

Case for rounded shapes (Pipes)

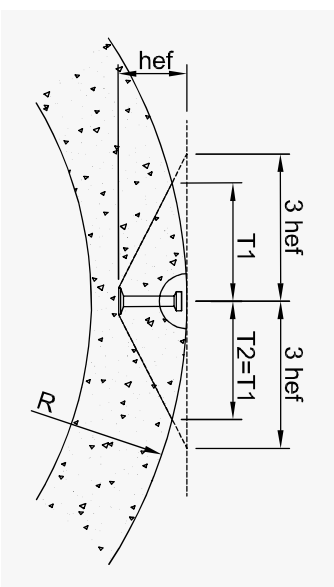
For rounded forms (like pipes for example), the transversal distances are reduced to take into account the exterior radius of the element.

So in this case:

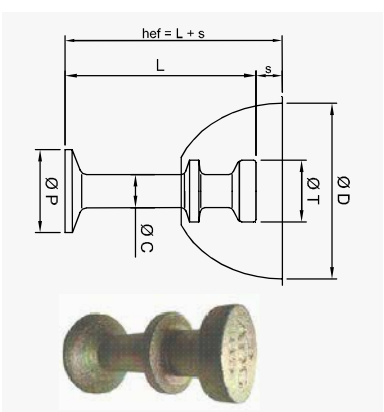
$$T_1 = T_2 = R \times \sin \left\{ 180 - \arcsin \left[\cos(18,4) \frac{R - h_{ef}}{R} \right] - 108,4 \right\}$$

With

- R (cm) = Bend radius of the concrete element
- h_{ef} (cm) = Casting depth of the anchor
- T_N (cm) = distance to the edge of the concrete or semi-distance between the anchors, limited to $3 \times h_{ef}$



2.2 Double Head Anchor



REFERENCE	SWL	DIMENSIONS [MM]					
		ØT	ØC	ØP	L	ØD	S
AP013...	1.3 T	18	10	25	55 à 240	60	8
AP025...	2.5 T	25	14	35	55 à 240	74	10
AP050...	5 T	36	20	50	120 à 180	94	12

The resistance value of the double head anchor is the same as the equivalent lift head anchor (same SWL and same length). Indeed lift head anchors and double head anchors have the same body and foot diameter.

Like for the lift head anchor, the anchorage is produced in the concrete due to the foot of the anchor which generates a compression cone. So, the anchorage resistance depends on the concrete resistance (f_{cd}), the length of the anchor (L) and the distances to the edge of the concrete (T_N) and between each anchor (T_N).

The wrenching resistance values are shown in paragraph 2.1 relating to lift head anchors.