asset MultiPlate® MP200
Corrugated Steel Structures

asset International Structures Ltd has a long, proven international record of providing a comprehensive range of products and services to the construction and related industries. Our innovation in design and experience means our structures can be found at various locations in the **UK** and **Europe**.

The components of galvanised steel structures have been used in the construction of civil engineering projects for over **100 years**. The first application of this type of construction took place in North America where the idea of using them in road and rail construction was born. Engineers have long since realised that by using corrugated steel in culvert and bridge design offers substantial savings in design cost and installation time.

Today, buried flexible steel structures are widely used in construction projects around the world. Structures of this type due to their application are often referred to as soil steel structures.

Applications

asset MultiPlate® MP200 structures are used in road, rail and other industrial applications such as:

- CULVERTS
- BRIDGE REHABILITATION OR EXTENSION
- OVERPASSES
- TUNNELS
- UNDERPASSES
- ECOLOGICAL CROSSINGS
- BELT CONVEYOR TUNNELS FOR THE MINING AND QUARRY INDUSTRIES
- PORTAL STRUCTURES
- PIPE PROTECTION APPLICATION
- AD TANKS
- SOAKAWAYS
- TEMPORARY STRUCTURES
- PROTECTING HIGH VOLTAGE CABLES

asset MultiPlate® MP200 Design

Our principle design method is the UK Highways CD375 design, considering up to normal and abnormal levels of traffic. The design programme also ensures up to a 120-year design life which is fully compliant with modern day applications.

Our engineers can also, where required, look at an individual application and calculate any unique load model footprint to offer a more bespoke solution. This is common when considering applications in the quarry/mining industries or when reviewing construction plants that may be used during installation. Using our extensive knowledge and experience we are able to look into the key parameters of the design to find efficiencies and potential cost savings.

Approvals for asset MultiPlate® MP200 include:

- Highways Agency Type Approval Certificate
- BBA HAPAS Certificate 18/H282
- CE Marking to Harmonised Standard EN 1090

asset MultiPlate® MP200

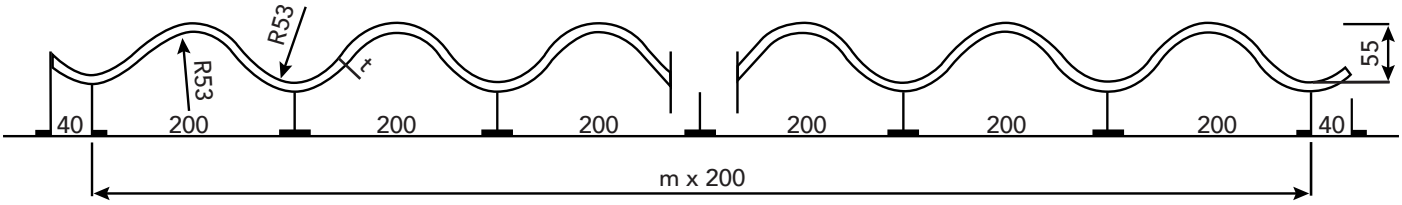
The versatility of **asset MultiPlate®** in terms of structure shapes and sizes offers the widest possible choice to the designer addressing conventional design problems and also considerable scope for originality when faced with one of the many unusual problems which arise in today's construction industry. **asset MultiPlate®** is manufactured in a wide range of steel thickness and plate sizes, and the range of applied finishes available includes galvanising and further optional secondary coatings.

Strength through flexibility

asset MultiPlate® structures provide a high compressive strength and create a composite steel/soil structure by transferring imposed loads to the surrounding backfill. Structural load capacity is a function of structure span, wall thickness and backfill properties. Foundation loads are considerably reduced compared to those exerted by rigid structures under similar load conditions.

Our technical staff are always ready to discuss the feasibility of applications however unusual they may at first appear.

