



NEMO|etc.

Certificate of Authorization #32455

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ENGINEER

EVALUATE

TEST

CONSULT

P.E. EVALUATION REPORT (PEER)

KELLY CO-2001, INC.

325 Thomaston Avenue

Waterbury, CT 06702

(203) 575-9220

PEER-KEL-001.A.R2

FL2689-R8 (NON-HVHZ)

Date of Issuance: 06/19/2018

Revision 2: 11/21/2023

SCOPE:

This P.E. Evaluation Report (henceforth 'PEER') is issued under **F.A.C. Rule 61G20-3** and the applicable rules and regulations governing the use of construction materials in the State of Florida. The documentation submitted has been reviewed by Robert Nieminen, P.E. for use of the product under the Florida Building Code. The product described herein has been evaluated for compliance with the **8th Edition (2023) Florida Building Code sections noted herein.**

DESCRIPTION: Kelly Co-2001, Inc. "Equalizer Valves" (NON-HVHZ)

LABELING: Labeling shall be in accordance with the requirements of the Accredited Quality Assurance Agency noted herein.

CONTINUED COMPLIANCE: This PEER is valid until such time as the named product(s) changes, the referenced Quality Assurance or production facility location(s) changes, or Code provisions that relate to the product(s) change. Acceptance of our PEERs by the named client constitutes agreement to notify NEMO ETC, LLC of any changes to the product(s), the Quality Assurance or the production facility location(s). NEMO ETC, LLC requires a complete review of its PEER relative to updated Code requirements with each Code Cycle.

ADVERTISEMENT: The Florida Product Approval Number (FL#) preceded by the words "NEMO P.E. Evaluated" may be displayed in advertising literature. If any portion of the PEER is displayed, then it shall be done in its entirety.

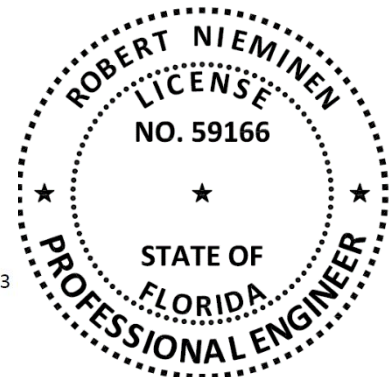
INSPECTION: Upon request, a copy of this entire PEER shall be provided to the user by the manufacturer or its distributors and shall be available for inspection at the job site at the request of the Building Official.

This PEER consists of pages 1 through 4, plus a 9-page Appendix.

Prepared by:

**Digitally signed by
Robert Nieminen
Date: 2023.11.21
'11:48:41 -05'00**

This item has been digitally signed and sealed by Robert Nieminen, P.E. Printed copies of this document are not considered signed and sealed, and the signature must be verified on any electronic copies. Robert Nieminen, Florida P.E. 59166, FBC ANE1983 NEMO ETC, LLC, Florida CA #32455



CERTIFICATION OF INDEPENDENCE:

1. NEMO ETC, LLC does not have, nor does it intend to acquire, or will it acquire, a financial interest in any company manufacturing or distributing products it evaluates.
2. NEMO ETC, LLC is not owned, operated, or controlled by any company manufacturing or distributing products it evaluates.
3. Robert Nieminen, P.E. does not have nor will acquire, a financial interest in any company manufacturing or distributing products for which the PEERs are being issued.
4. Robert Nieminen, P.E. does not have, nor will acquire, a financial interest in any other entity involved in the approval process of the product.
5. This is a building code evaluation. Neither NEMO|etc. nor Robert Nieminen, P.E. are, in any way, the Designer of Record for any project on which this PEER, or previous versions thereof, is/was used for permitting or design guidance unless retained specifically for that purpose.

ROOFING SYSTEMS EVALUATION:

1. SCOPE:

Product Category: Roofing
Sub-Category: Single Ply Roof Systems
Product Approval Method: Method 1, Option D – Codified Material, Evaluation by Engineer
Compliance Statement: Single Ply Roof Systems installed with **Kelly Co-2001, Inc. “Equalizer Valves”**, as produced by **KELLY CO-2001, INC.**, have demonstrated compliance with the following sections of the **8th Edition (2023) Florida Building Code** through testing in accordance with the following Standards. Compliance is subject to the [Installation Requirements](#) and [Limitations of Use](#) set forth herein.

2. STANDARDS:

SECTION	PROPERTY	STANDARD
1504.3.1	Wind	UL 1897
1504.7	Impact	FM 4470
1507.12.2	Material Standard	ASTM D4637
1507.12.2	Material Standard	ASTM D4434
1507.12.2	Material Standard	ASTM D6878

3. REFERENCES:

ENTITY	EXAMINATION	REFERENCE	DATE
NEMO	Traceability	FBC Cross-Listing Agreement	06/07/2018
NEMO	PEER	PEER-SIKA-001.A.R31	08/10/2023
NEMO	PEER	PEER-CRL-001.A.R8	09/19/2023
NEMO	PEER	PEER-CRL-003.A.R31	09/29/2023
UL, LLC (TST9628)	UL 1897	98NK8094	01/12/1999
UL, LLC (TST9628)	UL 1897	12NK06288	05/04/2012
UL, LLC (CER9626)	UL 1897	TGK.R9734	07/26/2018
UL, LLC (QUA9625)	Quality Control	Service Confirmation, Equalizer Vent	06/27/2023
UL, LLC (QUA9625)	Quality Control	Florida BCIS	Current

4. PRODUCT DESCRIPTION:

- 4.1 This PEER covers single ply roof systems installed using **Kelly Co-2001, Inc. “Equalizer Valves”** in accordance with **KELLY CO-2001, INC.** published installation instructions and the [Limitations of Use](#) herein.

