Test sample No.: S230807003-03

Model: J-095 Power Size: 3

| Req. Clause | Test Clause | Requirement Details | Result | P = PASS F = FAIL |
|---|---|---|---|---|
| 5.2.5 | 7.3.6.2 | Efficiency<br>After 500,000 test cycles the measured efficiency shall be not less than value stated in Table 1: | After 500,000 test cycles, opening moment:<br>0° to 4°: 32.40 Nm<br>efficiency= 77.53% | P |
| 5.2.8 | 7.3.6.4 | Overload performance<br>The door closer shall be capable of withstanding the closing overload tests : | Applied 21 kg overload weight 10 times, no damage or deformation or fluid leakage, function normal after 500,000 cycles. | P |
| 5.2.14 | 7.3.5.2 | Delay closing (optional)<br>After 500 000 cycles, the delay time shall not be less than 20 seconds. | No delayed closing function | NA |
| 5.2.10 | N/A | Fluid leakage<br>Throughout the test programme there shall be no leakage of fluid from the door closer: | No leakage | P |
| 5.2.11 | N/A | Damage<br>Throughout the test programme there shall be no damage to the door closer or its arms that would adversely affect its performance to this standard: | No damage | P |
| 5.2.16 | 7.3.6.6 | Zero position (for double action door closers only)<br>The amount of free play at the zero position of door closer after subject 500,000 test cycles shall not exceed 6 mm: | The specimen was not double action door closer | NA |

# TEST RESULTS

Test procedure: Sample B2 - Mechanical performance and durability

Test sample No.: S 2 3 0 8 0 7 0 0 3 - 0 4

Model: J-095 Power Size: 5

<table>
<tr><th>Req. Clause</th><th>Test Clause</th><th>Requirement Details</th><th>Result</th><th>P = PASS<br>F = FAIL</th></tr>
<tr><td>5.2.15</td><td>7.1.2</td><td>Adjustable closing force (optional)<br>If provided with an adjustable closing function, the door closer shall comply with the performance at both the minimum and maximum power settings claimed by manufacture :</td><td>Adjustable closing force,<br>Minimum power size: 3<br>Maximum power size: 5</td><td>P</td></tr>
<tr><td>5.2</td><td colspan="4">Performance<br>Table 1
<table>
<tr><th rowspan="2">Door closer Power size</th><th colspan="3">Closing moment</th><th rowspan="2">Opening moment 0° to 60°</th><th rowspan="2">Door closer efficiency 0° to 4°</th></tr>
<tr><th colspan="2">0° to 4°</th><th>88° to 92°</th><th>Any other angle</th></tr>
<tr><th></th><th>Nm min.</th><th>Nm max</th><th>Nm min.</th><th>Nm min.</th><th>Nm max.</th><th>% min.</th></tr>
<tr><td>1</td><td>9</td><td>< 13</td><td>3</td><td>2</td><td>26</td><td>50</td></tr>
<tr><td>2</td><td>13</td><td>< 18</td><td>4</td><td>3</td><td>36</td><td>50</td></tr>
<tr><td>3</td><td>18</td><td>< 26</td><td>6</td><td>4</td><td>47</td><td>55</td></tr>
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</table></td></tr>
<tr><td>N/A</td><td>7.3.1<br>7.3.3</td><td>Pre-cycle<br>Conduct a total of 5 000 pre-cycles.</td><td>Followed</td><td>P</td></tr>
<tr><td>5.2.3</td><td>7.3.4.1</td><td>Closing moment<br>After 5 000 pre-cycles the measured closing moments shall be not less than the value stated in Table 1 :</td><td>Grade 5,<br>Door mass: 100 kg<br>After 5 000 pre-cycles, closing moment:<br>0° to 4°: 43.33 Nm<br>88° to 92°: 23.23 Nm<br>Any other angle: 20.03 Nm</td><td>P</td></tr>
<tr><td>5.2.4</td><td>7.3.4.1</td><td>Opening moment<br>After 5 000 pre-cycles the maximum measured opening moment shall be not more than the value stated in Table 1 for the particular power size of closer being tested:</td><td>Grade 5,<br>After 5 000 pre-cycles, opening moment:<br>0° to 60°: 63.92 Nm</td><td>P</td></tr>
<tr><td>5.2.5</td><td>7.3.4.2</td><td>Efficiency<br>After 5000 pre-cycles the measured efficiency shall be not less than value stated in Table 1:</td><td>Grade 5,<br>After 5 000 pre-cycles, opening moment: 0° to 4°: 63.95 Nm<br>efficiency= 67.75%</td><td>P</td></tr>
<tr><td>5.2.6</td><td>7.3.4.3</td><td>Closing time<br>After 5000 pre-cycles, the closing time, from a door opening angle of 90 degree, shall be capable of adjustment to 3 seconds or less, and 20 seconds or more.</td><td>After 5 000 test cycles, the adjusted time:<br>Time min: 1"71<br>Time max: > 20s</td><td>P</td></tr>
<tr><td>5.2.7</td><td>N/A</td><td>Angles of operation<br>The door closer shall permit the test door to open according to its grade, and on closing, shall control the door from a minimum angle of 70 degree :</td><td>Maximum opening angle: 155°<br>Control angle: 145°</td><td>P</td></tr>
</table>

