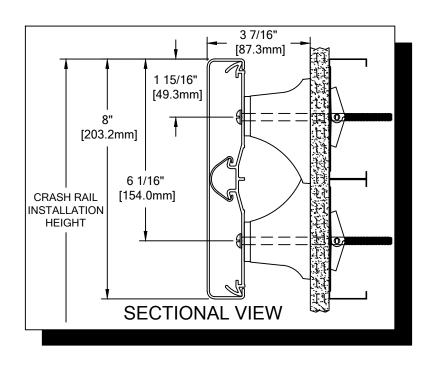
PLEASE READ

PLEASE READ THESE INSTRUCTIONS THOROUGHLY PRIOR TO BEGINNING THE <u>ECR-64N CRASH RAIL</u> INSTALLATION!

THIS INSTRUCTION SHEET IS INTENDED TO PROVIDE A SPECIFIC GUIDE TO FOLLOW FOR THE INSTALLATION OF THIS ECR-64N CRASH RAIL. CONTAINED WITHIN IS THE TECHNICAL INFORMATION AND INSTALLATION TECHNIQUES REQUIRED TO COMPLETE AN EFFICIENT, NEAT AND LONG-LASTING INSTALLATION.

INSPECT ALL MATERIALS FOR DAMAGE OR MISSING PARTS. IF YOU DISCOVER DAMAGED OR MISSING MATERIALS, IN THE USA PLEASE NOTIFY THE FACTORY AT (800) 233-8493, AND IN CANADA (888) 895-8955 FOR CUSTOMER SERVICE.

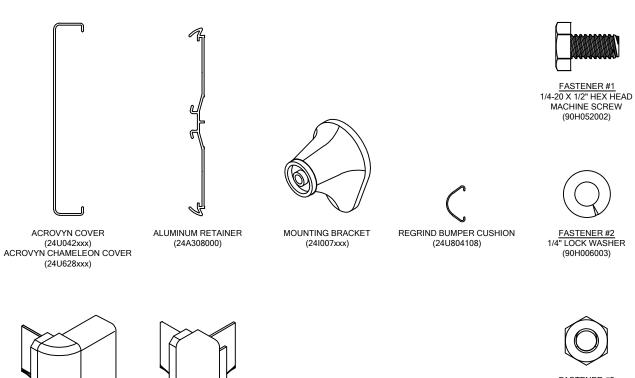
ECR-64N CRASH RAIL MUST BE INSTALLED IN ACCORDANCE WITH THESE INSTRUCTIONS! FAILURE TO FOLLOW THESE INSTRUCTIONS MAY VOID ANY PRODUCT WARRANTIES AND RESULT IN AN UNSUCCESSFUL INSTALLATION. FOR SPECIFIC QUESTIONS REGARDING THE INSTALLATION OF THIS ECR-64N CRASH RAIL PLEASE CALL THE FACTORY IN THE USA AT (800) 233-8493 OR EMAIL IWPTECHSUPPORT@C-SGROUP.COM. IN CANADA CALL (888) 895-8955.

