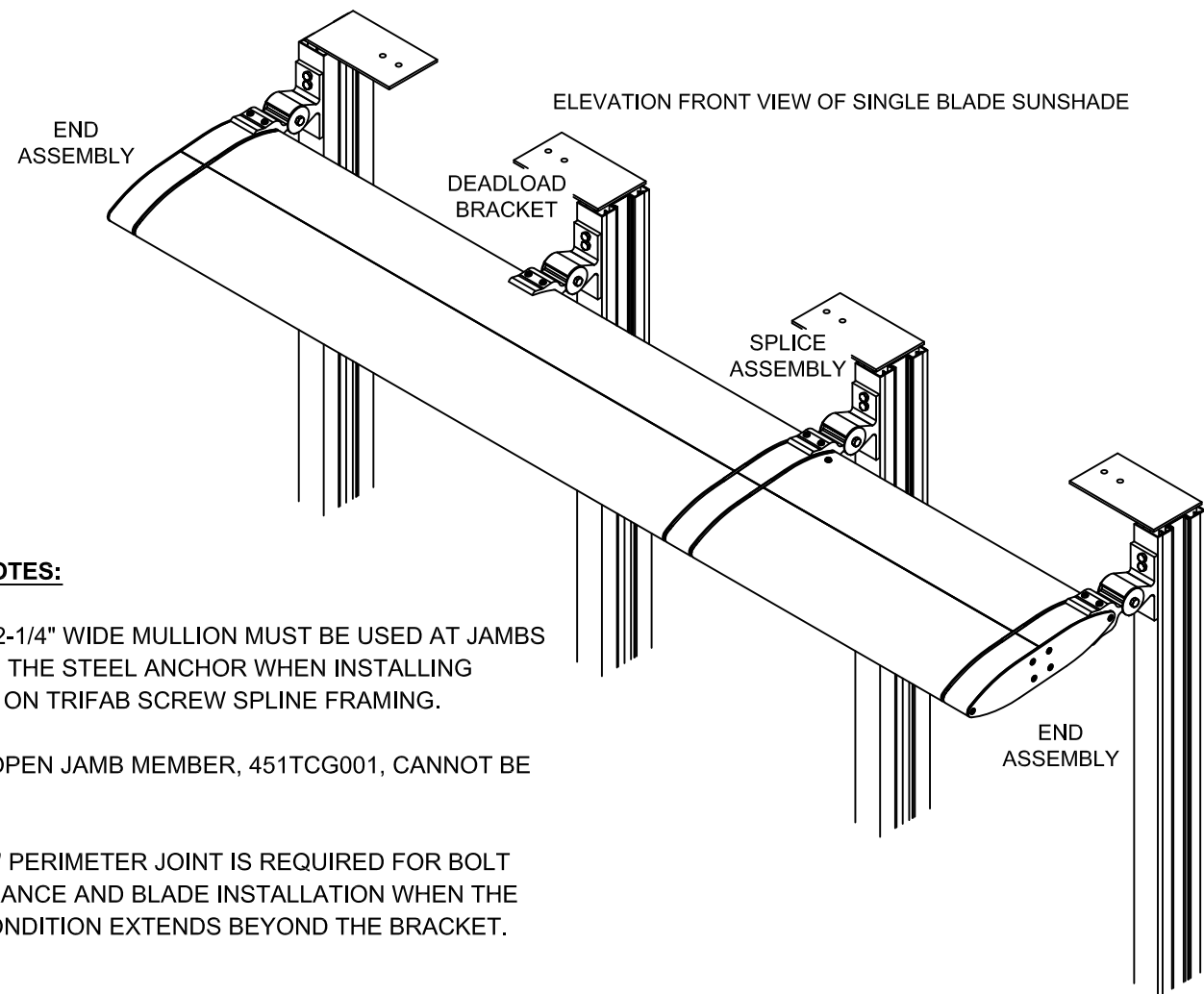


SINGLE BLADE SUNSHADE INSTALLATION INSTRUCTIONS FOR TRIFAB 451T VG SCREW SPLINE - CENTER GLAZED SYSTEM

THE FOLLOWING INSTRUCTIONS ARE FOR THE INSTALLATION OF THE KAWNEER SUNSHADE ON TRIFAB VG SCREW SPLINE - CENTER GLAZED SYSTEM. USE THESE INSTRUCTIONS IN CONJUNCTION WITH TRIFAB VG SCREW SPLINE INSTALLATION INSTRUCTIONS (451VG970).

THE TERMS "INSIDE" AND "OUTSIDE" ARE USED EXTENSIVELY IN THESE INSTRUCTIONS. THESE TERMS DO NOT REFER TO THE INTERIOR AND EXTERIOR OF THE BUILDING. THE TERMS REFER TO THE RELATIVE POSITION OF WORK PERFORMED ON THE SUNSHADE FROM AN ELEVATION PERSPECTIVE. SIMILARLY, THE TERMS "RIGHT" AND "LEFT" ARE USED.



GENERAL NOTES:

451TCG112 2-1/4" WIDE MULLION MUST BE USED AT JAMBS ALONG WITH THE STEEL ANCHOR WHEN INSTALLING SUNSHADES ON TRIFAB SCREW SPLINE FRAMING.

STANDARD OPEN JAMB MEMBER, 451TCG001, CANNOT BE USED.

NOTE: A 3/4" PERIMETER JOINT IS REQUIRED FOR BOLT HEAD CLEARANCE AND BLADE INSTALLATION WHEN THE BUILDING CONDITION EXTENDS BEYOND THE BRACKET.

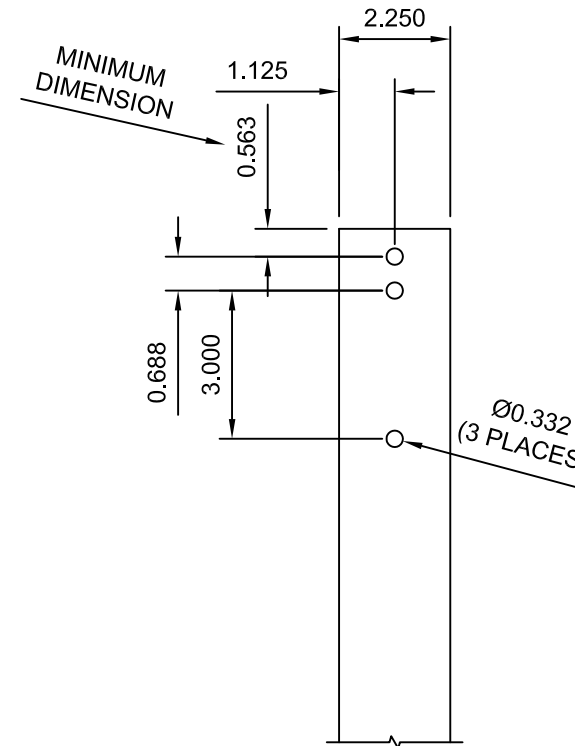
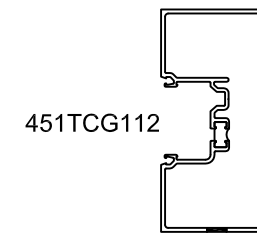
STEP 1 - ANCHOR CLIP VERTICAL MULLIONS PREPS

COMPLETE STEPS ON PAGE 16 OF SECTION V - FRAME FABRICATION & ASSEMBLY AS OUTLINED IN THE TRIFAB VG SCREW SPLINE INSTALLATION INSTRUCTION BOOKLET (451VG970).

