intertek
Total Quality. Assured.

Archibald Kenrick & Sons Ltd

TEST REPORT

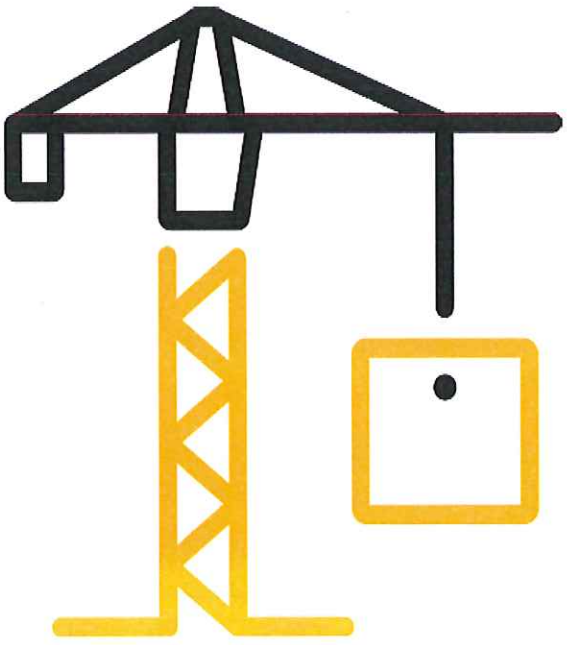
SCOPE OF WORKs
<Performance Test – Cylinder – SCDB5050-6P01 >

REPORT NUMBER
190612167GZU-002

ISSUE DATE **[REVISED DATE]**
2019/7/3 /

PAGES
10

DOCUMENT CONTROL NUMBER
TTRF_EN 1303:2015_d



Intertek Testing Services Ltd., Guangzhou Branch
Room 4103 & 4203, No. 63, Punan Road, Huangpu District,
Guangzhou, Guangdong Province, China.
Telephone: +8620-82139688, Facsimile: +8620-3205 7538
Website: www.intertek.com

Test Report

Report Number: 190509088GZU-002
Report Date: 2019/7/3

Applicant:	**Archibald Kenrick & Sons Ltd**
Applicant Address:	**Kenrick Way, West Bromwich, B70 6DB, United Kingdom**

Sample information

Product:	Lock cylinder
Trade Mark:	/
Model and/or type reference:	SCDB5050-6P01
Manufacturer:	/
Manufacturer Address:	/
Sample ID:	S190612167-001~010
Date of receipt of test item:	2019-06-12
Situation of receipt samples:	Received in good condition
Date (s) of performance of tests:	2019-06-12~2019-07-02

Testing information

Standard:	EN 1303:2015
Rating(s):	1 6 0 0 0 C 3 0
Classification of installation and use:	For use by people with a high incentive to exercise care and with a small chance of misuse.
Testing Laboratory name:	Intertek Testing Services Shenzhen Ltd. Guangzhou Branch
Address:	Room 4103 & 4203, No. 63, Punan Road, Huangpu District, Guangzhou, Guangdong Province, China.

Possible Test Case Verdits

Test Case does not apply to the Test object:	N/A
Test object does meet the requirement:	P (Pass)
Test item does not meet the requirement	F (Fail)

Conclusion:

The submitted samples were tested and found to COMPLY with applicable requirements of EN 1303:2015 for the ratings.

* When determining the test result, measurement uncertainty has been considered.

intertek
Total Quality. Assured.

Test Report

Report Number: 190509088GZU-002
Report Date: 2019/7/3

General product information:

Model	Function	Length(mm)	Movable detainers
SCDB5050-6P01	key outside and key inside	100(50+50)	6

Detail "Ratings" information listed as following:

1st digit (category of use):	Grade 1 — for use by people with a high incentive to exercise care and with a small chance of misuse;
2nd digit (Durability):	Grade 6 — 100000 test cycles;
3rd digit (Door mass):	Grade 0 — no door mass requirement;
4th digit (Fire resistance):	Grade 0 — not approved for use on fire resistant / smoke control door assemblies;
5th digit (Safety):	Grade 0 — no safety requirement;
6th digit (Corrosion resistance and temperature):	Grade C — high corrosion resistance; temperature requirement: from – 25 °C to + 65 °C;
7th digit (Key related security):	Grade 3 — 15 000 Min. number of effective differs / 5 Min. number of movable detainers;
8th digit (Attack resistance):	Grade 0 — no resistance against drilling; no resistance against mechanical attack.

intertek
Total Quality. Assured.

