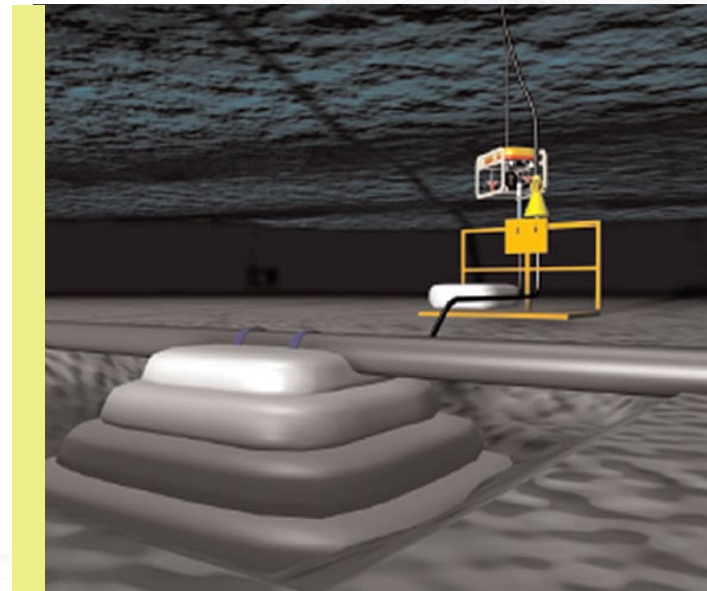


# Fabric Formwork Grout Bags

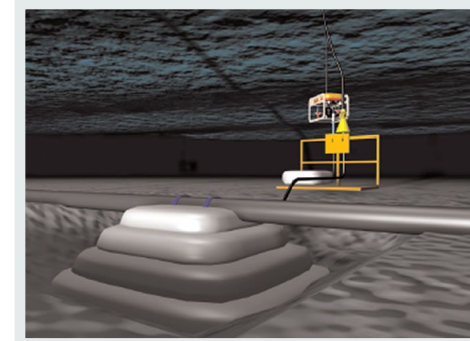
## An Easy-to-Use Selection Guide

For Support, Protection and Stabilisation of Pipelines, Cables, J-Tubes and Risers in the Offshore Energy Sectors



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16	FO-60L Large Base Pipeline Support
17	FOJT Range: J-Tube Supports



## Fabric Formwork Grout Bag Range

Your single-source solution for the design, manufacture and installation of all types of fabric formwork grout bags

FoundOcean has undertaken extensive testing on pipelines of various diameters and thicknesses of weightcoat, which has led to the development of a wide range of fully engineered fabric formworks.

FoundOcean's fabric formworks are a flexible shuttering, constructed from woven fabric which is filled with grout in-situ. The final shape of the support is defined by the shape of the grout bag. Fabric formworks are also used to raise a pipeline or structure by jacking to a desired elevation.

FoundOcean has experience of installing fabric formworks for supporting and stabilising pipelines, j-tubes and risers in both preventative and curative conditions, and depending upon the environment, can be deployed by divers or ROVs.

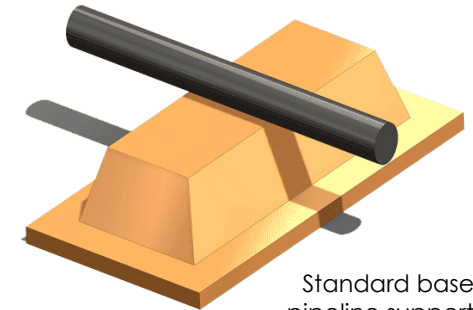
A pyramid shaped grout bag can be used to support the power cable(s) as it exits the J-Tube below the transition piece. Multiple grout bags can be used when more than one cable requires supporting.

In addition, FoundOcean provides specialised grout mixing and pumping equipment together with experienced personnel for the successful installation of the formworks.

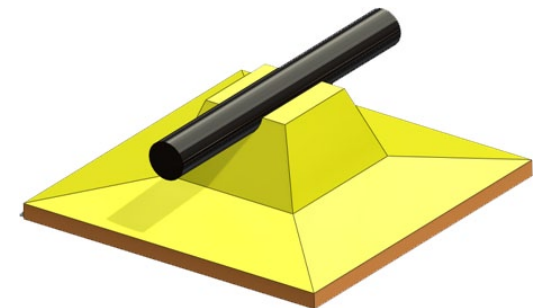
Because FoundOcean is involved in the offshore grouting work, all formwork designs take account of the practical aspects of installation. Detailed work procedures are provided to ensure that the diving or ROV contractor correctly applies the solutions.

### Notes

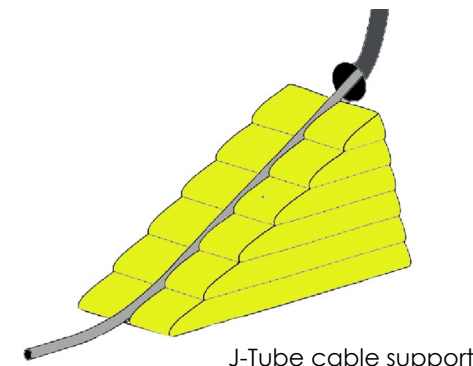
1. Diver deployed fabric formwork grout bags include fixing straps, injection sleeves and vent pipes.
2. Volume and cement quantities are a guide, subject to cement type and grout density.
3. The cement quantities indicated do not account for overage.
4. A reduction in the support height will result in less cement usage.
5. Grout bags can be installed using divers or ROVs.



Standard base pipeline support



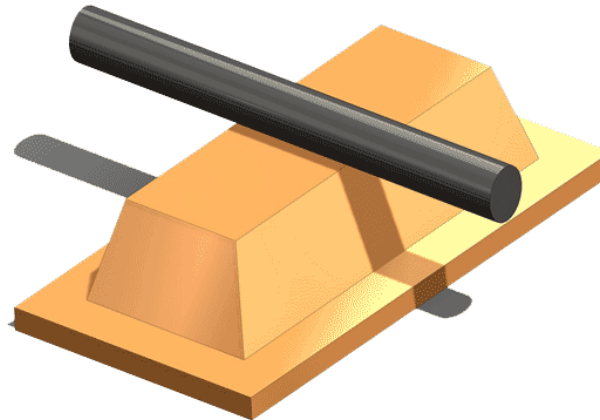
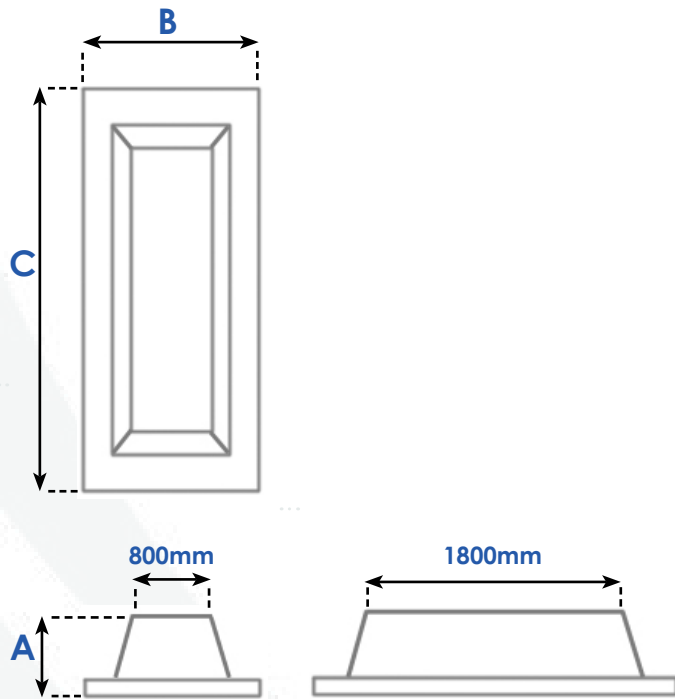
Standard and Large base pipeline support



