



EMFLEX[®]

Single Articulated Expansion Joints
(Single Untied or Tied Flexible Connector)

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Single Articulated Expansion Joints

(Single Untied or Tied Flexible Connector)

EMFLEX single articulated expansion joints (also known as single 'untied' or 'tied' flexible connectors) are used to absorb vibration in pumped systems and misalignment in pipework systems. They are usually installed at the pump suction and discharge connections. The tie rods prevent elongation due to the internal pressure thrust. The units are not intended to absorb vibration and misalignment simultaneously. Axial thrust must not be applied to these units, for example when pipework is mounted vertically from the unit. In this situation the pipework should be supported using spring supports.



TYPE BFC

For use on steel pipelines and is suitable for steam and hot water for heating. This unit has stainless steel bellows and inner sleeve with carbon steel 'untied' or 'tied' flanges.

TYPE BFCN

For use on copper pipelines and is suitable for condensate and domestic hot water. This unit has stainless steel internals comprising stainless steel bellows, inner sleeve and van-stone ends with carbon steel 'untied' or 'tied' backing flanges.

Nominal Size	Installed Length	Vibration Movement	Lateral Deflection at 10 bar
mm	mm	+/-mm	mm
50	130	0.75	2
65	130	0.75	2
80	130	0.75	2
100	130	0.75	2
125	150	0.75	2
150	150	0.75	2
200	200	0.75	2
250	200	0.75	2

Other lengths and sizes are available. External protective sleeves are available.

Working Pressure: 16 bar (1600 kPa).
Test Pressure: 1.5 x Working Pressure.

Design Consideration:
 Single tied flexible connectors are used on high temperature pumps etc where conventional rubber flexible connectors do not have sufficient temperature capability (i.e. above 100°C).

Press./Temp. ratings for carbon steel PN16 Flanges.

Design Temp. (°C)	120	150	200	250	300
Working Press. Bar	16	14	12	11	9

They are usefully employed to relieve stresses on boiler crown valves and other vulnerable plant connection points.

Material Specifications:

Bellows and internal sleeve are stainless steel.
 For steel service the flanges and tie rods are carbon steel.
 For copper service van-stone ends are stainless steel; backing flanges and tie rods are carbon steel.