







Product Approval Menu > Product or Application Search > Application List > Application Detail

FL812-R11 Application Type Revision Code Version 2023 Application Status Approved

Comments

Archived

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Category Impact Protective Systems

Subcategory Removable

Compliance Method Evaluation Report from a Florida Registered Architect or a Licensed Florida

Professional Engineer

Evaluation Report - Hardcopy Received

Florida Engineer or Architect Name who developed the Gordon DiBattisto, P.E.

Evaluation Report

Florida License

PE-82328

Quality Assurance Entity National Accreditation and Management Institute

Quality Assurance Contract Expiration Date 12/31/2024 Validated By Troy Bishop, P.E.

Validation Checklist - Hardcopy Received

Certificate of Independence FL812 R11 COI COI .pdf

Referenced Standard and Year (of Standard) **Standard Year** TAS 201 1994 TAS 202 1994 TAS 203 1994

Equivalence of Product Standards

Certified By Florida Licensed Professional Engineer or Architect

FL812 R11 Equiv EQUI .pdf

Sections from the Code

Date Submitted 10/23/2023
Date Validated 11/03/2023
Date Pending FBC Approval 11/06/2023
Date Approved 12/12/2023

Summary of Products

FL #	Model, Number or Name	Description
812.1	Armor Screen Series 2000	Flexible Wind Abatement / Impact Protection System
zone (H.V.H.Z.). Glass se within wind zone 4 and or envelope criterion is met porous' and remains intag	ide HVHZ: Yes	Installation Instructions FL812 R11 II DWG.pdf Verified By: Gordon DiBattisto, PE 82328 Created by Independent Third Party: Yes Evaluation Reports FL812 R11 AE EVAL .pdf Created by Independent Third Party: Yes

Back

Next

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Product Approval Accepts:





ARMOR SCREEN INSTALLATION INSTRUCTIONS:

Armor Screen is a flexible wind abatement and impact protection system utilizing a woven monofilament geotextile that fulfills the 2023 Florida Building Code 8th edition (2023) requirement for opening protection. This system is for use outside the high hurricane zone(HVHZ- Miami-Dade & Broward Counties). For information on use of this system within the HVHZ, refer to Armor Screen's Miami-Dade Notice of Acceptance (NOA) available on the Miami-Dade Product Control website. Separation from glass is required when system is installed within wind zone 4, within the HVHZ and on essential facilities.

Geosynthetic hurricane screen: The hurricane screen shall be produced from a polypropylene, woven monofilament geotextile fabric with individual filaments woven into a basket weave network and calendered such that the filaments retain dimensional stability relative to each other. The woven monofilament geotextile fabric shall have the following minimum average roll values:

The woven monomament geoleki	iic labile shall have the follo	wing minimum average roll v
Grab Tensile Strength	(ASTM D4632)	425 x 325 LBS
Puncture Strength	(ASTM D4833)	130 LBS
Mullen Burst	(ASTM D3786)	675 PSI
Trapezoidal Tear	(ASTM D4533)	150 x 125 LBS
Wide Width Tensile Strength	(ASTM D4595)	225 x 205 LBS/IN
Wide Width Elongation	(ASTM D4595)	22 x 21%
Apparent Opening Size		30 US STD SIEVE.

Percentage of Open Area 5%

The pores in Armor Screen are small enough that the surface tension of water causes the barrier screen to become solid in the presence of rain, and prevents damaging voluminous water intrusion, even from torrential rains.

In dry conditions, the pores remain open, and based on testing, allow approximately 3% of the wind to pass through.

Barrier can be mounted with opposing primary anchored perimeters in vertical, horizontal or any alignment appropriate to the structure being protected.

