

# ROUND CORNER METALLIC EXPANSION JOINTS FOR BOILER DUCTING

Metallic Expansion joints are of Round Corner type and used in boiler ducting systems of Cold / Hot Air and Flue Gas to absorb thermal expansion.

## Size

Minimum 600x600mm to maximum 14000x7000 mm

## Material

Carbon Steel (Air ducting) : IS 513 D (1.6 mm) / IS 1079 D (2.5 mm)  
Corten Steel (Gas Ducting) : ASTM A588Gr.A (1.6 mm / 2.5 mm)

## TYPE

Type of Corner - Round Corner

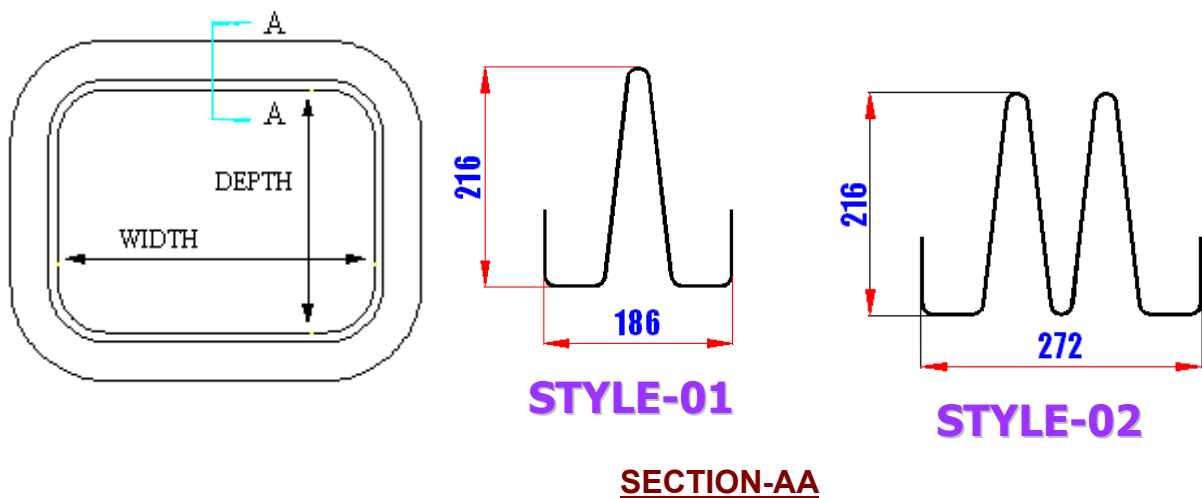
Type of Profile

1. Full Size (2.5 mm Thickness)
2. Half Size (1.6 mm Thickness)

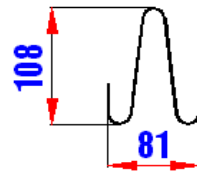
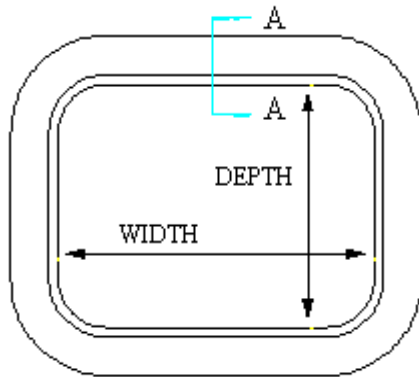
No. of convolutes : 1. Single  
2. Double  
3. Multiples of double (Four & Six)

The round corner expansion joints are designated as **style 1, style 2, style 4 and style 6**, the style number being the indication for the number of convolutions. For style 4, two numbers of style 2 joints will be connected by a corner stiffener. Various styles for Full round corner expansion joint is shown below:

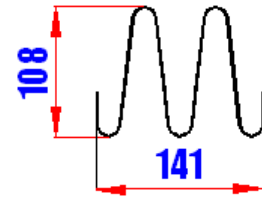
## FULL SIZE ROUND CORNER EXPANSION JOINT