TABLE 1: EVALUATED COMPONENTS					
TYPE	PRODUCT		MATERIAL STANDARD		AUDIT LOCATION
			REFERENCE	TYPE	
SECUREMENT	“Equalizer Valves” are spun-aluminum, one-way vents designed to transfer the uplift (negative) pressure created by the vortex at the perimeter-edge of a low-slope roof system to beneath the roof membrane		N/A	N/A	Villa Rica, GA
ROOF COVER	“KELLY CPA (PVC)” and “2001 CPA (PVC)”	45, 60-mil	ASTM D4434	III	Canton, MA
	Carlisle SynTec Systems “Sure-Seal FR Nonreinforced”	45, 60, 90-mil	ASTM D4637	I	Carlisle, PA
	Carlisle SynTec Systems “Sure-White”	60, 90-mil	ASTM D4637	I	
	Carlisle SynTec Systems “Sure-Tough”	45, 60, 75-mil	ASTM D4637	II	
	Carlisle SynTec Systems “Sure-Weld”	45, 60-mil	ASTM D6878	N/A	Carlisle, PA
	Carlisle SynTec Systems “Sure-Weld EXTRA”	72, 80-mil	ASTM D6878	N/A	

5. LIMITATIONS:

- 5.1 This is a building code evaluation. Neither NEMO ETC, LLC nor Robert Nieminen, P.E. are, in any way, the Designer of Record for any project on which this PEER, or previous versions thereof, is/was used for permitting or design guidance. PEERs are not to be construed as representing any attributes not specifically listed, nor are PEERs to be construed as an endorsement of the subject, or a recommendation for its use. There is no warranty by NEMO ETC, LLC or Robert Nieminen, P.E., express or implied, as to any finding or other matter in this PEER, or as to any product covered by the PEER.
- 5.2 This PEER is not for use in FBC High Velocity Hurricane Zone jurisdictions, as defined in FBC Chapter 2 (Broward and Miami-Dade Counties).
- 5.3 This PEER pertains to above-deck roof components. Roof decks and structural members shall be in accordance with FBC requirements to the satisfaction of the Authority Having Jurisdiction.
- 5.4 This PEER does not include evaluation of fire classification. Refer to **FBC 1505** for requirements and limitations regarding roof assembly fire classification. Refer to **FBC 2603** for requirements and limitations concerning the use of foam plastic insulation.
- 5.5 This PEER does not include evaluation of roof edge termination. Refer to **FBC 1504.5** for requirements and limitations regarding edge securement for low-slope roofs.
- 5.6 Refer to **FBC 1511** for requirements and limitations regarding recover installations.
- 5.6.1 For mechanically attached components over existing roof decks, fasteners shall be tested in the existing deck for withdrawal resistance. A qualified design professional shall review the data for comparison to the minimum requirements for the system. Testing shall be in accordance with [ANSI/SPRI FX-1](#) or [Testing Application Standard TAS 105](#).
- 5.6.2 For bonded insulation or membrane over existing substrates in a re-roof (tear off) or recover installation, the existing deck or existing roof surface shall be examined for compatibility with the adhesive to be installed. If any surface conditions exist that bring system performance into question, field uplift testing in accordance with [ANSI/SPRI IA-1](#), [ASTM E907](#), [FM Loss Prevention Data Sheet 1-52](#) or [Testing Application Standard TAS 124](#) shall be conducted on mock-ups of the proposed new roof assembly.
- 5.6.3 For bonded insulation or membrane over existing substrates in a recover installation, the existing roof system shall be capable of resisting project design pressures on its own merit to the satisfaction of the Authority Having Jurisdiction, as documented through field uplift testing in accordance with [ASTM E907](#), [FM Loss Prevention Data Sheet 1-52](#) or [Testing Application Standard TAS 124](#).
- 5.7 Refer to Appendix 1 for system attachment requirements for wind load resistance.
- 5.7.1 “MDP” = Maximum Design Pressure is the result of testing for wind load resistance based on allowable wind loads, and reflects the ultimate passing pressure divided by 2 (the 2 to 1 margin of safety per **FBC 1504.9** has already been applied). Refer to **FBC 1609** for determination of design wind loads.
- 5.7.2 For mechanically attached components or partially-bonded insulation, the maximum design pressure for the selected assembly shall meet or exceed at least the Zone 1 PRIME design pressure determined in accordance with **FBC Chapter 16**. Elevated pressure zones shall employ an attachment density designed by a qualified design professional to resist the elevated pressure criteria. Commonly used methods are [ANSI/SPRI WD1](#), [FM Loss Prevention Data Sheet 1-29](#), [Roofing Application Standard RAS 117](#) or [RAS 137](#). Assemblies marked with an asterisk* carry the limitations set forth in **Section 2.2.10.1 of FM Loss Prevention Data Sheet 1-29 (February 2020)** for Zone 2/3 enhancements.
- 5.7.3 For assemblies with all components fully bonded in place, the maximum design pressure for the selected assembly shall meet or exceed critical design pressure determined in accordance with **FBC Chapter 16**. No rational analysis is permitted for these systems.

- 5.8 All components in the roof assembly shall have quality assurance audit in accordance with F.A.C. [Rule 61G20-3](#). Refer to the Product Approval of the component manufacturer for components listed in Appendix 1 that are produced by a Product Manufacturer other than the report holder on [Page 1](#) of this PEER.

6. INSTALLATION:

Single Ply Roof Systems installed with **Kelly Co-2001, Inc. "Equalizer Valves"** shall be installed in accordance with **KELLY CO-2001, INC.** published installation instructions coupled with those of the roof membrane manufacturer, subject to the [Limitations of Use](#) noted herein.