DRILL THREE CLEAR HOLES IN THE EXTERIOR FACE OF ALL VERTICAL MULLIONS AT THE LOCATIONS SHOWN IN THE DIAGRAM AT RIGHT.

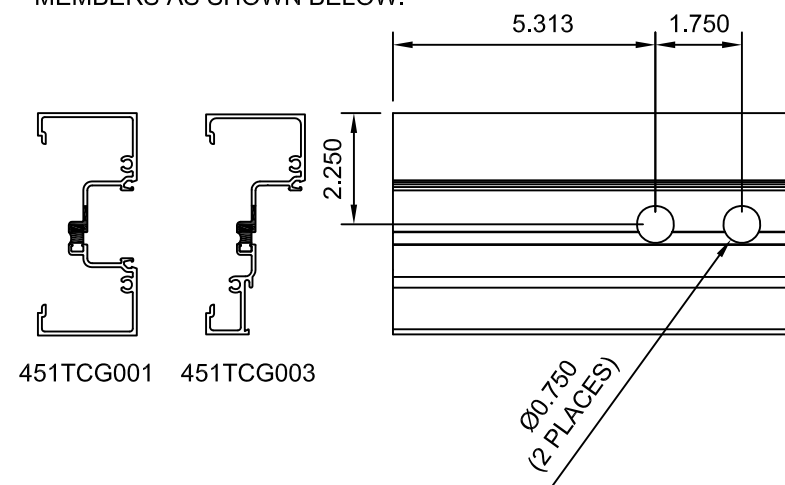
NOTE: SUNSHADES MAY BE LOCATED DOWN TO A MAXIMUM OF 36" FROM THE TOP OF THE VERTICAL MULLIONS TO THE CENTERLINE OF OUTRIGGER.

THE FIRST HOLE HAS TO BE LOCATED A MINIMUM OF 9/16" FROM THE TOP OF THE VERTICAL MULLION. THIS WILL PLACE THE SUNSHADE AS CLOSE TO THE TOP OF THE FRAME AS POSSIBLE.



STEP 2 - ADD ANCHOR PERIMETER ACCESS HOLES TO HEAD MEMBERS.

DRILL TWO ACCESS HOLES ON BOTH ENDS OF THE HEAD MEMBERS AS SHOWN BELOW.



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STEP 3 - INSTALL STEEL ANCHOR IN VERTICAL MULLIONS AND JAMBS. STEEL ANCHOR / REINFORCING OVERALL LENGTH IS EQUAL TO THE MULLION LENGTH - 5 1/2".

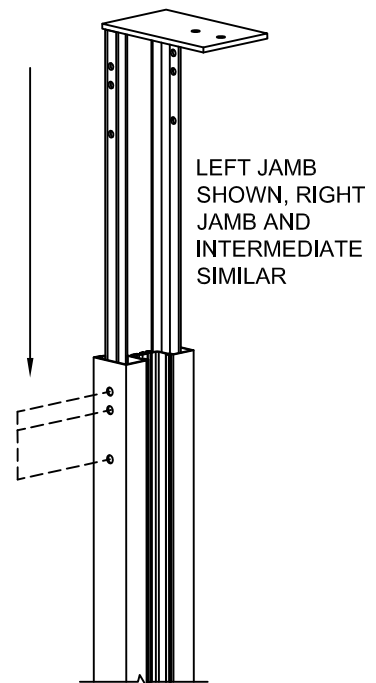
ATTACH ANCHOR CLIP TO VERTICAL MULLIONS AND JAMBS ONLY AFTER STEPS ON PAGE 18 OF THE TRIFAB VG SCREW SPLINE INSTALLATION INSTRUCTIONS (451VG970) HAVE BEEN COMPLETED.

IF THE CONTINUOUS STEEL ANCHOR IS INSTALLED BEFORE THE HORIZONTAL MEMBERS THE SCREW SPLINE HOLES WILL NOT BE ACCESSIBLE.

THE THERMAL POCKET OF THE VERTICAL MULLION MUST BE POSITIONED TO THE EXTERIOR.
(SEE FIGURE BELOW)

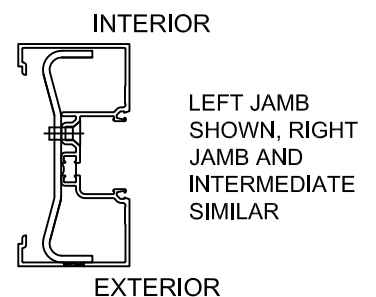
SLIDE THE STEEL ANCHOR INTO THE VERTICAL MULLION

ALIGN THE 3 CLEAR HOLES IN THE VERTICAL MULLION WITH THE 3 THREADED HOLES IN THE STEEL ANCHOR



FASTEN STEEL ANCHOR / REINFORCING AT 1/4 POINTS TO THE VERTICAL MULLION.

THE THERMAL POCKET OF THE VERTICAL MULLION MUST BE POSITIONED TO THE EXTERIOR.



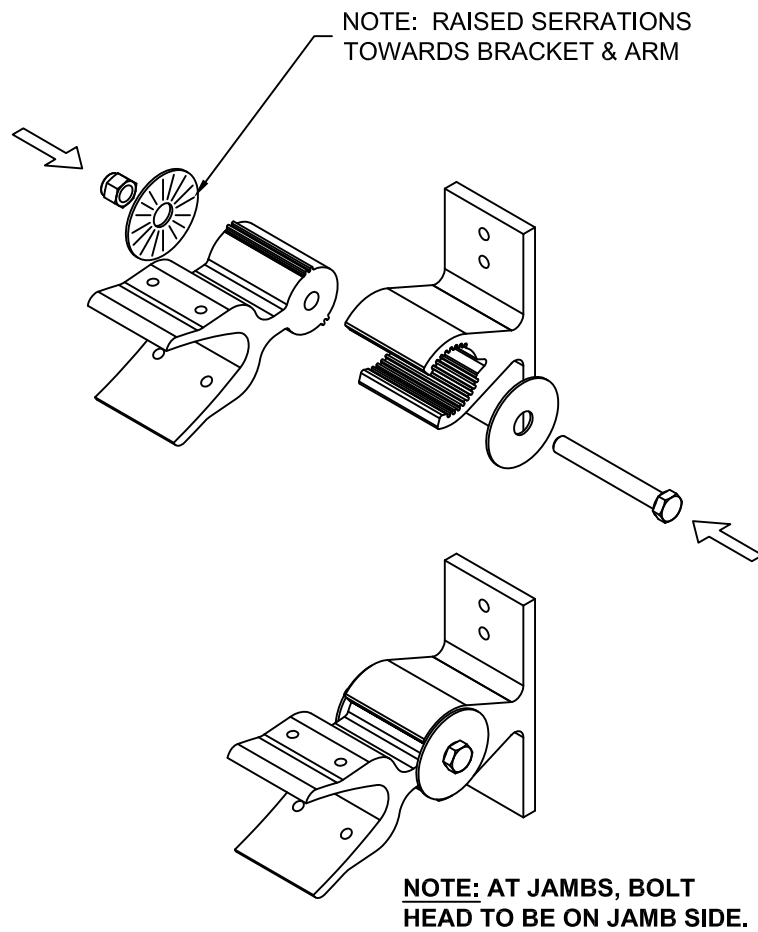
BRACKET ASSEMBLY

NOTE THAT STEPS 1-6 ARE FOR "STRAIGHT-LINE" SUNSHADES (NO CORNERS).