# TEST RESULTS

Test procedure: Sample B2 - Mechanical performance and durability

Test sample No.: S230807003-04

Model: J-095 Power Size: 5

| Req. Clause | Test Clause | Requirement Details | Result | P = PASS F = FAIL |
|---|---|---|---|---|
| 5.2.8 | 7.3.4.4 | Overload performance<br>The door closer shall be capable of withstanding the closing overload tests : | Applied 27 kg overload weight 10 times, no damage or deformation or fluid leakage, function normal after 5 000 pre-cycles. | P |
| 5.2.12 | N/A | Latch control (optional)<br>Accelerated closing shall be effective over a maximum range of 15 degree from the closed position, and shall be adjustable : | Have a latch control valve, latch control could be adjustable to enable accelerated closing control angle from 0 to 15°. | P |
| 5.2.14 | 7.3.4.5 | Delay closing (optional)<br>The delay time shall not be less than 20 seconds.<br>The delay zone shall not extend below the 65 degree open position.<br>The moment required to override manually the delay action shall not exceed 150 Nm.<br>The delay time at the conclusion of 500 test cycles shall be between 10 seconds to 30 seconds : | No delayed closing function | NA |
| 5.2.13 | 7.3.5.2 | Backcheck (optional)<br>The door closer shall be capable of arresting the test door before 90 degree position : | After 100,000 cycles for incorporating backcheck function, the door closer was capable arresting the test door before 90 degree position. | P |
| 5.2.2 | 7.3.1 | Durability<br>The door closer shall be able to close a test door conforming to 6.1.1 and 6.2 from an opening angle of 90°, for a minimum of 500, 000 test cycles : | Initial setting close time from 90° to 0°: 4"91 | — |
| 5.2.6 | 7.3.6.1<br>7.3.6.3 | Closing time<br>After 500,000 test cycles, the closing time, from a door opening angle of 90 degree, shall be capable of adjustment to 3 seconds or less, and 20 seconds or more.<br>After 500,000 test cycles, the closing time set at 5000 test cycles shall not have increased by more than 100%, or decreased by more than 30 % : | After 100,000 cycles for backcheck function and 400, 000 cycles for normal cycles, total 500,000 test cycles:<br>The closing time: 6"95<br>The adjusted time:<br>Time min: 1"70<br>Time max: > 20s | P |
| 5.2.3 | 7.3.6.2 | Closing moment<br>After 500,000 test cycles the measured closing moments shall be not less than the value stated in Table 1: | After 500,000 test cycles, closing moment:<br>0° to 4°: 46.59 Nm<br>88° to 92°: 25.31 Nm<br>Any other angle: 21.92 Nm | P |

# TEST RESULTS

Test procedure: Sample B2 - Mechanical performance and durability

Test sample No.: S230807003-04

Model: J-095 Power Size: 5

| Req. Clause | Test Clause | Requirement Details | Result | P = PASS F = FAIL |
|---|---|---|---|---|
| 5.2.5 | 7.3.6.2 | Efficiency<br>After 500,000 test cycles the measured efficiency shall be not less than value stated in Table 1: | After 500,000 test cycles, opening moment:<br>0° to 4°: 57.73 Nm<br>efficiency= 80.70% | P |
| 5.2.8 | 7.3.6.4 | Overload performance<br>The door closer shall be capable of withstanding the closing overload tests : | Applied 27 kg overload weight 10 times, no damage or deformation or fluid leakage, function normal after 500,000 cycles. | P |
| 5.2.14 | 7.3.5.2 | Delay closing (optional)<br>After 500 000 cycles, the delay time shall not be less than 20 seconds. | No delayed closing function | NA |
| 5.2.10 | N/A | Fluid leakage<br>Throughout the test programme there shall be no leakage of fluid from the door closer: | No leakage | P |
| 5.2.11 | N/A | Damage<br>Throughout the test programme there shall be no damage to the door closer or its arms that would adversely affect its performance to this standard: | No damage | P |
| 5.2.16 | 7.3.6.6 | Zero position (for double action door closers only)<br>The amount of free play at the zero position of door closer after subject 500,000 test cycles shall not exceed 6 mm: | The specimen was not double action door closer | NA |

