GENERAL RULES

THE FOLLOWING PRACTICES ARE RECOMMENDED TO ENSURE EARLY ACCEPTANCE OF YOUR PRODUCTS AND WORKMANSHIP:

A. HANDLE CAREFULLY - DO NOT DROP FROM THE TRUCK. STACK WITH ADEQUATE SEPARATION SO MATERIAL WILL NOT RUB TOGETHER. STORE OFF THE GROUND. PROTECT AGAINST ELEMENTS AND OTHER CONSTRUCTION TRADES.

B. KEEP MATERIAL AWAY FROM WATER, MUD AND SOIL..store away from exposure to the sun, heat and cold. 

C. PROTECT THE MATERIALS AFTER ERECTION, BY WRAPPING WITH KRAFT PAPER - OR BY ERECTING VISQUEEN/Canvas SPLATTER SCREENS. CEMENT, PLASTER, TERRAZZO AND OTHER ALKALINE MATERIALS ARE VERY HARMFUL TO THE CEMENT, PLASTER, TERRAZZO AND OTHER MATERIALS FROM DAMAGING THE FINISH.

D. ALL WORK SHOULD START FROM ESTABLISHED PLUMB, LEVEL AND TRUE. THOROUGHLY FAMILIAR WITH THE JOB.

E. THE SEQUENCE OF ERECTION SHOULD BE COORDINATED WITH THE JOB SUPERINTENDENT SO DELAYS ARE PREVENTED AND RISK OF MATERIAL DAMAGE IS MINIMIZED. IF PRESETTING OF ANCHORAGE IS REQUIRED, COORDINATE WITH GENERAL CONTRACTOR AND SUPERVISE LOCATION.

F. MAKE CERTAIN CONSTRUCTION WHICH WILL RECEIVE YOUR MATERIALS IS ACCORDING TO THE CONTRACT DOCUMENTS. IF NOT, NOTIFY THE GENERAL CONTRACTOR IN WRITING AND RESOLVE DIFFERENCES BEFORE PROCEEDING WITH YOUR WORK.

G. INSULATE ALL ALUMINUM TO BE PLACED IN CONTACT WITH THE MASONRY OR INCOMPATIBLE MATERIALS WITH A HEAVY COAT OF ZINC CHROMATE OR BITUMINOUS PAINT.

H. FOLLOW KAWNEER INSTALLATION AND GLAZING INSTRUCTIONS.

I. CHECK ALL MATERIAL ON ARRIVAL FOR QUANTITY.

J. CHECK ALL MATERIAL ON ARRIVAL FOR CORPORATE. GLAZING APPLICATION INSTRUCTIONS HAVE BEEN DELIVERED TO THE INSTALLER BY THE SILICONE MANUFACTURER.

K. BE SURE YOU HAVE ALL THE MATERIALS AND TOOLS NEEDED TO BEGIN THE INSTALLATION.

1. - APPROVED SHOP DRAWINGS
2. - LEVEL AND PLUMB (TRANSIT)
3. - FASTENERS AND REQUIRED DRIVERS
4. - PERIMETERS AND ACCESSORIES SUCH AS ANCHORS, FASTENERS, SLEEVES AND/OR SPLICE CAPS.
5. - SEALING MATERIALS
6. - GLAZING MATERIALS

L. FOLLOW SEALANT MANUFACTURER'S RECOMMENDATIONS FOR PROPER SEALANT AND APPLICATION. ALL SEALANTS AND MASTICS MUST BE COMPATIBLE WITH ALL SURFACES INCLUDING OTHER SEALANT SURFACES. WHERE REQUIRED ALL SEALANTS MUST ADHERE TO ALL SURFACES INCLUDING OTHER SEALANT SURFACES.

M. FOLLOW SEALANT MANUFACTURER'S RECOMMENDATIONS FOR PROPER SEALANT AND APPLICATION. ALL SEALANTS AND MASTICS MUST BE COMPATIBLE WITH ALL SURFACES INCLUDING OTHER SEALANT SURFACES. WHERE REQUIRED ALL SEALANTS MUST ADHERE TO ALL SURFACES INCLUDING OTHER SEALANT SURFACES.

N. FOLLOW SEALANT MANUFACTURER'S RECOMMENDATIONS FOR PROPER SEALANT AND APPLICATION. ALL SEALANTS AND MASTICS MUST BE COMPATIBLE WITH ALL SURFACES INCLUDING OTHER SEALANT SURFACES. WHERE REQUIRED ALL SEALANTS MUST ADHERE TO ALL SURFACES INCLUDING OTHER SEALANT SURFACES.