## HALF SIZE ROUND CORNER EXPANSION JOINT



**STYLE-01**

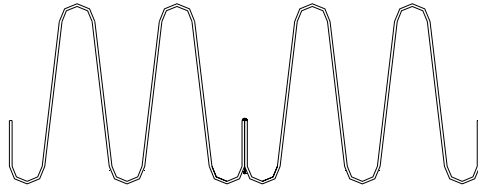


**STYLE-02**

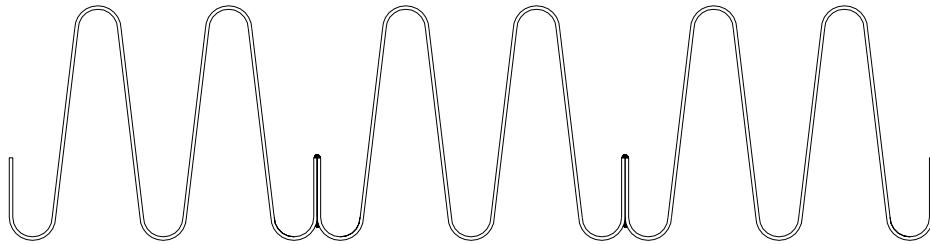
### SECTION-AA

Width of expansion joint :

FULL SIZE ROUND CORNER EXPANSION JOINT Width (mm)		HALF SIZE ROUND CORNER EXPANSION JOINT Width (mm)	
Style 1	186	Style 1	81
Style 2	272	Style 2	141
Style 4	554	Style 4	282
Style 6	836	Style 6	423



STYLE 4



STYLE 6

### **CORNER PIECES OF ROUND CORNER EXPANSION JOINT**



Corner pieces are made separately and joined with straight pieces of required length to make full expansion joints.

Corner pieces of half size joints are of 302 mm radius

Corner pieces of Full size joints are of 605 mm radius

Corner pieces detail dimensions are as per the enclosed Drg.No. **SK-DT-RCEJ**.