# TEST RESULTS

Test procedure: Sample C1 - Corrosion Resistance

Test sample No.: S230807003-05

Model: J-095 Power Size: 3

| Req. Clause | Test Clause | Requirement Details | Result | P = PASS F = FAIL |
|---|---|---|---|---|
| 5.2.17 | 7.4.2 | Corrosion resistance<br>Measure closing moment prior to the test. | 0° to 4°: 23.27 Nm<br>88° to 92°: 18.32 Nm<br>Any other angle: 14.66 Nm | NA |
| | 7.4.3 | The requirement shall be according to EN 1670.<br>The acceptance conditions of EN 1670 shall be met for all surfaces of the door closer which are visible: | Grade 2,<br>After 48h corrosion test,<br>No visible corrosion occurs to all surfaces of the door closer | |
| | 7.4.4 | The closing moment of the door closer shall be not less than 80% of the closing moment measured prior to the test. | Grade 2,<br>After 48h corrosion test, ratio of the closing moment to the closing moment measured prior to the test:<br>0° to 4°: 23.38 Nm<br>88° to 92°: 17.16 Nm<br>Any other angle: 15.02 Nm | |

# TEST RESULTS

Test procedure: Sample C2 - Corrosion Resistance

Test sample No.: S230807003-06

Model: J-095 Power Size: 6

| Req. Clause | Test Clause | Requirement Details | Result | P = PASS F = FAIL |
|---|---|---|---|---|
| 5.2.17 | 7.4.2 | Corrosion resistance<br>Measure closing moment prior to the test. | 0° to 4°: 48.74 Nm<br>88° to 92°: 22.40 Nm<br>Any other angle: 19.13 Nm | P |
| | 7.4.3 | The requirement shall be according to EN 1670.<br>The acceptance conditions of EN 1670 shall be met for all surfaces of the door closer which are visible: | Grade 2,<br>After 48h corrosion test,<br>No visible corrosion occurs to all surfaces of the door closer | |
| | 7.4.4 | The closing moment of the door closer shall be not less than 80% of the closing moment measured prior to the test. | Grade 2,<br>After 48h corrosion test, ratio of the closing moment to the closing moment measured prior to the test:<br>0° to 4°: 48.61 Nm<br>88° to 92°: 23.08 Nm<br>Any other angle: 19.56 Nm | |

# TEST RESULTS

Test procedure: Fire-resistant

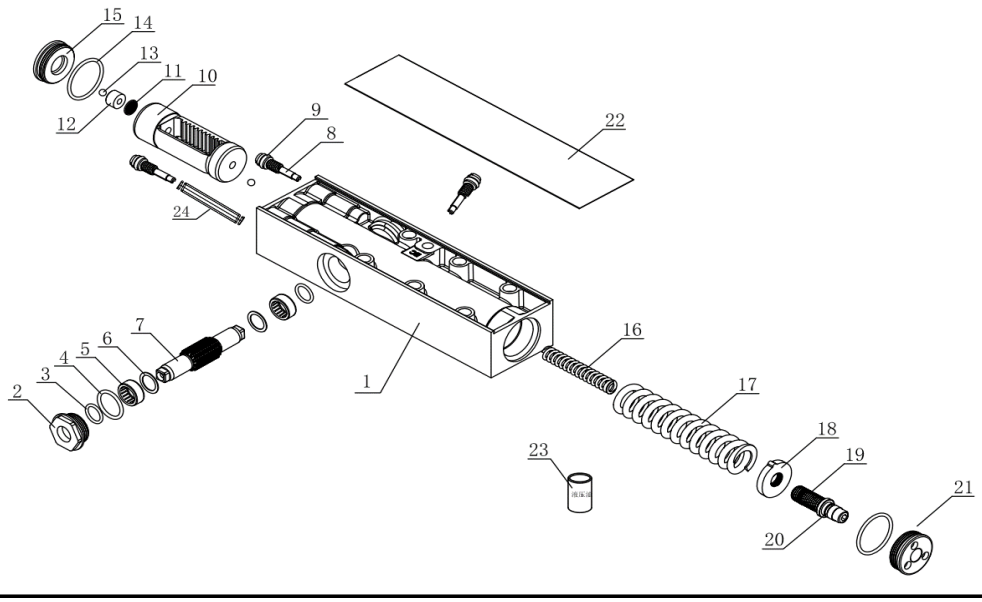
Test sample No.: S 2 3 0 8 0 7 0 0 3 - N A

