

### SIZE RANGE HELIBORE 68

Clear Internal Diameter (m)	WEIGHT PER METRE (kg) HELIBORE 68					Clear End Area (m <sup>2</sup> )
	STEEL THICKNESS (mm)					
	1.5	2.0	2.5	3.0	3.5	
0.3	14	-	-	-	-	0.07
0.4	18	-	-	-	-	0.13
0.5	23	-	-	-	-	0.20
0.6	27	36	-	-	-	0.28
0.7	32	41	-	-	-	0.38
0.8	36	47	-	-	-	0.50
0.9	41	53	66	79	90	0.64
1.0	45	59	73	87	100	0.78
1.1	50	65	80	95	109	0.95
1.2	54	72	89	106	118	1.13

INDICATIVE WEIGHTS FOR GALVANISED PIPES

### SIZE RANGE HELIBORE 125

Clear Internal Diameter (m)	WEIGHT PER METRE (kg) HELIBORE 125					Clear End Area (m <sup>2</sup> )
	STEEL THICKNESS (mm)					
	1.5	2.0	2.5	3.0	3.5	
1.2	55	73	90	108	124	1.13
1.4	65	85	105	125	145	1.54
1.5	69	91	113	134	156	1.77
1.6	74	97	120	143	166	2.01
1.8	83	109	135	161	187	2.55
2.0	92	121	150	178	207	3.14
2.2	102	133	165	196	227	3.80
2.4	-	145	179	214	248	4.52
2.6	-	-	194	231	268	5.31
2.8	-	-	-	249	289	6.16
3.0	-	-	-	267	309	7.07
3.2	-	-	-	-	329	8.04
3.4	-	-	-	-	350	9.08
3.6	-	-	-	-	371	10.18

INDICATIVE WEIGHTS FOR GALVANISED PIPES



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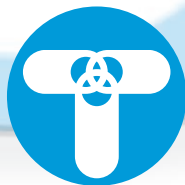
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# HELIBORE PIPE



**TUBOSIDER**

GRUPPO RUSCALLA

UNITED KINGDOM LTD



Highways Agency  
Type Approval  
Certificate No: BE1/4/92



DESPATCH OF HELIBORE PIPE



STORMWATER ATTENUATION TANK MANUFACTURED FROM HELIBORE PIPE



TRENCHCOATED PIPE








H125 PIPE COUPLING BAND

## INTRODUCTION

**TUBOSIDER** Helibore pipe is helically wound corrugated steel pipe, which provides the most cost effective, and versatile pipe system on the market.

Designed to Highways Agency Standard BD12, Helibore is a lightweight, durable pipe system capable of carrying full highway loadings. It is quick and simple to install and reduces overall costs compared to other pipe types.

## APPLICATIONS INCLUDE:

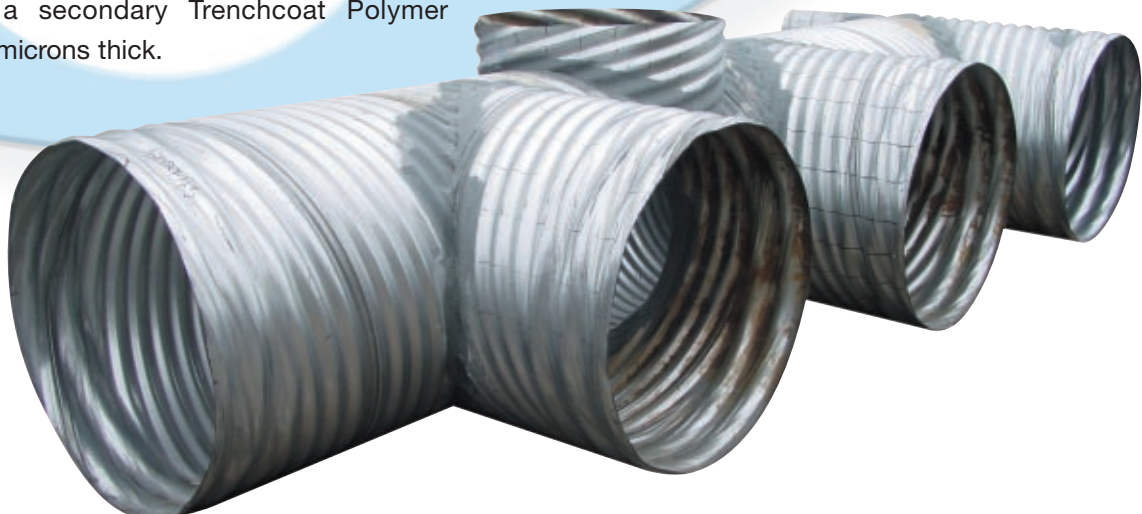
- |                                                                                                                  |                                                                                                                 |
|------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------|
|  Culverts                     |  Soakaways (Perforated Pipe) |
|  Pedestrian underpasses       |  Pile casings                |
|  Stormwater Attenuation Tanks |  Sacrificial form work       |
|  Manholes                     |  Stormwater sewers           |

