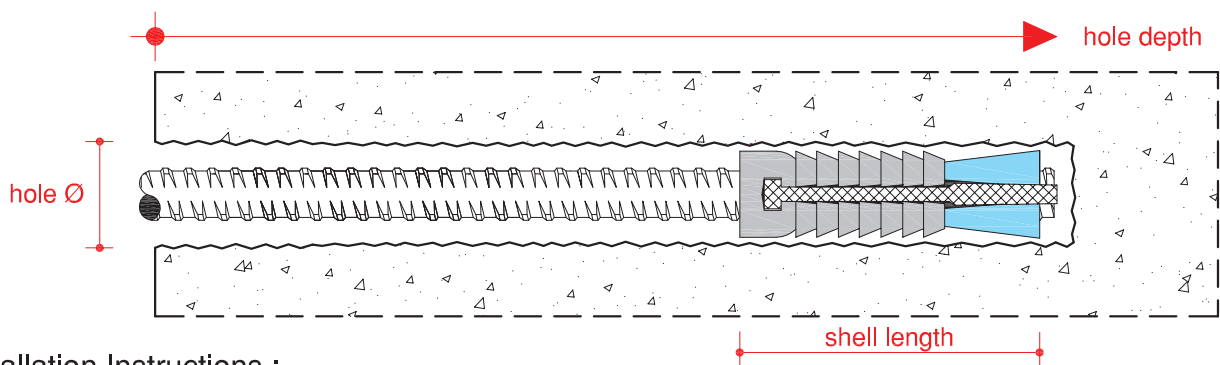


## Technical Data Sheet : D.296

### DYWIDAG Mechanical Expansion Shells - Form Tie Applications

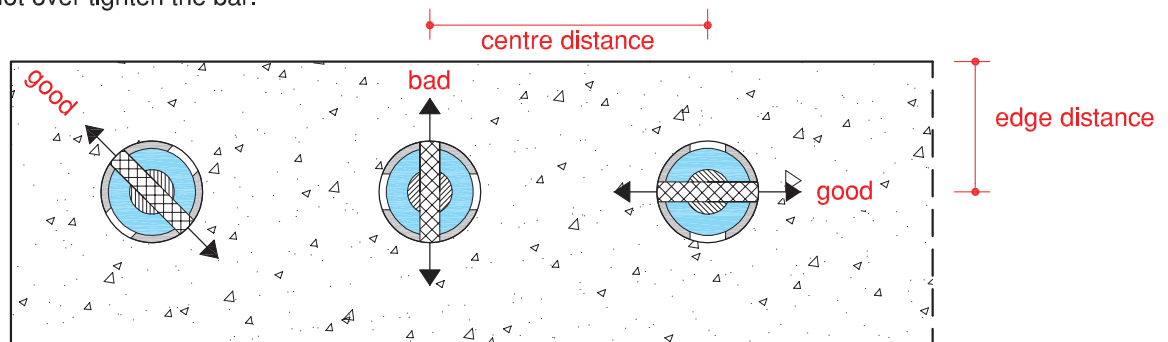
#### Prestressing Steel Threadbar :

bar Ø	grade	ultimate kN	part No.	length mm	weight kg	hole Ø mm	min. depth mm	min. centre mm	min. edge mm
15mm	900/1100	195	15F2128	85	0.24	32 - 34	200	350	175
15mm	900/1100	195	15F2135	85	0.26	35 - 37	200	350	175
15mm	900/1100	195	15F2184	130	0.38	35 - 37	250	350	175
20mm	900/1100	345	20F2137	125	0.68	51 - 53	300	500	250
26.5mm	950/1050	579	26E2221	150	1.13	61 - 63	400	600	350



#### Installation Instructions :

- IMPORTANT** : the hole should be drilled using a rotary percussive drill only and then blown clean using compressed air.
- The hole diameter should be controlled to fall within the stated tolerance range of the Expansion Shell being used.
- Screw the threadbar fully into the conical part of the Expansion Shell as shown above.
- IMPORTANT** : if the Expansion Shell is fitted with a temporary plastic collar, it should be removed before insertion into the hole.
- Before installation, orientate the Expansion Shell as shown on the drawing below to avoid the risk of spalling.
- After installation the Expansion Shell should be locked by rotating the bar clockwise to "activate" the two half shells.
- IMPORTANT** : do not over tighten the bar.



#### Testing :

- To assess the safe carrying capacity of the Expansion Shell, it is recommended that pull-out tests are conducted on-site.
- A suitable hollow hydraulic stressing jack should be used to check and determine the adequate depth and spacing of the holes.
- If no initial movement is acceptable, a preload of 50kN - 100kN should be applied using an hydraulic jack.

#### General Notes :

- The Expansion Shells are designed to carry the ultimate capacity of the Threadbar in competent material.
- Expansion Shells to suit other Threadbar diameters and hole sizes are available on request.
- Centre and edge distances are based on concrete or rock strength of 30N/mm<sup>2</sup> at 50% ultimate capacity of the bar.
- Where vibration is present, the load and movement of the formties held by the Expansion Shell should be constantly monitored.
- This information is given in good faith and is for guidance purposes only.
- Installers should satisfy themselves that use of the Expansion Shells meets the requirements of the Designer responsible.