7. BUILDING PERMIT REQUIREMENTS:

As required by the Building Official or Authority Having Jurisdiction in order to properly evaluate the installation of this product.

8. MANUFACTURING PLANTS:

Contact the named QA entity for manufacturing facilities covered by F.A.C. [Rule 61G20-3](#) QA requirements. Refer to [Section 4](#) herein for products and production locations having met codified material standards.

9. QUALITY ASSURANCE ENTITY:

[UL, LLC – QUA9625](#): (360) 817-5512; bsai.inspections@ul.com

- THE 9-PAGES THAT FOLLOW FORM PART OF THIS PEER -

APPENDIX 1: ATTACHMENT REQUIREMENTS FOR WIND UPLIFT RESISTANCE

TABLE	DECK	APPLICATION	TYPE	DESCRIPTION	PAGE
1	Wood	New or Reroof (Tear-Off)	G	Air-Sealed Deck, Air-Sealed Roof Cover, KELLY CO-2001 "EQUALIZER VALVES"	2
2A	Steel	New or Reroof (Tear-Off)	C	Air Sealed Deck, Mechanically Attached Insulation, Bonded Roof Cover, KELLY CO-2001 "EQUALIZER VALVES"	3
2B	Steel	New	G	Air Sealed Deck, Spray-Applied Insulation, Air-Sealed Roof Cover, KELLY CO-2001 "EQUALIZER VALVES"	5
3A	Structural concrete	New or Reroof (Tear-Off)	G	Air Sealed Deck, Optional Insulation, Roof Cover, KELLY CO-2001 "EQUALIZER VALVES"	6
3B	Structural concrete	New or Reroof (Tear-Off)	G	Deck Waterproofing, Optional Insulation, Roof Cover, Pressure Equalizing Vent	6
3C	Structural concrete	New or Reroof (Tear-Off)	G	Air Sealed Deck, Vapor Barrier, Optional Insulation, Coverboard, Roof Cover, KELLY CO-2001 "EQUALIZER VALVES"	7
4A	Concrete	Recover	G	Air Sealed Deck, Optional Insulation, Roof Cover, KELLY CO-2001 "EQUALIZER VALVES"	8
4B	Concrete	Recover	G	Air Sealed Deck, Vapor Barrier, Optional Insulation, Coverboard, Roof Cover, KELLY CO-2001 "EQUALIZER VALVES"	8

The following notes apply to the systems outlined herein:

- The roof system evaluation herein pertains to above-deck roof components. Roof decks and structural members shall be in accordance with FBC requirements to the satisfaction of the Authority Having Jurisdiction. The load resistance of the roof deck shall be documented through proper codified and/or FBC Approval documentation.
- Fasteners shall be of sufficient length for the following engagements:
 - Wood Deck: Minimum 0.75-inch plywood penetration or minimum 1-inch wood plank embedment.
 - Steel Deck: Minimum 0.75-inch steel penetration and engage the top flute of the steel deck.
 - Structural concrete: Minimum 1-inch embedment. Fasteners installed with a pilot hole in accordance with the fastener manufacturer's published installation instructions.
- Unless otherwise noted, insulation may be any one layer or combination of FBC Approved (Local or Statewide) board(s) that meets FBC 1505 and, for foam plastic, FBC Chapter 26, when installed with the roof cover.
- For mechanically attached components, the maximum design pressure for the selected assembly shall meet or exceed at least the Zone 1 PRIME design pressure determined in accordance with FBC Chapter 16. Elevated pressure zones shall employ an attachment density designed by a qualified design professional to resist the elevated pressure criteria. Commonly used methods are [ANSI/SPRI](#) WD1, [FM Loss Prevention Data Sheet](#) 1-29, [Roofing Application Standard](#) RAS 117 or RAS 137. Assemblies marked with an asterisk* carry the limitations set forth in Section 2.2.10.1 of [FM Loss Prevention Data Sheet](#) 1-29 for Zone 2/3 enhancements.
- For mechanically attached components over existing decks, fasteners shall be tested in the existing deck for withdrawal resistance. A qualified design professional shall review the data for comparison to the minimum requirements for the system. Testing and analysis shall be in accordance with [ANSI/SPRI](#) FX-1 or [Testing Application Standard](#) TAS 105. For systems using Trufast Versa-Fast, the number of Versa-Fast Fasteners installed through the Versa-Fast Plate may be increased from the minimum noted in order to yield minimum required withdrawal resistance.
- For existing substrates in a recover installation, the existing roof system shall be capable of resisting project design pressures on its own merit to the satisfaction of the Authority Having Jurisdiction, as documented through field uplift testing. Field uplift testing shall be in accordance with ASTM E907, [FM Loss Prevention Data Sheet](#) 1-52 or [Testing Application Standard](#) TAS 124.
- "MDP" = Maximum Design Pressure is the result of testing for wind load resistance based on allowable wind loads. Refer to FBC 1609 for determination of design wind pressures.

TABLE 1: WOOD DECKS - NEW CONSTRUCTION OR REROOF (TEAR-OFF)
SYSTEM TYPE G: AIR-SEALED DECK, AIR-SEALED ROOF COVER, KELLY CO-2001 "EQUALIZER VALVES"

