

EMFLEX Expansion Joint Calculator

Instruction to calculate amount of thermal expansion

Firstly align the central white sliding scale showing the PIPE LENGTH with the CARBON STEEL or COPPER arrow.
Secondly look at the TEMPERATURE DIFFERENCE blue scale.
Finally read of the EXPANSION from the central white sliding scale.

Example 1:

Consider a carbon steel pipe of 30 metres length, which expands when the temperature rises from 0 to 80 deg C.

TEMPERATURE DIFFERENCE = 80 - 0 = 80 deg C.

Therefore by aligning the scales, EXPANSION = 30 mm.

Example 2:

Consider a copper pipe of 15 metres length, which expands when the temperature rises from 0 to 70 deg C.

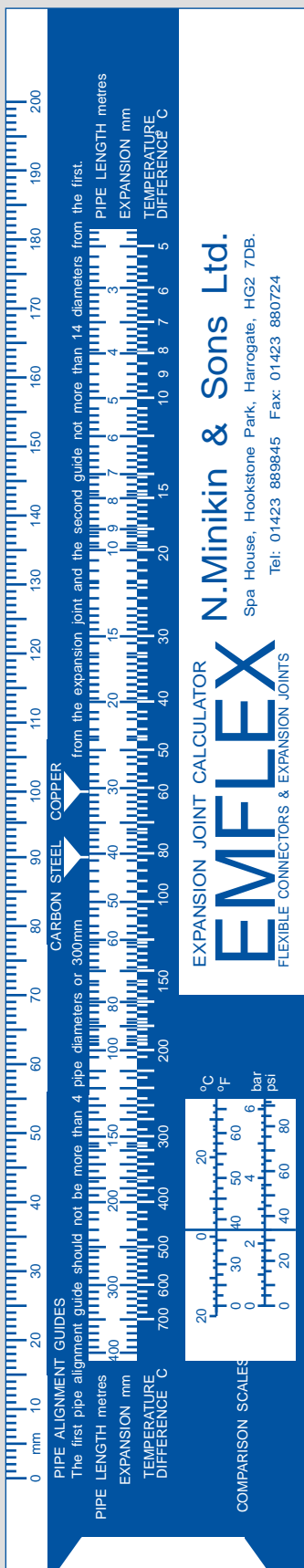
TEMPERATURE DIFFERENCE = 70 deg C.

Therefore by aligning the scales, EXPANSION = 17.5 mm.

Comparison Scales

Temperature comparison scales can be used to convert between degrees C and degrees F.

Pressure comparison scales can be used to convert between



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EMFLEX Expansion Joint Calculator

Instruction to calculate anchor force for axial expansion joints

Firstly align the central white sliding scale showing the WORKING PRESSURE with the relevant system working pressure.
Secondly look at the relevant PIPE SIZE on the blue scale.
Finally read off the FORCE from the central white sliding scale.

Example 1:

Consider a 50mm nominal size axial unit at 4 bar working pressure.

FORCE = 7.9kN

Example 2:

Consider a 200mm nominal size axial unit at 10 bar working pressure.

FORCE = 85.3kN

Scale Rules

Rules are provided at scales of 1:20, 1:50, 1:100 and 1:200 which are commonly used.

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