1600 SYSTEM 2 NOTES

1600 SYSTEM 2 IS AVAILABLE WITH 1" FRAMING MEMBERS WHICH ACCEPT BOTH 1" AND 1/4" INFILLS. ALSO 1/4" FRAMING MEMBERS WHICH ACCEPT 1/4" INFILLS ONLY ARE AVAILABLE.

THE TERM "CAPTURED VERTICALS OR CAPTURED HORIZONTALS" WILL BE USED THROUGHOUT THESE INSTRUCTIONS. THIS MEANS FRAMING MEMBERS THAT ACCEPT AN EXTERIOR PRESSURE PLATE AND COVERS. "STRUCTURAL GLAZED VERTICALS" DO NOT ACCEPT EXTERIOR METAL.

GLASS BITE IS 1/2" AT CAPTURED VERTICALS AND HORIZONTALS. GLASS BITE IS 1" AT STRUCTURAL GLAZED VERTICALS. GLASS SIZES MUST BE CALCULATED FROM APPROVED SHOP DRAWINGS.

UNLESS OTHERWISE SPECIFIED, IT IS RECOMMENDED THAT SILICONE SEALANT BE USED FOR ALL INTERNAL SEALS.

SEALANT MUST BE APPLIED PER THE SEALANT MANUFACTURER'S RECOMMENDATIONS AND PASS ALL ADHESION AND COMPATIBILITY TESTING. AT ALL JOINTS SEALANT MUST ADHERE TO METAL, GASKETS, THERMAL SEPARATOR AND JOINT PLUG MATERIALS. CLEAN ALL SURFACES PRIOR TO APPLICATION OF SEALANT AND PRIME WHERE NECESSARY TO ACHIEVE PROPER ADHESION.

VERTICAL MULLION SPICE - VERTICAL MULLIONS THAT ARE STRUCTURALLY GLAZED MUST BE SPLICE AT A HORIZONTAL. LOCATION OF THIS SPLICE MUST BE REVIEWED FOR STRUCTURAL INTEGRITY BY FACTORY ENGINEERING.

SHM ALL SILL HORIZONTALS AT SETTING BLOCK LOCATIONS.

TECHNICAL SEALS INSTALLATION INSTRUCTIONS

1600 SYSTEM 2 IS AVAILABLE WITH 1" FRAMING MEMBERS WHICH ACCEPT BOTH 1" AND 1/4" INFILLS. ALSO 1/4" FRAMING MEMBERS WHICH ACCEPT 1/4" INFILLS ONLY ARE AVAILABLE.

THE TERM "CAPTURED VERTICALS OR CAPTURED HORIZONTALS" WILL BE USED THROUGHOUT THESE INSTRUCTIONS. THIS MEANS FRAMING MEMBERS THAT ACCEPT AN EXTERIOR PRESSURE PLATE AND COVERS. "STRUCTURAL GLAZED VERTICALS" DO NOT ACCEPT EXTERIOR METAL.

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UNLESS OTHERWISE SPECIFIED, IT IS RECOMMENDED THAT SILICONE SEALANT BE USED FOR ALL INTERNAL SEALS.

SEALANT MUST BE APPLIED PER THE SEALANT MANUFACTURER'S RECOMMENDATIONS AND PASS ALL ADHESION AND COMPATIBILITY TESTING. AT ALL JOINTS SEALANT MUST ADHERE TO METAL, GASKETS, THERMAL SEPARATOR AND JOINT PLUG MATERIALS. CLEAN ALL SURFACES PRIOR TO APPLICATION OF SEALANT AND PRIME WHERE NECESSARY TO ACHIEVE PROPER ADHESION.

VERTICAL MULLION SPICE - VERTICAL MULLIONS THAT ARE STRUCTURALLY GLAZED MUST BE SPLICE AT A HORIZONTAL. LOCATION OF THIS SPLICE MUST BE REVIEWED FOR STRUCTURAL INTEGRITY BY FACTORY ENGINEERING.

SHM ALL SILL HORIZONTALS AT SETTING BLOCK LOCATIONS.

TECHNICAL SEALS INSTALLATION INSTRUCTIONS
OPEN BACK HORIZONTAL NOTES

THE OPEN BACK HORIZONTAL IS TO BE TYPICALLY USED FOR ALL HEADS/SLID AND LAST BAY INTERMEDIATE HORIZONTALS.

THE OPEN BACK HORIZONTAL CAN BE USED AT OTHER CONDITIONS IF IT IS AN ADVANTAGE TO THE JOB DESIGN.

THE SHEAR BLOCK AT ALL OPEN-BACK INTERMEDIATE HORIZONTALS HAS THE OPTION TO BE PRE-INSTALLED INTO THE HORIZONTAL BEFORE HORIZONTALS ARE INSTALLED.