STEP 1 - ASSEMBLING MOUNTING BRACKETS & ARMS

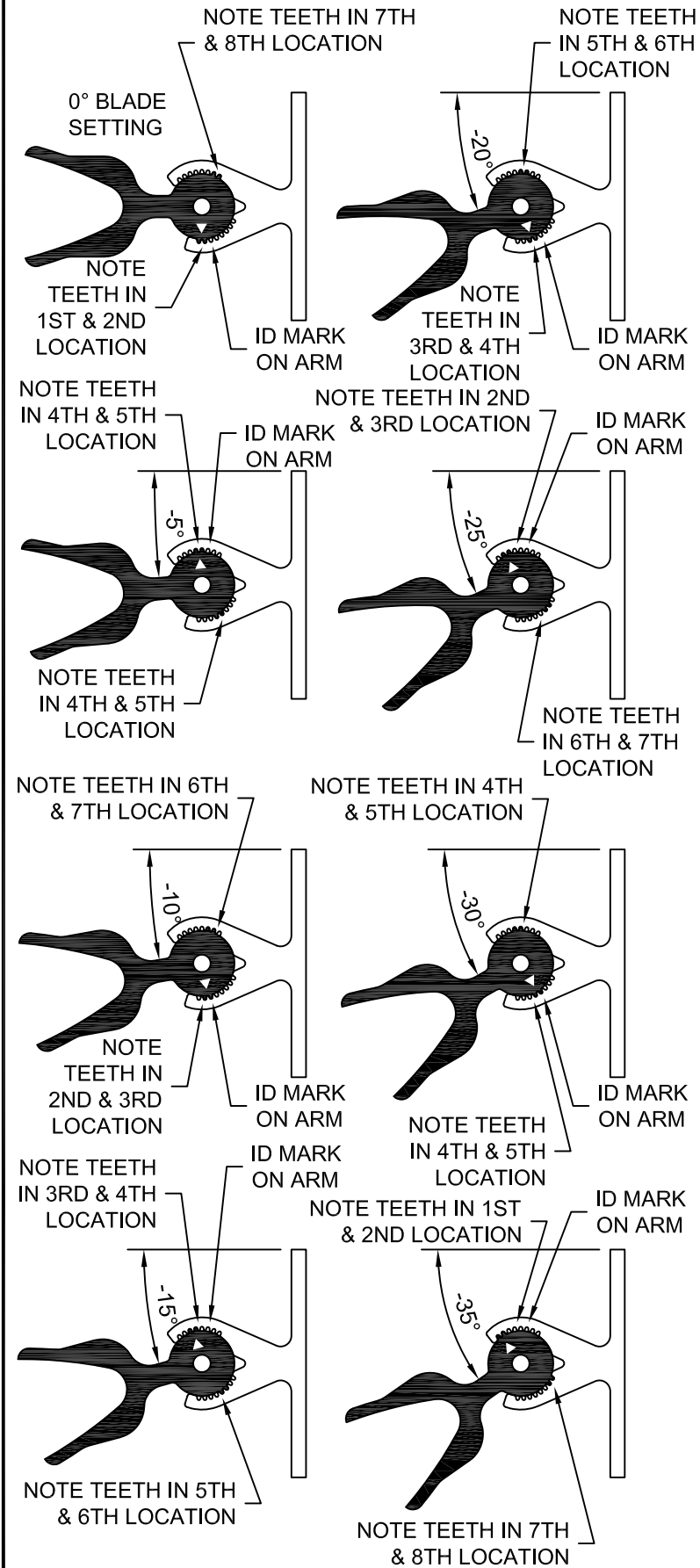
ALIGN THE MOUNTING ARM (482262) AND THE MOUNTING BRACKET (482450) AT SPECIFIED ANGLE (REFERENCE BRACKET ANGLES IN NEXT COLUMN). SLIDE MOUNTING ARM INTO MOUNTING BRACKET AND FASTEN TOGETHER USING 3/8"-16 X 3" HHMS (128916), 3/8" LOCK NUT (128392), AND TWO (2) SERRATED WASHERS (128979) - NOTE: RAISED SERRATIONS ON WASHERS SHOULD BE FACING THE BRACKET AND ARM.

NOTE: BOLT AND LOCK NUT MUST BE TIGHTENED TO AN INITIAL TORQUE OF 200 IN-LBS (17 FT-LBS).



BRACKET ANGLES SHOWN BELOW.

CRITICAL NOTE: THE MOUNTING BRACKET AND ARM IS NOT SYMMETRICAL. PLEASE NOTE THE ID MARK LOCATION ON ARM AND ORIENTATION OF BRACKET.



STEP 2 - ASSEMBLING MOUNTING BRACKETS & ARMS

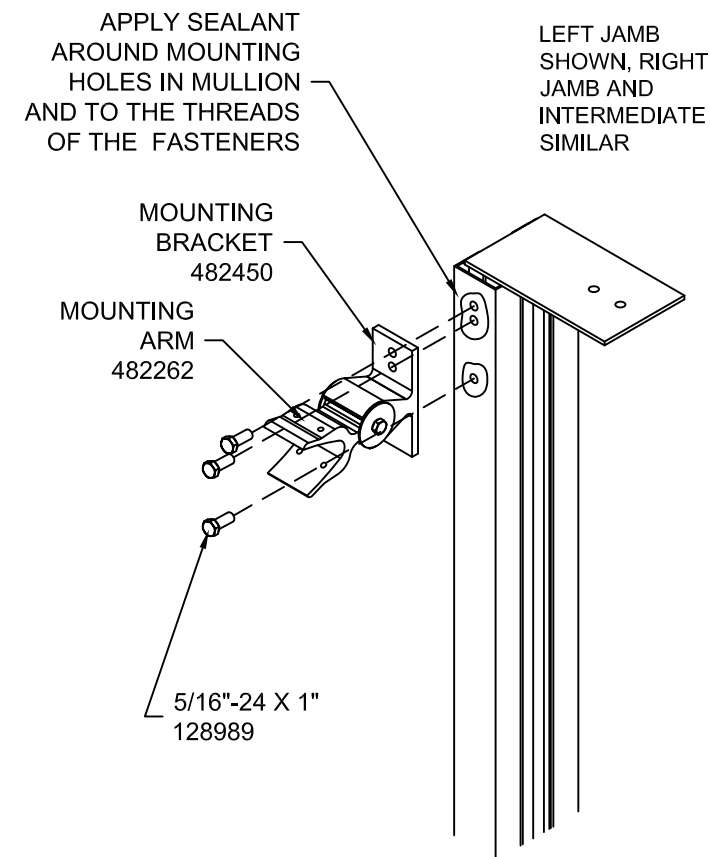
ALIGN THE THREE CLEAR HOLES IN THE MOUNTING BRACKET (482450) WITH THE THREE CLEAR HOLES IN THE VERTICAL MULLION AND THE THREADED HOLES IN THE STEEL ANCHOR.

