File SA8271
Project 10NK12750

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REPORT

On

Panic Hardware (FVSR)
Panic Hardware Certified for Canada (FVSR7)

*__FORTRESS INDUSTRIAL CO LTD Changhua Hsien, Taiwan__

DESCRIPTION

PRODUCT COVERED:

USL, CNL - Panic hardware, Model 7100R of the Rim Type and Model 7100V of the Surface Mounted Vertical Rod Type.

These devices have been examined in accordance with ANSI/BHMA A156.3, Grade 1 requirements with the following finishes:

Finish	Base Material	BHMA Designation
Bright chromium plated over nickel	Steel	651
Satin chromium plated over nickel	Steel	652
Satin stainless steel	Stainless steel 300 series	630

ENGINEERING CONSIDERATIONS (NOT FOR FIELD REPRESENTATIVE'S USE):

USL indicates evaluation to the Standard for Panic Hardware, UL 305, and Standard for Exit Devices, ANSI/BHMA A156.3.

CNL indicates evaluation to the Standard for Emergency Exit and Emergency Fire Exit Hardware, CAN/ULC-S132.

GENERAL:

These panic hardware devices are designed for application to single or double outwardly swinging doors. A horizontal push pad extends across the door which, when depressed, will release the latches and permit the door to open. The presence of various types of outside operation and locking devices in no way interferes with the operation of the push pad. These devices may also be provided with a means for dogging the push pad and latches in an open position. The device cannot be dogged in the closed position.

MARKING:

The Listee's Name and/or File Number, SA8271 and series number. Also see Listing Mark Data Page. All markings may be molded, die-stamped, paint-stenciled, or provided on a R/C (PGDQ2) or R/C (PGJI2), suitable for the material to which it is being applied.

The device may also be marked "Also evaluated in accordance with ANSI/BHMA A156.3-2008 Grade 1 test". An abbreviated marking "ANSI-1" may be used.

FOLLOW-UP TESTS:

Refer to the Appendix pages in this volume for Follow-Up Tests.

INSTALLATION INSTRUCTIONS:

Installation instruction for the panic hardware covered in this report shall be shipped with the hardware.

Model	Installation Instruction, ILL No.
7100R	A
7100V	B

CONSTRUCTION DETAILS:

The panic hardware is constructed in accordance with the following descriptive indices and illustrations.

The profile of head cover might be changed, but material, plating, securement method and latch opening shall be the same with ILLs. 4 and 65. The overall size shall be within the range as shown in ILLs. 4 and 65, the profile cannot have any sharp edges.

MODEL 7100R RIM TYPE PANIC HARDWARE

*General – **ILL.** 1 shows the exploded view for Model 7100R panic hardware. The construction details of **Model** 7100R are shown as follows,

INDEX OF ILLUSTRATION:

DESCRIPTION	DRAWING NO.	EDITION	REVISION DATE	ILL.
Assembly drawing	ER71360H6630S2-D5A4	00	2012-05-29	1
Head cover - 1	ZEA-RS630-E7G1D5623	00	2011-12-16	2
Head cover - 2	ZEA-RSA41-E7G1D7523	00	2012-05-05	3
Head cover - alternate	-	00	2012-07-09	4
Screws	ZSMA-003	00	2009-08-25	5
Screws	ZSMC-065	00	2012-05-29	6
End set	ZEA-RSB0C-E7G101521	00	2012-01-11	7
End cover	ZEA-RS630-E7G1A4622	00	2011-12-16	8
Screws	ZSMC-030	3	2009-08-25	9
Screws	ZSIB-006	00	2011-12-15	10
Stikeplate	ZEA-RSA04-E7G103528	00	2012-01-10	11
Screws	ZSIB-010	03	2012-03-13	12
Sex nuts	ZDAC5000-78	03	2011-01-21	13
Chassis assembly	ZEB-RSB0C-E7G101589	00	2011-12-16	14
Starting plate spring	ZEA-RSB00-E7G101605	01	2012-03-23	15
Starting plate shaft	ZEA-RSB0C-E7G103530	00	2011-12-16	16
Starting plate	ZEA-RSB04-E7G101504	00	2012-01-10	17
E retaining ring	ZE-002-03	00	2011-12-15	18
Cross turn	ZEA-RSB04-E7G101511	00	2011-12-16	19
Latch shaft	ZEA-RSB0C-E7G101507	00	2012-01-11	20
E2 retaining ring	ZE-008-04	00	2012-01-10	21
Latch spring	ZEA-RSB00-E7G103605	01	2012-03-22	22
Latch	ZEA-RSB00-E7G101642	00	2012-01-12	23
Lock plate	ZEA-RSB0C-E7G101508	00	2012-01-11	24
Lock plate push pin	ZEA-RSB0C-E7G101587	00	2011-12-16	25

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INDEX OF ILLUSTRATION: cont.