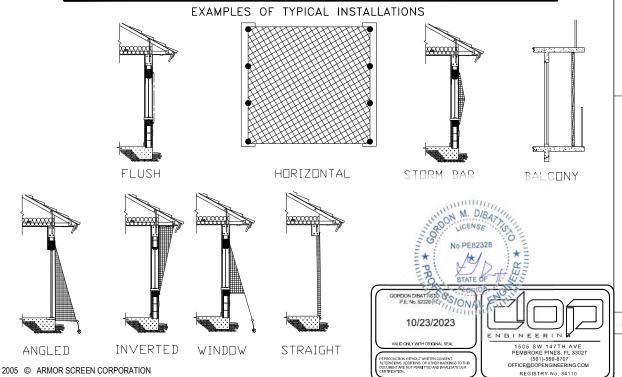
Design loads calculated to ASCE 7-22 as required by the prevailing building code. Product marking - a label shall be affixed to the barrier with the following statement:

"Armor Screen Corporation, Florida Building Code Approved" Testing meets Florida Building Code 8th Edition; TAS 201; TAS 202; TAS 203; ASTM E 330-02; ASTM E 1996-17 Level D; and

ASTM E 1886-12 per Sections 1620 and 1626 and fulfills its requirement for opening protection.

- ASTM G155
- ASTM D638
- ASTM C158 • ASTM D635 - C1
- ASTM D1929 ASTM D2843

ALL GEOSYNTHETIC HURRICANE SCREEN ASSEMBLY INSTALLATION DETAILS DEPICTED WITHIN THESE DRAWINGS ARE TYPICAL FOR THE INSTALLATION OF THIS WIND ABATEMENT AND IMPACT PROTECTION ALL OTHER BUILDING COMPONENTS SHOWN HEREIN ARE DEPICTED AS EXISTING, AND SYSTEM DNLY. NOT CONSTRUCTED BY THE SCREEN COMPANY



Armor Screen Corp. 2744 Hillsboro Road West Palm Beach, FL ArmorScreen.com (561) 841-8890

TITLE:

ARMOR SCREEN SERIES 2000 FLEXIBLE WIND ABATEMENT/IMPACT **PROTECTION** SYSTEM

FL#

FL 812 - R10

DATE: 04/23/2015

REVISION DATE: 10/23/2023

SCALE: N.T.S.

Pg. 1 of 8

Table 1	Ancher Chasing	Anghar Chaisea
Table 1	Anchor Spacing	Anchor Choices

	Anchor opacing Anchor Choices						
Span	Deflection	1' O/C	2' O/C	1*	2*	3*	4*
in feet	in inches	Design pr	essure **	3/8" open eye	3/8" bolt	½" open eye	½" bolt
4'	5.5"	130	65	Х	Х	Х	Х
6'	6.7"	130	65		Х	X	Х
6'	6.7"	92.75	46	Х	Х	Х	Х
8'	8.5"	130	90				Х
8'	8.5"	130	65			X	Х
8'	8.5"	115	58		Х	X	Х
8'	8.5"	68.75	34	Х	Х	X	Х
10'	16"	130	90				Х
10'	16"	130	65		Х	X	Х
10'	16"	94.75	47	Х	Х	Х	Х
12'	21"	130	90				Х
12'	21"	130	65			Х	Х
12'	21"	120	60		Х	X	Х
12'	21"	69.75	35	Х	Х	Х	Х
14'	30"	130	80				Х
14'	30"	130	65			X	Х
14'	30"	120	60		Х	Х	Х
14'	30"	64.75	32	Х	Х	X	Х
16'	39"	130	75				Х
16'	39"	130	65			Х	Х
16'	39"	110	55		Х	Х	Х
16'	39"	60	34.25	Х	Х	Х	Х
20'	40"	58.00	29.00			Х	Х
24'	41"	48.00	24.00			X	Х

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ARMOR SCREEN SERIES 2000 **BUCKLE & STRAP SYSTEM**

FL#

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CONCRETE: *Table is intended for drop-in and LDT anchors in concrete.

WOOD: Lag anchoring (incl. LDT) into wood as follows

Column 1*: 3/8" thread, 1.75" penetration into SYP (0.55sg)

Column 2*: 3/8" thread, 3.1" penetration into SYP Column 3*: 1/2" thread, 3.0" penetration into SYP Column 4*: ½" thread, 3.7" penetration into SYP

EARTH: * Specified earth anchor may be used with any of table choices.