APPLY SEALANT AROUND THE CLEAR HOLES ON THE VERTICAL MULLIONS AND TO THE THREADS OF THE FASTENERS BEFORE ATTACHING THE MOUNTING BRACKETS.

ATTACH THE MOUNTING BRACKETS TO THE VERTICAL MULLIONS WITH THREE 5/16"-24 X 1" HEX HEAD BOLTS (128989) AND LOCK WASHERS (028513) THREADED INTO THE STEEL ANCHOR.

TIGHTEN THE ATTACHMENT BOLTS. BE SURE THE SPRING TYPE LOCK WASHERS ARE COMPRESSED. THEN TIGHTEN APPROXIMATELY 1/2 TURN MORE.

ATTACH ALL MOUNTING BRACKETS BEFORE PROCEEDING TO STEP 3.

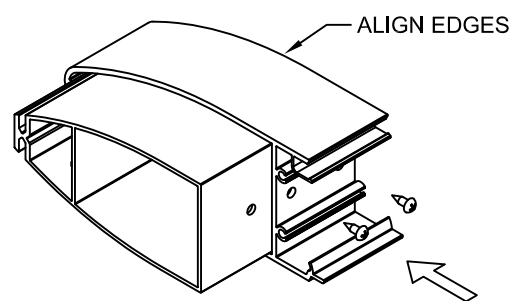
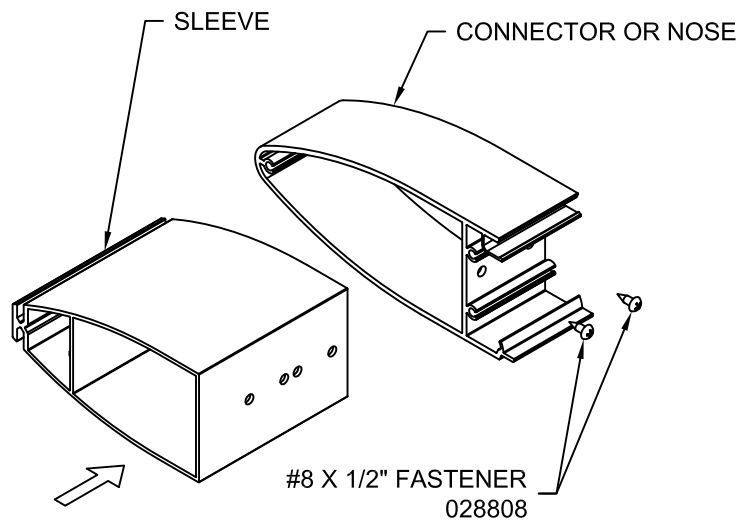


BLADE, END & SPLICE ASSEMBLIES

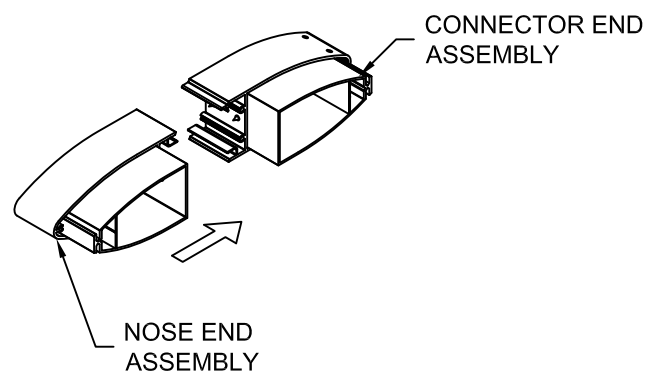
STEP 3 - END ASSEMBLY

NOTE: 6" AND 8" ONE-PIECE BLADES WILL BE ATTACHED TO SLEEVES USING FASTENERS THROUGH MOUNTING ARMS.

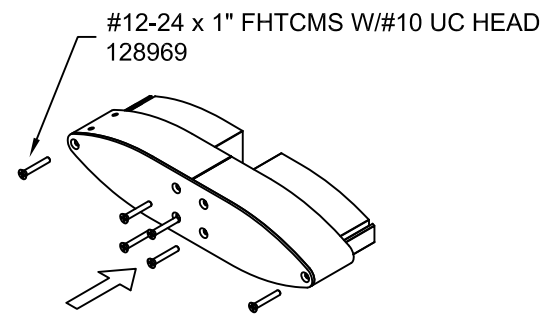
SLIDE SLEEVE INTO CONNECTOR OR NOSE, ALIGN MOUNTING HOLES AND SLEEVE EDGE WITH CONNECTOR OR NOSE EDGE. ATTACH USING TWO (2) #8 X 1/2" FASTENERS (028808).



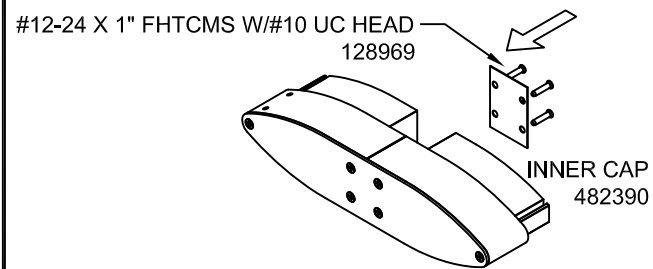
SNAP CONNECTOR END ASSEMBLY (WITH HOLES) AND NOSE END ASSEMBLY TOGETHER



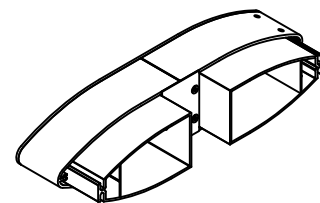
ATTACH ENDCAP TO END ASSEMBLY USING SIX (6) #12-24 X 1" FHTCMS "F" W/#10 UC HEAD (128969) FASTENERS