J-Tube cable support

# FO-24R ROV Deployed Pipeline Support

For use with Pipelines up to 600mm (24 inch) diameter



## Soil Bearing Capacity

Sandy	2.44 Tonnes/m <sup>2</sup>
Soft	1.46 Tonnes/m <sup>2</sup>
Very soft	0.97 Tonnes/m <sup>2</sup>

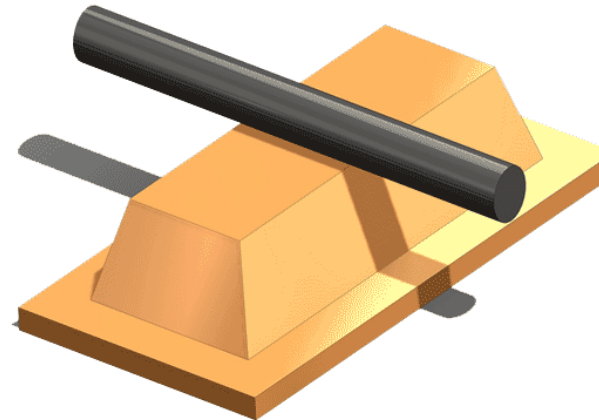
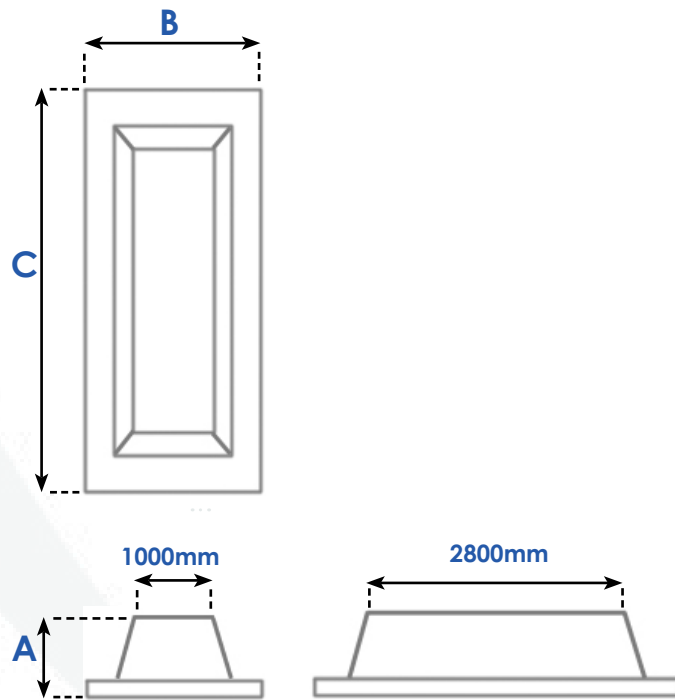
Order Code	Support Height (mm) A	Mattress Base Width (m) B	Mattress Base Length (m) C	Pay Load (Tonne)			Grout Volume (m <sup>3</sup> )	Cement (Tonne)	Submersed Weight (Tonne)
				Sandy	Soft	Very Soft			
FO-24R-300	100-300	-	-	4.30	2.45	1.47	0.51	0.70	0.47
FO-24R-600	300-600	-	-	3.90	1.98	1.00	1.02	1.38	0.94
FO-24R-750	600-700	1.95	2.95	12.04	6.40	3.60	2.16	2.92	1.97
FO-24R-1000	750-1000	2.13	3.13	13.40	6.90	3.66	3.09	4.20	2.84
FO-24R-1250	1000-1250	2.31	3.31	14.75	7.30	3.58	4.22	5.72	3.86
FO-24R-1500	1250-1500	2.48	3.48	16.07	7.61	3.37	5.55	7.53	5.08
FO-24R-1750	1500-1750	2.66	3.66	17.34	7.80	3.03	7.10	9.60	6.50
FO-24R-2000	1750-2000	2.84	3.84	18.55	7.87	2.54	8.89	12.06	8.13
FO-24R-2500	2000-2500	3.20	4.20	20.74	7.59	1.00	13.25	17.97	12.12

## Notes

1. ROV deployed bags include injection sleeves, chain packets, and vent pipes.
2. Volume and cement quantities are a guide for each size of bag, subject to cement type and grout density.
3. The cement quantities indicated do not account for overage.
4. A reduction in the support height will result in less cement usage.
5. Installation is by ROV.

# FO-36R ROV Deployed Pipeline Support

For use with Pipelines up to 900mm (36 inch) diameter



### Soil Bearing Capacity

Sandy	2.44 Tonnes/m <sup>2</sup>
Soft	1.46 Tonnes/m <sup>2</sup>
Very soft	0.97 Tonnes/m <sup>2</sup>

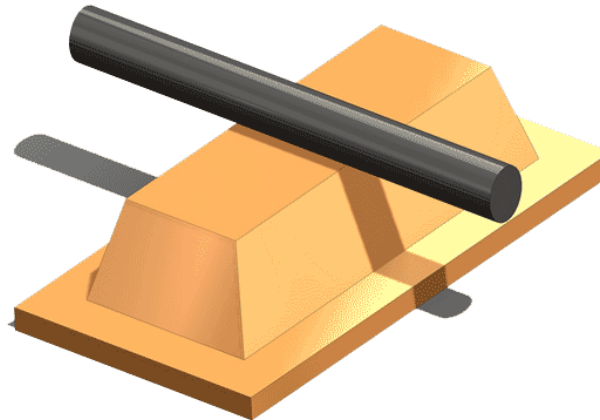
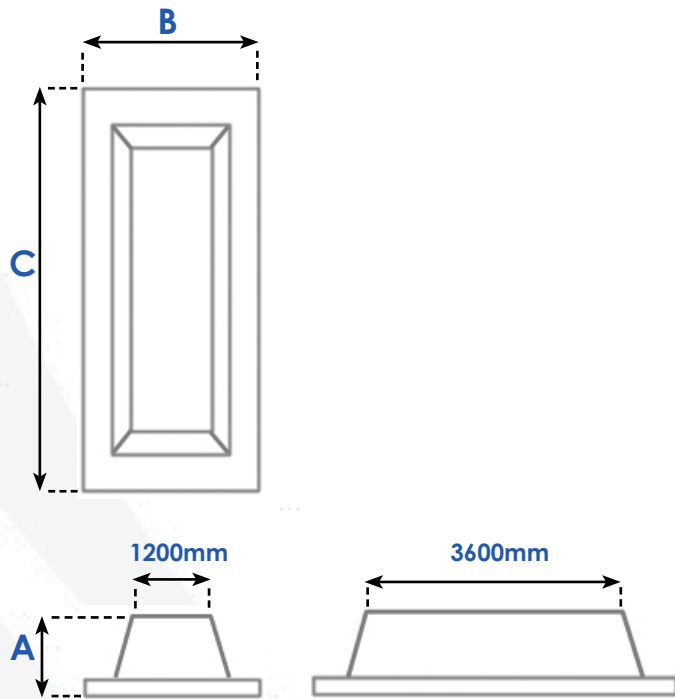
### Notes

- ROV deployed bags include injection sleeves, chain packets, and vent pipes.
- Volume and cement quantities are a guide for each size of bag, subject to cement type and grout density.
- The cement quantities indicated do not account for overage.
- A reduction in the support height will result in less cement usage.
- Installation is by ROV.