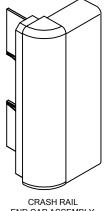


IMPORTANT NOTES

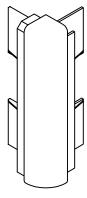
- ALL LINEAL MATERIAL TO BE SUPPLIED IN STOCK LENGTHS. ALUMINUM AND ACROVYN IN LENGTHS UP TO 20'-0". THIS MATERIAL IS TO BE FIELD CUT USING QUALITY EQUIPMENT TO INSURE THAT ALL CUTS ARE SQUARE. WHEN CUTTING MATERIAL SECTIONS, C/S RECOMMENDS USING AN 80-100 TOOTH CARBIDE TIPPED SAW BLADE OR EQUIVALENT, TO MINIMIZE CHIPPING AND MAINTAIN JOINT ALIGNMENT.
- RADIAL MATERIAL MAY BE SUPPLIED FACTORY FORMED OR IN STRAIGHT LENGTHS FOR FIELD FORMING. CONSULT FACTORY FOR OPTIONS.
- 3. ALL DIMENSIONS ARE TYPICAL.
- 4. FOR DRYWALL/PLASTER WALL CONSTRUCTION, IT IS RECOMMENDED FOR FASTENERS TO BE ENGAGED INTO METAL/WOOD STUDS TO MAINTAIN MAXIMUM PULLOUT STRENGTH.
- 5. MATERIAL MUST REACH 65°F MIN. TO 75°F MAX. 24 HOURS PRIOR TO INSTALLATION. THIS IS ESSENTIAL TO MINIMIZE EXPANSION AND CONTRACTION OF MATERIAL.
- 6. ALUMINUM RETAINER SPLICE SHOULD NOT EXCEED 4" [101.6mm] DISTANCE FROM A BRACKET.
- 7. THE DISTANCE BETWEEN AN ACROVYN SPLICE JOINT AND AN ALUMINUM RETAINER SPLICE JOINT SHOULD BE STAGGERED 6" [152.4mm].
- 8. TANGENT POINTS ON FACTORY FORMED RADIAL MATERIAL WILL BE MARKED APPROXIMATELY AND SHOULD BE CUT TO SUIT FIELD CONDITIONS.
- 9. THIS CRASH RAIL REQUIRES A MINIMUM OF 2 MOUNTING BRACKETS PER UNIT. THE MINIMUM END CAP-TO-END CAP CRASH RAIL LENGTH IS 9 3/4" [247.7mm].
- 10. FOR MORE INFORMATION ON ECR-64N CRASH RAIL SEE OUR WEBSITE AT www.c-sgroup.com.

COMPONENTS & WALL FASTENERS





END CAP ASSEMBLY (ECR64CAPxxx)