## MATERIALS & MANUFACTURE

All materials are sourced from Quality Assured certified suppliers. The pipe is helically wound from pre-galvanised steel coil to BS EN 10143 which has 305gms/m<sup>2</sup> zinc on each surface.

For very aggressive environments/applications, the coils have a secondary Trenchcoat Polymer coating 250 microns thick.

The product and manufacturing process is BBA Certified, Certificate No: 91/R062. Pipes can be manufactured in any length from 3m to 14m and in diameters from 0.3m to 3.6m.



## DESIGN & STRUCTURAL PRINCIPLES

The pipe is designed for strength and durability to Highways Agency Standard BD12 to provide 120-year life and to carry full highway live load.

Helibore pipe is a flexible structure, its performance is optimised by the surrounding fill. Under the imposed dead and live load, the steel/soil composite transfers load to the surrounding fill.

The load exerted on the pipe bed is approximately one third of that generated by a concrete pipe or r.c. box.

The design process also encompasses the choice of secondary protective coatings, if necessary, including Monoguard Bitumen, Trenchcoat Polymer or Epoxy coatings.

## JOINTING

The pipe ends are re-corrugated to produce two annular corrugations at the end of the pipe. The curved, corrugated segmented coupling band is bolted around the pipe barrel providing a very strong mechanical joint, which will not disjoin even under severe differential settlement/ground movement.

The **TUBOSIDER** gasketed joint is WRc approved to "Sewers for Adoption" standards of watertightness.

## FABRICATIONS & END TREATMENTS

A wide range of elbows, T's, branches and manholes can be factory fabricated to provide huge savings on material, time and costs compared to concrete or HDPE systems.

Pipe ends can be cut to form bevels, step bevels and skews to suit embankment slopes and eliminate the need for expensive r.c. headwalls and wingwalls.

## DURABILITY



Helically wound pipe has been produced for more than 35 years. Modern continuous galvanising techniques ensure that pipes are highly durable. Highways Agency Standard BD12 require a design life of 120 years.

Helibore is now available with Trenchcoat Polymer secondary coating, which is BBA Certified for 60 years life. This means that Helibore pipe now offers the unique strength advantages of steel with the durability of Polyethylene - an unbeatable combination.

## QUALITY ASSURANCE

**TUBOSIDER** Helibore is fully BBA Certified, Certificate No: 91/R062. Helibore is also Highways Agency Type Approved, Certificate No: BE1/4/92. **TUBOSIDER** are currently working towards a full Quality Assurance system compliant with BS EN ISO9002.

**TUBOSIDER** provide full bedding and backfill details and jointing instructions with every order. Good backfilling practice is vitally important.

### MANNINGS 'n' VALUES

#### 68 x 13 Corrugation

<b>Diam (m)</b>	0.3	0.5	0.6	0.9	1.1
<b>Unpaved</b>	0.012	0.014	0.016	0.019	0.020
<b>25% Paved</b>	0.012	0.013	0.015	0.017	0.018

#### 125 x 25 Corrugation

<b>Diam (m)</b>	1.2	1.5	2.0	2.6	3.0
<b>Unpaved</b>	0.023	0.024	0.025	0.026	0.027
<b>25% Paved</b>	0.020	0.021	0.022	0.023	0.023