Order Code	Support Height (mm) A	Mattress Base Width (m) B	Mattress Base Length (m) C	Pay Load (Tonne)			Grout Volume (m <sup>3</sup> )	Cement (Tonne)	Submersed Weight (Tonne)
				Sandy	Soft	Very Soft			
FO-36R-300	100-300	-	-	7.88	4.38	2.60	0.95	1.29	0.87
FO-36R-600	300-600	-	-	8.90	4.50	2.38	2.16	2.93	1.98
FO-36R-750	600-700	2.15	3.95	17.40	9.13	4.99	3.58	4.80	3.28
FO-36R-1000	750-1000	2.33	4.13	18.79	9.41	4.72	5.07	6.88	4.64
FO-36R-1250	1000-1250	2.51	4.31	20.11	9.57	4.30	6.80	9.23	6.22
FO-36R-1500	1250-1500	2.68	4.48	21.35	9.59	3.71	8.79	11.92	8.04
FO-36R-1750	1500-1750	2.86	4.66	22.50	9.45	2.92	11.06	14.99	10.12
FO-36R-2000	1750-2000	3.04	4.84	23.53	9.13	1.93	13.61	18.46	12.45
FO-36R-2500	2000-2500	4.30	5.20	25.21	7.93	-	19.60	26.66	17.99

# FO-48R ROV Deployed Pipeline Support

For use with Pipelines up to 1200mm (48 inch) diameter



### Soil Bearing Capacity

Sandy	2.44 Tonnes/m <sup>2</sup>
Soft	1.46 Tonnes/m <sup>2</sup>
Very soft	0.97 Tonnes/m <sup>2</sup>

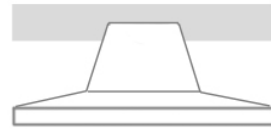
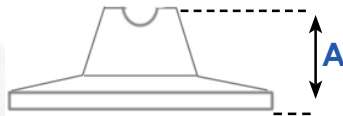
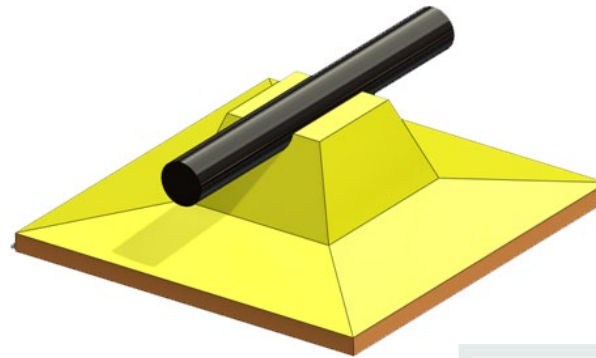
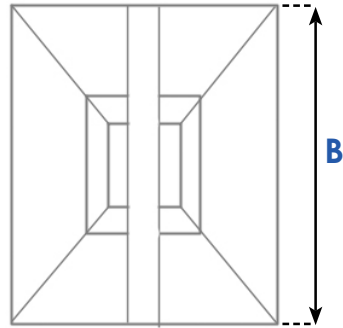
Order Code	Support Height (mm) A	Mattress Base Width (m) B	Mattress Base Length (m) C	Pay Load (Tonne)			Grout Volume (m <sup>3</sup> )	Cement (Tonne)	Submersed Weight (Tonne)
				Sandy	Soft	Very Soft			
FO-48R-300	100-300	-	-	11.67	6.47	3.87	1.44	1.95	1.32
FO-48R-600	300-600	-	-	12.69	6.44	3.32	3.20	4.34	2.92
FO-48R-750	600-700	2.35	4.75	22.54	11.60	6.22	5.08	6.89	4.65
FO-48R-1000	750-1000	2.53	4.93	23.85	11.70	5.62	7.13	9.67	6.52
FO-48R-1250	1000-1250	2.71	5.11	25.05	11.50	4.82	9.46	12.84	8.66
FO-48R-1500	1250-1500	2.88	5.28	26.13	11.20	3.80	12.11	16.42	11.08
FO-48R-1750	1500-1750	3.06	5.46	27.08	10.70	2.55	15.07	20.43	13.79
FO-48R-2000	1750-2000	3.20	5.64	27.87	10.00	1.06	18.37	24.91	16.80
FO-48R-2500	2000-2500	3.60	6.00	28.94	7.83	-	26.04	35.31	23.83

### Notes

1. ROV deployed bags include injection sleeves, chain packets, and vent pipes.
2. Volume and cement quantities are a guide for each size of bag, subject to cement type and grout density.
3. The cement quantities indicated do not account for overage.
4. A reduction in the support height will result in less cement usage.
5. Installation is by ROV.

# FO-14S Standard Base Pipeline Support

For use with Pipelines up to 350mm (14 inch) diameter



### Soil Bearing Capacity

Sandy	2.44 Tonnes/m <sup>2</sup>
Soft	1.46 Tonnes/m <sup>2</sup>
Very soft	0.97 Tonnes/m <sup>2</sup>

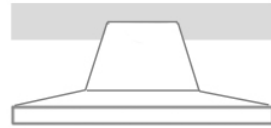
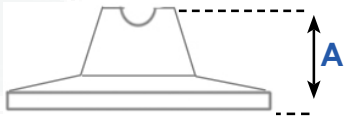
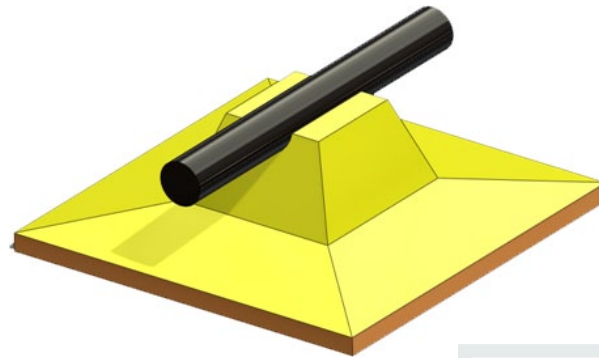
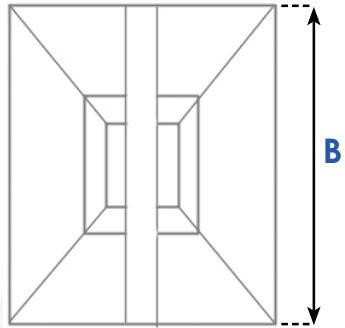
### Notes

1. Diver deployed bags include fixing straps, injection sleeves and vent pipes.
2. Volume and cement quantities are a guide for each size of bag, subject to cement type and grout density.
3. The cement quantities indicated do not account for overage.
4. A reduction in the support height will result in less cement usage.
5. Grout bags can be installed by divers.

Order Code	Support Height (mm) A	Mattress Base Length (mm) B	Mattress Base Area (m <sup>2</sup> )	Pay Load (Tonne)			Grout Volume (m <sup>3</sup> )	Cement (Tonne)	Submersed Weight (Tonne)	Pyramid Pipe Bearing Length (mm) B
				Sandy	Soft	Very Soft				
FO-14S-300	100-300	1540.80	2.37	5.08	2.77	1.61	0.74	1.00	0.69	650
FO-14S-600	300-600	1770.20	3.13	6.56	3.50	1.98	1.16	1.57	1.06	650
FO-14S-750	600-750	1884.88	3.55	7.33	3.87	2.14	1.43	1.94	1.31	650
FO-14S-1000	750-1000	2076.00	4.30	8.68	4.48	2.38	1.97	2.67	1.81	650
FO-14S-1250	1000-1250	2267.10	5.13	10.07	5.06	2.56	2.66	3.61	2.44	650
FO-14S-1500	1250-1500	2458.23	6.04	11.49	5.61	2.66	3.61	4.76	3.21	650
FO-14S-1750	1500-1750	2649.35	7.01	12.93	6.09	2.60	4.54	6.16	4.15	650
FO-14S-2000	1750-2000	2840.40	8.06	14.36	6.50	2.57	5.77	7.83	5.28	650
FO-14S-2250	2000-2250	3031.58	9.19	15.77	6.82	2.34	7.22	9.79	6.60	650
FO-14S-2500	2250-2500	3222.70	10.38	17.14	7.02	1.96	8.90	12.07	8.14	650
FO-14S-2750	2500-2750	3413.80	11.65	18.45	7.10	1.42	10.84	14.70	9.92	650
FO-14S-3000	2750-3000	3604.90	12.99	19.68	7.03	0.70	13.06	17.71	11.95	650