CRASH RAIL OUTSIDE CORNER ASSEMBLY







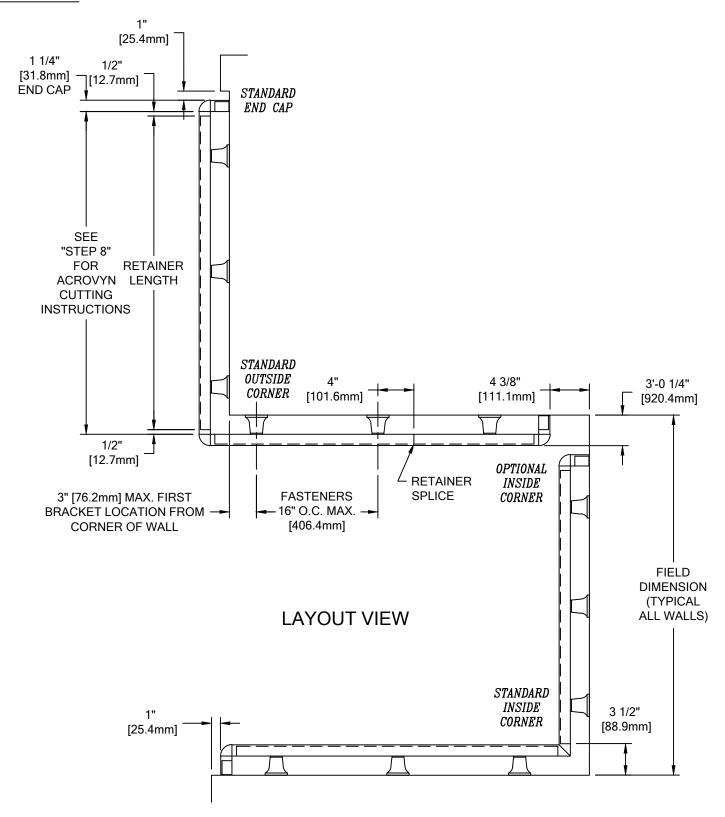




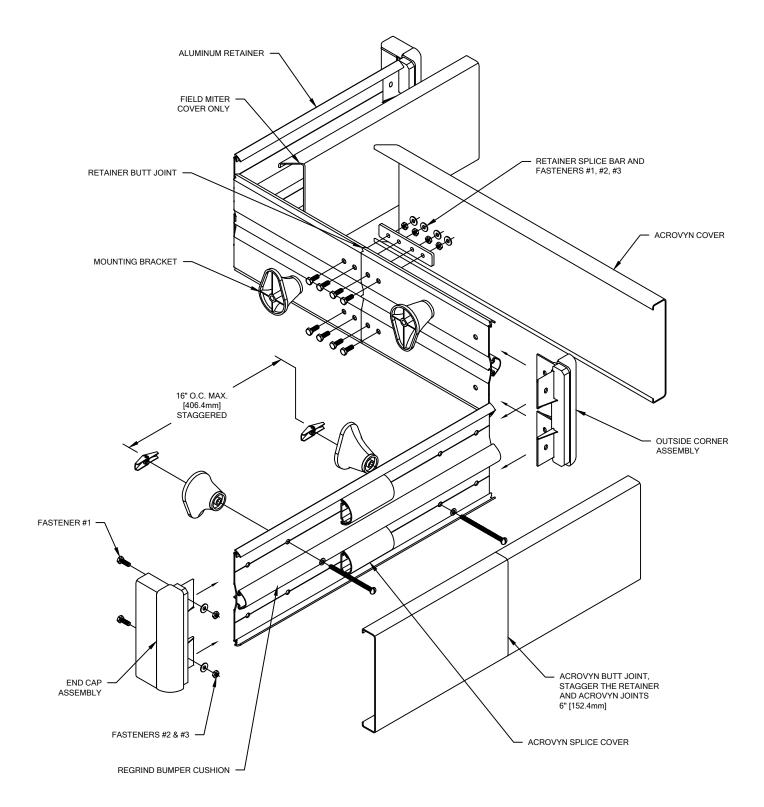
RETAINER SPLICE BAR (241976000)

WALL CONDITION	SPECIFIED FASTENER	DRILL DIAMETERS		C/S PART
		WALL	RETAINER	NUMBER
STEEL STUD/GYPSUM WALL	1/4-20 X 5" RD HD TOGGLE BOLT 1/4" FLAT WASHER SAE	3/4"	9/32"	90H049002 90H007003
CONCRETE/CONC. BLOCK	#14 X 5" PHILLIPS ROUND HEAD AP SCREW 1/4" FLAT WASHER	3/16"	9/32"	90H287002 90H007003
WOOD STUD/GYPSUM WALL	#14 X 5" PHILLIPS ROUND HEAD AP SCREW 1/4" FLAT WASHER	1/8"	9/32"	90H287002 90H007003

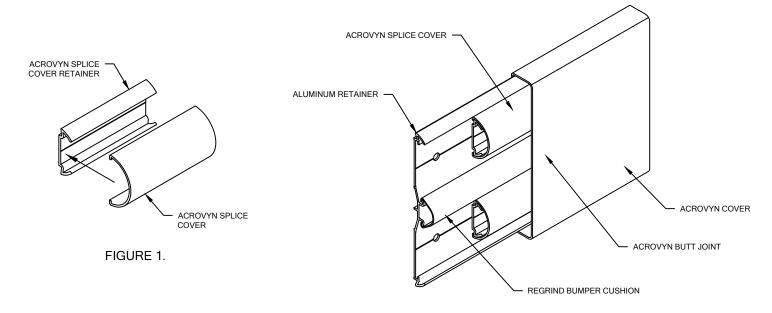
LAYOUT VIEW



TYPICAL ASSEMBLY



SPLICE COVER ASSEMBLY



NOTE: INSTALLATION OF LINEAL OR RADIAL ECR-64N CRASH RAIL SHOULD BE DONE IN ACCORDANCE WITH THE FOLLOWING INSTRUCTIONS.

- 1. ESTABLISH CRASH RAIL HEIGHT ABOVE FINISH FLOOR. DEDUCT 1 15/16" [49.3mm] AND 6 1/16" [154.0mm] AND SNAP A CHALK LINE AT THAT HEIGHT. THIS MARKS THE LOCATION OF THE RETAINER FASTENERS. (SEE SECTIONAL VIEW)
- 2. CUT THE CONTINUOUS ALUMINUM RETAINER TO LENGTH, USING THE REQUIRED DEDUCTIONS AS NOTED (SEE LAYOUT VIEW). PRE-DRILL CLEARANCE HOLES IN THE ALUMINUM RETAINER 16" [406.4mm] O.C., STAGGERED AS REQUIRED. REFERENCE CHART ON PAGE 2 FOR CORRECT DRILL DIAMETERS.