ATTACH INNER CAP (482390) TO END ASSEMBLY USING FOUR (4) #12-24 X 1" FHTCMS "F" W/#10 UC HEAD (128969) FASTENERS

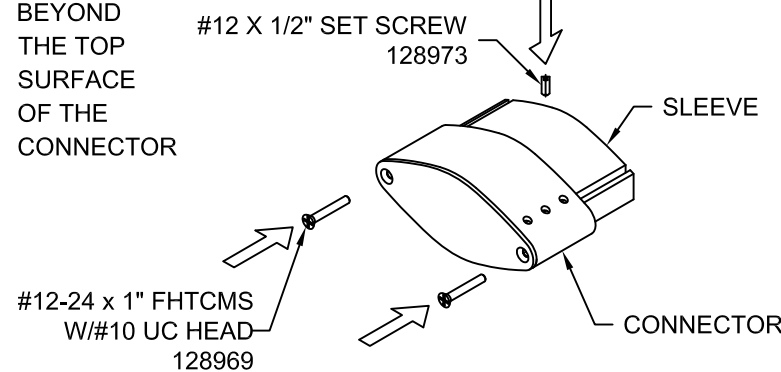


NOTE THAT END ASSEMBLY CAN BE USED AT LEFT JAMB OR RIGHT JAMB (BY ROTATING ASSEMBLY OVER)



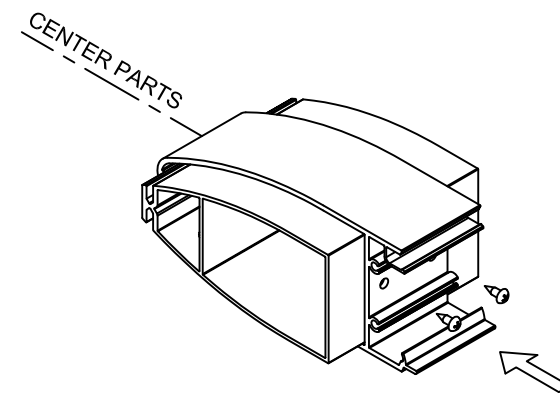
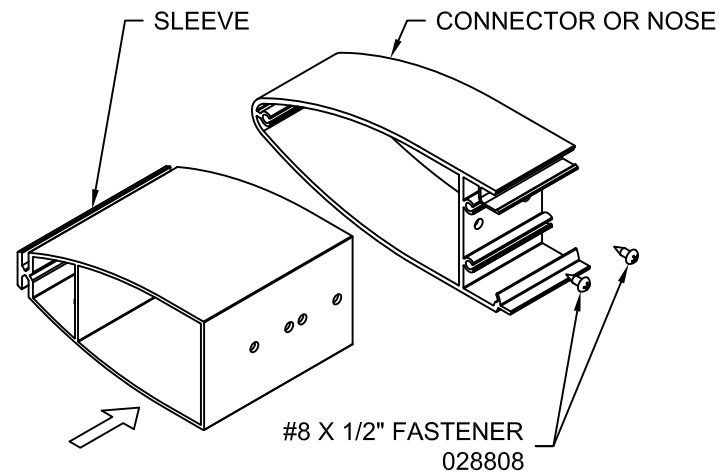
FOR ONE-PIECE-BLADE END ASSEMBLIES, ATTACH ENDCAP TO CONNECTOR USING TWO (2) #12-24 X 1" FHTCMS "F" W/#10 UC HEAD FASTENERS (128969)

NOTE: SLIDE SLEEVE INTO CONNECTOR AND FASTEN WITH ONE (1) #12 X 1/2" SET SCREW (128973) AT CENTER HOLE. SET SCREW MUST NOT EXTEND BEYOND THE TOP SURFACE OF THE CONNECTOR

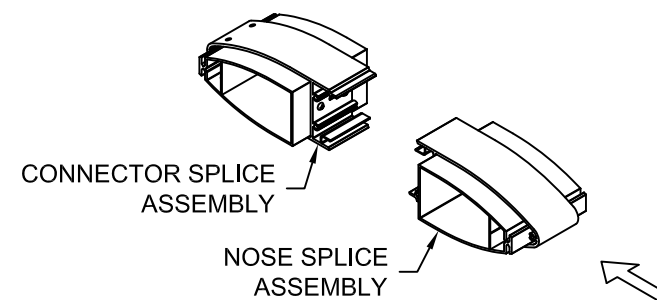


STEP 4 - SPLICE ASSEMBLY

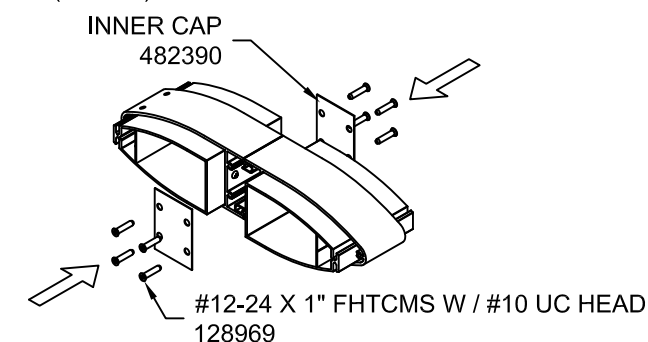
SLIDE SLEEVE INTO CONNECTOR OR NOSE. ALIGN SLEEVE CENTER ON CONNECTOR OR NOSE CENTER. ATTACH USING TWO (2) #8 X 1/2" FASTENERS (028808).



SNAP CONNECTOR SPLICE ASSEMBLY (WITH HOLES) AND NOSE SPLICE ASSEMBLY TOGETHER



ATTACH INNER CAP (482390) TO SPLICE ASSEMBLY ON EACH SIDE USING FOUR (4) #12-24 X 1" FHTCMS W/#10 UC HEAD (128969) FASTENERS

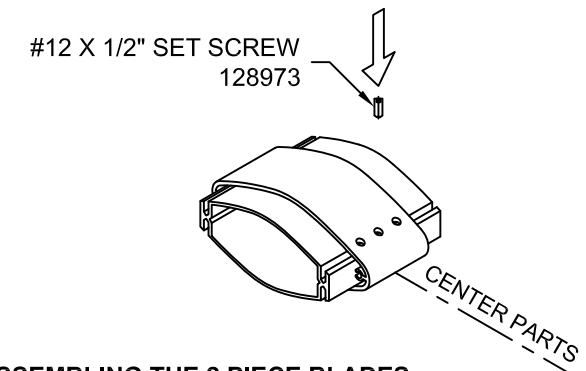


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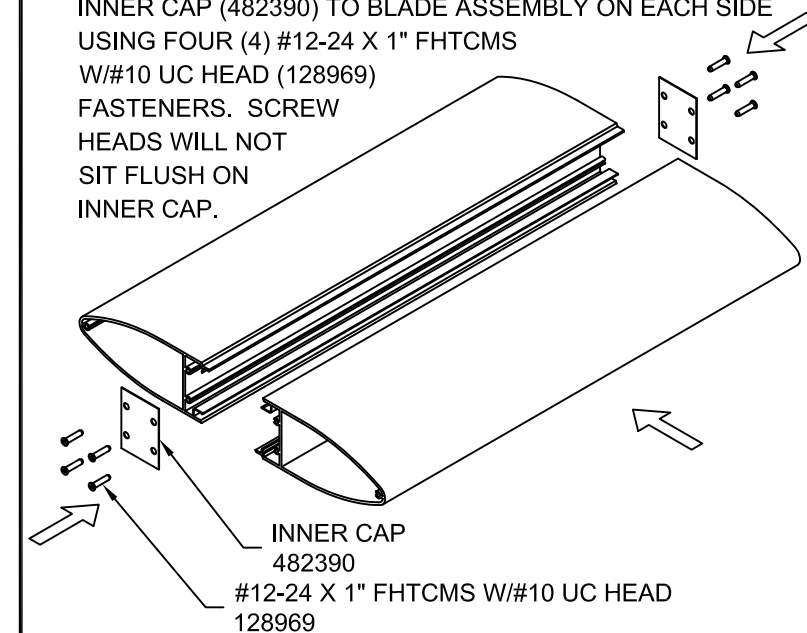
FOR ONE-PIECE-BLADE SPLICE ASSEMBLIES, CENTER SLEEVE IN CONNECTOR AND FASTEN WITH ONE (1) #12 X 1/2" SET SCREW (128973) AT CENTER HOLE.