OPEN BACK HORIZONTALS AT 90° AND 135° CORNERS

WHenever possible avoid using open back horizontals at 90° and 135° corners. If using the open back horizontal becomes absolutely necessary, the shear block connection will be as shown below.

Also refer to corner instructions 162-273.

REFERENCE INSTRUCTIONS 162-263 FOR EXTERIOR FRAME PERIMETERS

HEAD CONDITION

CEILING INTERMEDIATE HORIZONTALS

SECTION A-A

SILL CONDITION

STOOL INTERMEDIATE HORIZONTALS

SILL HORIZONTALS MUST BE SHIMMED

WHEN THE OPEN SIDE OF THE OPEN BACK HORIZONTAL IS EXPOSED AND AT EYE LEVEL, A SNAP-IN FILLER IS AVAILABLE.

WHEN THE SNAP-IN FILLER IS NOT USED, AND DUE TO STANDARD COMMERCIAL EXTRUDED TOLERANCES, IT MAY BE REQUIRED TO USE A 4" PIECE OF THE FILLER AT EACH END OF A HORIZONTAL.

USE PART 163-316 FOR THE 8' DEEP SYSTEM
USE PART 162-317 FOR THE 7'-10" DEEP SYSTEM

OPEN BACK HORIZONTALS AT 120° CORNERS

STEP - 1 CHECK OPENINGS

ELEVATIONS AND SLABS MUST BE WITHIN ADJUSTMENT OF ANCHORING SYSTEM. SEE APPROVED SHOP DRAWINGS FOR ALLOWABLE ADJUSTMENT.

ANCHORING SURFACES OF PERIMETER CONSTRUCTION MUST BE LEVEL AND PLUMB WITHIN THE ADJUSTMENT LIMITS OF THE HEAD, SILL AND JAMB. SEE APPROVED SHOP DRAWINGS FOR ALLOWABLE ADJUSTMENT.

STEP - 2 LAY OUT ANCHOR AND MULLION CENTERLINES

USE WALL LINES ESTABLISHED BY THE GENERAL CONTRACTOR ON EACH FLOOR LAY OUT A REFERENCE LINE TO ESTABLISH IN AND OUT WALL LOCATIONS.

USE COLUMN CENTER LINES ESTABLISHED BY THE GENERAL CONTRACTOR ON EACH FLOOR LAY OUT MULLION CENTER LINES AND ANCHOR CENTER LINES.

EXTERIOR FACE OF BEAM OR FLOOR SLAB

VARIES WITH JOB CONDITIONS

SEE APPROVED SHOP DRAWINGS FOR ANCHOR LAYOUTS

TYPICAL STRUCTURAL GLAZED VERTICAL

STEP - 3 INSTALL PRE-SET ANCHORS IF APPLICABLE

USING LOCATION LINES PREVIOUSLY ESTABLISHED INSTALL PRE-SET ANCHORS IN PLACE PER APPROVED SHOP DRAWINGS.
**STEP - 4 FRAME ASSEMBLY**

Attach anchors to Mullions where applicable.

Anchor prep may be fabricated in the field or factory. Consult approved shop drawings for correct method.

Standard anchor prep is thru-bolted at intermediate verticals and tapping plates are used at jamb verticals. Refer to approved shop drawings for correct method.

When welding anchors, protect installed glass and metal from weld splatter.

Details same for "Captured Verticals".

**Structural Glazed Vertical**

Weld plate

Size and spacing of weld per approved shop drawings

Do not over tighten anchor connections. Tighten to a "snug tight" position with parts brought into good contact. Be sure any spring type lock washers are compressed, then tighten approximately 1/2 more turn.

Attach shear blocks. Structural glazed vertical details similar for "Captured Verticals".

TYPICAL INTERMEDIATE SHEAR BLOCKS

162-377 6" System

162-378 7 1/2" System

HEAD AND SILL SHEAR BLOCKS

162-331 6" System

162-332 7 1/2" System

REFERENCE INSTRUCTIONS 162-983 FOR EXTERIOR FRAME PERIMETERS HEAD AND SILL SHEAR BLOCKS 162-384 6" SYSTEM

162-385 7 1/2" SYSTEM

**STEP - 5 INSTALL 162-310 THERMAL BREAK**

162-310 THERMAL BREAK

Option to install thermal break after verticals and horizontals are installed.