DESCRIPTION	DRAWING NO.	EDITION	REVISION DATE	ILL.
Pin	ZEA-RSB01-E7G102507	00	2012-01-11	26
C ring	ZCA-002-1D	00	2011-12-15	27
Lock spring	ZEA-RSB00-E7G104605	01	2012-03-22	28
Chassis	ZEB-RSB0C-E7G101582	00	2011-12-16	29
Chassis M plate	ZEA-RSB0C-E7G101567	00	2012-01-11	30
Chassis plate	ZEA-RSB0C-E7G101571	00	2012-01-10	31
Push pad assembly	ZEB-RS630-E372360679	00	2011-12-16	32
Rear cover	ZEA-RSB00-E7G101353	00	2012-01-12	33
Push pad buffer	ZEA-RSB00-E7G101316	00	2011-08-09	34
Screws	ZSIA-013	4	2009-08-18	35
Push pad	ZEA-RS630-E72360690	00	2011-12-16	36
Front cover	ZEA-RSB00-E7G101352	00	2012-01-12	37
Clip	ZEA-RSB00-E7G101514	00	2012-01-11	38
E retaining ring	ZE-001-03	00	2011-12-15	39
Poke wheel	ZEA-RSB00-E7G102320	00	2012-01-12	40
Poke wheel shaft	ZEA-RSB00-E7G102530	00	2011-12-16	41
Screws	ZSMC-030	3	2009-08-25	42
Screws	ZSIC-043	2	2009-08-25	43
Push pad bottom set	ZEA-RS630-E7A360691	01	2012-03-14	44
Two section pad	ZEA-RS630-E7G102653	00	2011-12-16	45
M plate	ZEA-RSB0C-E7G101501	01	2012-03-28	46
Arm assembly	ZEB-RSB0C-E7G101581	00	2011-12-16	47
Arm top set	ZEA-RSB00-E7G102547	00	2011-12-16	48
Arm shaft	ZEA-RSB0C-E7G101530	00	2012-01-11	49
E retaining ring	ZE-002-03	00	2011-12-15	50
Arm	ZEA-RSB0C-E7G101509	00	2012-01-11	51
Arm spring	ZEA-RSB00-E7G102605	01	2012-03-28	52
Arm bottom set	ZEA-RSB0C-E7G101547	00	2012-01-11	53

TEST RECORD NO. 1

SAMPLES:

Samples of the Panic Hardware as indicated below and constructed as described herein, were submitted by the manufacturer for examination and test.

Panic Hardware of the Rim Type, Model 7100R

Panic Hardware of the Surface Vertical Rod Type, Model 7100V

The both of the models were used for test purposes and considered representative of the entire series.

GENERAL:

Test results relate only to the items tested.

Tests were considered covered as follows:

Test	File Reference	Report Date	Test Record No.
Finish Tests	SA8271	2010-05-18	1

The following tests were conducted.

Endurance Test: Cycle Test:	UL 305, Section 5 ANSI/BHMA A156.3 Section 8.1 CAN/ULC-S132-07 Section 4.3
Emergency Operation Test: Exit Test: Opening Force & Emergency Operation Opening Force Test:	UL 305, Section 6 ANSI/BHMA A156.3 Section 8.2 CAN/ULC-S132-07 Section 4.4 & 4.5
Outside Pull Test:	ANSI/BHMA A156.3 Section 8.3
Push Test:	ANSI/BHMA A156.3 Section 8.5
Deadlatching Effectiveness Test:	ANSI/BHMA A156.3 Section 8.6
Force To Latch Door Test:	ANSI/BHMA A156.3 Section 8.7
Surface Vertical Rod Or Rod Cover Abuse Test:	ANSI/BHMA A156.3 Section 8.8

The test methods and results of the above tests have been reviewed and found in accordance with the requirements in UL 305, CAN/ULC-S132, and ANSI/BHMA A156.3.

Test Record Summary:

The results of this investigation, including construction review and testing, indicate that the products evaluated comply with the applicable requirements in the following standards and, therefore, such products are judged eligible to bear UL's Mark as described on the Conclusion Page of this Report.

Standard	Title	Edition or Publication Date	Latest Revision Date
UL 305	Panic Hardware	Fifth Edition	January 23, 2007
ANSI/BHMA A156.3	Exit Devices	September 24, 2008	N/A
CAN/ULC-S132	Emergency Exit and Emergency Fire Exit Hardware	Second Edition	August 2007

TEST RECORD NO. 2

Test results relate only to the items tested.

SAMPLES:

Samples of Models 7100R and 7100V panic hardware, as indicated below and constructed as described herein, were submitted by the manufacturer for examination and test.

ENGINEERING CONSIDERATIONS:

The purpose of this investigation was to determine the acceptance of adding the alternate construction of Models 7100R and 7100V panic hardware.

No testing of the above panic hardware was considered necessary based on the following investigations.

1. The alternate construction of Models 7100R and 7100V are identical to the currently Listed panic hardware Models 7100R and 7100V except the head cover profile.

2. The material of alternate head covers are the same and the securement method is not changed. Latch opening of head cover is at the same position and have the same dimensions.

3. Client also changed the all drawing number to accommodate the current management.

Based on the above investigations, UL Follow-Up Service Procedure File SA8271, Volume 1, Section 5 will be revised for adding alternate head covers of Models 7100R and 7100V.