NOTE: SET SCREW MUST NOT EXTEND BEYOND THE TOP SURFACE OF THE CONNECTOR.



STEP 5 - ASSEMBLING THE 2 PIECE BLADES

SNAP TWO (2) BLADE PIECES TOGETHER (BLADES TO BE CUT TO LENGTH BEFORE ASSEMBLY). THEN ATTACH INNER CAP (482390) TO BLADE ASSEMBLY ON EACH SIDE USING FOUR (4) #12-24 X 1" FHTCMS W/#10 UC HEAD (128969) FASTENERS. SCREW HEADS WILL NOT SIT FLUSH ON INNER CAP.



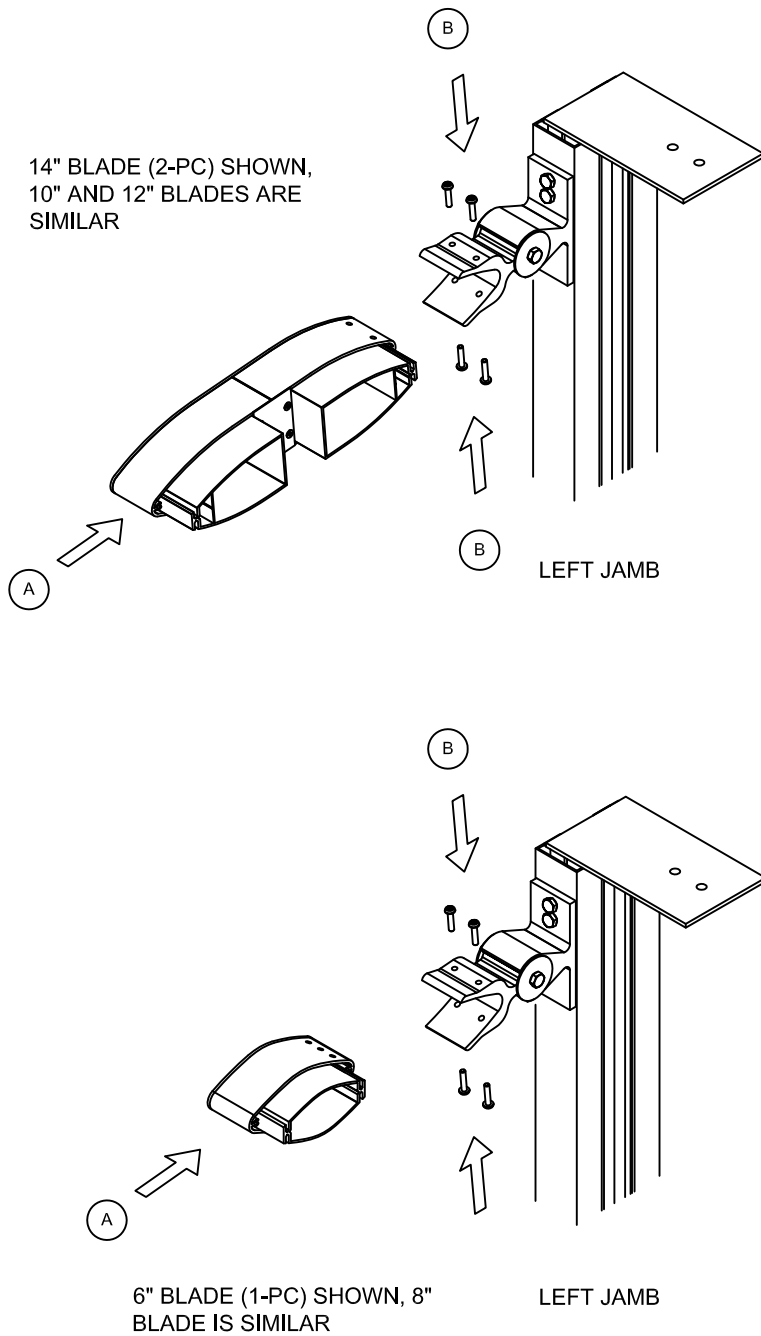
KAWNEER VERSOLEIL HORIZONTAL SINGLE BLADE SUNSHADE TRIFAB SCREW SPLINE INSTALLATION INSTRUCTIONS

