

States FIXED STRUCTURES

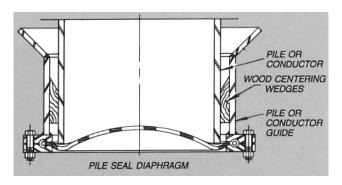
Diaphragm Closures

Innovative Diaphragm Solutions

Diaphragm Closures, pioneered by Oil States Industries, are the accepted method of efficiently sealing platform legs and skirt sleeves to provide buoyancy during the jacket installation phase. The closures are made of nylon-reinforced rubber and can be quickly and easily pierced by the pile or ruptured with an integral cutting device.

Unequaled Reliability Record

Since 1965 Oil States has designed and manufactured thousands of these versatile closures. They have been used on platforms worldwide by all major oil companies, maintaining a reliability record that is unequaled in the industry. In fact, Oil States has designed and manufactured more offshore platform diaphragm closures than all other manufacturers of similar equipment combined.



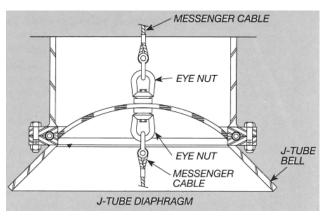


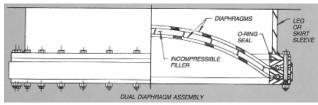


Photo courtery Marsthon Oil UK, Ltd. and Ottshow Missain
Oil States' 87-inch diaphragm closures on Marathon's 21,000 ton South Brae A jacket.

Superior Pressure Capability

Oil States' diaphragms have been successfully used on the world's tallest offshore platforms. To ensure quality and reliability, each diaphragm is factory tested and certified to 1.5 times hydrostatic pressure. Significantly, Oil States' diaphragms are noted for having the highest pressure capability in the industry.

Diaphragms for piling as large as 144" O.D. have been supplied by Oil States. Also, special diaphragm applications have utilized dual diaphragms or retrievable diaphragm support plugs. The many options available preclude water depth limitations on the closures.









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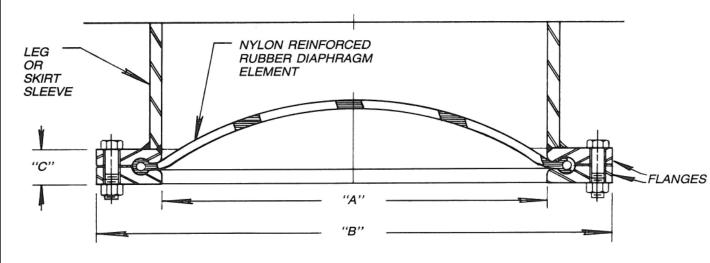
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Diaphragm Closures



PILE SIZE		A *		B*		C†		EST. WEIGHT‡	
in.	mm	in.	mm	in.	mm	in.	mm	lbs.	kg
		12	305	19	483	2.5	64	165	75
		15	381	22	559	2.5	64	197	89
		19	483	26	660	2.5	64	240	109
18	457	24	610	34	864	3.0	76	304	138
24	610	28	711	38	965	3.0	76	390	177
24	610	30	762	40	1016	3.0	76	414	188
30	762	33	838	43	1092	3.0	76	439	199
36	914	38	965	48	1219	3.0	76	509	231
36	914	40	1016	50	1270	3.5	89	652	296
42	1067	44	1118	54	1372	3.5	89	712	323
42	1067	49	1245	59	1499	3.5	89	796	361
48	1219	51	1295	61	1549	3.5	89	828	376
48	1219	55	1397	65	1651	3.5	89	896	406
54	1372	58	1473	68	1727	3.5	89	951	431
60	1524	63.5	1613	73.5	1867	3.5	89	1062	482
60	1524	66	1676	76	1930	3.5	89	1101	499
66	1676	68	1727	78	1981	4.0	102	1285	583
66	1676	71	1803	81	2057	4.0	102	1366	620
72	1829	75	1905	85	2159	4.0	102	1456	660
72	1829	78	1981	88	2235	4.0	102	1523	691
78	1981	82	2083	92	2337	4.0	102	1602	727
84	2134	87	2210	97	2464	4.0	102	1686	765
84	2134	90	2286	100	2540	4.0	102	1742	790
96	2438	101	2565	111	2819	4.0	102	1966	892
102	2591	107	2718	120	3048	4.0	102	2690	1211
120	3048	128	3251	138	3505	4.0	102	2522	1144
132	3353	139	3531	149	3785	4.0	102	2817	1278
144	3658	149	3785	159	4039	4.0	102	3050	1383

When ordering Diaphragm Closures, furnish O.D. and I.D. of jacket leg, pile O.D., and water depth. Oil States will then provide a detailed drawing of the proposed installation.

- * Dimensions A and B can vary to fit various leg sizes.
- † Dimension C can vary with test pressure requirements.
- ‡ Estimated weight can vary with test pressure and flange dimensions.