# FO-24S Standard Base Pipeline Support

For use with Pipelines between 350-600mm (14-24 inch) diameter



Soil Bearing Capacity	
Sandy	2.44 Tonnes/m <sup>2</sup>
Soft	1.46 Tonnes/m <sup>2</sup>
Very soft	0.97 Tonnes/m <sup>2</sup>

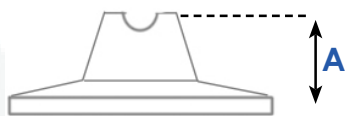
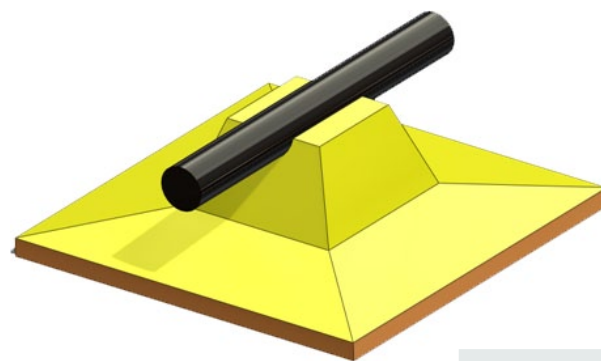
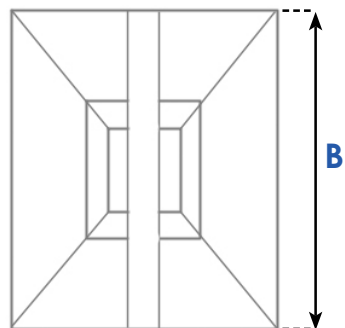
### Notes

1. Diver deployed bags include fixing straps, injection sleeves and vent pipes.
2. Volume and cement quantities are a guide for each size of bag, subject to cement type and grout density.
3. The cement quantities indicated do not account for overage.
4. A reduction in the support height will result in less cement usage.
5. Grout bags can be installed using divers.

Order Code	Support Height (mm) A	Mattress Base Length (mm) B	Mattress Base Area (m <sup>2</sup> )	Pay Load (Tonne)			Grout Volume (m <sup>3</sup> )	Cement (Tonne)	Submersed Weight (Tonne)	Pyramid Top Pipe Bearing Length (mm) B
				Sandy	Soft	Very Soft				
FO-24S-300	100-300	1790.92	3.20	6.94	3.82	2.26	1.08	1.46	0.85	900
FO-24S-600	300-600	2020.20	4.08	8.44	4.47	2.48	1.63	2.21	1.49	900
FO-24S-750	600-750	2134.90	4.55	9.26	4.82	2.60	2.00	2.71	1.83	900
FO-24S-1000	750-1000	2316.05	5.41	10.67	5.40	2.76	2.73	3.70	2.50	900
FO-24S-1250	1000-1250	2517.16	6.33	12.10	5.92	2.84	3.63	4.92	3.32	900
FO-24S-1500	1250-1500	2708.00	7.33	13.50	6.39	2.81	4.72	6.40	4.32	900
FO-24S-1750	1500-1750	2899.40	8.40	14.96	6.77	2.67	6.02	8.17	5.50	900
FO-24S-2000	1750-2000	3090.50	9.55	16.35	7.05	2.40	7.53	10.21	6.89	900
FO-24S-2250	2000-2250	3281.60	10.76	17.71	7.22	1.97	9.30	12.61	8.50	900
FO-24S-2500	2250-2500	3472.70	12.06	19.00	7.25	1.38	11.32	15.35	10.36	900
FO-24S-2750	2500-2750	3663.80	13.42	20.21	7.13	0.60	13.63	18.49	12.47	900
FO-24S-3000	2750-3000	3604.90	14.86	31.32	6.85	-	16.24	22.03	14.86	900

# FO-36S Standard Base Pipeline Support

For use with Pipelines between 600-900mm (24-36 inch) diameter



### Soil Bearing Capacity

Sandy	2.44 Tonnes/m <sup>2</sup>
Soft	1.46 Tonnes/m <sup>2</sup>
Very soft	0.97 Tonnes/m <sup>2</sup>

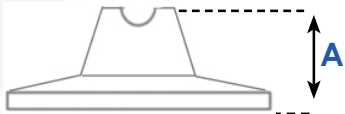
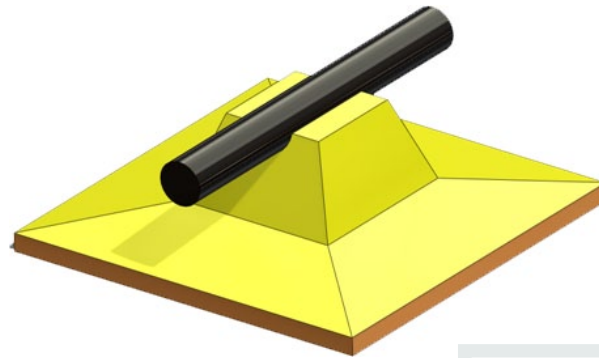
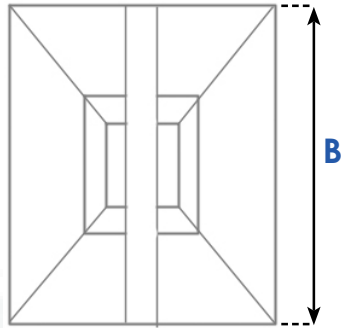
### Notes

1. Diver deployed bags include fixing straps, injection sleeves and vent pipes.
2. Volume and cement quantities are a guide for each size of bag, subject to cement type and grout density.
3. The cement quantities indicated do not account for overage.
4. A reduction in the support height will result in less cement usage.
5. Grout bags can be installed by divers.

Order Code	Support Height (mm) A	Mattress Base Length (mm) B	Mattress Base Area (m <sup>2</sup> )	Pay Load (Tonne)			Grout Volume (m <sup>3</sup> )	Cement (Tonne)	Submersed Weight (Tonne)	Pyramid Top Pipe Bearing Length (mm) B
				Sandy	Soft	Very Soft				
FO-36S-300	100-300	2240.90	5.02	10.77	5.88	3.43	1.58	2.14	1.45	1350
FO-36S-600	300-600	2470.20	6.10	12.33	6.39	3.42	2.75	3.73	2.51	1350
FO-36S-750	600-750	2584.90	6.68	13.20	6.69	3.43	3.35	4.54	3.06	1350
FO-36S-1000	750-1000	2776.05	7.70	14.63	7.12	3.37	4.50	6.10	4.13	1350
FO-36S-1250	1000-1250	2967.10	8.80	16.05	7.47	3.19	5.88	7.98	5.38	1350
FO-36S-1500	1250-1500	3158.20	9.97	17.43	7.72	2.86	7.48	10.15	6.85	1350
FO-36S-1750	1500-1750	3349.40	11.21	18.76	7.84	2.37	9.34	12.67	8.54	1350
FO-36S-2000	1750-2000	3540.50	12.53	20.03	7.82	1.71	11.46	15.54	10.48	1350
FO-36S-2250	2000-2250	3731.60	13.92	21.21	7.64	0.87	13.87	18.81	12.69	1350
FO-36S-2500	2250-2500	3922.70	15.38	22.28	7.29	-	16.59	22.50	15.18	1350
FO-36S-2750	2500-2750	4113.80	16.92	23.23	6.75	-	19.64	26.64	17.97	1350
FO-36S-3000	2750-3000	4304.99	18.53	24.00	5.99	-	23.03	31.24	21.07	1350