MOUNTING THE SUNSHADES

STEP 6 - INSTALLING END / SPLICE / BLADE ASSEMBLIES

A) SLIDE END ASSEMBLY INTO MOUNTING ARM, ALIGNING MOUNTING HOLES IN BLADE AND MOUNTING HOLES IN MOUNTING ARM

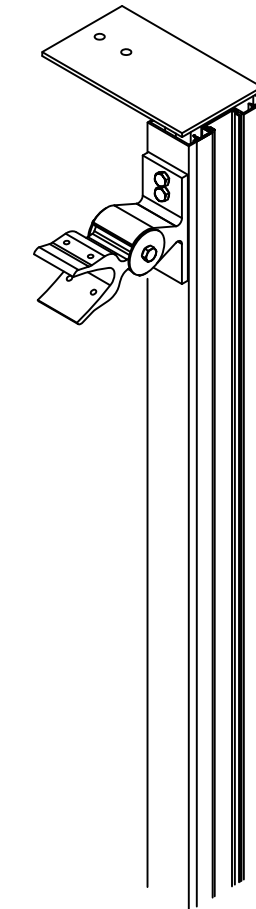
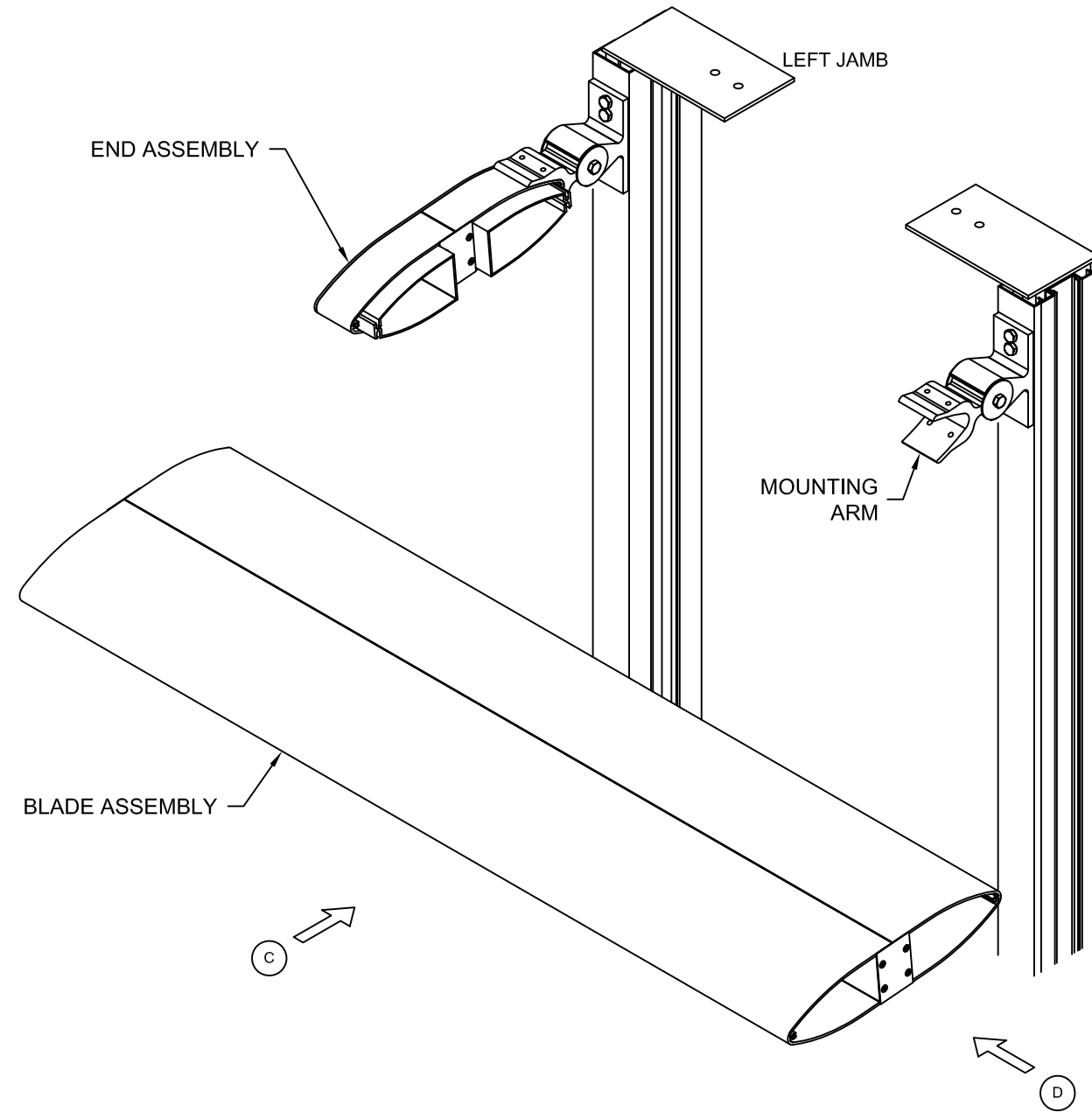
B) FASTEN END ASSEMBLY TO MOUNTING ARM USING FOUR (4) #12 X 1" PHTF "AB" FASTENERS (128267)



C) SLIDE BLADE (ASSEMBLY, IF TWO-PIECE) INTO MOUNTING ARMS

D) SLIDE BLADE OVER SLEEVE IN THE END ASSEMBLY

E) TEMPORARILY HOLD BLADE IN PLACE UNTIL NEXT STEP (F) IS COMPLETE. ASSISTANCE MAY BE REQUIRED



STEP 6 - INSTALLING END / SPLICE / BLADE ASSEMBLIES

F) SLIDE SPLICE ASSEMBLY INTO MOUNTING ARM
(SLEEVE SHOULD SLIDE INTO BLADE ASSEMBLY)

G) ALIGN MOUNTING HOLES IN SPLICE ASSEMBLY AND
MOUNTING HOLES IN MOUNTING ARM

H) FASTEN SPLICE ASSEMBLY TO MOUNTING ARM USING
FOUR (4) #12 X 1" PHTF "AB" FASTENERS (128267)

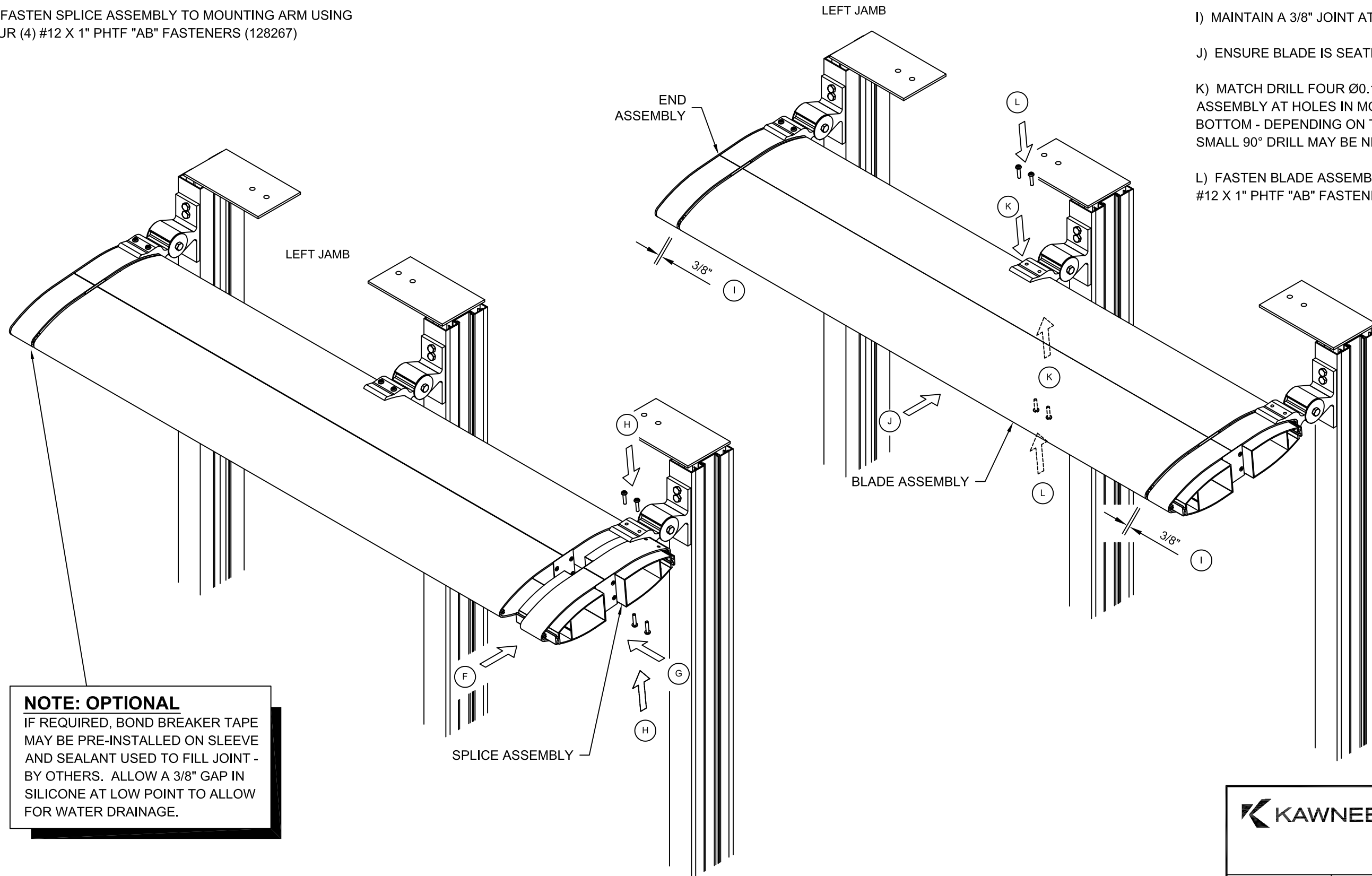
STEP 7 - INSTALLING END / SPLICE / BLADE ASSEMBLIES