Note

THERMAL BREAK TO BE THE SAME LENGTH AS VERTICAL MULLIONS

For Captured Verticals

Install head and sill end caps 162-388 1" framing 162-389 1 1/4" framing Set in sealant

NOT REQUIRED AT EXTERIOR FRAME PERIMETERS SHOWN IN INSTRUCTIONS 162-983 AND AT OPTIONAL PERIMETER FILLERS 162-022 AND 162-023

DO NOT STRETCH WHEN REMOVING FROM COIL AND CARTON

DO NOT STRETCH DURING INSTALLATION

NOT REQUIRED AT EXTERIOR FRAME PERIMETERS SHOWN IN INSTRUCTIONS 162-983 AND AT OPTIONAL PERIMETER FILLERS 162-022 AND 162-023

**STEP - 6 PERIMETERS WHERE APPLICABLE**

Install perimeter members per approved shop drawings. Perimeter members can occur at head, sill or jamb conditions.

**STEP - 7 INSTALL VERTICAL MULLIONS**

Dimension buildup check

Check overall frame dimensions about every five Mullions on long runs. This is to avoid dimension buildup.

10 UNITS CHECK DIMENSION

5 UNITS CHECK DIM.
**INSTALLATION INSTRUCTIONS**

**PART NO.**

**ORDER:**

**SH/T:**

**DRAWING:**

**STEP - 7 INSTALL VERTICAL MULLIONS**

**STRUCTURAL GLAZED VERTICALS**

**DETAILS SIMILAR FOR “CAPTURED VERTICALS”**

**“F” OR “T” ANCHORS WHERE APPLICABLE**

**“F” AND “T” ANCHOR FASTENER LOCATIONS PER APPROVED SHOP DRAWINGS**

**SHEET:**

**DRAWING:**

**REFERENCE INSTRUCTIONS 162-983 FOR EXTERIOR FRAME PERIMETERS**

**THESE SHEAR BLOCKS MAY NEED TO BE REMOVED TO INSTALL A**

**ANCHOR FASTENER THAT MIGHT BE LOCATED CLOSE TO THE MULLION**

**1/8”**

**1 1/4”**

**SILL SHOWN**

**HEAD SIMILAR**

**162-314 6” SYSTEM AT JAMBS**

**162-315 7 1/2” SYSTEM AT JAMBS**

**162-342 6” SYSTEM AT MULLIONS**

**162-343 7 1/2” SYSTEM AT MULLIONS**

**STEP - 7 INSTALL VERTICAL MULLIONS**

**STRUCTURAL GLAZED VERTICALS**

**DETAILS SIMILAR FOR “CAPTURED VERTICALS”**

**HEAD/SILL SHEAR BLOCK/ANCHOR WHERE APPLICABLE.**

**CAN NOT BE USED WITH EXTERIOR FRAME PERMETERS SHOWN ON INSTRUCTIONS 162-983**

**STEP - 7 INSTALL VERTICAL MULLIONS**

**VERTICAL SPlice JOINTS WHERE APPLICABLE.**

**CAPTURED VERTICALS**

**SLEEVE IS FACTORY TAPED INTO THE BOTTOM OF THE TOP VERTICAL.**

**REMOVE THE TAPE AND LET THE SLEEVE SLIDE DOWN TO THE FACTORY APPLIED STOP SCREW**

**FIELD APPLIED FIXING SCREW 128-348 #10 x 1 1/4” FLAT HEAD SELF DRILLING.**

**SHOP APPLIED STOP SCREW 128-267 #12 x 1” PAN HEAD TYPE AB**

**USE TEMPORARY SPACERS FOR JOINT DIMENSION**

**STEP - 7 INSTALL VERTICAL MULLIONS**

**VERTICAL SPlice JOINTS WHERE APPLICABLE.**

**STRUCTURAL GLAZED VERTICALS**

**SLEEVE IS FACTORY TAPED INTO THE BOTTOM OF THE TOP VERTICAL.**

**REMOVE THE TAPE AND LET THE SLEEVE SLIDE DOWN TO THE FACTORY APPLIED STOP SCREW**

**FIELD APPLIED FIXING SCREW 128-348 #10 x 1 1/4” FLAT HEAD SELF DRILLING.**

**SHOP APPLIED STOP SCREW 128-267 #12 x 1” PAN HEAD TYPE AB**

**USE TEMPORARY SPACERS FOR JOINT DIMENSION**

**THE MULLION LOCATED CLOSE TO THAT MIGHT BE ANCHOR FASTENER TO INSTALL A**

**TO BE REMOVED**

**BLOCKS MAY NEED**

**THESE SHEAR BLOCKS MAY BE LOCATED CLOSE TO THE MULLION**

**1/8”**

**1 1/4”**

**SILL SHOWN**

**HEAD SIMILAR**

**1600 SYSTEM 2**

**INSTALLATION INSTRUCTIONS**

**PART NO.**

**162-971 4 OF 12**

**95449-69**

**10/20/07**
**STEP - 8 INSTALL HEAD/SILL AND INTERMEDIATE HORIZONTALS**

**TUBULAR HORIZONTALS**

**STRUCTURAL GLAZED VERTICALS**

Details same for "captured verticals" except horizontal thermal break cut 1/4" short each end.

