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# **RECOMMENDED ENGINEERING SPECIFICATION FOR UltraJoint®**

# **METAL EXPANSION JOINT**

## PART 1 GENERAL

1.01 SECTION INCLUDES

1. UltraJoint single or multi-ply stainless steel bellows internally pressurized expansion joint with integral guide ring, eliminating need for guiding within 4 pipe diameters (first guide to be at 14 pipe diameters.). Provide appropriate model internally guided and internally pressurized bellows expansion joint with restraint rods to limit the axial compression and extension for attachment to mating piping
   1. Model UltraJoint UJ/50-FxF (150# carbon steel plate flange – 50 PSI working pressure)
   2. Model UltraJoint UJ/50-WxW (carbon steel weld ends – 50 PSI working pressure)
   3. Model UltraJoint UJ/50-GxG (carbon steel groove ends - 50 PSI working pressure)
   4. Model UltraJoint UJ/150-FxF (150# carbon steel plate flange – 150 PSI working pressure)
   5. Model UltraJoint UJ/150-WxW (carbon steel weld ends – 150 PSI working pressure)
   6. Model UltraJoint UJ/150-GxG (carbon steel groove ends - 150 PSI working pressure
   7. Model UltraJoint UJ/300-FxF (300# carbon steel flange - 300 PSI working pressure)
   8. Model UltraJoint UJ/300-WxW (carbon steel weld ends – 300 PSI working pressure)
   9. Model UltraJoint UJ/300-GxG (carbon steel groove ends - 300 PSI working pressure)

1.02 MANUFACTURER

A. Provide appropriate model single or multi-ply internally guided and internally pressurized expansion joint as manufactured by Flex-Hose Co., or approved equal.

PART 2 PRODUCTS

2.01 Metal expansion joint(s)

## Expansion joints shall be made in the USA.

1. Bellows element shall be a single or multi-ply of stainless steel material
2. Flanged units shall have 150# or 300# (depending on mating piping) carbon steel plate fixed flanges (ANSI OD and drilling)
3. Weld end units shall be a carbon steel schedule 40/standard wall pipe (minimum)
4. Groove end units shall be a carbon steel schedule 40/standard wall pipe (minimum)
5. The rated working pressure of the bellows shall have a minimum 3:1 safety factor as per EJMA (Expansion Joint Manufacturers Association)
6. Joint shall be provided with internal restraint rods to prevent over-extension.
7. Joint shall have internal guide ring that allows placement of first guide at a distance of 14 pipe diameters.
8. Joint shall be provided with internal guide ring to limit lateral motion
9. Optional compression stops are to be utilized in applications where over-compression of the expansion joint may occur.
10. For the Canadian market they must be CSA standard B51 certified, inspected and tested by the Technical Standards & Safety Authority of Canada with a 4:1 safety factor per EJMA