



# CRUX Grout Seals

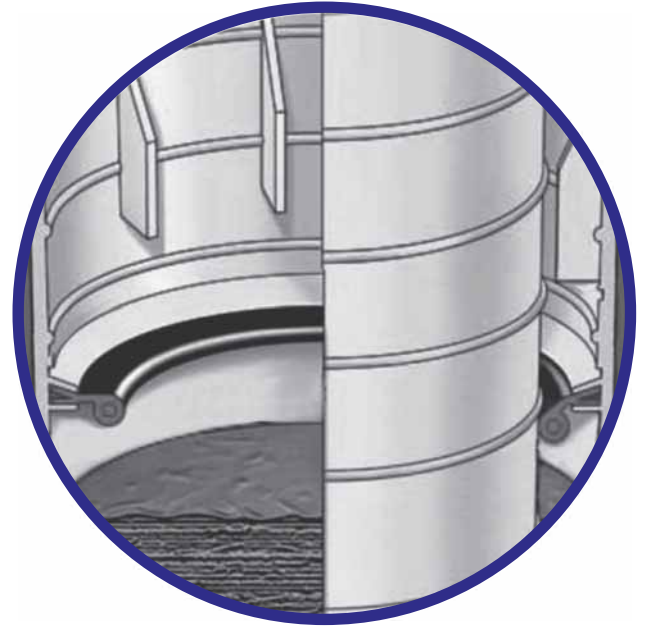
The **CRUX Grout Seal** is a passive grout support system, requiring no activation. The action of pile installation through the Grout Seal sets up a hoop tension in the reinforced bulbous ring. The resultant radial reaction of the bulbous ring acting against the pile associated with the hoop tension then counteracts the grout pressure forces.

The system accepts the tolerance, which must be provided within pile centralisers without significant loss of capacity. The bulbous ring positions itself to locate around the pile at its position within the centraliser shims.

A single Grout Seal unit has the capacity to support 30 metres or more of submerged grout. Capacity can be increased by adding more core fabric within the bulbous ring. Where grout pressure heads exceed the level for which it is prudent to use a single unit, capacity can be achieved by provision of a dual system, with support capacity shared between two Grout Seals.

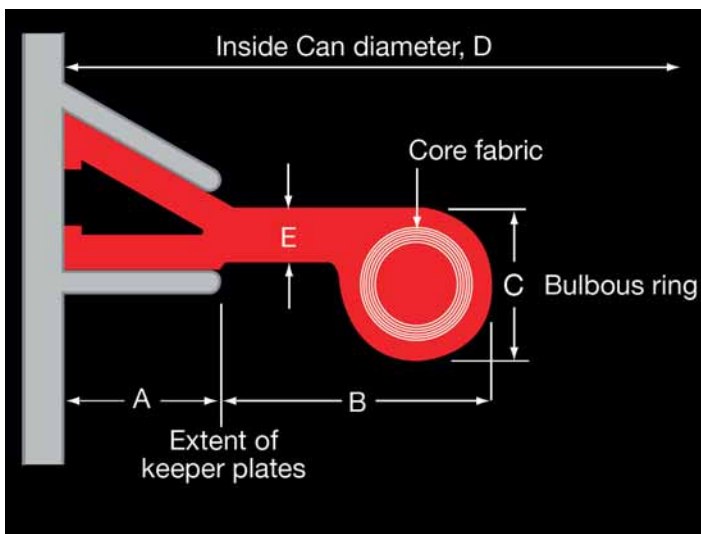
Fitting is achieved by insertion between two pre-installed keeper plates. The fixing toroid is then filled and pressurised with epoxy to provide an effective and secure fixing.

Grout Seals can be pre-fitted in Cans which are then delivered to the fabrication yard for connection to the structure or, alternatively, they may be site fitted. In either case no site commissioning is required.



## Advantages to using CRUX Grout Seal Systems

- No hoses, valves or other hardware to purchase, fit or test. This results in clear cost savings and eliminates the dominant cause of frequent grout support system failure.
- No site testing or commissioning required.
- The Grout Seal also functions as a wiper, preventing seabed material from entering the annulus to the detriment of grout connection strength.
- No offshore operation is required.
- No residual activation hardware remains to cause cathodic protection drain or diver hazard.



PILE SIZE in inches	DIMENSIONS in mm				
	A	B	C	D	E
20	50	65	50	702	20
24	60	71	50	830	20
30	60	75	55	980	20
36	62	78	60	1130	20
42	65	84	65	1290	22
48	65	84	65	1432	22
54	65	104	70	1614	22
60	65	104	70	1758	22
66	70	114	75	1928	24
72	70	114	75	2070	24
84	70	129	90	2382	25
96	70	134	90	2676	25
108	70	154	90	3000	25

NOTE: Inside Can Diameter, D, may be varied to a limited extent.

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