

## LINER PLATE



**TUBOSIDER**

GRUPPO RUSCALLA

UNITED KINGDOM LTD



## INTRODUCTION

# The biggest European Producer of Corrugated Steel Products.

**Tubosider's** interests extend throughout Europe, Africa, Middle East and South America.

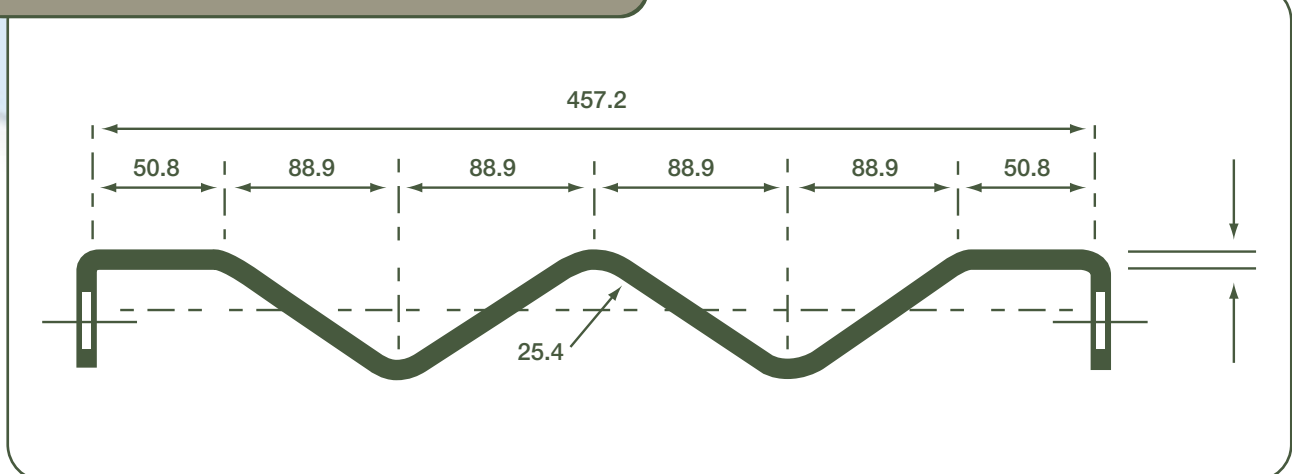
This wealth of technical and manufacturing expertise gained over 40 years is now brought to bear on a range of corrugated steel products.

Liner plate is a flanged corrugated Steel Plate for use in tunnelling or applications where installation is available from one side only, the structures are flexible and can accommodate significant ground movement without detriment to their structural performance.

## APPLICATIONS:

- Shafts
- Culverts
- lining old structures
- Railway Tunnels
- Protection from falling masonry structures

## TYPICAL PLATE DETAIL










## ADVANTAGES WITH HOT DIPPED GALVANISED STEEL

Adoption of corrugated steel as the engineering solution at the inception of a project both speeds and simplifies the design, procurement and construction at a later stage.

Unlike concrete structures the design process is rapid, the installation swift and simple and the structure is immediately ready to carry loads.

The curved plate configuration facilitates efficient shipping as the plates can be nested in bundles enabling hundreds of plates to be moved in a single load.

### ADVANTAGES:

-  Economical
-  Flexible
-  Ease of assembly
-  Structural Simplicity
-  Ease of Transportation and Delivery
-  Ultra Versatile
-  Long Lasting

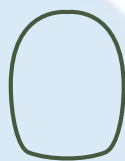
## STRUCTURE PROFILES

This exceptional range of structure profiles ensures that Tubosider can offer a perfectly tailored solution to almost any culvert/re-lining requirement.

## All Structures are designed to rigorous national and international standards

For use in a vast range of applications from road construction, railways, ammunition stores, aggregate bins and many more innovative solutions which amply illustrate the flexibility and versatility of these products. In all these applications, the cost to benefit ratios are unrivalled by any other product.

## PROFILES



UNDERPASS



CIRCULAR



PIPE-ARCH



HORSESHOE



ARCH

### ENGINEERING PROPERTIES AND WEIGHT PER PLATE

Steel Thickness (mm)	Moment of Inertia (cm <sup>4</sup> /m)	Sectional Modulus (cm <sup>3</sup> /m)	Area (cm <sup>2</sup> /m)	6 Hole Plate kg	7 Hole Plate kg	8 Hole Plate kg
2.70	75.94	29.50	34.19	13.29	15.36	17.42
3.40	101.97	38.06	44.08	16.58	19.16	21.73
4.20	130.19	46.81	54.06	20.34	23.51	26.66
4.60	147.12	51.29	59.08	22.23	25.70	29.14
5.30	173.77	59.89	68.95	25.52	29.50	33.45
6.10	206.38	68.71	79.02	29.28	33.84	38.38



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