HOLLOW BLOCK: Column 1*, approved epoxy anchoring system for $\frac{3}{8}$ " & $\frac{1}{2}$ " thread.

NOTE: **Design pressure may be increased by 5% for negative loads.

TRACK SYSTEM: Table applies to track system, anchored with two $\frac{5}{16}$ " fasteners per cleat, as follows:

- into hollow block, min. 1 $\frac{1}{4}$ " embed can be installed as in column 1*
- into concrete, min. 1 3/4" embed can be installed as in column 3*
- into concrete, min. 2" embed can be installed as in column 4*
- into wood (SYP. sg. 0.55), min. 1" embed can be installed as in column 1*
- into wood (SYP. sq. 0.55), min. 2" embed installed as in column 3*

NOTES:

Anchor Spacing: varies inversely with pressure and is subject to rational analysis, Max 24"/ Min 6" O.C.

Span: is measured anchor to anchor and is subject to rational analysis.

Deflection: is minimum glass separation measured at mid-span of screen and is subject to rational analysis.

ANCHOR SPECIFICATION:

Lag Anchors: 3/8" Lag Anchor

½" Lag Anchor

Tapcon $\frac{5}{16}$ ", $\frac{3}{8}$ ", or $\frac{1}{2}$ " LDT can anchor in both wood and concrete

Drop-in Anchor: $\frac{3}{8}$ " Steel Drop-in anchor in 3000 PSI (min.) concrete, $1\frac{1}{2}$ " min.

embedment, 4" min. edge distance (Dewalt or equal)

 $\frac{1}{2}$ " Steel Drop-in anchor in 3000 PSI (min.) concrete, 2" min.

embedment, 5" min. edge distance (Dewalt or equal)

Earth Anchor: Proprietary System: Stabilized ½" x 30" Shaft with 4" helix **

Working Load of Earth Anchor is 3150 LBS. Soil Class: 5 (medium dense coarse sand)

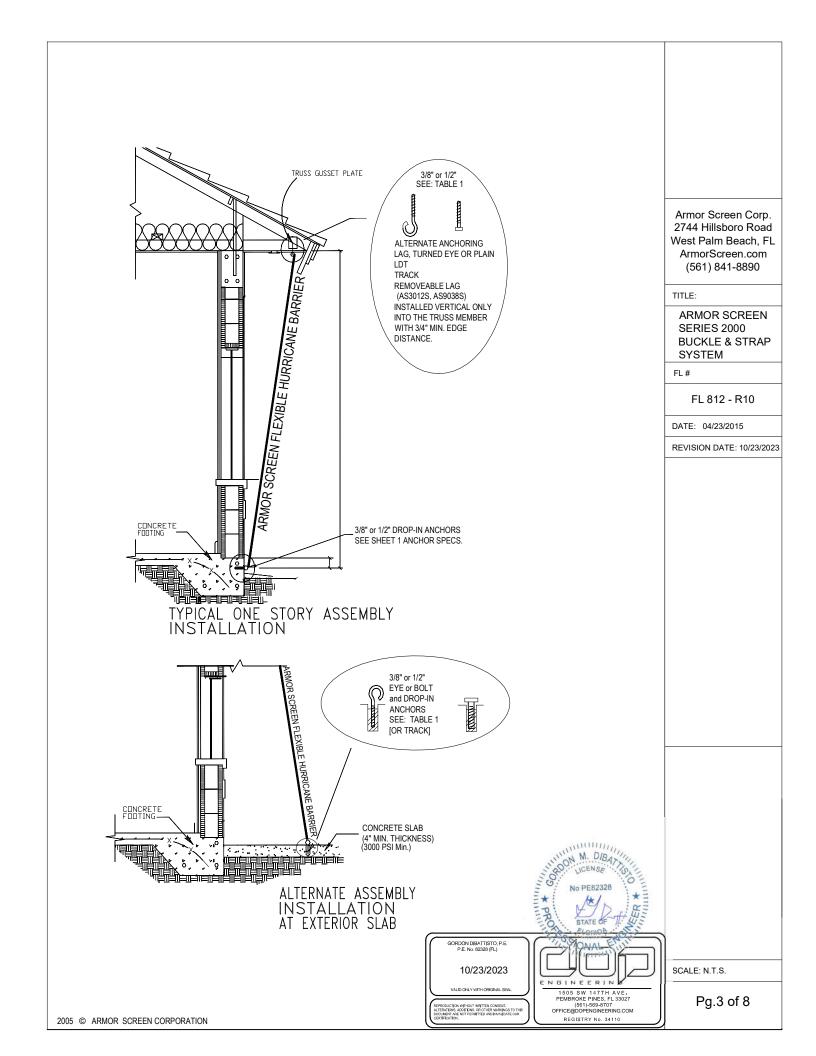
Epoxy Anchor: Equal to Red Head umbrella inserts and

