

**EVALUATION REPORT OF
MASTER-F WALL PANELS**

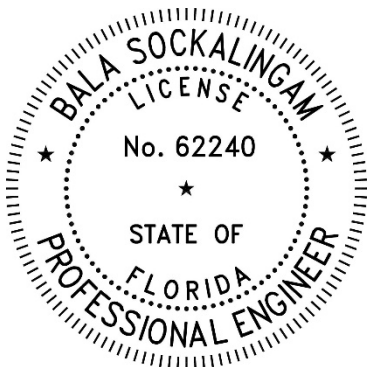
**FLORIDA BUILDING CODE 8TH EDITION (2023)
FLORIDA PRODUCT APPROVAL
FL 27199.1-R2
STRUCTURAL COMPONENTS
STRUCTURAL WALL**

**Prepared For:
Master Panel S.L.
Polig. Industrial La Cardena
Camino de Toledo
45211 Equivias, Toledo, Spain
Telephone: (+34) 925 51 99 26**

**Prepared By:
Bala Sockalingam, Ph.D., P.E.
Florida Professional Engineer #62240
1216 N Lansing Ave., Suite C
Tulsa, OK 74106
Telephone: (918) 492-5992**

**This report consists of
Evaluation Report (3 Pages including cover)
Installation Details (3 Pages)
Load Span Table (1 Page)**

**Report No. C2713-2
Date: 8.12.2023**



This item has been digitally signed and sealed by Bala Sockalingam, PE, on the date indicated.

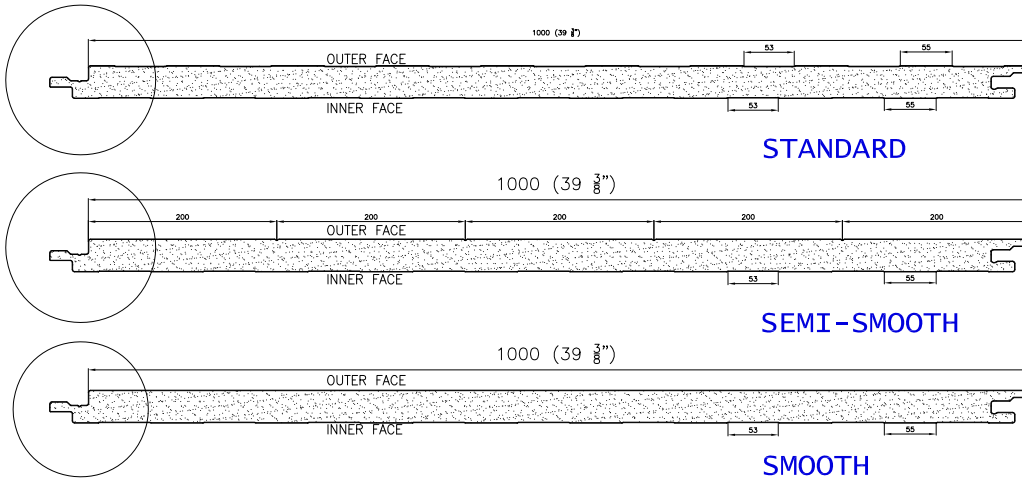
Printed copies of this document are not considered signed and sealed and this signature must be verified on any electronic copies.