NOTE: IT IS RECOMMENDED THAT THE ACROVYN COVERS AND ALUMINUM RETAINER BE CUT WITH AN 80-100 TOOTH CARBIDE TIPPED SAW BLADE OR EQUIVALENT.

- 3. USING THE RETAINER AS A TEMPLATE, MARK THE LOCATION OF THE FASTENERS. USE A LEVEL TO INSURE RETAINER IS PLUMB. DRILL CLEARANCE HOLES IN WALL SURFACE FOR MOUNTING HARDWARE. REFERENCE CHART ON PAGE 2 FOR CORRECT DRILL DIAMETERS.
- 4. ATTACH END CAPS/OUTSIDE CORNERS BY SLIDING THE END CAP/OUTSIDE CORNER ONTO THE END OF THE ALUMINUM RETAINER AND SECURING INTO POSITION USING THE TWO (2) 1/4-20 X 1/2" HEX HEAD MACHINE SCREWS WITH LOCK WASHER AND NUT AT EACH END CAP AND FOUR (4) AT EACH OUTSIDE CORNER

NOTE: TO AID IN LOCATING THE END CAPS CORRECTLY, CUT A 4" [101.6mm] SECTION OF COVER FROM SCRAP AND SNAP IT ON THE RETAINER. LOCATE THE CAP SO IT ALIGNS FLUSH WITH THE TOP AND BOTTOM OF THE COVER.

5. INSTALL EACH SECTION OF ASSEMBLED RETAINER, IN SUCCESSION, USING THE APPROPRIATE HARDWARE. USE A LEVEL TO INSURE RETAINER IS LEVEL.

NOTE: WHEN FIELD FORMING RADIUS CRASH RAIL, BE SURE TO APPLY NEEDED PRESSURE FROM BRACKET TO BRACKET.

- 6. CUT THE REGRIND BUMPER CUSHION TO LENGTH NOTING THE REQUIRED DEDUCTIONS (SEE LAYOUT VIEW) AND INSTALL ONTO ALUMINUM RETAINER.
- 7. ATTACH THE ACROVYN SPLICE COVER TO THE APPROPRIATE RETAINERS BY SNAPPING THEM INTO PLACE. REMOVE THE PROTECTIVE COVERING FROM THE FACTORY APPLIED ADHESIVE AND ATTACH THE ASSEMBLY TO THE RETAINER AT ALL ACROVYN SPLICE JOINTS.
- 8. CUT THE ACROVYN COVER TO THE PROPER LENGTH. THE COVER LENGTH IS DETERMINED BY MEASURING THE DISTANCE BETWEEN THE INSTALLED END CAPS AND/OR OUTSIDE CORNERS.

NOTE: IT IS RECOMMENDED THAT THE ACROVYN COVERS BE CUT SLIGHTLY LONGER (1/32" UP TO 5'-0", 1/16" OVER 5'-0") THAN THE MEASURED DISTANCE. THIS ADDITIONAL LENGTH WILL PROVIDE FOR A TIGHTER COVER-TO-END CAP FIT.

9. ALIGN THE TOP OF THE ACROVYN COVER WITH THE TOP OF THE ALUMINUM RETAINER AND SNAP THE COVER ONTO THE BOTTOM SECTION OF THE RETAINER.

NOTE: MANUFACTURER RECOMMENDS ALL PRINTED "PRODUCT IDENTIFICATION" ON THE REAR OF THE ACROVYN PROFILE SHALL BE ORIENTED IN THE SAME DIRECTION DURING INSTALLATION TO ENSURE PROPER ALIGNMENT AT SPLICE BUTT JOINTS.



Muncy, Pennsylvania ● (800) 233-8493 ● Fax (570) 546-5169 Mississauga Ontario ● (888) 895-8955 ● Fax (905) 274-6241 www.c-sgroup.com