

# Single unrestrained

## MWA & MFA series

These expansion joints are made of one single bellows element with end connections.

Regardless of accessories, such as liners and covers, this model absorbs all of the movements in any one length of piping but it is mainly used to absorb axial movements.

It does not restrain pressure thrust so adequate anchors and guides must be provided and they can be used only in piping systems that incorporate correctly designed anchors and pipe alignment guides. These expansion joints are made of one single bellows element with end connections.



**MWA**

This type of Expansion Joint is made up of one single bellows provided with welding ends.



**MFA**

This type of Expansion Joint is made up of one single bellows equipped with fixed flanges.



**MFG**

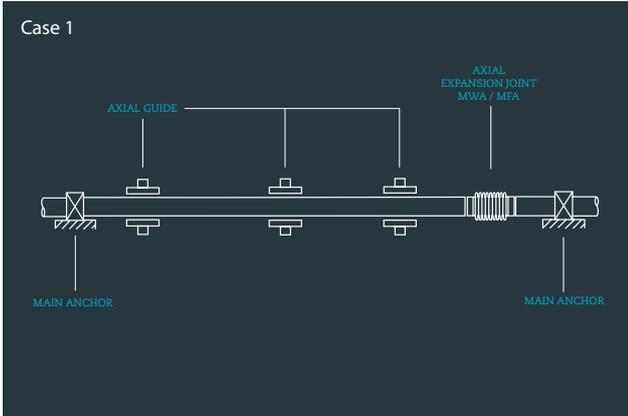
This type of Expansion Joint is made up of one single bellows equipped with floating flanges.

More Single unrestrained expansion joints on [www.macoga.com](http://www.macoga.com)

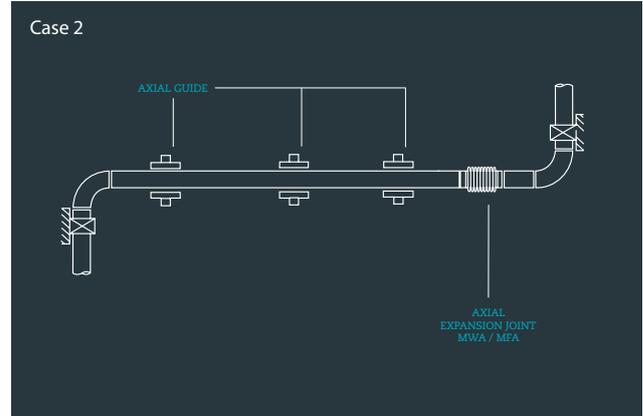
## Features

TYPE	SERIES		
Single unrestrained	MWA, MFA, MTE, MTI, MQP, MFG		
PRESSURE THRUST RESTRAINT	MOVEMENTS		
✘	Axial	✔	
	Lateral	Single-plane	✔
		Multi-plane	✔
	Angular	Single-plane	✔
		Multi-plane	✔
Must be properly guided Requires main and directional anchors			

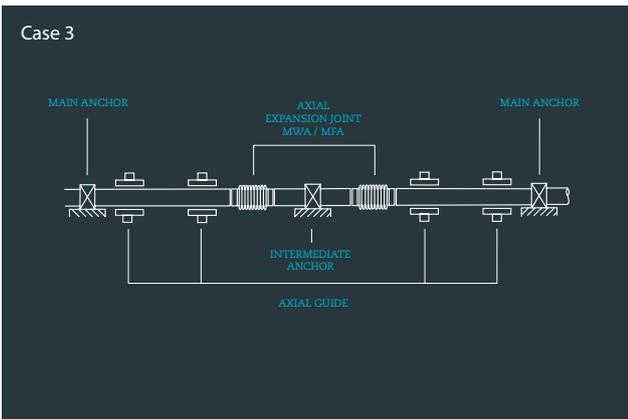
Typical applications



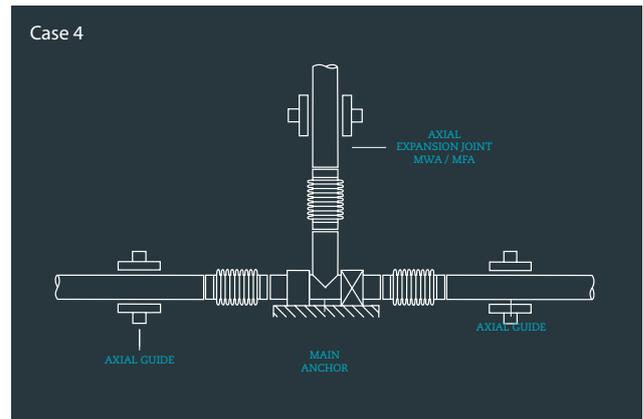
The classic case of an Expansion Joint located in a straight section of piping installed between two main anchors.



The main anchors are located where pipes change directions in order to consider the straight section as an individual section of piping taking us to case no. 1.



Owing to the size of the straight section of pipe, the Axial EJs are fitted in a way that they are joined together by an intermediate fixed point, thus forming a single unit, similar to an Axial EJ fitted between two main fixed points.



In this case the main fixed point is situated at the intersection where two sections of piping meet.

Typical applications

