HEATMASTERS®
the wizards of metal

SELECTING HEATING RESISTORS

CALCULATING THE SIZE OF A VHV HEATING MAT

Formula to calculate length of the pipe circle:
L = 3.14 x (Du + t), in which Du = external diameter of the pipe; t = thickness of the heating resistor = 10 mm

EXAMPLE

Selecting heating element for tube (Ø508 x 25 mm).

Using standard EN ISO 17663:2009 on formula:

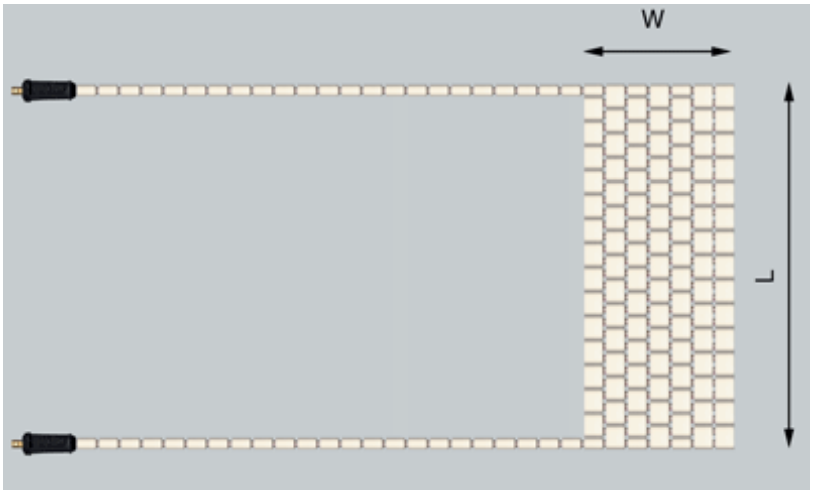
$2{,}5\sqrt{(2Du-4e)e}$, Max 12 x e

Heating zone W = 300mm and length of pipe circle P = 1626 mm.

Suitable standard-size heating element is VHV-185x325 (7x15), W = 325 mm, L = 185 mm.

Quantity of heating elements will be
Q = P/L = 1626/185 = 8,7 -> 8 heating elements needed, whereby the area between the resistors is less than wall thickness.

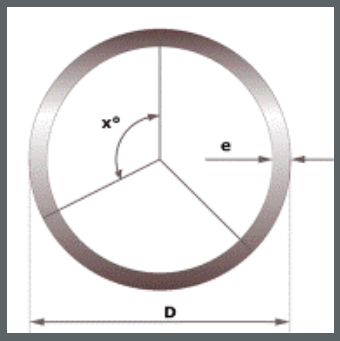
Dimensions of a heating mat



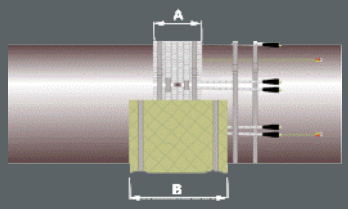
Standards are giving quality requirements for heat treatment as:

Pipe Ø [mm]	Qty	Pitch
under 170	1	
171-370	2	180°
371-550	3	120°
over 551	4	90°

Quantity of T/C's (EN ISO 17663:2009)



Placing of T/C's (EN ISO 17663:2009)



Width of heating and insulation zones