Model: J-095

| Req. Clause | Requirement Details | Result | P = PASS<br>F = FAIL |
|---|---|---|---|
| 5.2.18 | Fire/smoke door suitability<br>A door closer for use on a fire/smoke door assembly shall meet the necessary requirements of Annex A : | Grade 0,<br>No evidence shows suitable use on fire-resistant door or smoke-control doors. | NA |

# PRODUCT DRAWING(S)

| 序 号 | 名 称 | 材 质 | 数 量 |
|---|---|---|---|
| 1 | 机 壳 | ADC12 | *1 |
| 2 | 中 盖 | ADC12 | *2 |
| 3 | 中盖动密封圈 | 丁晴胶 | *2 |
| 4 | 中盖静密封圈 | 丁晴胶 | *1 |
| 5 | 滚针轴承 | 轴承钢 | *2 |
| 6 | 齿轮垫片 | 铁 | *2 |
| 7 | 齿 轮 | 20CR | *1 |
| 8 | 调速阀 | 易车铁 | *3 |
| 9 | 调速油芯动密封圈 | 丁晴胶 | *2 |
| 10 | 活 塞 | 20CR | *1 |
| 11 | 滤 网 | 不锈钢 | *1 |
| 12 | 单向阀 | 易车铁 | *1 |
| 13 | 单向阀钢珠 | 铬钢 | *2 |
| 14 | 端盖静密封圈 | 丁晴胶 | *2 |
| 15 | 头 盖 | 6061铝合金 | *1 |
| 16 | 内弹簧 | 60硅 | *1 |
| 17 | 弹 簧 | 60硅 | *1 |
| 18 | 调力螺母 | 铁 | *1 |
| 19 | 调力螺杆 | 铁 | *1 |
| 20 | 调力螺杆封密胶圈 | 丁晴胶 | *1 |
| 21 | 尾 盖 | 铁 | *1 |
| 22 | 装饰盖板 | 不锈铁 | *1 |
| 23 | 液压油 | 55#45 | |
| 24 | 调速阀弹簧 | 82B | *1 |

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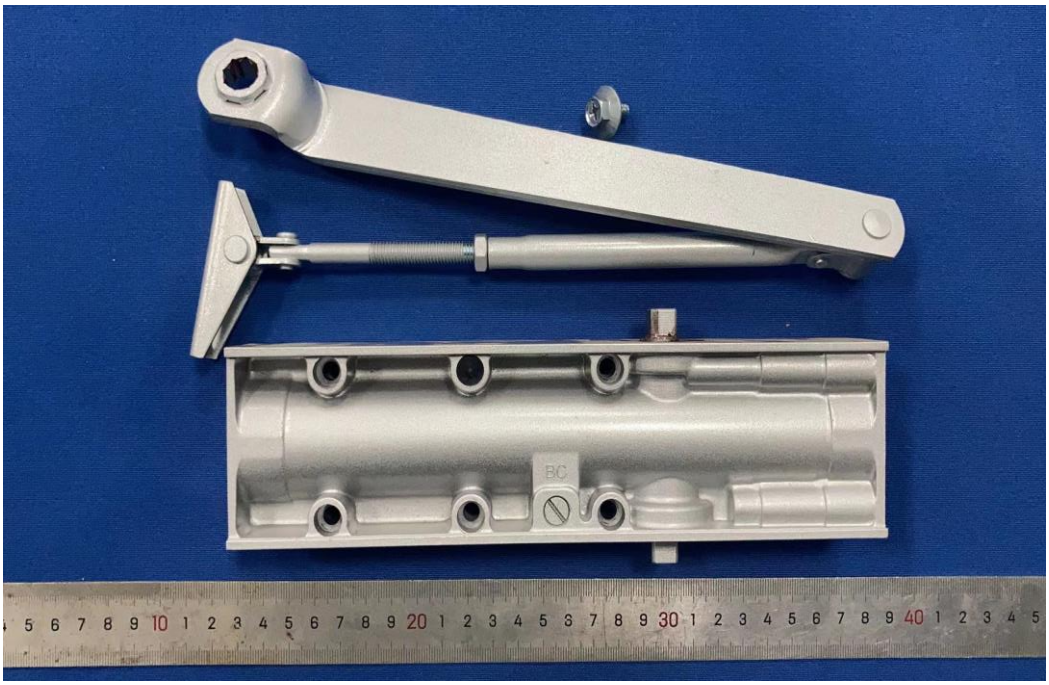
# PRODUCT PHOTO(S)

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# REVISION HISTORY

| Revision No. | Date | Changes | Author | Reviewer |
|---|---|---|---|---|
| Original | 2023/11/9 | First issue | Frank Feng | Credy Chen |
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The End of Report