System No.	Deck (Note 1)	Insulation	Roof Cover			MDP (psf)
			Type	Air Seal	Valve	
W-1.	New Construction or Re-Roof (Tear-Off): Min. 15/32-inch APA rated plywood	FBC Approved, UL Classified two-component spray applied foamed plastic; formed in two or more layers, min ½-inch thick each, with 2001 Reinforced Fiberglass Mesh (not UL Classified) laid over first layer	Carlisle "Sure-Seal FR Nonreinforced", "Sure-White", "Sure-Tough", "Sure-Tough FR", "Sure-Weld" or "Sure-Weld EXTRA" or "KELLY CPA (PVC)" or "2001 CPA (PVC)"	The perimeter and penetrations are sealed with a mechanically fastened, picture frame of Kelly Co-2001 Inc. termination bars, consisting of: ✓ 2001 butyl rubber gasket (nominal 5/8" x ¾" cross-section) and termination bars consisting of ½" wide x 6 ft. long extruded aluminum bars. The gasket is centered on the underside of the membrane on the substrate. A termination bar is fastened over the membrane to the deck with 1/4-13 steel screws spaced 7" o.c. through pre-punched holes. - or ✓ 2001 butyl rubber gasket (nominal 5/8" x ¾" cross-section) and termination strips consisting of min. 7/16" thick x 6" wide strips of APA rated wood sheathing. The gasket is centered on the underside of the membrane on the substrate. A termination strip is fastened over the membrane to the deck with FBC Approved #14 screws and 3" diameter galvalume metal stress plates spaced 12" o.c.	Kelly Co-2001, Inc. "Equalizer Valves" installed in accordance with KELLY CO-2001, INC. published requirements	-60.0
W-2.	New Construction: Min. 7/16-inch APA rated plywood or OSB; The longitudinal sides parallel to and centered over wood joists, spaced 24-inch o.c. Butt joints of adjacent sheets are to be staggered. Kelly Co-2001 petroleum-based exterior wood deck adhesive is used to adhere sheathing to joists and to seal all deck joints. Fastening consist of FBC Approved #14 screws and 3" diameter galvalume metal stress plates located in a row at the longitudinal seams of sheathing beginning 4 in. from each staggered butt seam and 20-inch o.c. Another row is located at the longitudinal center line of each sheet, 4-inch from each butt edge and 22-inch o.c.	(Optional) UL Classified, FBC Approved separator mats or slip sheets, or rigid roof insulation, any thickness, adhered, mechanically attached or loose laid	Carlisle "Sure-Seal FR Nonreinforced", "Sure-White", "Sure-Tough", "Sure-Tough FR", "Sure-Weld" or "Sure-Weld EXTRA" or "KELLY CPA (PVC)" or "2001 CPA (PVC)"	The perimeter and penetrations are sealed with a mechanically fastened, picture frame of Kelly Co-2001 Inc. termination bars, consisting of: ✓ 2001 butyl rubber gasket (nominal 5/8" x ¾" cross-section) and termination bars consisting of ½" wide x 6 ft. long extruded aluminum bars. The gasket is centered on the underside of the membrane on the substrate. A termination bar is fastened over the membrane to the deck with 1/4-13 steel screws spaced 7" o.c. through pre-punched holes. - or ✓ 2001 butyl rubber gasket (nominal 5/8" x ¾" cross-section) and termination strips consisting of min. 7/16" thick x 6" wide strips of APA rated wood sheathing. The gasket is centered on the underside of the membrane on the substrate. A termination strip is fastened over the membrane to the deck with FBC Approved #14 screws and 3" diameter galvalume metal stress plates spaced 12" o.c.	Kelly Co-2001, Inc. "Equalizer Valves" installed in accordance with KELLY CO-2001, INC. published requirements	-97.5

TABLE 2A: STEEL DECKS - NEW CONSTRUCTION OR REROOF (TEAR-OFF)
SYSTEM TYPE C: AIR SEALED DECK, MECHANICALLY ATTACHED INSULATION, BONDED ROOF COVER, KELLY CO-2001 "EQUALIZER VALVES"