Test Report

Report Number: 190509088GZU-002
Report Date: 2019/7/3

If related to subcontract, the remark* for the test items conducted by a subcontractor.
When determining the test result, measurement uncertainty has been considered.

EN 1303:2015
Building hardware –Cylinders for locks
– Requirements and test methods

Clause	Requirement - Test	Result - Remark	Verdict
7	**Classification**		
7.1	Category of use (1st) :	Grade 1	—
7.2	Test cycles – Durability (2nd) :	Grade 6	—
7.3	Door mass (3rd)	Grade 0	—
7.4	Fire resistance (4th)	Grade 0	—
7.5	Safety (5th)	Grade 0	—
7.6	Corrosion resistance (6th)	Grade C	—
7.7	Key related security (7th)	Grade 3	—
7.8	Attack resistance (8th)	Grade 0	—
4	**REQUIREMENT**		
4.1	General		
4.2	Key strength The key shall not break under the applied maximum torque of 2,5 Nm After the test, the key shall be capable of being removed from the cylinder and re-used to operate the same cylinder with a torque not exceeding 1,5 Nm.	After test, no broken was found and the operation torque: 0,04 Nm	P
4.3*	Durability After the number of test cycles specified in Table 1, it shall operate the cylinders with a new original key with a torque not exceeding 1,5 Nm Table 1 - Number of cycles Durability / Number of cycles: Grade 4 — 25 000 Grade 5 — 50 000 Grade 6 — 100 000	Grade 6 100 000 cycles Torque: before cycles test 0,04 Nm After cycles test 0,07 Nm	P
4.4	Door Mass:	No requirement	N/A
4.5	Fire resistance	Grade 0, not approved for use on fire resistant / smoke control door assemblies.	N/A
4.6	Safety:	No requirement	N/A
4.7	Corrosion resistance		
4.7.1	Corrosion resistance It shall be possible to operate the cylinder with its proper key using a maximum torque of 1,5 Nm after tested according to grade 3 of EN 1670. This corrosion test shall apply to the functionality only.	Grade C Salt spray time 96 hours Torque: 0,10 Nm	N/A

Test Report

Report Number: 190509088GZU-002
Report Date: 2019/7/3

<table>
<tr><td>4.7.2</td><td>Operation at extreme temperatures
It shall be possible to operate the cylinder with its proper key using a maximum torque of 1,5 Nm at both -25°C and + 65°C.</td><td>Torque:
At -25 °C 0,04 Nm
At +65 °C 0,06 Nm</td><td>N/A</td></tr>
<tr><td>4.8</td><td colspan="3">Key related security</td></tr>
<tr><td>4.8.1</td><td>Minimum number of effective differs
The minimum number of effective differs shall be as specified in below table.
<table>
<tr><th>Key related security grade</th><th>Minimum number of effective differs</th></tr>
<tr><td>1</td><td>100</td></tr>
<tr><td>2</td><td>300</td></tr>
<tr><td>3</td><td>15 000</td></tr>
<tr><td>4</td><td>30 000</td></tr>
<tr><td>5</td><td>30 000</td></tr>
<tr><td>6</td><td>100 000</td></tr>
</table></td><td>Grade 3
Claimed 27993 effective differs.</td><td>P</td></tr>
<tr><td>4.8.2</td><td>Minimum number of movable detainers
The minimum number of movable detainers shall be as specified in below table.
<table>
<tr><th>Key related security grade</th><th>Minimum number of movable detainers</th></tr>
<tr><td>1</td><td>2</td></tr>
<tr><td>2</td><td>3</td></tr>
<tr><td>3</td><td>5</td></tr>
<tr><td>4</td><td>5</td></tr>
<tr><td>5</td><td>6</td></tr>
<tr><td>6</td><td>6</td></tr>
</table></td><td>Grade 3
6 movable detainers</td><td>P</td></tr>
</table>