# FO-48S Standard Base Pipeline Support

For use with Pipelines between 900-1200mm (36-48 inch) diameter



Soil Bearing Capacity	
Sandy	2.44 Tonnes/m <sup>2</sup>
Soft	1.46 Tonnes/m <sup>2</sup>
Very soft	0.97 Tonnes/m <sup>2</sup>

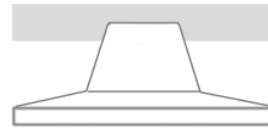
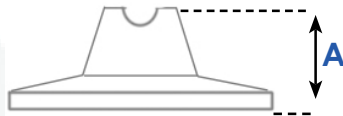
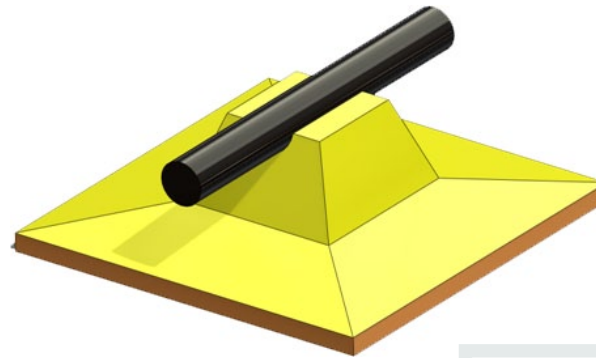
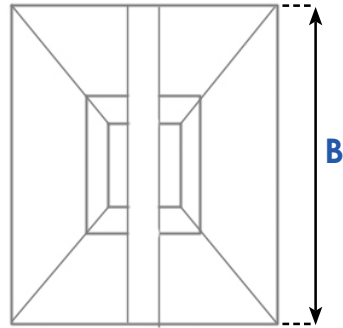
### Notes

1. Diver deployed bags include fixing straps, injection sleeves and vent pipes.
2. Volume and cement quantities are a guide for each size of bag, subject to cement type and grout density.
3. The cement quantities indicated do not account for overage.
4. A reduction in the support height will result in less cement usage.
5. Grout bags can be installed using divers.

Order Code	Support Height (mm) A	Mattress Base Length (mm) B	Mattress Base Area (m <sup>2</sup> )	Pay Load (Tonne)			Grout Volume (m <sup>3</sup> )	Cement (Tonne)	Submersed Weight (Tonne)	Pyramid Top Pipe Bearing Length (mm) B
				Sandy	Soft	Very Soft				
FO-48S-300	100-300	2690.90	7.24	15.53	8.48	4.93	2.28	3.09	2.09	1800
FO-48S-600	300-600	2920.20	8.50	16.85	8.55	4.39	4.26	5.78	3.90	1800
FO-48S-750	600-750	3034.90	9.21	17.70	8.70	4.24	5.16	7.00	4.72	1800
FO-48S-1000	750-1000	3226.05	10.40	19.06	8.93	3.86	6.85	9.29	6.27	1800
FO-48S-1250	1000-1250	3417.10	11.67	20.37	9.00	3.30	8.80	11.94	8.05	1800
FO-48S-1500	1250-1500	3608.28	13.01	21.61	8.90	2.50	11.00	14.92	10.08	1800
FO-48S-1750	1500-1750	3799.40	14.43	22.75	8.69	1.66	13.54	18.37	12.39	1800
FO-48S-2000	1750-2000	3990.50	15.92	23.78	8.27	0.52	16.37	22.20	14.98	1800
FO-48S-2250	2000-2250	4181.60	17.48	24.69	7.66	-	19.54	26.50	17.88	1800
FO-48S-2500	2250-2500	4372.75	19.12	25.45	6.80	-	23.06	31.28	21.10	1800
FO-48S-2750	2500-2750	4563.87	20.82	26.05	5.70	-	26.95	36.55	24.66	1800
FO-48S-3000	2750-3000	4754.99	22.60	26.46	4.44	-	31.24	42.37	28.58	1800

# FO-60S Standard Base Pipeline Support

For use with Pipelines between 1200-1500mm (48-60 inch) diameter



### Soil Bearing Capacity

Sandy	2.44 Tonnes/m <sup>2</sup>
Soft	1.46 Tonnes/m <sup>2</sup>
Very soft	0.97 Tonnes/m <sup>2</sup>

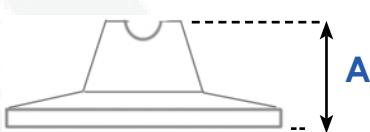
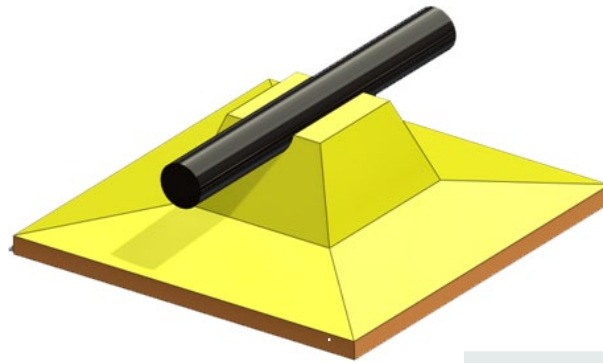
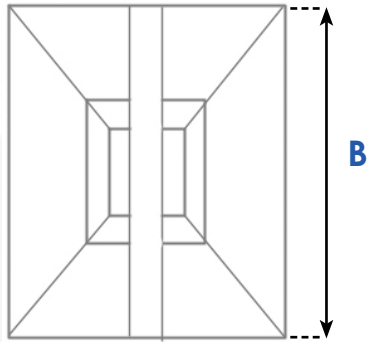
### Notes

1. Diver deployed bags include fixing straps, injection sleeves and vent pipes.
2. Volume and cement quantities are a guide for each size of bag, subject to cement type and grout density.
3. The cement quantities indicated do not account for overage.
4. A reduction in the support height will result in less cement usage.
5. Grout bags can be installed by divers.

Order Code	Support Height (mm) A	Mattress Base Length (mm) B	Mattress Base Area (m <sup>2</sup> )	Pay Load (Tonne)			Grout Volume (m <sup>3</sup> )	Cement (Tonne)	Submersed Weight (Tonne)	Pyramid Top Pipe Bearing Length (mm) B
				Sandy	Soft	Very Soft				
FO-60S-300	100-300	3190.90	10.18	21.84	11.93	6.97	3.20	4.34	2.94	2250
FO-60S-600	300-600	3420.20	11.70	22.69	11.30	5.60	6.32	8.57	5.78	2250
FO-60S-750	600-750	3534.93	12.49	23.48	11.31	5.22	7.58	10.28	6.94	2250
FO-60S-1000	750-1000	3726.05	13.88	24.72	11.20	4.44	9.91	13.44	9.07	2250
FO-60S-1250	1000-1250	3917.16	15.34	25.87	10.93	3.45	12.55	17.02	11.48	2250
FO-60S-1500	1250-1500	4108.20	16.87	26.90	10.46	2.24	15.50	21.02	14.19	2250
FO-60S-1750	1500-1750	4299.40	18.48	27.80	9.79	0.79	18.80	25.50	17.20	2250
FO-60S-2000	1750-2000	4490.50	20.16	28.54	8.90	-	22.46	30.46	20.55	2250
FO-60S-2250	2000-2250	4681.60	21.19	29.12	7.77	-	26.49	35.93	24.24	2250
FO-60S-2500	2250-2500	4872.70	23.74	29.51	6.38	-	30.93	41.95	28.30	2250
FO-60S-2750	2500-2750	5063.80	25.64	29.60	4.70	-	35.78	48.53	32.74	2250
FO-60S-3000	2750-3000	5254.99	27.61	29.66	2.76	-	41.07	55.71	37.57	2250

# FO-14L Large Base Pipeline Support

For use with Pipelines up to 350mm (14 inch) diameter



### Soil Bearing Capacity

Sandy	2.44 Tonnes/m <sup>2</sup>
Soft	1.46 Tonnes/ m <sup>2</sup>
Mud	0.60 Tonnes/ m <sup>2</sup>