System No.	Deck (Note 1)	Air Seal	Base Insulation	Top Insulation			Roof Cover			MDP (psf)
				Type	Fasteners (Note 5)	Attach	Type	Attach	Valve	
S-1.	Min. 22 ga., type B, 33 ksi steel	Minimum min 4 mil Kelly Co-2001, Inc. reinforced polyethylene with end and lap seams overlapped min 6 in., and sealed with 2 in. wide pressure sensitive tape. The poly air barrier must be of sufficient size to wrap over the top of the insulation or cover board, a min of 6 in., around the entire perimeter and at penetrations, to be air sealed to the roof cover.	Anu UL Classified, FBC Approved polyisocyanurate insulation and/or gypsum-based coverboard	Min. 7/16-inch APA rated OSB	Carlisle "Sure-Seal HP Fastener"	1 per 4 ft ²	Carlisle "Sure-Seal FR Nonreinforced", "Sure-White", "Sure-Tough" or "Sure-Tough FR"	Carlisle "Sure-Seal 90-8-30A Bonding Adhesive", contact application at 1.67 gal/square	Kelly Co-2001, Inc. "Equalizer Valves" installed in accordance with KELLY CO-2001, INC. published requirements	-30.0
S-2.	Min. 22 ga., type B, 33 ksi steel	Minimum min 4 mil Kelly Co-2001, Inc. reinforced polyethylene with end and lap seams overlapped min 6 in., and sealed with 2 in. wide pressure sensitive tape. The poly air barrier must be of sufficient size to wrap over the top of the insulation or cover board, a min of 6 in., around the entire perimeter and at penetrations, to be air sealed to the roof cover.	Anu UL Classified, FBC Approved polyisocyanurate insulation and/or gypsum-based coverboard	Min. 7/16-inch APA rated OSB	Carlisle "Sure-Seal HP Fastener"	1 per 4 ft ²	Carlisle "Sure-Weld" or "Sure-Weld EXTRA"	Carlisle "Sure-Weld Bonding Adhesive", contact application at 1.67 gal/square	Kelly Co-2001, Inc. "Equalizer Valves" installed in accordance with KELLY CO-2001, INC. published requirements	-30.0
S-3.	Min. 22 ga., type B, 33 ksi steel	Minimum min 4 mil Kelly Co-2001, Inc. reinforced polyethylene with end and lap seams overlapped min 6 in., and sealed with 2 in. wide pressure sensitive tape. The poly air barrier must be of sufficient size to wrap over the top of the insulation or cover board, a min of 6 in., around the entire perimeter and at penetrations, to be air sealed to the roof cover.	Min. 1.5-inch Polyiso HP-H, InsulBase, HP-N, HP-W, H-Shield, ACFoam II, ACFoam III, H-Shield CG, ENRGY 3, PSI-25, Multi-Max FA-3	Additional layer(s) base insulation and/or min. 0.5-inch Dens Deck, Dens Deck Prime or SECUROCK Gypsum-Fiber Roof Board	Carlisle "Sure-Seal HP Fastener" with "Sure-Seal Insulation Plate"	1 per 2 ft ²	Carlisle "Sure-Seal FR Nonreinforced", "Sure-White", "Sure-Tough" or "Sure-Tough FR"	Carlisle "Sure-Seal 90-8-30A Bonding Adhesive", contact application at 1.67 gal/square	Kelly Co-2001, Inc. "Equalizer Valves" installed in accordance with KELLY CO-2001, INC. published requirements	-45.0
S-4.	Min. 22 ga., type B, 33 ksi steel	Minimum min 4 mil Kelly Co-2001, Inc. reinforced polyethylene with end and lap seams overlapped min 6 in., and sealed with 2 in. wide pressure sensitive tape. The poly air barrier must be of sufficient size to wrap over the top of the insulation or cover board, a min of 6 in., around the entire perimeter and at penetrations, to be air sealed to the roof cover.	Min. 1.5-inch Polyiso HP-H, InsulBase, H-Shield, ACFoam II, SecurShield, H-Shield CG, ENRGY 3	Additional layer(s) base insulation and/or min. 0.5-inch Dens Deck Prime or SECUROCK Gypsum-Fiber Roof Board	Carlisle "Sure-Seal HP Fastener" with "Sure-Seal Insulation Plate"	1 per 2 ft ²	Carlisle "Sure-Weld" or "Sure-Weld EXTRA"	Carlisle "Sure-Weld Bonding Adhesive", contact application at 1.67 gal/square	Kelly Co-2001, Inc. "Equalizer Valves" installed in accordance with KELLY CO-2001, INC. published requirements	-45.0

TABLE 2A: STEEL DECKS - NEW CONSTRUCTION OR REROOF (TEAR-OFF)
SYSTEM TYPE C: AIR SEALED DECK, MECHANICALLY ATTACHED INSULATION, BONDED ROOF COVER, KELLY CO-2001 "EQUALIZER VALVES"

System No.	Deck (Note 1)	Air Seal	Base Insulation	Top Insulation			Roof Cover			MDP (psf)
				Type	Fasteners (Note 5)	Attach	Type	Attach	Valve	
S-5.	Min. 22 ga., type B, 33 ksi steel	Minimum min 4 mil Kelly Co-2001, Inc. reinforced polyethylene with end and lap seams overlapped min 6 in., and sealed with 2 in. wide pressure sensitive tape. The poly air barrier must be of sufficient size to wrap over the top of the insulation or cover board, a min of 6 in., around the entire perimeter and at penetrations, to be air sealed to the roof cover.	(Optional) Min. 1.5-inch ACfoam II or Sarnatherm(a)	Additional layer(s) base insulation and/or min. 0.5-inch Dens Deck Prime or SECUROCK Gypsum-Fiber Roof Board	OMG Heavy Duty with OMG Flat Bottom Metal Plate or Sarnafastener #14 with Sarnaplate	1 per 2 ft ²	"KELLY CPA (PVC)" or "2001 CPA (PVC)"	"Sarnacol 2121", wet-lay application at 0.75 to 2.25 gal/sq. or "Sarnacol 2170", contact application at 1.25 gal/sq	Kelly Co-2001, Inc. "Equalizer Valves" installed in accordance with KELLY CO-2001, INC. published requirements	-45.0
S-6.	Min. 22 ga., type B, 33 ksi steel	Minimum min 4 mil Kelly Co-2001, Inc. reinforced polyethylene with end and lap seams overlapped min 6 in., and sealed with 2 in. wide pressure sensitive tape. The poly air barrier must be of sufficient size to wrap over the top of the insulation or cover board, a min of 6 in., around the entire perimeter and at penetrations, to be air sealed to the roof cover.	Anu UL Classified, FBC Approved polyisocyanurate insulation and/or gypsum-based coverboard	Min. 7/16-inch APA rated OSB	Carlisle "Sure-Seal HP Fastener" with "Sure-Seal Insulation Plate"	1 per 3.2 ft ²	Carlisle "Sure-Seal FR Nonreinforced", "Sure-White", "Sure-Tough" or "Sure-Tough FR"	Carlisle "Sure-Seal 90-8-30A Bonding Adhesive", contact application at 1.67 gal/square	Kelly Co-2001, Inc. "Equalizer Valves" installed in accordance with KELLY CO-2001, INC. published requirements	-52.5
S-7.	Min. 22 ga., type B, 33 ksi steel	Minimum min 4 mil Kelly Co-2001, Inc. reinforced polyethylene with end and lap seams overlapped min 6 in., and sealed with 2 in. wide pressure sensitive tape. The poly air barrier must be of sufficient size to wrap over the top of the insulation or cover board, a min of 6 in., around the entire perimeter and at penetrations, to be air sealed to the roof cover.	Anu UL Classified, FBC Approved polyisocyanurate insulation and/or gypsum-based coverboard	Min. 7/16-inch APA rated OSB	Carlisle "Sure-Seal HP Fastener" with "Sure-Seal Insulation Plate"	1 per 3.2 ft ²	Carlisle "Sure-Weld" or "Sure-Weld EXTRA"	Carlisle "Sure-Weld Bonding Adhesive", contact application at 1.67 gal/square	Kelly Co-2001, Inc. "Equalizer Valves" installed in accordance with KELLY CO-2001, INC. published requirements	-52.5