**2023.08.12
12:20:58 -05'00'**

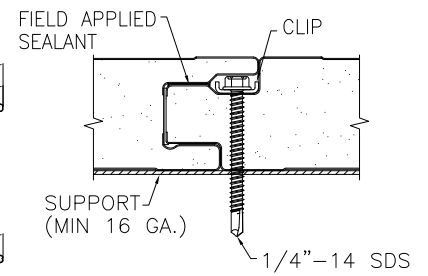
Manufacturer:	Master Panel S.L.
Product Name:	Master-F Wall Panel
Panel Description:	Master-F Panels are factory-assembled, metal faced, sandwich panels with a chemically bonded continuously foamed-in-placed foam plastic core. Maximum 1000 mm (39.4") coverage. Panel thickness: 50 mm (2"), 60 mm (2.4"), 80 mm (3.1"), 100 mm (3.9"), 120 mm (4.7") and 150 mm (5.9").
Panel Core:	Polyiso foam insulation designated as "Master-PIR". Nominal core density is 2.3 pcf with flame spread index of 20 and smoke-developed index of 300 when tested in accordance with ASTM E84-15b.
Exterior skin:	Min. 26 ga., 33 ksi galvanized coated steel (ASTM A653) or galvalume coated steel (ASTM A792) with standard, lined and flat finish. Minimum base metal thickness is 0.017" as per FBC 2023 Section 1405.2.
Interior skin:	Min. 26 ga., 33 ksi galvanized coated steel (ASTM A653) or galvalume coated steel (ASTM A792) with standard and flat finish. Minimum base metal thickness is 0.017" as per FBC 2023 Section 1405.2.
Support Description:	Min. 16 ga., 50 ksi steel section (Must be designed by others)
Design Pressure:	Allowable inward and outward loads are shown in the load span table. The allowable loads for panel strength, connection and deflection limit of L/180 were developed from test data. Maximum panel span is 90".
Panel Clip:	U-Clip - 16 ga. (0.06" thick), 3.5" long, 0.75" wide galvanized steel
Expansion Fasteners:	Elco's Fab-Lok® FAS/FAC 10-4, 10-8 or 10-12 expansion fasteners to fasten the interior skin to support.
Sidelap Sealant:	Dow Corning® 791 silicone weatherproofing sealant (nominal 1/4" bead)
Panel Attachment: Fastening Design FD1	U-Clip fastened to min. 16 ga. steel supports with (3) ¼"-14 Type 3 self-drilling screws per clip or to min 14 ga. steel supports with (2) ¼"-14 Type 3 self-drilling screws per clip at all supports. For 12 ga. or thicker steel, #12-24 Type 5 self-drilling screws may be used. In lieu of self-drilling screws, self-tapping screws may be used. Fasteners are corrosion resistant as per FBC 2023 Section 1405.17.

Fastening Design FD2	In addition to the Fastening Design FD1, the panels can be installed with (3) Fab-Lok fasteners spaced at maximum 9.8" o.c. (250 mm) from the panel sidelap.
Weather Resistance:	Master-F Panels, when installed in accordance with this report and Master Panel current installation procedure, provide a weather resistant exterior wall envelope based on testing in accordance with ASTM E331 and FBC Section 1403.2.
Test Standards:	Wall assemblies were tested in accordance with the testing requirements of ASTM E330-14 "Standard Test Method for Structural Performance of Exterior Windows, Doors, Skylights and Curtain Walls by Uniform Static Air Pressure Difference", ASTM E283-04(2012) "Standard Test Method for Determining Rate of Air Leakage Through Exterior Windows, Curtain Walls, and Doors Under Specified Pressure Differences Across the Specimen" and E331-00(2016) "Standard Test Method for Water Penetration of Exterior Windows, Skylights, Doors, and Curtain Walls by Uniform Static Air Pressure Difference".
Test Equivalency:	The test procedures in ASTM E84-15b comply with test procedures prescribed in ASTM E84-18b.
Code Compliance:	The product described herein has demonstrated compliance with FBC 2023 Section 1404.5 and 2603.3.
Product Limitations:	Design wind loads shall be determined for each project in accordance with FBC 2023 Section 1609 or ASCE 7-22 using allowable stress design. The maximum support spacing listed herein shall not be exceeded. The design pressure for reduced support spacing may be computed using rational analysis prepared by a Florida Professional Engineer or Master Panel load span table. This evaluation report is not applicable in High Velocity Hurricane Zone.
Supporting Documents:	ASTM E330 Test Report ENCON Technology Inc. C2192-1, Reporting Date 6/8/2018 ASTM E84 Test Report Intertek Testing Services NA Inc. 102643891SAT-001A-Rev 1, Reporting Date 2/8/2018 ASTM E283 & E331 Test Report ENCON Technology Inc. C2192-2, Reporting Date 6/11/2018

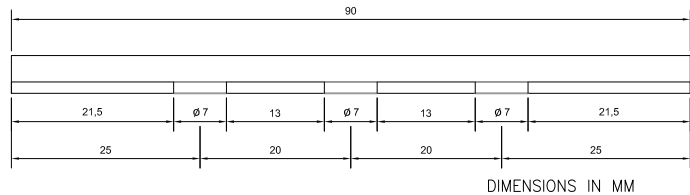
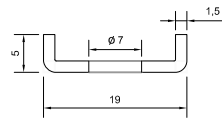
Profiles:



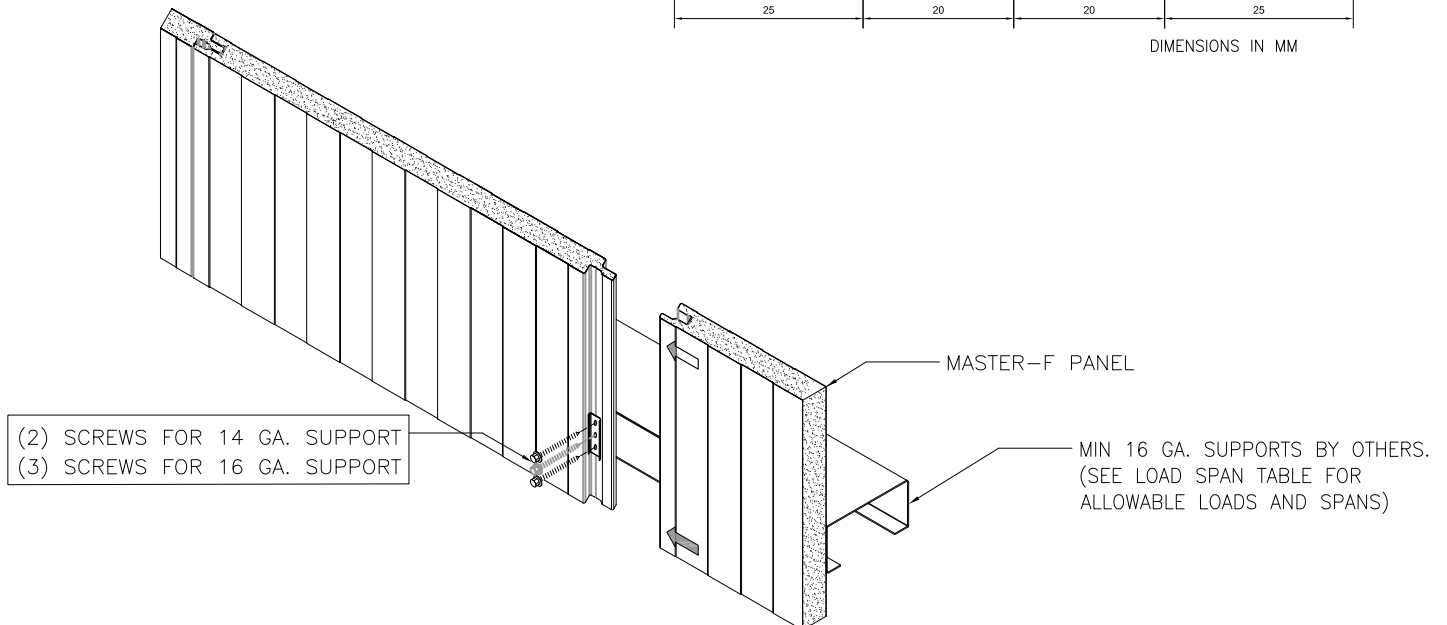
CLIP DETAILS:

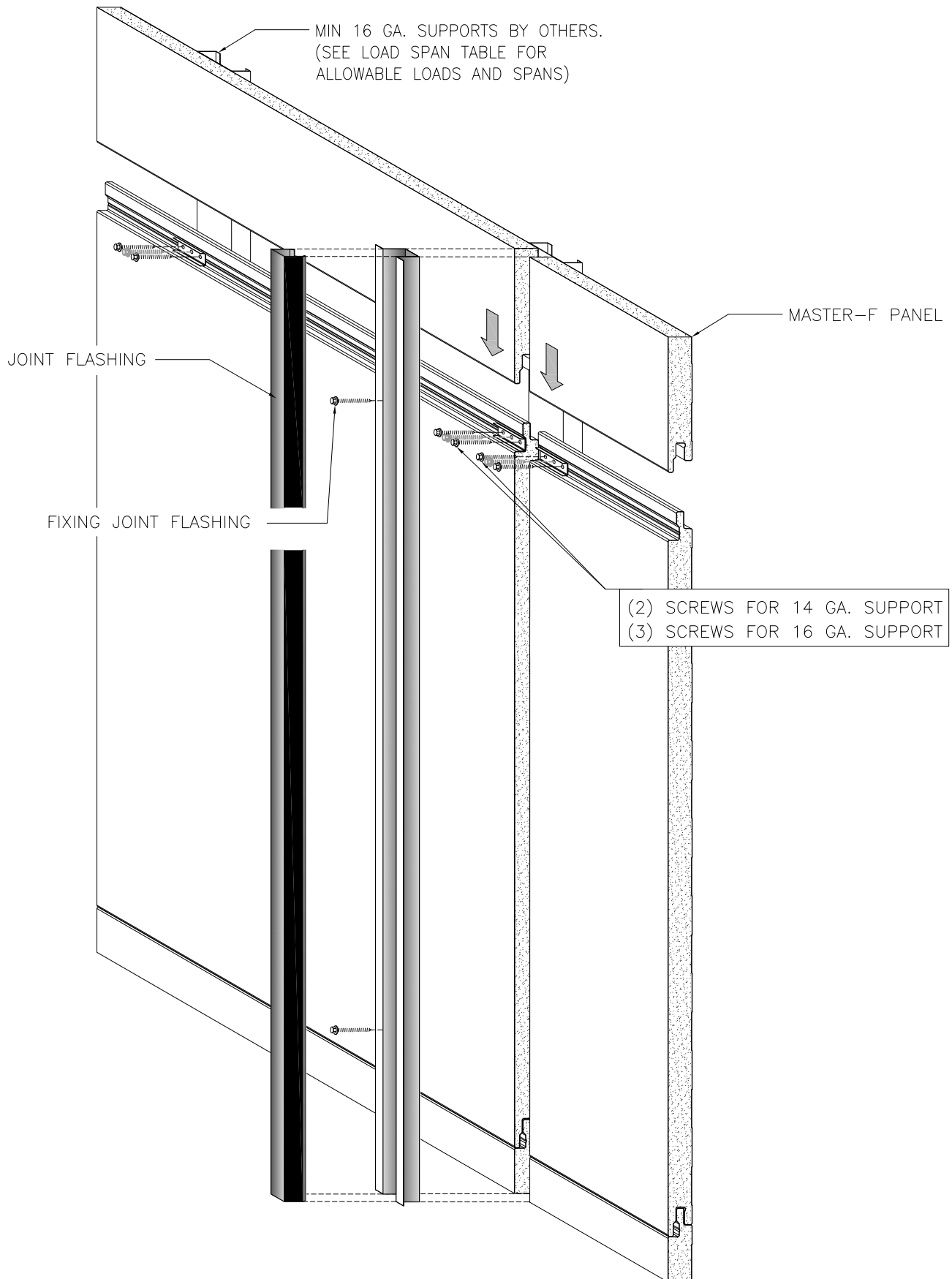


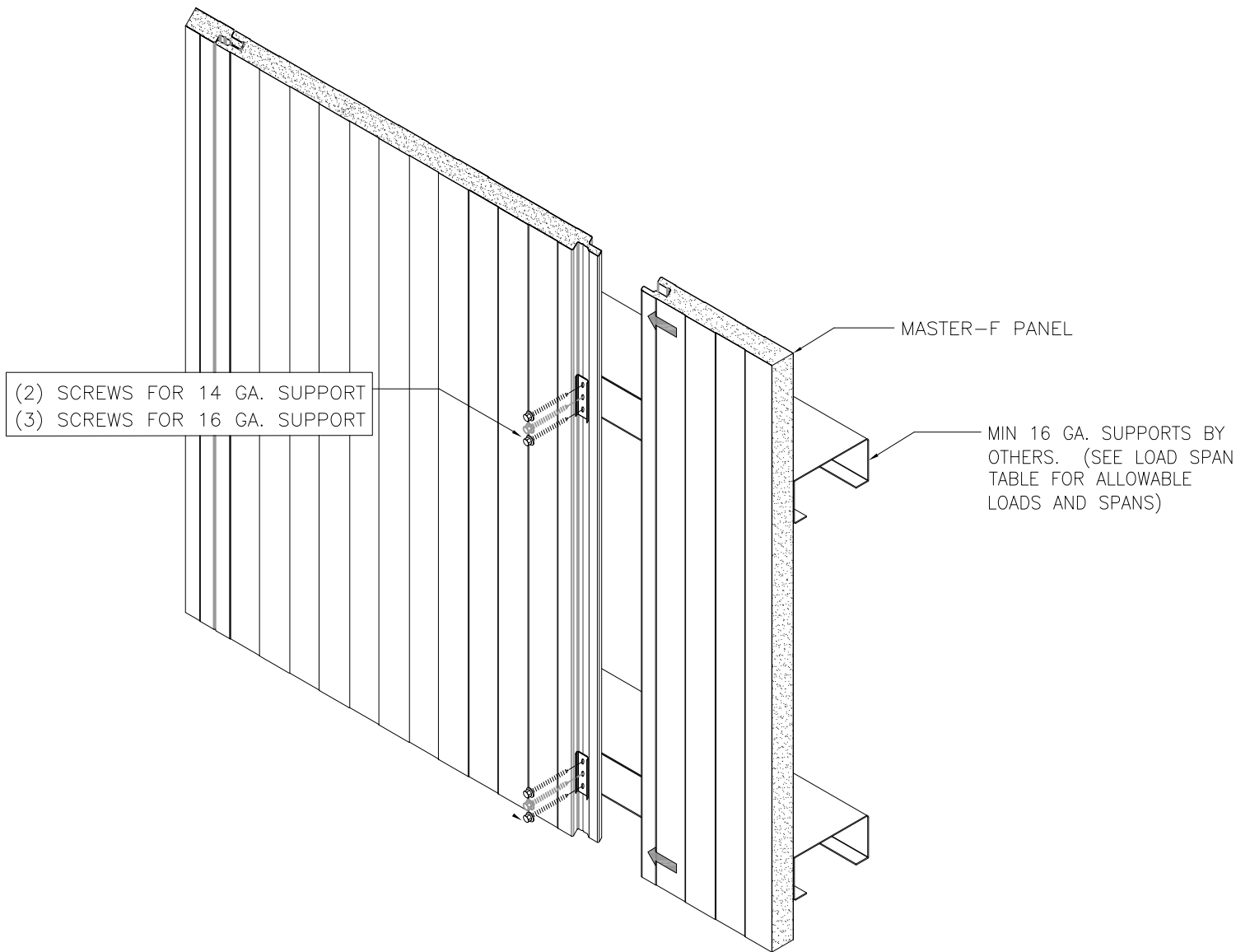
U-CLIP:



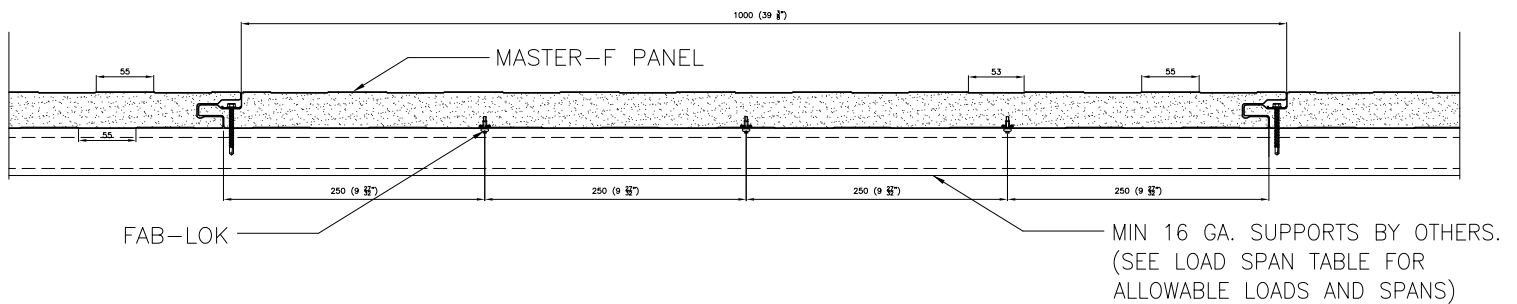
DIMENSIONS IN MM







FAB-LOK FASTENER OPTION:



MASTER PANEL LS
Master-F Wall Panel
Allowable Inward & Outward Loads

Panel Description	Support Spacing (in)	Allowable Inward Load (psf) FD1 & FD2	Allowable Outward Load (psf)	
			FD1	FD2
Master F Min. 26 ga. Exterior & Interior Skins Panel Core Thickness: 1-31/32", 2-3/8", 3-5/32" 3-15/16", 4-23/32", 5-15/16" (50, 60, 80, 100, 120 & 150 mm)	36	132.5	34.5	67.5
	39	122.3	33.7	65.4
	42	113.6	32.8	63.3
	48	99.4	31.2	56.3
	54	88.3	29.5	50.0
	60	79.5	27.8	45.0
	66	72.3	26.2	40.9
	72	66.3	24.4	37.5
	78	61.2	22.5	34.6
	84	56.8	20.9	32.1
	90	53.0	19.5	30.0

Notes:

1. Allowable load is the lowest value of panel strength, connection strength & deflection limit of L/180.
2. Allowable load is applicable to two or more span conditions.
3. The bold numbers indicate design loads obtained from test reports.
4. Panels must be installed as per Evaluation Report FL 27199.1 and Master Panel current installation procedure.
5. For Fastening Design FD1, U-clips are fastened to min. 14 ga. steel with (2) 1/4"-14 Type 3 SDS or to min. 16 ga. steel with (3) 1/4"-14 Type 3 SDS at all supports.
6. The Fastening Design FD2 includes U-clip attachment plus 3 Fab-loks fasteners per panel width at supports. Fastener spacing is 9.8" (250 mm) o.c. from female edge of panel seam.
7. Continuous bead of Dow Corning® 791 silicone weatherproofing sealant was field applied along the panel seams.
8. The structural capacity of support beam are not considered and must be examined independently by others.
9. Minimum bearing width of support is 2.5".