128-405 Screws #12 x 7/8" flat head type AB

**REFERENCE INSTRUCTIONS 162-983 FOR EXTERIOR FRAME PERIMETERS**

OPEN BACK HORIZONTALS AND LAST BAY HORIZONTALS FILLER AVAILABLE WHEN OPEN BACK IS EXPOSED AND AT EYE LEVEL

**INSTALLING CEILING INTERMEDIATE OPEN BACK HORIZONTAL**

**INSTALLING STOOL INTERMEDIATE OPEN BACK HORIZONTAL**

**INTERMEDIATE HEAD**

**HEAD**

**SILL**

**SECTION A-A**

**FILL GASKET POCKET**

**FILL ADAPTER GROOVE**

**APPLICATION RECOMMENDATIONS**

JUST BEFORE INSTALLING JOINT PLUGS APPLY SEALANT AS SHOWN FILLING GASKET POCKET AND ADAPTER GROOVE.

128-405 Screws #12 x 7/8" flat head type AB

**REFERENCE INSTRUCTIONS 162-983 FOR EXTERIOR FRAME PERIMETERS**

**STEP - 9 INSTALL JOINT PLUGS**

**CAPTURED GLAZED VERTICALS**

ALL SURFACES AND GROOVES MUST BE CLEANED PER THE SEALANT MANUFACTURER'S RECOMMENDATIONS.

**FACE VIEW**

**SEAL AROUND JOINT PLUG EDGES TOOL SEALANT**

**SEAL AROUND JOINT PLUG EDGES TOOL SEALANT**

**FILLER AVAILABLE WHEN OPEN BACK IS EXPOSED AND AT EYE LEVEL**

**STRUCTURAL GLAZED VERTICALS**

Details same for "captured verticals" except horizontal thermal break cut 1/4" short each end.

**FACE VIEW**

**APPLY SEALANT TO THIS FACE OF JOINT PLUG**

**INSTALLATION INSTRUCTIONS**

**1600 SYSTEM**

**REFERENCE INSTRUCTIONS 162-983 FOR EXTERIOR FRAME PERIMETERS**

**DRAWING**

**PART NO.**

**ORDER**

**162-971 5 OF 12**
STEP - 9 INSTALL JOINT PLUGS

162-971

STEP - 10 INSTALL PERIMETER FILLERS AND SPANDREL ADAPTERS WHERE APPLICABLE

1600 SYSTEM

PART NO.

ORDER:

SHT:

DRAWING:

APPLICATION INSTRUCTIONS

STEP - 9 INSTALL JOINT PLUGS

STRUCTURAL GLAZED VERTICALS

APPLY SEALANT AS SHOWN
FILLING GASKET POCKETS AND VERTICAL GROOVES

JOINT PLUG
162-324 1" FRAMING
162-325 1/4" FRAMING

APPLY SEALANT TO BOTH SIDES OF PLUG

SEAL AROUND JOINT PLUG EDGES
TOOL SEALANT

STEP - 10 INSTALL PERIMETER FILLERS AND SPANDREL ADAPTERS WHERE APPLICABLE

STRUCTURAL GLAZED VERTICALS

JUST BEFORE INSTALLING FILLERS AND SPANDREL ADAPTERS FACE SEAL JOINTS AT ALL 4 CORNERS. ALSO SEAL SCREW HEAD AT TOP HALF OF HORIZONTAL JOINTS.

APPLY SEALANT TO BOTH SIDES OF PLUG

SEAL AROUND JOINT PLUG EDGES
TOOL SEALANT

STEP - 10 INSTALL PERIMETER FILLERS AND SPANDREL ADAPTERS WHERE APPLICABLE

CAPTURED VERTICALS

ALL SURFACES AND GROOVES MUST BE CLEANED PER THE SEALANT MANUFACTURER'S RECOMMENDATIONS.

INSTALL VERTICAL ADAPTER WITH 128-348 SCREWS #10 X 1-1/4" FLAT HEAD SELF DRILLING SCREW. LOCATE A MAXIMUM 6" AND A MINIMUM 4" FROM EACH END AND 9" ON CENTER AT STEEL REINFORCING USE 128-401 #10 X 1" FLAT HEAD TYPE B SCREW. DRILL .25" DIA. #23 DRILL INTO MULLION USING ADAPTER HOLES AS A PILOT.