TABLE 2B: STEEL DECKS - NEW CONSTRUCTION
SYSTEM TYPE G: AIR SEALED DECK, SPRAY-APPLIED INSULATION, AIR-SEALED ROOF COVER, KELLY CO-2001 "EQUALIZER VALVES"

System No.	Deck (Note 1)	Air Seal	Insulation	Roof Cover			MDP (psf)
				Type	Air Seal	Valve	
S-8.	Min. 22 ga., type B, 33 ksi steel	Side-lap and butt seams sealed with two component spray-applied foamed plastic.	FBC Approved, UL Classified two-component spray applied foamed plastic; min 1 in. thick sprayed over 2001 Reinforced Fiberglass Mesh stretched across steel deck	Carlisle "Sure-Seal FR Nonreinforced", "Sure-White", "Sure-Tough", "Sure-Tough FR", "Sure-Weld" or "Sure-Weld EXTRA" or "KELLY CPA (PVC)" or "2001 CPA (PVC)"	The perimeter and penetrations are sealed with a mechanically fastened, picture frame of Kelly Co-2001 Inc. termination bars, consisting of: ✓ 2001 butyl rubber gasket (nominal 5/8" x 3/4" cross-section) and termination bars consisting of 1/2" wide x 6 ft. long extruded aluminum bars. The gasket is centered on the underside of the membrane on the substrate. A termination bar is fastened over the membrane to the deck with 1/4-13 steel screws spaced 7" o.c. through pre-punched holes. - or ✓ 2001 butyl rubber gasket (nominal 5/8" x 3/4" cross-section) and termination strips consisting of min. 7/16" thick x 6" wide strips of APA rated wood sheeting. The gasket is centered on the underside of the membrane on the substrate. A termination strip is fastened over the membrane to the deck with FBC Approved #14 screws and 3" diameter galvalume metal stress plates spaced 12" o.c.	Kelly Co-2001, Inc. "Equalizer Valves" installed in accordance with KELLY CO-2001, INC. published requirements	-112.5

TABLE 3A: STRUCTURAL CONCRETE DECKS - NEW CONSTRUCTION OR REROOF (TEAR-OFF)
SYSTEM TYPE G: AIR SEALED DECK, OPTIONAL INSULATION, ROOF COVER, KELLY CO-2001 "EQUALIZER VALVES"

System No.	Deck (Note 1)	Perimeter Air Seal	Deck Air Seal	Insulation	Roof Cover		MDP (psf)
					Type	Valve	
C-1	Structural concrete	Minimum 18-inch wide strips min 4 mil reinforced polyethylene or Carlisle "Sure-Seal FR Nonreinforced", "Sure-White", "Sure-Tough", "Sure-Tough FR", "Sure-Weld" or "Sure-Weld EXTRA" or "KELLY CPA (PVC)" or "2001 CPA (PVC)" adhered to the concrete deck at the entire perimeter with KELLY CO-2001, INC. specified adhesive or sealant. Air seal should be bonded so as to permit wrapping over the top of any insulation or barrier board, a min of 6 inches.	Any joints or holes through the roof deck are sealed in accordance with KELLY CO-2001, INC. specifications.	(Optional) Any UL Classified, FBC Approved roof insulation and/or coverboard combination, any thickness, loose-laid with staggered joints	Carlisle "Sure-Seal FR Nonreinforced", "Sure-White", "Sure-Tough", "Sure-Tough FR", "Sure-Weld" or "Sure-Weld EXTRA" or "KELLY CPA (PVC)" or "2001 CPA (PVC)"	Kelly Co-2001, Inc. "Equalizer Valves" installed in accordance with KELLY CO-2001, INC. published requirements	-75.0

TABLE 3B: STRUCTURAL CONCRETE DECKS - NEW CONSTRUCTION OR REROOF (TEAR-OFF)
SYSTEM TYPE G: DECK WATERPROOFING, AIR SEALED DECK, OPTIONAL INSULATION, ROOF COVER, KELLY CO-2001 "EQUALIZER VALVES"

System No.	Deck (Note 1)	Deck Waterproofing	Air Seal	Insulation	Roof Cover		MDP (psf)
					Type	Valve	
C-2	Structural concrete	UL Classified roof coating or liquid applied roof system, FBC Approved for use over concrete deck, applied in accordance with the manufacturer's Florida Product Approval or UL Classified, ASTM D6164, polyester reinforced, SBS modified bitumen roof cover, FBC Approved for use over concrete deck, installed in accordance with the manufacturer's Florida Product Approval or UL Classified, spray-applied polyurethane foam roof system, FBC Approved for use over concrete deck, installed in accordance with the manufacturer's Florida Product Approval.	Air Seal: Minimum 18 in. wide strips of Carlisle "Sure-Seal FR Nonreinforced", "Sure-White", "Sure-Tough", "Sure-Tough FR", "Sure-Weld" or "Sure-Weld EXTRA" or "KELLY CPA (PVC)" or "2001 CPA (PVC)", adhered or mechanically terminated to the roof deck, in a bead of air seal caulking or tape, with a continuous series of Kelly Co-2001, Inc. termination bar around the perimeter and penetrations. The air seal strips are extended up through the roof assembly, and are heat-welded to the underside of the roof cover	(Optional) UL Classified, FBC Approved separator mats or slip sheets, or rigid roof insulation, any thickness, adhered, mechanically attached, or loose laid, followed by 0.5-inch thick, UL Classified, FBC Approved gypsum-based roof coverboard, adhered, mechanically attached, or loose laid.	Carlisle "Sure-Seal FR Nonreinforced", "Sure-White", "Sure-Tough", "Sure-Tough FR", "Sure-Weld" or "Sure-Weld EXTRA" or "KELLY CPA (PVC)" or "2001 CPA (PVC)"	Kelly Co-2001, Inc. "Equalizer Valves" installed in accordance with KELLY CO-2001, INC. published requirements	-112.5