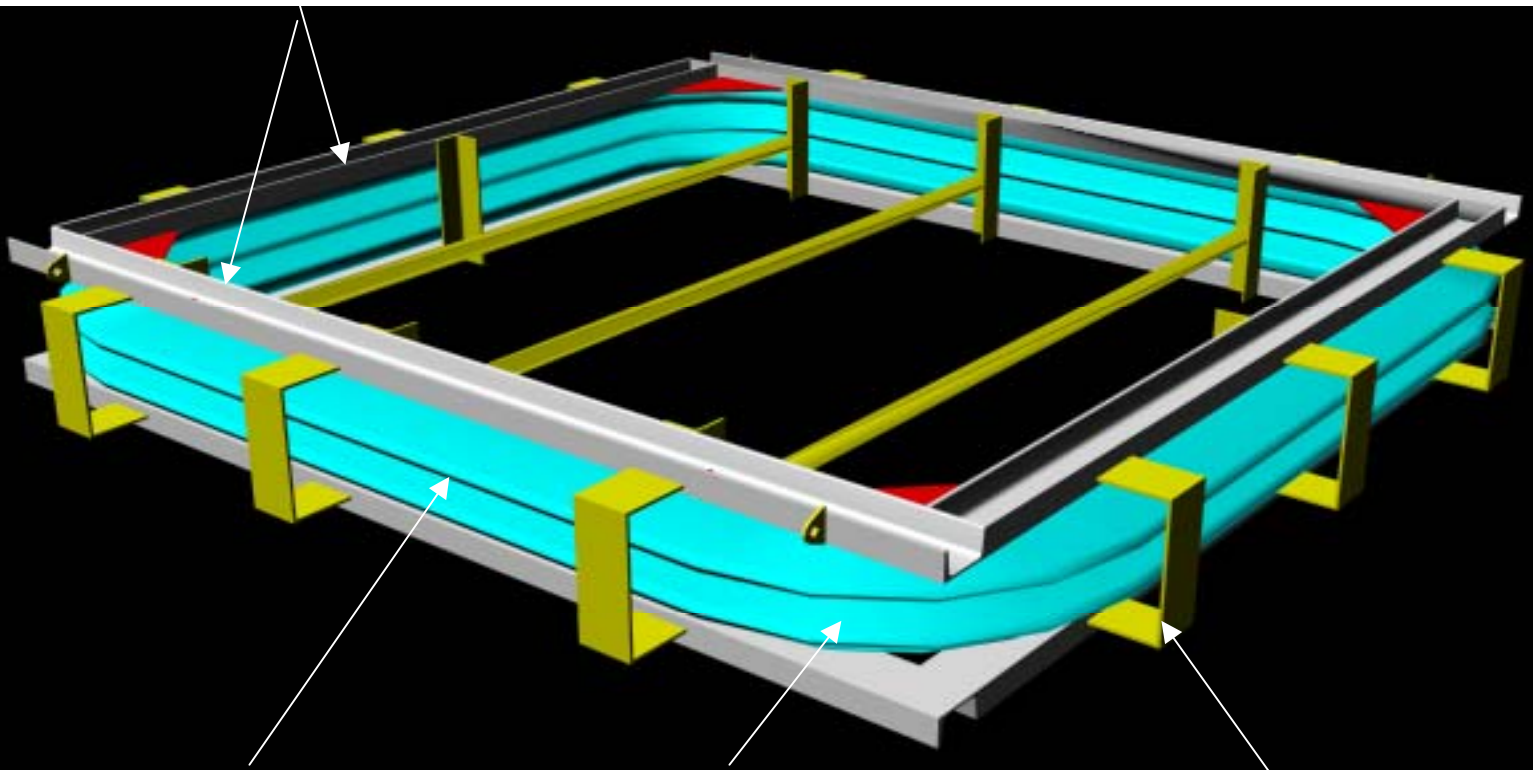
## FLANGES

Expansion joints are shipped with the connecting flanges (Flanges are bolted to Expansion joints). Flanges are also split along with expansion joints and joined at site.

Also transport clamps / strut tubes are to be provided along with flanges.

## **ROUND CORNER EXPANSION JOINT**

**FLANGES**



**STRAIGHT  
PIECE**

**CORNER  
PIECE**

**TRANSPORT  
CLAMPS**

[illegible]

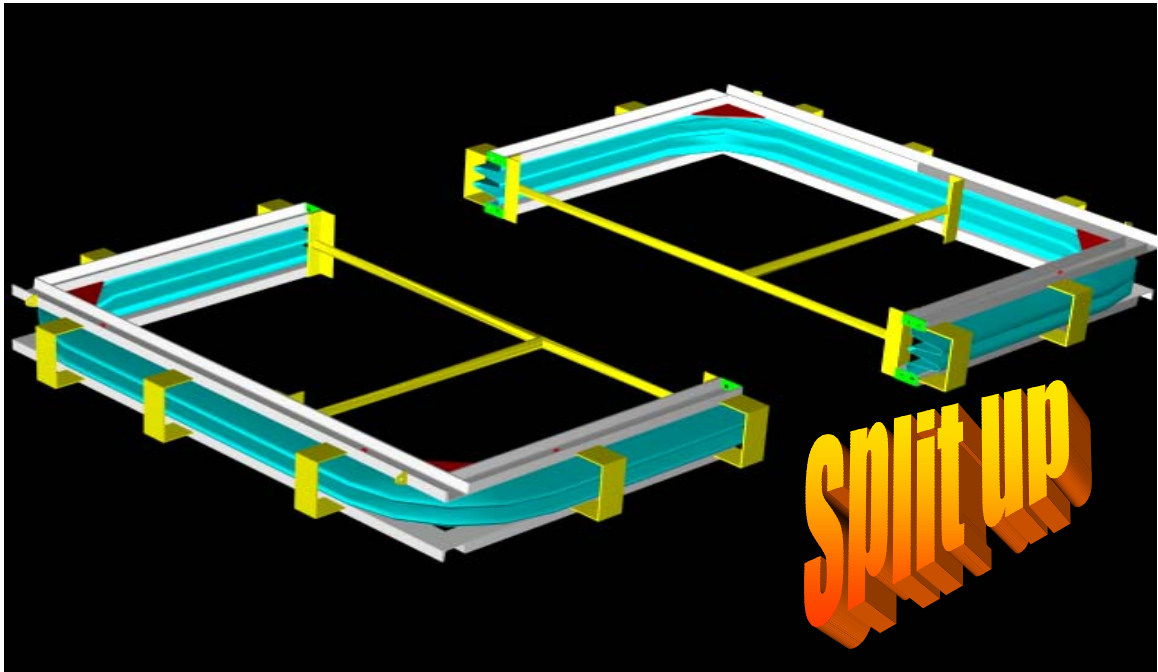
EXP.JT.