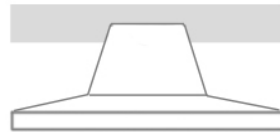
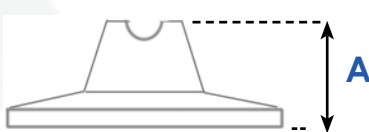
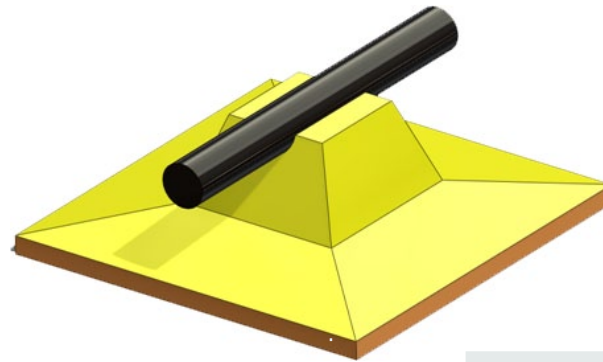
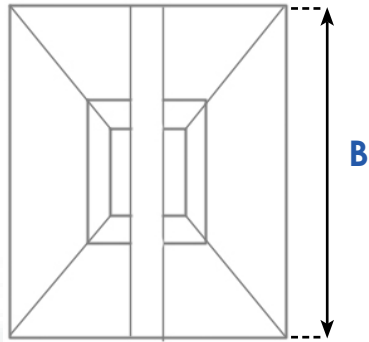
### Notes

1. Diver deployed bags include fixing straps, injection sleeves and vent pipes.
2. Volume and cement quantities are a guide for each size of bag, subject to cement type and grout density.
3. The cement quantities indicated do not account for overage.
4. A reduction in the support height will result in less cement usage.
5. Grout bags can be installed using divers.

Order Code	Support Height (mm) A	Top Length (m)	Mattress Base Length (mm) B	Mattress Base Area (m <sup>2</sup> )	Pay Load (Tonne)			Grout Volume (m <sup>3</sup> )	Cement (Tonne)	Submersed Weight (Tonne)	Pyramid Top Pipe Bearing Length (mm) F
					Soft	Very Soft	Mud				
FO-14L-300	100-300	0.52	2660.80	7.08	8.90	5.38	2.81	1.56	2.10	1.43	650
FO-14L-600	300-600	0.52	2890.20	8.35	10.31	6.24	3.12	2.06	2.79	1.88	650
FO-14L-750	600-700	0.52	3004.80	9.02	11.01	6.62	3.24	2.37	3.21	2.17	650
FO-14L-1000	750-1000	0.52	3196.00	10.21	12.18	7.20	3.39	2.99	4.06	2.73	650
FO-14L-1250	1000-1250	0.52	3387.11	11.47	13.32	7.74	3.45	3.70	5.02	3.43	650
FO-14L-1500	1250-1500	0.52	13.57	12.80	14.43	8.19	3.40	4.67	6.33	4.27	650
FO-14L-1750	1500-1750	0.52	3769.35	14.20	15.47	8.55	3.24	5.77	7.83	5.20	650
FO-14L-2000	1750-2000	0.52	3960.47	15.68	16.44	8.80	2.94	7.07	9.59	6.46	650
FO-14L-2250	2000-2250	0.52	4151.50	17.23	17.32	8.92	2.48	8.58	11.64	7.85	650
FO-14L-2500	2250-2500	0.52	4342.70	18.85	18.08	8.90	1.84	10.34	14.02	9.46	650
FO-14L-2750	2500-2750	0.52	4533.80	20.55	18.72	8.71	1.02	12.35	16.75	11.30	650
FO-14L-3000	2750-3000	0.52	4724.90	22.32	19.21	8.34	-	14.64	19.86	13.40	650

# FO-24L Large Base Pipeline Support

For use with Pipelines between 350-600mm (14-24 inch) diameter



### Soil Bearing Capacity

Sandy	2.44 Tonnes/m <sup>2</sup>
Soft	1.46 Tonnes/ m <sup>2</sup>
Mud	0.60 Tonnes/ m <sup>2</sup>

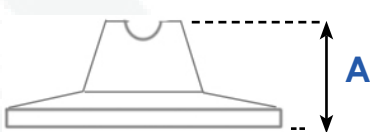
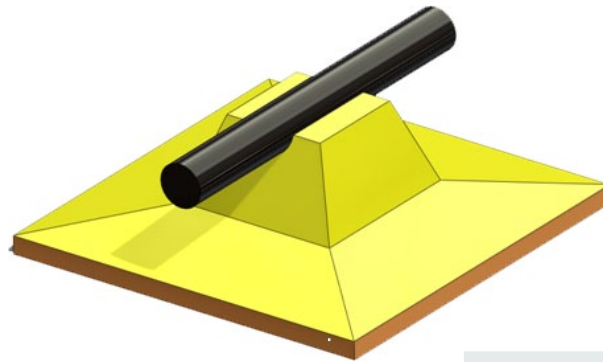
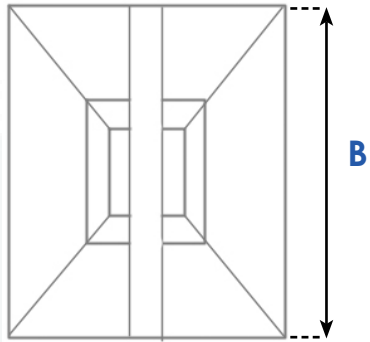
### Notes

1. Diver deployed bags include fixing straps, injection sleeves and vent pipes.
2. Volume and cement quantities are a guide for each size of bag, subject to cement type and grout density.
3. The cement quantities indicated do not account for overage.
4. A reduction in the support height will result in less cement usage.
5. Grout bags can be installed using divers.

Order Code	Support Height (mm) A	Top Length (m)	Mattress Base Length (mm) B	Mattress Base Area (m <sup>2</sup> )	Pay Load (Tonne)			Grout Volume (m <sup>3</sup> )	Cement (Tonne)	Submersed Weight (Tonne)	Pyramid Top Pipe Bearing Length (mm) F
					Soft	Very Soft	Mud				
FO-24L-300	100-300	681.00	2910.90	8.47	10.60	6.50	3.54	1.86	2.52	1.70	900
FO-24L-600	300-600	681.00	3140.20	9.86	12.00	7.20	2.60	2.60	3.53	2.39	900
FO-24L-750	600-700	681.00	3254.90	10.59	12.70	7.54	3.00	3.00	4.07	2.77	900
FO-24L-1000	750-1000	681.00	3446.05	11.87	13.83	8.05	3.84	3.84	5.21	3.51	900
FO-24L-1250	1000-1250	681.00	3637.10	13.22	14.92	8.47	4.81	4.81	6.52	4.40	900
FO-24L-1500	1250-1500	681.00	3838.00	14.65	15.94	8.80	5.97	5.97	8.10	5.46	900
FO-24L-1750	1500-1750	681.00	4019.40	16.15	16.88	9.02	7.33	7.33	9.94	6.70	900
FO-24L-2000	1750-2000	681.00	4210.50	17.72	17.73	9.09	8.90	8.90	12.07	8.16	900
FO-24L-2250	2000-2250	681.00	4401.60	19.37	18.45	9.02	10.76	10.76	14.59	9.84	900
FO-24L-2500	2250-2500	681.00	4592.70	19.10	19.05	8.78	12.85	12.85	17.43	11.76	900
FO-24L-2750	2500-2750	681.00	4783.80	22.88	19.49	8.34	15.20	15.20	20.62	13.94	900
FO-24L-3000	2750-3000	681.00	4974.90	24.75	19.76	7.71	17.91	17.91	24.29	16.39	900