TABLE 3C: STRUCTURAL CONCRETE DECKS - NEW CONSTRUCTION OR REROOF (TEAR-OFF)
SYSTEM TYPE G: AIR SEALED DECK, OPTIONAL VAPOR BARRIER, OPTIONAL INSULATION, ROOF COVER, KELLY CO-2001 "EQUALIZER VALVES"

System No.	Deck (Note 1)	Deck Air Seal	Vapor Barrier	Insulation	Coverboard	Roof Cover				MDP (psf)
						Type	Attach	Perimeters & Penetrations	Valve	
C-3	Structural concrete	Perimeter roof deck to vertical wall joints, through-roof-deck penetrations and deck joints are air sealed with Carlisle "Sure-Tough", or "Sure-Tough FR" fully adhered to the roof deck and flashed on to the perimeter and through deck penetrations.	(Optional) Siplast "Paradiene 20 TG", torch-applied followed by Siplast "Paradiene 30 FR TG", torch-applied	(Optional) UL Classified, FBC Approved rigid roof insulation, any thickness, mechanically attached or loose-laid.	Min. 0.5-inch Dens Deck, SECUROCK Glass-Mat Roof Board	Carlisle "Sure-Seal FR Nonreinforced", "Sure-White", "Sure-Tough" or "Sure-Tough FR"	Loose laid or adhered in Carlisle "Sure-Seal 90-8-30A Bonding Adhesive", contact application at 1.67 gal/square. The membrane is directly terminated (secured) to the concrete deck with KELLY CO-2001, INC. air seal termination techniques using butyl gum tape and termination bars, or structural "C" Channels fastened with FBC Approved concrete fasteners 6-in o.c. at perimeters and all roof penetrations	Finish flashed onto the air sealed field of the roof membrane in accordance with KELLY CO-2001, INC. published requirements	Kelly Co-2001, Inc. "Equalizer Valves" installed in accordance with KELLY CO-2001, INC. published requirements	-142.5
C-4	Structural concrete	Perimeter roof deck to vertical wall joints, through-roof-deck penetrations and deck joints are air sealed with Carlisle "Sure-Weld" or "Sure-Weld EXTRA" fully adhered to the roof deck and flashed on to the perimeter and through deck penetrations.	(Optional) Siplast "Paradiene 20 TG", torch-applied followed by Siplast "Paradiene 30 FR TG", torch-applied	(Optional) UL Classified, FBC Approved rigid roof insulation, any thickness, mechanically attached or loose-laid.	Min. 0.5-inch Dens Deck, SECUROCK Glass-Mat Roof Board	Carlisle "Sure-Weld" or "Sure-Weld EXTRA"	Loose laid or adhered in Carlisle "Sure-Weld Bonding Adhesive", contact application at 1.67 gal/square. The membrane is directly terminated (secured) to the concrete deck with air seal termination techniques using butyl gum tape and termination bars or structural "C" Channels fastened with FBC Approved concrete fasteners 6-in o.c. at perimeters and all roof penetrations	Finish flashed onto the air sealed field of the roof membrane in accordance with KELLY CO-2001, INC. published requirements	Kelly Co-2001, Inc. "Equalizer Valves" installed in accordance with KELLY CO-2001, INC. published requirements	-142.5
C-5	Structural concrete	Perimeter roof deck to vertical wall joints, through-roof-deck penetrations and deck joints are air sealed with "KELLY CPA (PVC)" or "2001 CPA (PVC)" fully adhered to the roof deck and flashed on to the perimeter and through deck penetrations.	(Optional) Siplast "Paradiene 20 TG", torch-applied followed by Siplast "Paradiene 30 FR TG", torch-applied	(Optional) UL Classified, FBC Approved rigid roof insulation, any thickness, mechanically attached or loose-laid.	Min. 0.5-inch Dens Deck, SECUROCK Glass-Mat Roof Board	"KELLY CPA (PVC)" or "2001 CPA (PVC)"	Loose laid or adhered in "Sarnacol 2121", wet-lay application at 0.75 to 2.25 gal/sq. or "Sarnacol 2170", contact application at 1.25 gal/sq. The membrane is directly terminated (secured) to the concrete deck with air seal termination techniques using butyl gum tape and termination bars or structural "C" Channels fastened with FBC Approved concrete fasteners 6-in o.c. at perimeters and all roof penetrations	Finish flashed onto the air sealed field of the roof membrane in accordance with KELLY CO-2001, INC. published requirements	Kelly Co-2001, Inc. "Equalizer Valves" installed in accordance with KELLY CO-2001, INC. published requirements	-142.5

TABLE 4A: RECOVER APPLICATIONS, CONCRETE DECK
SYSTEM TYPE G: AIR SEALED EXISTING ROOF, OPTIONAL INSULATION, ROOF COVER, KELLY CO-2001 "EQUALIZER VALVES"