I) MAINTAIN A 3/8" JOINT AT SLEEVES

J) ENSURE BLADE IS SEATED FIRMLY AGAINST MOUNTING ARM

K) MATCH DRILL FOUR Ø0.185 (#13 DRILL) HOLES INTO BLADE
ASSEMBLY AT HOLES IN MOUNTING ARMS (TWO IN TOP AND TWO IN
BOTTOM - DEPENDING ON THE ANGLE THAT THE BLADES ARE SET, A
SMALL 90° DRILL MAY BE NEEDED)

L) FASTEN BLADE ASSEMBLY TO MOUNTING ARM USING FOUR (4)
#12 X 1" PHTF "AB" FASTENERS (128267)



NOTE: OPTIONAL

IF REQUIRED, BOND BREAKER TAPE
MAY BE PRE-INSTALLED ON SLEEVE
AND SEALANT USED TO FILL JOINT -
BY OTHERS. ALLOW A 3/8" GAP IN
SILICONE AT LOW POINT TO ALLOW
FOR WATER DRAINAGE.

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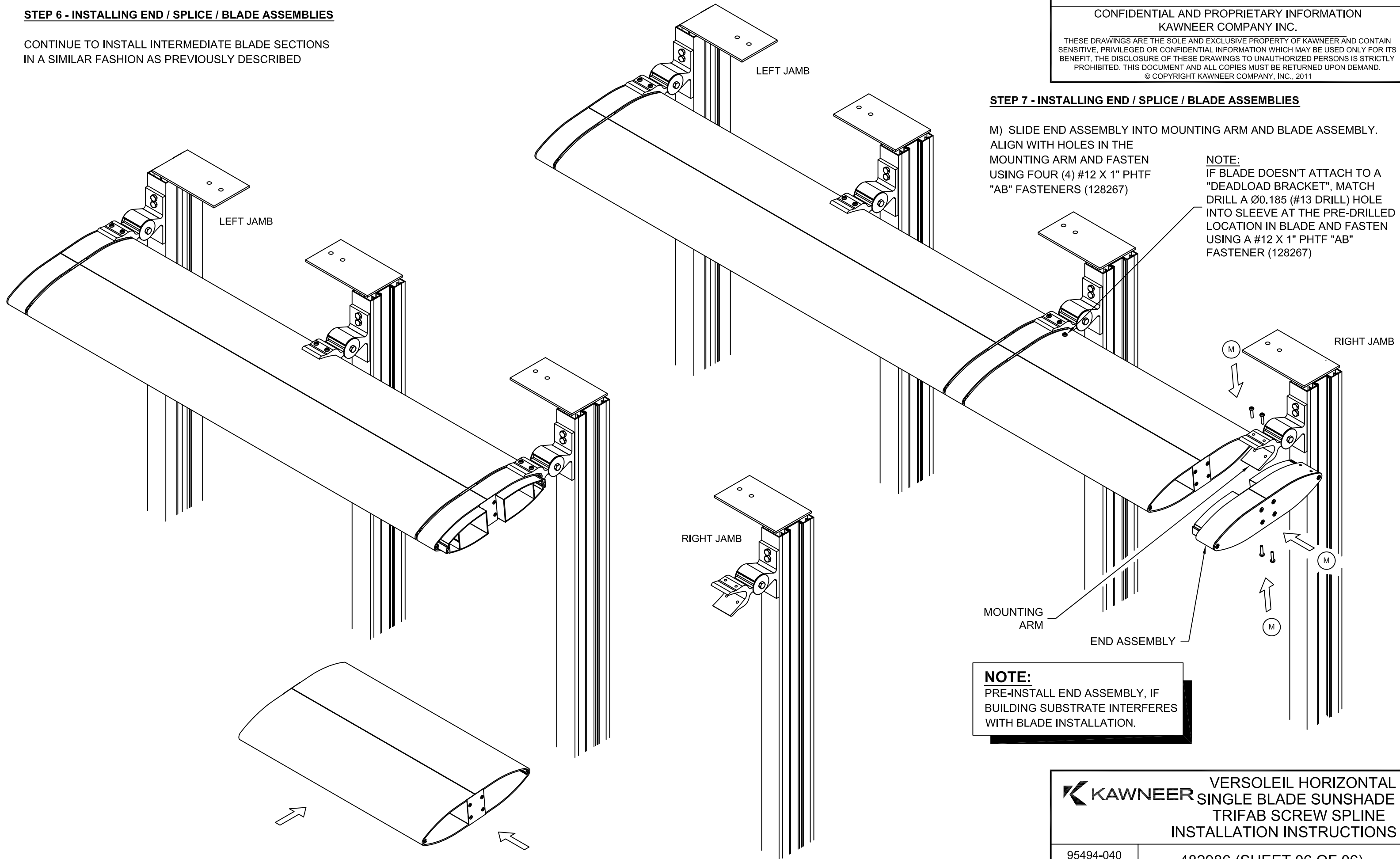
STEP 6 - INSTALLING END / SPLICE / BLADE ASSEMBLIES

CONTINUE TO INSTALL INTERMEDIATE BLADE SECTIONS IN A SIMILAR FASHION AS PREVIOUSLY DESCRIBED

STEP 7 - INSTALLING END / SPLICE / BLADE ASSEMBLIES

M) SLIDE END ASSEMBLY INTO MOUNTING ARM AND BLADE ASSEMBLY. ALIGN WITH HOLES IN THE MOUNTING ARM AND FASTEN USING FOUR (4) #12 X 1" PHTF "AB" FASTENERS (128267)

NOTE:
IF BLADE DOESN'T ATTACH TO A "DEADLOAD BRACKET", MATCH DRILL A Ø0.185 (#13 DRILL) HOLE INTO SLEEVE AT THE PRE-DRILLED LOCATION IN BLADE AND FASTEN USING A #12 X 1" PHTF "AB" FASTENER (128267)



NOTE:
PRE-INSTALL END ASSEMBLY, IF BUILDING SUBSTRATE INTERFERES WITH BLADE INSTALLATION.

KAWNEER VERSOLEIL HORIZONTAL
SINGLE BLADE SUNSHADE
TRIFAB SCREW SPLINE
INSTALLATION INSTRUCTIONS