INSTALLATION

INSTALLATION GROOVE FOR TOOL

PERIMETER FILLER

GROOVE FOR INSTALLATION TOOL

USE PUTTY KNIFE, SMALL PRY BAR OR SCREW DRIVER

KAWNEER
1600 SYSTEM
INSTALLATION INSTRUCTIONS
PART NO.
162-971 6 OF 12
**STEP - 12 INSTALL INTERIOR GLAZING GASKETS**

**STEP - 13 INSTALL INTERIOR SPONGE AIR SEALS**

1" FRAMING MEMBERS

APPLY BOND BREAKER TAPE TO SLEEVE FACE AND SEAL MULLION JOINT. INSTALL 426-318 SPONGE AIR SEAL.

**STEP - 14 INSTALL SETTING BLOCKS**

**STEP - 15 INSTALL EXTERIOR GASKETS INTO PRESSURE PLATES**

REFERENCE GASKET NOTES IN STEP 12 SAME NOTES APPLY.

REFERENCE INSTRUCTIONS 162-593 FOR EXTERIOR FRAME PERIMETERS

**STEP - 16 INSTALL GLASS**

CAPTURED VERTICALS

USE 162-593 GLAZING TEMPORARIES AS REQUIRED, USE 128-605 SCREWS

MAXIMUM TEMPORARY SPACING IS 30°. IF WINDS GREATER THAN 50 MPH (80KPH) ARE EXPECTED, ADDITIONAL TEMPORARIES MAY BE REQUIRED. CONSULT YOUR SEALANT AND/OR IN필 SUPPLIER FOR SPACING RECOMMENDATIONS. INSTALL PRESSURE PLATES WHERE POSSIBLE.

LOCATE SETTING BLOCKS PER APPROVED SHOP DRAWINGS OR DEAD LOAD CHARTS

VERTICAL GASKETS ARE TO RUN CONTINUOUS EXCEPT AT HEAD AND SILL CONDITIONS. THE GASKET IS TO BE CUT 1/2" SHORT.

THIS IS FOR THE SEAL AT SECTION D-D

STEP 17 - SHEET # 10

LOCATING THE GASKET TO BE THE SAME LENGTH AS PRESSURE PLATE.
**STEP - 16 INSTALL GLASS**

**STRUCTURAL GLAZED VERTICALS**

**VISION GLASS**

**SPANDREL GLASS**

**STEP - 17 INSTALL EXTERIOR PRESSURE PLATES**

**RECOMMEND USING TORQUE LIMIT TOOL 162-399 SEE NOTE.**

**HOW TO SET TORQUE LIMIT**

1. ATTACH ANY CALIBRATED TORQUE INDICATOR TO OUTPUT STUB (1) AND DETERMINE PRESENT TORQUE SETTING WHILE HOLDING THE BODY (5), OR VICE-VERSA.

2. REMOVE SNAP RING (2) AND LOCKING PLATE (3).

3. ADJUST NUT (4) WITH OPEN-END WRENCH : CLOCKWISE TO INCREASE TORQUE, COUNTER-CLOCKWISE TO DECREASE TORQUE.

4. OBTAIN NEW TORQUE READING WITH THE CALIBRATED TORQUE INDICATOR. REPEAT PRECEDING STEP IF MORE ADJUSTMENT IS NECESSARY TO REACH DESIRED LIMIT.

5. REPLACE LOCKING PLATE INTO NOTCHES AND INSTALL SNAP RING. IF LOCKING PLATE DOES NOT "SEAT", MOVE THE ADJUSTING NUT SLIGHTLY UNTIL IT DROPS IN PLACE. THE DIRECTION IS BEST DETERMINED BY WHETHER A MINIMUM TORQUE APPLICATION OR A MAXIMUM ONE IS DESIRED.

**INSTALL PRESSURE PLATES USING SCREWS 128-406 1/4-14 X 1" HEX WASHER HEAD TYPE AB.**

**SCREWS ARE TO BE LOCATED 9" ON CENTER. ALWAYS LOCATE A SCREW AS CLOSE AS POSSIBLE TO A HORIZONTAL JOINT. THIS WILL PROVIDE MAXIMUM PRESSURE FOR THE CRITICAL JOINT SEALS.**

**INSTALL HORIZONTAL PRESSURE PLATES WITH WEEP HOLES TOWARDS TOP OF HORIZONTAL.**

**AT EACH HORIZONTAL AND VERTICAL PRESSURE PLATE INSTALL TWO SCREWS PART WAY, THEN INSTALL THE THIRD SCREW ALL THE WAY, AND THEN TIGHTEN THE FIRST TWO SCREWS. THIS ELIMINATES LATERAL WALKING OF THE PRESSURE PLATE POSITION.**