# FO-36L Large Base Pipeline Support

For use with Pipelines between 600-900mm (24-36 inch) diameter



Soil Bearing Capacity	
Sandy	2.44 Tonnes/m <sup>2</sup>
Soft	1.46 Tonnes/ m <sup>2</sup>
Mud	0.60 Tonnes/ m <sup>2</sup>

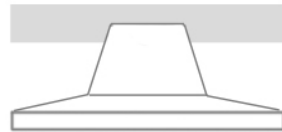
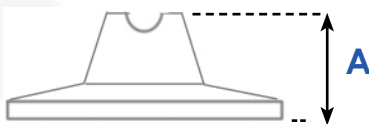
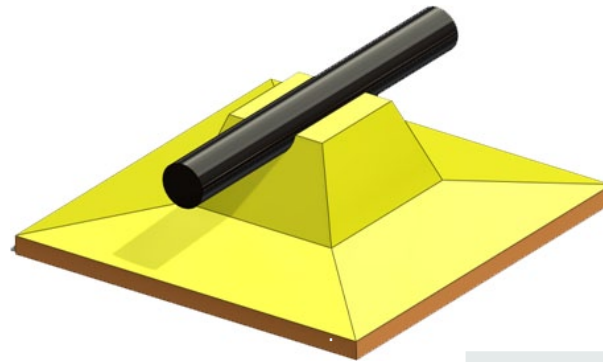
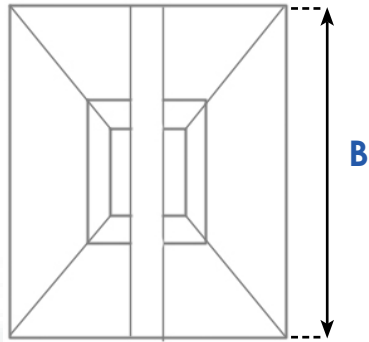
### Notes

1. Diver deployed bags include fixing straps, injection sleeves and vent pipes.
2. Volume and cement quantities are a guide for each size of bag, subject to cement type and grout density.
3. The cement quantities indicated do not account for overage.
4. A reduction in the support height will result in less cement usage.
5. Grout bags can be installed using divers.

Order Code	Support Height (mm) A	Top Length (m)	Mattress Base Length (mm) B	Mattress Base Area (m <sup>2</sup> )	Pay Load (Tonne)			Grout Volume (m <sup>3</sup> )	Cement (Tonne)	Submersed Weight (Tonne)	Pyramid Top Pipe Bearing Length (mm) F
					Soft	Very Soft	Mud				
FO-36L-300	100-300	-	3760.90	14.14	17.66	10.78	5.49	3.27	4.44	2.99	1350
FO-36L-600	300-600	1022.00	3990.20	15.92	19.09	11.34	5.36	4.55	6.17	4.16	1350
FO-36L-750	600-700	1022.00	4104.90	16.85	19.84	11.64	5.33	5.20	7.05	4.77	1350
FO-36L-1000	750-1000	1022.00	4296.06	18.45	21.03	12.04	5.14	6.40	8.68	5.92	1350
FO-36L-1250	1000-1250	1022.00	4487.10	20.13	22.13	12.33	4.80	7.95	10.78	7.28	1350
FO-36L-1500	1250-1500	1022.00	4678.28	21.88	23.13	12.47	4.28	9.66	13.10	8.84	1350
FO-36L-1750	1500-1750	1022.00	4869.40	23.71	24.00	12.45	3.50	11.62	15.76	10.63	1350
FO-36L-2000	1750-2000	1022.00	5060.50	25.60	24.73	12.26	2.69	13.85	18.79	12.67	1350
FO-36L-2250	2000-2250	1022.00	5251.60	27.57	25.31	11.88	1.56	16.36	22.19	14.97	1350
FO-36L-2500	2250-2500	1022.00	5442.70	29.62	25.71	11.29	-	19.19	26.03	17.56	1350
FO-36L-2750	2500-2750	1022.00	5633.80	31.74	25.92	10.46	-	22.34	30.30	20.44	1350
FO-36L-3000	2750-3000	1022.00	5824.99	33.93	25.92	9.39	-	25.84	35.05	23.64	1350

# FO-48L Large Base Pipeline Support

For use with Pipelines between 900-1200mm (36-48 inch) diameter



### Soil Bearing Capacity

Sandy	2.44 Tonnes/m <sup>2</sup>
Soft	1.46 Tonnes/ m <sup>2</sup>
Mud	0.60 Tonnes/ m <sup>2</sup>

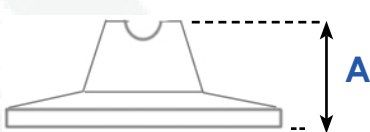
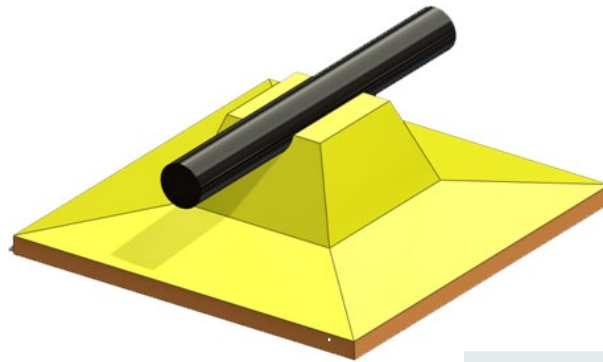
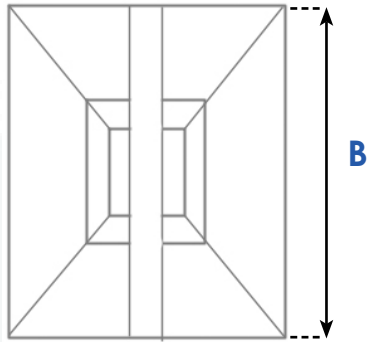
### Notes

1. Diver deployed bags include fixing straps, injection sleeves and vent pipes.
2. Volume and cement quantities are a guide for each size of bag, subject to cement type and grout density.
3. The cement quantities indicated do not account for overage.
4. A reduction in the support height will result in less cement usage.
5. Grout bags can be installed using divers.

Order Code	Support Height (mm) A	Top Length (m)	Mattress Base Length (mm) B	Mattress Base Area (m <sup>2</sup> )	Pay Load (Tonne)			Grout Volume (m <sup>3</sup> )	Cement (Tonne)	Submersed Weight (Tonne)	Pyramid Top Pipe Bearing Length (mm) F
					Soft	Very Soft	Mud				
FO-48L-300	100-300	-	4210.90	17.73	22.01	13.39	6.76	4.21	5.71	3.87	1800
FO-48L-600	300-600	1360.00	4440.26	19.71	23.02	13.42	6.05	6.31	8.56	5.77	1800
FO-48L-750	600-700	1360.00	4554.93	20.74	23.65	13.55	5.79	7.27	9.86	6.65	1800
FO-48L-1000	750-1000	1360.00	4746.05	22.52	24.60	13.63	5.21	9.07	12.30	8.30	1800
FO-48L-1250	1000-1250	1360.00	4937.16	24.37	25.43	13.56	4.44	11.12	15.08	10.17	1800
FO-48L-1500	1250-1500	1360.00	5128.20	26.56	26.00	13.30	3.47	13.45	18.24	12.30	1800
FO-48L-1750	1500-1750	1360.00	5319.40	28.29	26.63	12.85	2.26	16.07	21.80	14.70	1800
FO-48L-2000	1750-2000	1360.00	5510.52	30.36	26.96	12.17	0.82	19.01	25.78	17.39	1800
FO-48L-2250	2000-2250	1360.00	5701.60	32.50	27.10	11.26	-	22.28	30.22	20.39	1800
FO-48L-2500	2250-2500	1360.00	5892.70	34.72	27.02	10.11	-	25.91	35.14	23.71	1800
FO-48L-2750	2500-2750	1360.00	6083.80	37.01	26.70	8.68	-	29.91	40.57	27.37	1800
FO-48L-3000	2750-3000	1360.00	6274.90	39.37	26.14	6.96	-	34.30	46.52	31.38	1800