screens with Dewalt pure 50+ Epoxy.



SCALE: N.T.S

Pg. 2 of 8



STORM BAR								
MAX. STORM BAR SPAN	4'	5'	6'	8'	9' 9"	12'	14'	
MAX. PSF	130	86	60	130	60	130	130	
SYP 2"x6"	Х	Х	Х					
ALUM. TUBE				x				
2"x6"x1/8" 6063-T6				^				
SYP 4"x8"					Х			
ALUM. TUBE						х		
2"x6"x1/4" 6061-T6						^		
ALLIM TUDE								

2"x8"x1/4" 6061-T6

- STORM BAR SPAN IS MEASURED BRACKET TO BRACKET. DEFLECTION; ACHIEVED BY ONE OR MORE STORM BARS AND MAY BE INCREASED WITH BLOCKING
- MAX. DEFLECTION TO BE PER NOA AS RELATES TO SPAN. SPAN PROPORTIONATELY REDUCED BY INTERMEDIATE RESTS, SUCH AS STORM BARS OR MULLIONS, AND MEASURED FROM ANCHOR TO PROXIMATE STORM BAR OR BETWEEN PROXIMATE STORM BARS
- THE STORM BAR SPLITS THE ANCHOR / SCREEN SPAN INTO MULTIPLE SPANS, EACH OF WHICH IS USED TO DETERMINE THE MINIMUM DEFLECTION.
- ANCHOR ENDS WITH MINIMUM ¼" HARDWARE STORM BAR MAY BE ATTACHED WITH PERMANENT OR REMOVABLE STORM BAR BRACKET, OR BY ATTACHING THE STORM BAR DIRECTLY TO THE WALL.
- ALTERNATE: CUSTOM BRACKET COMPRISED OF 2" X 2" X 1 $\,\%$ " X $\,\%$ " ALUMINUM ANGLES ON EACH SIDE OF STORM BAR.
- SUBJECT TO RATIONAL ANALYSIS

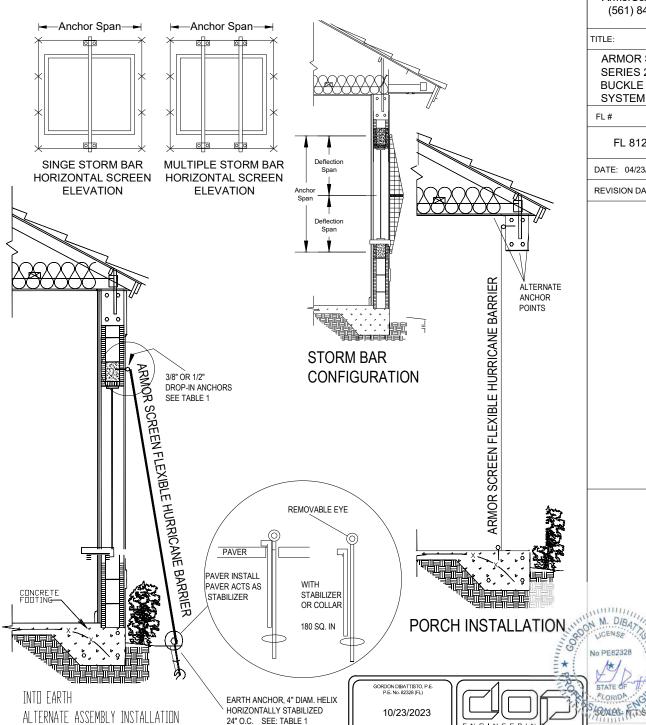
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ARMOR SCREEN SERIES 2000 **BUCKLE & STRAP**