**TORQUE ALL SCREWS TO 95 TO 100 INCH POUNDS. DURING COLD WEATHER, TORQUE SCREWS TO 50 INCH POUNDS UNTIL ALL 4 SIDES HAVE BEEN CLAMPED. THEN TORQUE SCREWS TO 95 TO 100 INCH POUNDS.**

**NOTE - THE TORQUE LIMIT TOOL WAS DESIGNED TO BE USED WITH A HAND DRIVEN DEVICE. THE TOOL CAN BE ADAPTED TO A DRILL MOTOR IF USED AT A MAXIMUM SPEED OF APPROX. 300 RPM. HIGHER SPEEDS CAN CAUSE OVERHEATING AND AFFECT THE ACCURACY. AFTER APPROX. 1 HOUR OF TOOL USAGE CHECK TORQUE SETTINGS WITH A TORQUE WRENCH.**

**IF WINDS GREATER THAN 50 MPH (80KPH) ARE EXPECTED, ADDITIONAL TEMPORARIES MAY BE REQUIRED. CONSULT YOUR SEALANT AND/OR INFILL SUPPLIER FOR SPACING RECOMMENDATIONS.**

**GLAZING TEMPORARY 162-353**

**INSTALL WITH SCREWS 128-400**

**AT 1" GLASS #12 X 2-1/4 PH HD TYPE B USE SCREW 128-284**

**AT 1/4" GLASS #12 X 1-1/2 FL HD TYPE AB**

**AT CORNERS AND SPLAYS RETAINERS SHOULD BE MADE FROM A GOOD QUALITY HARDWOOD. THESE RETAINERS ARE NOT SUPPLIED BY KAWNEER.**

**1600 SYSTEM INSTALLATION INSTRUCTIONS**

**PART NUMBER 162-971 9 OF 12**

**DRAWING**

**ORDER**

**B”**

**JUST BEFORE INSTALLING VERTICAL PRESSURE PLATES APPLY A GENEROUS AMOUNT OF SEALANT TO THE JOINT PLUG FACE FILLING JOINTS AS SHOWN.**

**CLEAN JOINT PER SEALANT MANUFACTURER'S RECOMMENDATIONS**

**CAPTURED VERTICALS**

**INSTALL VERTICAL PRESSURE PLATES AT CAPTURED VERTICALS**

**NOTE - THE TORQUE LIMIT TOOL WAS DESIGNED TO BE USED WITH A HAND DRIVEN DEVICE. THE TOOL CAN BE ADAPTED TO A DRILL MOTOR IF USED AT A MAXIMUM SPEED OF APPROX. 300 RPM. HIGHER SPEEDS CAN CAUSE OVERHEATING AND AFFECT THE ACCURACY. AFTER APPROX. 1 HOUR OF TOOL USAGE CHECK TORQUE SETTINGS WITH A TORQUE WRENCH.**

**INTERMEDIATE HORIZONTAL VISION OVER SPANDREL**

**TOOL EXCESS SEALANT HEAD CONDITION SILL SAME**

**VERTICAL GASKET STOPS 1/2" SHORT AT HEAD AND SILL CONDITIONS**

**INHEAD CONDITION**

**SILL SAME**

**VERTICAL GASKET**

**TOOL EXCESS SEALANT PERIMETER FILLER HEAD CONDITION SILL SAME**

**TOOL EXCESS SEALANT**

**KAWNEER**

**162-971 9 OF 12**
**STEP - 17 INSTALL EXTERIOR PRESSURE PLATES**

**INSTALL VERTICAL PRESSURE PLATES AT CAPTURED VERTICALS**

**VERTICAL EXPANSION JOINTS**

**TOP OF VERTICAL MULLION TO TOP OF PRESSURE PLATE IS 1-1/2"**

**AT TOP PRESSURE PLATE LOCATE SCREW CLOSE TO THE MULLION JOINT BUT NOT BELOW THE JOINT.**

**CLEAN JOINT PER SEALANT MANUFACTURER'S RECOMMENDATIONS**

**COMPLETELY SEAL JOINT. DO NOT LET SEALANT INTERFERE WITH COVER SNAP OVERLAP PRESSURE PLATE FACE CREATING A BAND-AID SEAL.**