# FO-60L Large Base Pipeline Support

For use with Pipelines between 1200-1500mm (48-60 inch) diameter



### Soil Bearing Capacity

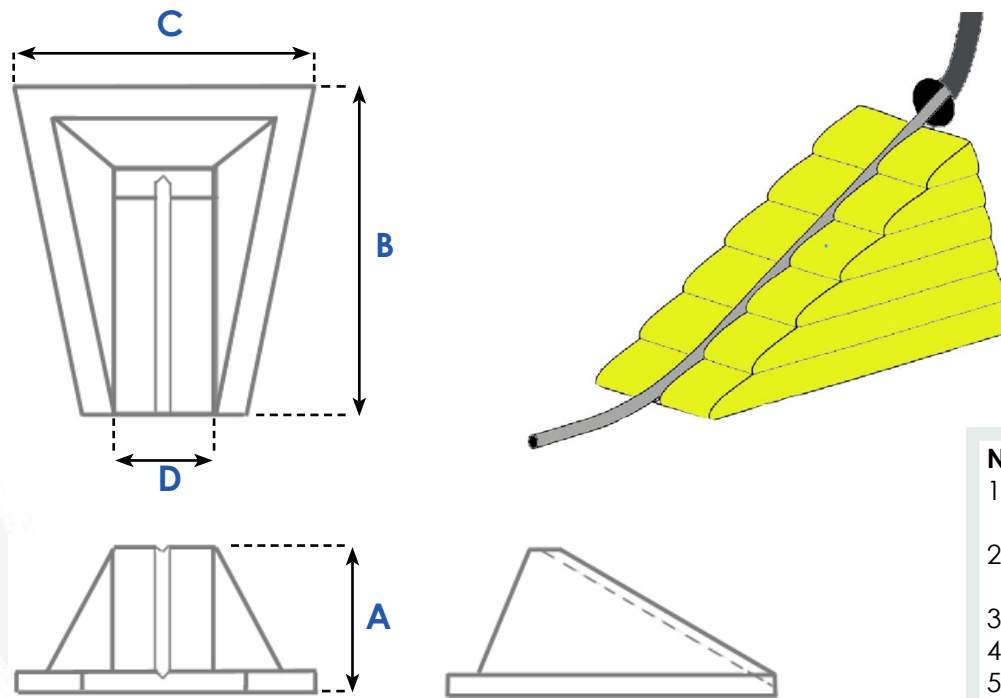
Sandy	2.44 Tonnes/m <sup>2</sup>
Soft	1.46 Tonnes/ m <sup>2</sup>
Mud	0.60 Tonnes/ m <sup>2</sup>

### Notes

1. Diver deployed bags include fixing straps, injection sleeves and vent pipes.
2. Volume and cement quantities are a guide for each size of bag, subject to cement type and grout density.
3. The cement quantities indicated do not account for overage.
4. A reduction in the support height will result in less cement usage.
5. Grout bags can be installed using divers.

Order Code	Support Height (mm) A	Top Length (m)	Mattress Base Length (mm) B	Mattress Base Area (m <sup>2</sup> )	Pay Load (Tonne)			Grout Volume (m <sup>3</sup> )	Cement (Tonne)	Submerged Weight (Tonne)	Pyramid Top Pipe Bearing Length (mm) F
					Soft	Very Soft	Mud				
FO-60L-300	100-300	-	4660.90	21.72	26.94	16.36	8.20	5.24	7.11	4.79	2250
FO-60L-600	300-600	1.70	4890.20	23.91	27.14	15.49	6.55	8.51	11.53	7.79	2250
FO-60L-750	600-700	1.70	5004.90	25.04	27.59	15.39	6.02	9.84	13.35	9.00	2250
FO-60L-1000	750-1000	1.70	5196.00	26.99	28.21	15.06	4.97	12.27	16.64	11.22	2250
FO-60L-1250	1000-1250	1.70	5387.00	29.02	28.67	14.53	3.68	15.00	20.35	13.73	2250
FO-60L-1500	1250-1500	1.70	5587.20	31.11	29.93	13.78	2.14	18.06	24.50	16.52	2250
FO-60L-1750	1500-1750	1.70	5769.40	33.28	28.99	12.78	0.33	21.45	29.09	19.63	2250
FO-60L-2000	1750-2000	1.70	5960.50	35.50	28.83	11.53	-	25.21	34.19	23.06	2250
FO-60L-2250	2000-2250	1.70	6151.60	37.84	28.43	10	-	29.34	39.80	26.85	2250
FO-60L-2500	2250-2500	1.70	6342.70	40.26	27.77	8.18	-	33.88	45.95	31.00	2250
FO-60L-2750	2500-2750	1.70	6533.80	42.69	26.84	6.04	-	38.83	52.67	35.53	2250
FO-60L-3000	2750-3000	1.70	6724.99	45.22	25.61	3.58	-	44.22	59.98	40.46	2250

For use with J-tubes and Cables



### Soil Bearing Capacity

Sandy	2.44 Tonnes/m <sup>2</sup>
Soft	1.46 Tonnes/m <sup>2</sup>
Very soft	0.97 Tonnes/m <sup>2</sup>

### Notes

1. Diver deployed bags include fixing straps, injection sleeves and vent pipes.
2. Volume and cement quantities are a guide for each size of bag, subject to cement type and grout density.
3. The cement quantities indicated do not account for overage.
4. A reduction in the support height will result in less cement usage.
5. Installation is by divers.

Order Code	Height (mm) A	Length (mm) B	Width (mm) C	Cable Bearing Width (mm) D	Soil Bearing Capacity (Tonne)	Pay Load (Tonne)			Grout Volume (m <sup>3</sup> )	Cement (Tonne)	Submerged Weight (Tonne)
						Sandy	Soft	Very Soft			
J-T 1000	1000	2300	2500	1000	0.41	9.80	5.88	3.92	2.10	2.90	1.90
J-T 1200	1200	2750	2700	1000	0.46	12.24	7.43	4.57	2.90	4.10	2.70
J-T 1400	1400	3200	2900	1000	0.50	15.19	9.12	6.08	3.90	5.60	3.60
J-T 1600	1600	3600	3100	1000	0.56	17.97	10.79	7.19	5.10	7.30	4.70
J-T 1800	1800	4050	3300	1000	0.62	21.20	12.72	8.49	6.50	9.30	6.10
J-T 2000	2000	4450	3500	1000	0.67	24.38	14.63	9.75	8.20	11.70	7.60
J-T 2200	2200	4900	3700	1000	0.73	28.04	16.82	11.22	10.10	14.40	9.40
J-T 2400	2400	5350	3900	1000	0.78	31.92	19.15	12.77	12.30	17.40	11.40
J-T 2600	2600	5700	4100	1000	0.87	35.40	21.37	14.16	14.70	20.90	13.70





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#### ABOUT FOUNDOCEAN

FoundOcean has over 45 years' experience of subsea and offshore foundation grouting for the global energy construction industries.

FoundOcean also provides life extension solutions for offshore structures which includes structural inspection, repair and maintenance services, marine growth control products, freespan correction grout bags, and pipeline/cable support and protection services.

This is why, to offshore installation contractors FoundOcean is the subcontractor of choice for minimising the risks associated with completing projects safely and on time.

FoundOcean was founded in 1966 and is a privately held UK-headquartered company. Its specialist grouting equipment is located for rapid deployment in Europe, the Gulf of Mexico, South East Asia, India and the Middle East. FoundOcean is certified to ISO 9001:2008 by DNV, and is also FPAL registered.

[www.foundocean.com](http://www.foundocean.com)

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