Test Report

Report Number: 190509088GZU-002
Report Date: 2019/7/3

<table>
<tr>
<td>4.8.3</td>
<td>Maximum number of identical steps
The choice of key steps for movable detainer operation which have the same operating level shall be restricted as indicated in below table.
Maximum identical adjacent key steps are allowed as indicated in below table.
<table>
<tr><th>Key related security grade</th><th>Maximum Number of identical steps</th></tr>
<tr><td>1</td><td>100%</td></tr>
<tr><td>2</td><td>70%, max. 2 adjacent</td></tr>
<tr><td>3</td><td>60%, max. 2 adjacent</td></tr>
<tr><td>4</td><td>60%, max. 2 adjacent</td></tr>
<tr><td>5</td><td>60%, max. 2 adjacent</td></tr>
<tr><td>6</td><td>50%, max. 2 adjacent</td></tr>
</table>
</td>
<td>Grade 3
60% identical steps
2 identical adjacent steps</td>
<td>P</td>
</tr>
<tr>
<td>4.8.4</td>
<td>Direct coding on key
Direct key coding shall not be permitted on keys for the key related security grades 3 to 6 .</td>
<td>Grade 3
No direct coding on key</td>
<td>N/A</td>
</tr>
<tr>
<td>4.8.5</td>
<td>Operation of security mechanism (inter-passing)
For the key related security grades 1, 2 and 3, it shall not be possible before the durability test to operate the cylinder with the next closest key to its own key using a torque of 1,5 Nm +0,2/−0 Nm.
For the key related security grades 4, 5 and 6, it shall not be possible before and after the durability test to operate the cylinders with the next closest key to its own key using a torque of 1,5 Nm +0,2/−0 Nm.</td>
<td>Grade 3
1,5Nm can not operate the cylinder with the next closest key before cycle test.</td>
<td>P</td>
</tr>
<tr>
<td>4.8.6</td>
<td>Torque resistance of plug/cylinder relevant to key related security
It shall not be possible to rotate the plug and/or cylinder in the key related security grades 1 to 6, using the specified applied torque as indicated in below table.
<table>
<tr><th>Key related security grade</th><th>Maximum troque, Nm</th><th>Tolerance, Nm</th></tr>
<tr><td>1</td><td>2,5</td><td>-0 +0,25</td></tr>
<tr><td>2</td><td>5</td><td>0 +0,5</td></tr>
<tr><td>3</td><td>15</td><td>-0 +1,5</td></tr>
<tr><td>4</td><td>15</td><td>-0 +1,5</td></tr>
<tr><td>5</td><td>15</td><td>-0 +1,5</td></tr>
<tr><td>6</td><td>15</td><td>-0 +1,5</td></tr>
</table>
</td>
<td>Grade 3
15Nm can not operate the cylinder.</td>
<td>P</td>
</tr>
</table>

