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# **RECOMMENDED ENGINEERING SPECIFICATION FOR BELLOWSXhaust™**

# **METAL EXPANSION JOINT**

## PART 1 GENERAL

1.01 SECTION INCLUDES

1. BellowsXhaust stainless steel bellows expansion joint. Bellows used for exhaust come in many forms and sizes. Provide adequate application information in order to select the proper bellows expansion joint for attachment to mating piping.
	1. Specify the alloy (321 stainless steel is common) of the bellows required during request for proposal
	2. Specify the flow rate (ft/sec) of the media to confirm whether a liner should be included inside the bellows as high flow rates and/or turbulent flow may require an internal rigid liner.
	3. Specify the mating connections required for the exhaust expansion joint: plate flanges, weld ends, and angle flanges are just a few of the available fitting options.

1.02 MANUFACTURER

A. Provide appropriate model bellows expansion joint as manufactured by Flex-Hose Co., or approved equal.

PART 2 PRODUCTS

2.01 Metal expansion joints(s)

## Expansion joints shall be made in the USA.

1. Bellows element shall be a single ply (typically) of stainless steel material
2. Flanged units shall have 150# carbon steel plate fixed flanges (ANSI OD and drilling)
3. The rated working pressure of the bellows shall have a minimum 3:1 safety factor as per EJMA (Expansion Joint Manufacturers Association)
4. Optional tie rods are to be utilized in applications where over-extension of the expansion joint may occur.
5. Optional compression stops are to be utilized in applications where over-compression of the expansion joint may occur.
6. Where tie rods are require the flanges must be configured with three (minimum) tie rods equally spaced, to prevent over travel and react to thrust loads resulting from internal pressure.
7. 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