System No.	Substrate (Note 1, Note 6)	Perimeter Air Seal	Deck Air Seal	Insulation	Roof Cover		MDP (psf)
					Type	Valve	
R-1	Existing UL Classified roof assembly over structural concrete	Minimum 18-inch wide strips min 4 mil reinforced polyethylene or Carlisle "Sure-Seal FR Nonreinforced", "Sure-White", "Sure-Tough", "Sure-Tough FR", "Sure-Weld" or "Sure-Weld EXTRA" or "KELLY CPA (PVC)" or "2001 CPA (PVC)" adhered to the concrete deck at the entire perimeter with KELLY CO-2001, INC. specified adhesive or sealant. Air seal should be bonded so as to permit wrapping over the top of any insulation or barrier board, a min of 6 inches.	Any joints or holes through the existing roof are sealed in accordance with KELLY CO-2001, INC. specifications.	(Optional) Any UL Classified, FBC Approved roof insulation and/or coverboard combination, any thickness, loose-laid with staggered joints	Carlisle "Sure-Seal FR Nonreinforced", "Sure-White", "Sure-Tough", "Sure-Tough FR", "Sure-Weld" or "Sure-Weld EXTRA" or "KELLY CPA (PVC)" or "2001 CPA (PVC)"	Kelly Co-2001, Inc. "Equalizer Valves" installed in accordance with KELLY CO-2001, INC. published requirements	-75.0

TABLE 4B: RECOVER APPLICATIONS, CONCRETE DECK
SYSTEM TYPE G: AIR SEALED DECK, OPTIONAL INSULATION, ROOF COVER, KELLY CO-2001 "EQUALIZER VALVES"

System No.	Substrate (Note 1, Note 6)	Deck Air Seal	Gravel Mat	Insulation	Coverboard	Roof Cover				MDP (psf)
						Type	Attach	Perimeters & Penetrations	Valve	
R-2	Existing UL Classified roof assembly over structural concrete	Perimeter roof deck to vertical wall joints, through-roof-deck penetrations and deck joints are air sealed with Carlisle "Sure-Tough", or "Sure-Tough FR" fully adhered to the roof deck and flashed on to the perimeter and through deck penetrations.	(Optional) Loose laid gravel mat	(Optional) UL Classified, FBC Approved rigid roof insulation, any thickness, mechanically attached or loose-laid.	Min. 0.5-inch Dens Deck, SECUROCK Glass-Mat Roof Board	Carlisle "Sure-Seal FR Nonreinforced", "Sure-White", "Sure-Tough" or "Sure-Tough FR"	Loose laid or adhered in Carlisle "Sure-Seal 90-8-30A Bonding Adhesive", contact application at 1.67 gal/square. The membrane is directly terminated (secured) to the concrete deck with KELLY CO-2001, INC. air seal termination techniques using butyl gum tape and termination bars, or structural "C" Channels fastened with FBC Approved concrete fasteners 6-in o.c. at perimeters and all roof penetrations	Finish flashed onto the air sealed field of the roof membrane in accordance with KELLY CO-2001, INC. published requirements	Kelly Co-2001, Inc. "Equalizer Valves" installed in accordance with KELLY CO-2001, INC. published requirements	-142.5
R-3	Existing UL Classified roof assembly over structural concrete	Perimeter roof deck to vertical wall joints, through-roof-deck penetrations and deck joints are air sealed with Carlisle "Sure-Weld" or "Sure-Weld EXTRA" fully adhered to the roof deck and flashed on to the perimeter and through deck penetrations.	(Optional) Loose laid gravel mat	(Optional) UL Classified, FBC Approved rigid roof insulation, any thickness, mechanically attached or loose-laid.	Min. 0.5-inch Dens Deck, SECUROCK Glass-Mat Roof Board	Carlisle "Sure-Weld" or "Sure-Weld EXTRA"	Loose laid or adhered in Carlisle "Sure-Weld Bonding Adhesive", contact application at 1.67 gal/square. The membrane is directly terminated (secured) to the concrete deck with air seal termination techniques using butyl gum tape and termination bars or structural "C" Channels fastened with FBC Approved concrete fasteners 6-in o.c. at perimeters and all roof penetrations	Finish flashed onto the air sealed field of the roof membrane in accordance with KELLY CO-2001, INC. published requirements	Kelly Co-2001, Inc. "Equalizer Valves" installed in accordance with KELLY CO-2001, INC. published requirements	-142.5

TABLE 4B: RECOVER APPLICATIONS, CONCRETE DECK
SYSTEM TYPE G: AIR SEALED DECK, OPTIONAL INSULATION, ROOF COVER, KELLY CO-2001 "EQUALIZER VALVES"

System No.	Substrate (Note 1 , Note 6)	Deck Air Seal	Gravel Mat	Insulation	Coverboard	Roof Cover				MDP (psf)
						Type	Attach	Perimeters & Penetrations	Valve	
R-4	Existing UL Classified roof assembly over structural concrete	Perimeter roof deck to vertical wall joints, through-roof-deck penetrations and deck joints are air sealed with "KELLY CPA (PVC)" or "2001 CPA (PVC)" fully adhered to the roof deck and flashed on to the perimeter and through deck penetrations.	(Optional) Loose laid gravel mat	(Optional) UL Classified, FBC Approved rigid roof insulation, any thickness, mechanically attached or loose-laid.	Min. 0.5-inch Dens Deck, SECUROCK Glass-Mat Roof Board	"KELLY CPA (PVC)" or "2001 CPA (PVC)"	Loose laid or adhered in "Sarnacol 2121", wet-lay application at 0.75 to 2.25 gal/sq. or "Sarnacol 2170", contact application at 1.25 gal/sq. The membrane is directly terminated (secured) to the concrete deck with air seal termination techniques using butyl gum tape and termination bars or structural "C" Channels fastened with FBC Approved concrete fasteners 6-in o.c. at perimeters and all roof penetrations	Finish flashed onto the air sealed field of the roof membrane in accordance with KELLY CO-2001, INC. published requirements	Kelly Co-2001, Inc. "Equalizer Valves" installed in accordance with KELLY CO-2001, INC. published requirements	-142.5