Test Report

Report Number: 190509088GZU-002
Report Date: 2019/7/3

<table>
<tr><td>4.9</td><td colspan="3">Free play and safety</td></tr>
<tr><td>4.9.1</td><td colspan="3">General</td></tr>
<tr><td>4.9.2</td><td>Resistance to attack by drilling
It shall not be possible to rotate the cam using a maximum torque of 5 Nm without the correct key, after the drilling time specified in below table.
<table>
<tr><th>Attack resistance grade</th><th>Max. net drilling time, min.</th><th>Total test time, min.</th></tr>
<tr><td></td><td></td><td></td></tr>
<tr><td>0</td><td>-</td><td>-</td></tr>
<tr><td>A</td><td>3</td><td>5</td></tr>
<tr><td>B</td><td>5</td><td>10</td></tr>
<tr><td>C</td><td>3</td><td>5</td></tr>
<tr><td>D</td><td>5</td><td>10</td></tr>
</table></td><td>Grade 0
Not required.</td><td>N/A</td></tr>
<tr><td>4.9.3</td><td>Resistance to attack by chisel
It shall not be possible to rotate the cam using a maximum torque of 5 Nm without the correct key, after the number of blows specified in below table.
<table>
<tr><th>Attack resistance grade</th><th>Blows</th></tr>
<tr><td>0</td><td>-</td></tr>
<tr><td>A</td><td>30</td></tr>
<tr><td>B</td><td>40</td></tr>
<tr><td>C</td><td>30</td></tr>
<tr><td>D</td><td>40</td></tr>
</table></td><td>Grade 0
Not required.</td><td>N/A</td></tr>
<tr><td>4.9.4</td><td>Resistance to attack by twisting
It shall not be possible to rotate the cam using a maximum torque of 5 Nm without the correct key, after the number of twists specified in below table.
<table>
<tr><th>Attack resistance grade</th><th>Twists</th></tr>
<tr><td>0</td><td>-</td></tr>
<tr><td>A</td><td>20</td></tr>
<tr><td>B</td><td>30</td></tr>
<tr><td>C</td><td>20</td></tr>
<tr><td>D</td><td>30</td></tr>
</table></td><td>Grade 0
Not required.</td><td>N/A</td></tr>
</table>

Test Report

Report Number: 190509088GZU-002
Report Date: 2019/7/3

<table>
<tr>
<td>4.9.5</td>
<td>Resistance to attack by plug/cylinder extraction
It shall not be possible to rotate the cam using a maximum torque of 5 Nm without the correct key, after the number of twists specified in below table.
<table>
<tr><th>Attack resistance grade</th><th>Max. force applied, KN</th><th>Net time allowed, min</th><th>Total time allowed, min</th></tr>
<tr><td>0</td><td>-</td><td>-</td><td>-</td></tr>
<tr><td>A</td><td>-</td><td>-</td><td>-</td></tr>
<tr><td>B</td><td>-</td><td>-</td><td>-</td></tr>
<tr><td>C</td><td>10</td><td>5</td><td>15</td></tr>
<tr><td>D</td><td>15</td><td>5</td><td>15</td></tr>
</table>
</td>
<td>Grade 0
Not required.</td>
<td>N/A</td>
</tr>
<tr>
<td>4.9.6</td>
<td>Torque resistance of plug/cylinder relevant to attack resistance
It shall not be possible to rotate the plug and/or cylinder with a torque applied to the plug specified in Table 3.
<table>
<tr><th>Attack resistance grade</th><th>Torque</th></tr>
<tr><td>0</td><td>-</td></tr>
<tr><td>A</td><td>20</td></tr>
<tr><td>B</td><td>30</td></tr>
<tr><td>C</td><td>20</td></tr>
<tr><td>D</td><td>30</td></tr>
</table>
</td>
<td>Grade 0
Not required.</td>
<td>N/A</td>
</tr>
</table>

Test Report

Report Number: 190509088GZU-002
Report Date: 2019/7/3

Appendix A: Product Documents

Model No.	Document Ref.	Document Title	Issue	Date
SCDB5050-6P01	Explored drawing	Explored drawing	20190612	20190612

Note:

It is a mandatory requirement that Intertek is informed of any modifications or changes to the following:

- Product submitted for approval or that has been approved
- Manufacturing process
- Manufacturing address
- Materials
- Materials supplier
- Documents recorded within this register

Test Report

Report Number: 190509088GZU-002
Report Date: 2019/7/3

Appendix C: Sample received photo

Approved by:

Jordan Lin

Name: Jordan Lin
Title: Reviewer

Hanna Deng

Name: Hanna Deng
Title: Engineer

Revision:

Revision No.	Date	Changes	Author	Reviewer
Original	2019/7/5	First issue	Hanna Deng	Jordan Lin

****

The End of Report