DUCT

FLANGE

## SPLITTING THE EXPANSION JOINTS

The expansion joints are shipped as a single piece for size up to 2000 mm. For the sizes above 2000mm expansion joints are shipped in split condition. Splits joints are assembled at site prior to installation.





1	2	3	4	5	6	7	8
DRAWING NO. SK-DT-RCEJ		FOR TOLERANCES OF UNTOLERANCED DIMENSIONS DURING MANUFACTURE REFER PLANT STD. NO TP 023 0299					
HS-RCEJ # 01 (CARBON STEEL) (MC-94-249-029) HS-RCEJ # 01 (CORTEN STEEL) (MC-94-249-033)		HS-RCEJ # 02 (CARBON STEEL) (MC-94-249-030) HS-RCEJ # 02 (CORTEN STEEL) (MC-94-249-034)		HS-RCEJ (For all styles)			
FS-RCEJ # 01 (CARBON STEEL) (MC-94-249-031) FS-RCEJ # 01 (CORTEN STEEL) (MC-94-249-035)		FS-RCEJ # 02 (CARBON STEEL) (MC-94-249-032) FS-RCEJ # 02 (CORTEN STEEL) (MC-94-249-036)		FS-RCEJ (For all styles)			
<div>NOTES:</div> <div><div><div>1.</div><div>NO SCRIBE MARKS, DIE MARKS, SCRATCHES OR OTHER IMPERFECTIONS RUNNING IN THE LONGITUDINAL DIRECTION OF THE CONVOLUTION ARE PERMITTED. IF SUCH MARKS DO OCCUR, THEY MUST BE BLENDED INTO THE BASE MATERIAL WHEN BLENDED MARKS, THE MINIMUM THICKNESS SHALL NOT BE LESS THAN 1.1 MM FOR HS / 1.8 MM FOR FS.</div></div><div><div>2.</div><div>WAVES(FLUTTER) FORMED DUE TO BENDING OF CORNER PIECES: FREQUENCIES NOT LESS THAN 25 MM AND THE AMPLITUDE NOT TO EXCEED 2.5 MM FOR HS / 4.8 MM FOR FS.</div></div><div><div>3.</div><div>NO WAVES(FLUTTER) BEYOND THE NEUTRAL RADIUS OF THE BENT CORNER PIECES ARE PERMITTED.</div></div><div><div>4.</div><div>MATERIAL TO BE USED :- HS-RCEJ (#01 &amp; #02) : IS:513 TYPE D(CARBON) / A588GR.A (CORTEN) FS-RCEJ (#01 &amp; #02) : IS:1079 ST.34.(CARBON) / A588GR.A (CORTEN)</div></div></div>							
		<div>REV 01</div> <div>DATE</div> <div>ALTERED : CHD &amp; APPD :</div> <div>ZONE</div>		<div>CAUTION: The information on this document is the property of BHARAT HEAVY ELECTRICALS LTD. It must not be used directly or indirectly in any way detrimental to the interest of the company.</div> <div><div>TYPE OF PRODUCT OR NAME OF CUSTOMER/PROJECT</div><div><div><div>DEPT DUCT CODE</div><div>355-054</div><div>ALL DIMENSIONS ARE IN MM</div><div>124</div></div><div><div>PROJECTION</div><div>SCALE</div><div>WEIGHT (Kg)</div></div><div><div>REF TO ASSY / OLD DWG</div><div><div>TITLE</div><div>SPEC.FOR ROUND CORNER EXPANSION JOINTS</div></div></div></div></div>		<div><div><div>DRN</div><div>CHD</div><div>APPD</div></div><div><div>NAME</div><div>BMKUMAR</div><div>ARUN</div><div>V.S.R</div></div><div><div>SIGNATURE</div><div></div><div></div><div></div></div><div><div>DATE</div><div>21-04-08</div><div>21-04-08</div><div>21-04-08</div></div></div> <div><div>DRAWING NO :</div><div>SK-DT-RCEJ</div><div>REV</div></div>	
1	2	3	4	5	6	7	8