**INSTALL HORIZONTAL PRESSURE PLATES AT CAPTURED VERTICALS**

**CENTER HORIZONTAL PRESSURE PLATES SO END GAPS ARE EQUAL.**

**INTERMEDIATE HORIZONTAL VISION OVER SPANDREL**

**SEAL JOINTS AS SHOWN. TOOL SEALANT. THIS SEAL IS TO JOIN AND ADHERE TO THE JOINT PLUG SEALS.**

**CLEAN JOINT PER SEALANT MANUFACTURER'S RECOMMENDATIONS**

**DO NOT LET THE SEAL INTERFERE WITH THE COVER SNAP.**

**VERTICAL GASKET STOPS 1/2" SHORT OF END.**

**JUST BEFORE APPLYING PRESSURE PLATE APPLY A GENEROUS AMOUNT OF SEALANT TO THE JOINT PLUG FACE.**

**CLEAN JOINT PER SEALANT MANUFACTURER'S RECOMMENDATIONS**

**REFERENCE INSTRUCTIONS 162-983 FOR EXTERIOR FRAME PERIMETERS**

**INSTALL HORIZONTAL PRESSURE PLATES AT SSG VERTICALS**

**NOTE - THE TORQUE LIMIT TOOL WAS DESIGNED TO BE USED WITH A HAND DRIVEN DEVICE. THE TOOL CAN BE ADAPTED TO A DRILL MOTOR IF USED AT A MAXIMUM SPEED OF APPROX. 300 RPM. HIGHER SPEEDS CAN CAUSE OVERHEATING AND AFFECT THE ACCURACY. AFTER APPROX. 1 HOUR OF TOOL USAGE CHECK TORQUE SETTINGS WITH A TORQUE WRENCH.**

**INSTALLATION INSTRUCTIONS**

**PART NUMBER**

162-971 10 OF 12
**STEP - 17 INSTALL EXTERIOR PRESSURE PLATES**

Install Horizontal Pressure Plates at SSG Verticals

- **A-A**
  - Vision
  - Spandrel

**A-A**
- Vision
- Spandrel
- Completely seal horizontal pressure plate joint. Do not let sealant interfere with cover snap.
- Clean joint per sealant manufacturer's recommendations.

**B-B**
- Vision
- Spandrel
- Head Horizontal Sill Same

**B-B**
- Gasket 027-850
- Complete joint per sealant manufacturer's recommendations.

**STEP - 18 INSTALL PERIMETER SEALS**

Perimeter weather seals are installed at the pressure plate location as detailed below. (This seal should be installed before covers are applied when covers deeper than 3/4" are used.) Exterior cosmetic seals at the cover may be applied at the head and jamb only. Sill covers must remain open to allow water drainage to the exterior.

- Perimeter filler
- Vision
- Head Horizontal Sill Same

- Vision
- Jamb condition
- Required weather seal
- Optional cosmetic seal
### Step 19: Install Exterior Covers

**Captured Verticals**

**Care must be taken to avoid damage to covers during installation. Use a 16" long piece of 2 x 4 wood along with a hammer or v mail to seat the cover.**

**Engage one side of cover as shown.**

**2 x 4 Wood 16" Long**

**Hammer or V Mail**

**Vertical expansion joint**

**Top of pressure plate to top of cover is 4-1/2"**

**Splice sleeve at factory applied to bottom cover**

**Step 19: Install Exterior Covers**

Pinning of all vertical covers is required for both sides. Drill a 1/8" dia. hole (10G drill) and install 128-020 screws #6 x 3/8" pan head type B. Locate pinning at a horizontal closest to the cover height center.

**(One side only at jambs)**

**Install horizontal covers with the weep holes down**

**Equal space both ends of horizontal cover**

**Equal cover**

**Horizontal cover**

**Greater than 1-1/4" projection**

**128-020 #6 screws**

**162-058 pressure plate**

**Step 19: Install Exterior Covers**

**Structural Glazed Verticals**

**Install horizontal covers with the weep holes down**

**Vision**

**Spandrel**

**Removing Covers**

Covers can be saved if tolerances are not too tight and the cover is removed with extreme care.

**Prv bar with sharp point and flat this side**

**Push back the gasket trim up**

**Start at one end to disengage**

**Do this in progression for the complete length**

**Step 20: Install Structural and Weather Seals**

Kawneer does not supply sealant. Sealant to be silicone as recommended by the sealant manufacturer. Infill and metal to be cleaned per the sealant manufacturer's recommendations. Sealant backup rod to be per the sealant manufacturer's recommendations.

Fill space between insulated units and behind single glazed units with recommended backup rod.

Apply structural seal and weather seal as shown.

Allow structural seal to cure per sealant manufacturer's recommendations.

Remove temporary retainers, seal fastener holes and fill weather seal holes.

**Vision at interior structural seal**

**Spandrel at interior structural seal**

**Vision at exterior structural seal**

**Spandrel at exterior structural seal**

**Exterior structural seal must be applied in three steps, each side separately then the weather seal**

**Kawneer**

1600 System Installation Instructions

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