FL 812 - R10

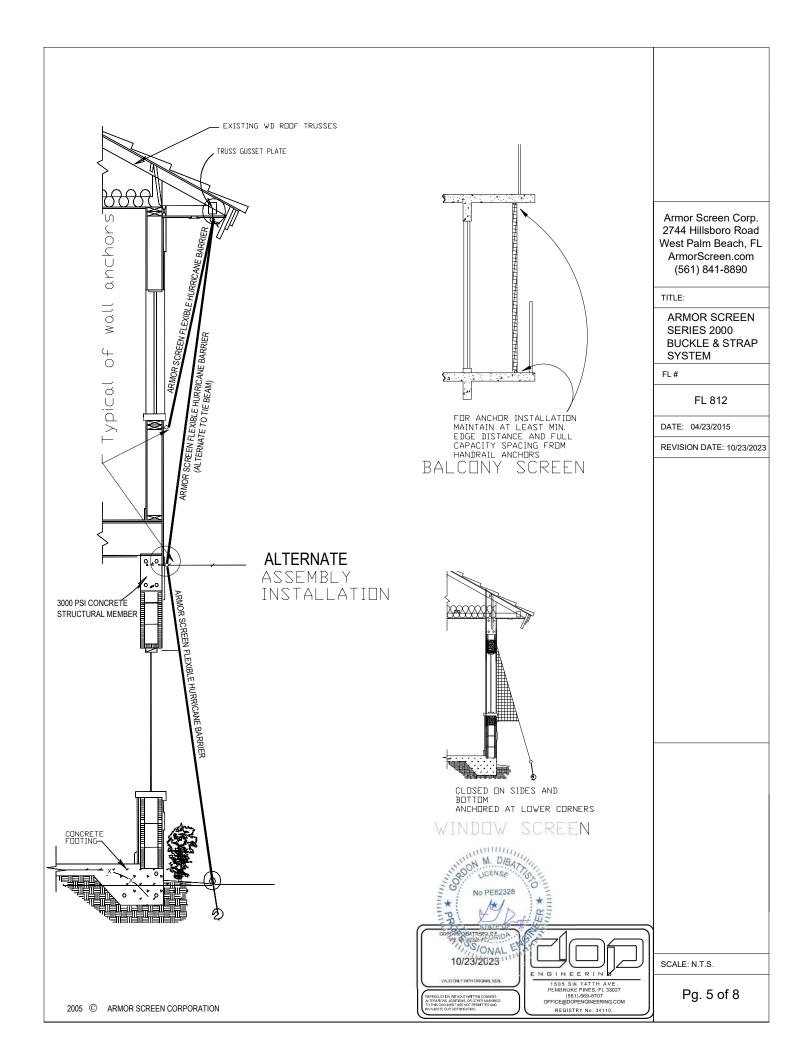
DATE: 04/23/2015

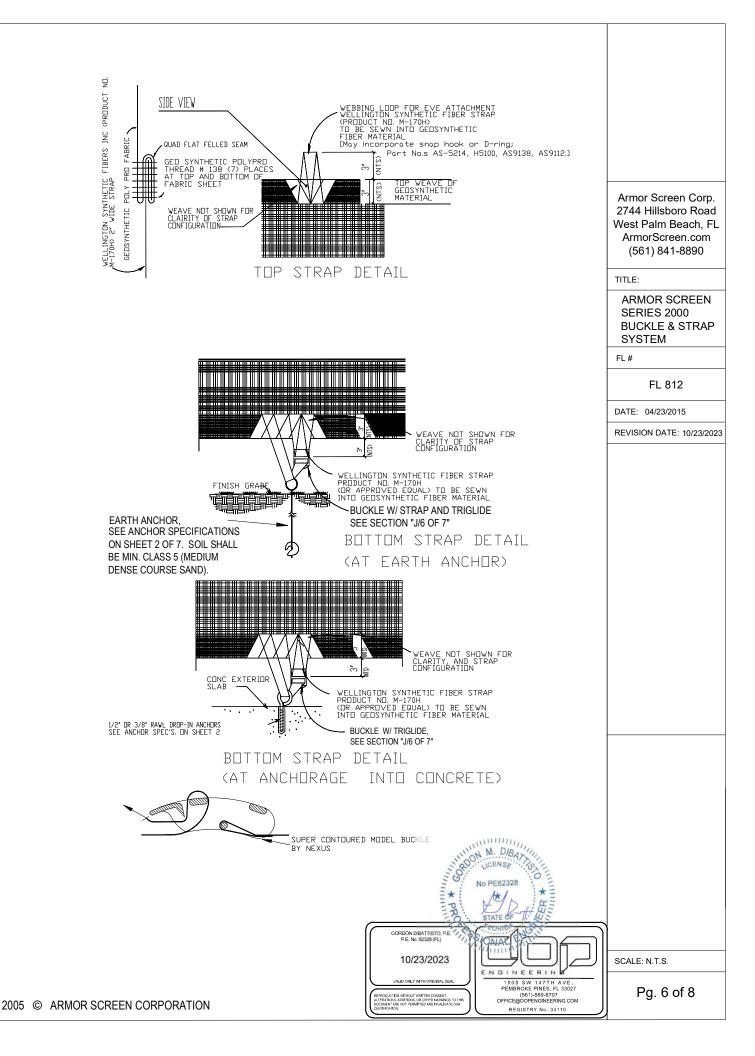
REVISION DATE: 10/23/2023

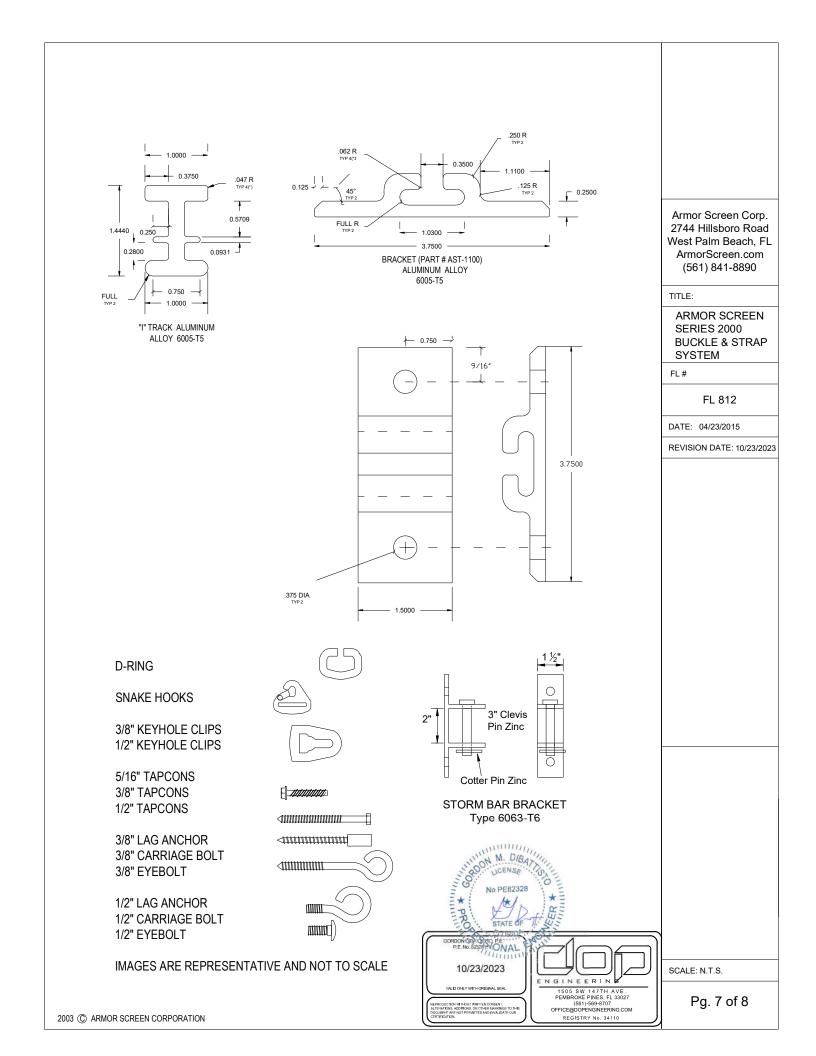


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Pg. 4 of 8







LOADS ON EXISTING STRUCTURE FROM SCREEN SYSTEM Rh= PERPENDICULAR LOADS (PSF) PRESSURE (PSF) Span Span in feet in inches 30 psf | 40 psf | 50 psf | 60 psf | 70 psf | 90 psf | 110 psf | 130 psf 3 ft. 38 in. 4 ft. 48 in. 5 ft. 60 in. 6 ft. 72 in. 7 ft. 84 in. 8 ft. 96 in. 9 ft. 108 in. 10 ft. 120 in. 11 ft. 132 in. 12 ft. 144 in. 13 ft. 156 in. 14 ft. 168 in. 180 in. 15 ft. 16 ft. 192 in. 17 ft. 204 in. 18 ft. 216 in. 19 ft. 228 in. 20 ft. 240 in. 21 ft. 252 in. 22 ft. 264 in. 23 ft. 276 in.

Rv	Rh	
Span	Deflection	Pressure PSF
Rv	Rh	

2744 Hillsboro Road West Palm Beach, FL ArmorScreen.com (561) 841-8890

Armor Screen Corp.

TITLE:

ARMOR SCREEN **SERIES 2000 BUCKLE & STRAP** SYSTEM

FL#

FL 812

DATE: 04/23/2015

REVISION DATE: 10/23/2023

LOADS ON EXISTING STRUCTURE FROM SCREEN SYSTEM Rv= PARALLEL LOADS (PLF)

GORDON DIBATTISTO, P.E. P.E. No. 82328 (FL) 70723/2023

IV- I / II VILLEE EO/IDO (I EI)									
Span	Span	PRESSURE (PSF)							
in feet	in inches	30 psf	40 psf	50 psf	60 psf	70 psf	90 psf	110 psf	130 psf
3 ft.	38 in.	59	76	92	109	126	129	127	128
4 ft.	48 in.	78	101	123	145	168	172	169	171
5 ft.	60 in.	98	126	154	182	369	215	211	214
6 ft.	72 in.	118	151	185	218	251	258	253	257
7 ft.	84 in.	137	176	215	254	293	301	296	299
8 ft.	96 in.	157	201	246	291	335	344	338	342
9 ft.	108 in.	177	227	277	327	377	387	380	385
10 ft.	120 in.	196	252	308	363	419	430	422	428
11 ft.	132 in.	216	277	338	400	461	474	464	470
12 ft.	144 in.	235	302	369	436	503	517	507	513
13 ft.	156 in.	255	327	400	472	545	560	549	556
14 ft.	168 in.	275	353	431	509	587	603	591	599
15 ft.	180 in.	294	378	461	545	629	646	633	641
16 ft.	192 in.	314	403	492	581	670	689	676	684
17 ft.	204 in.	333	428	523	618	712	732	718	727
18 ft.	216 in.	353	453	554	654	754	775	760	770
19 ft.	228 in.	373	479	584	690	796	818	802	812
20 ft.	240 in.	392	504	615	727	838	861	844	855
21 ft.	252 in.	412	529	646	763	880	904	887	898
22 ft.	264 in.	431	554	677	799	922	947	929	941
23 ft.	276 in.	451	579	707	836	964	990	971	984
24 ft.	288 in.	471	604	738	872	1006	1033	1013	1026

NOTES:

24 ft.

288 in.

- 1. Deflections are delivered from test results.
- 2. Deflection is the minimum glass separation measured at mid span of the screen and subject to rational analysis.
- 3. Reaction Rh can be positive (towards structure) or negative (away from WON M. DIBA structure). ADON M. DIBAT
- 4. Rv is always tension as shown.

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SCALE: N.T.S.

Pg. 8 of 8