MP200 200 x 55mm Corrugation



Innovative application of asset MultiPlate® MP200

asset MultiPlate® MP200 Lolham - Rail viaduct near Peterborough

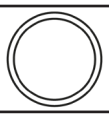
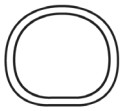
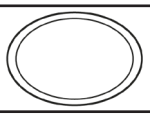
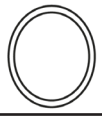
Height of Cover Table Guide for MP200

The table below should be used as a guide for using **asset MultiPlate®** structures including height of cover limits in metres for **MP200**. These limits are based upon the UK Highways design method **CD375**. The calculation takes into account the maximum allowable corner bearing pressure of **300KN/m²** and assumes **normal and abnormal levels of traffic**.

For Eurocode load models please contact our technical department.

HEIGHT OF COVER TABLE MP200												
Steel Thickness (mm)	**3.0 mm**		**4.0 mm**		**5.0 mm**		**6.0 mm**		**7.0 mm**		**8.0 mm**	
	(10 bolts/m)		**(10 bolts/m)**		**(10 bolts/m)**		**(15 bolts/m)**		**(20 bolts/m)**		**(20 bolts/m)**	
Diameter/Span (m)	**Min**	**Max**	**Min**	**Max**	**Min**	**Max**	**Min**	**Max**	**Min**	**Max**	**Min**	**Max**
3.0	0.65	7.3	0.65	11	0.65	15.7	0.65	15.7	0.65	15.7	0.65	15.7
4.0	0.8	5.1	0.8	8	0.8	11.7	0.8	15.7	0.8	15.7	0.8	15.7
5.0			1.0	6.1	1.0	9.2	1.0	13.2	1.0	15.7	1.0	15.7
6.0					1.2	7.5	1.2	10.7	1.2	12.7	1.2	14.3
7.0					1.4	6.2	1.4	8.3	1.4	9.9	1.4	11.1
8.0									1.6	7.6	1.6	8.5

asset MultiPlate® MP200 Profiles

STRUCTURE	SHAPE	SIZE RANGE	TYPICAL USES
	Round Pipe	Diameter 1.74 - 8.0m	Culverts, underpasses service or recovery tunnels
	Low Profile Pipe Arch	Span 1.83 - 8.0m	Culverts where headroom is limited
	High Profile Pipe Arch (underpass)	Span 2.08 - 8.0m	Culverts and underpasses beneath embankments for pedestrians, livestock and vehicles
	Horizontal Ellipse	Span 1.97 - 8.0m	Culvert, sewers and tunnels where headroom is limited
	Vertical Ellipse	Span 1.65 - 8.0m	Culvert, sewers and tunnels where headroom is limited
	Arch	Span 2.0 - 8.0m	For bridging rock bedded streams. Also for low headroom, large waterway openings and sometimes for aesthetic consideration

*** FOR THE FULL LIST OF SHAPES AND SIZES PLEASE CONTACT OUR TECHNICAL DEPARTMENT ***

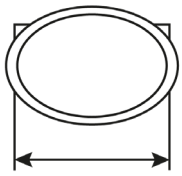
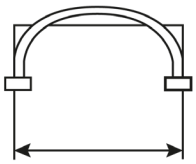
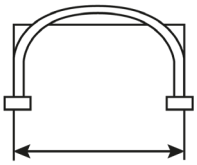
Note: asset MultiPlate® is suitable for lining failing structures by either assembly inside, where working space permits, or hauling in from outside where working space is insufficient. Grout connections can be supplied for filling the annular space between the new lining and the failing structure. Other shapes can be supplied for special applications.

FOR FURTHER INFORMATION SCAN THIS CODE TO VISIT OUR WEBSITE

asset|STEEL

asset MP200 SuperSpan®

asset MP200 Superspan® is, as the name implies, a wider span structure.
The special feature of these structures is that they utilise an in-situ cast concrete 'thrust beam' to generate the maximum available lateral ground support from the adjacent compacted backfill.

STRUCTURE	SHAPE	SIZE RANGE
	Ellipse	6.0m - 12.0m
	Low Profile Arch	6.0m - 12.0m
	High Profile Arch	6.0m - 12.0m

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Asset MultiPlate® MP200 and MP200 SuperSpan®

APPROVALS:

- Highways Agency Type Approval Certificate
- BBA HAPAS Certificate 18/H282
- CE Marking to Harmonised Standard EN1090

DESIGNED TO:

- UK Highways CD375

Achilles BuildingConfidence AUDITED

bsi ISO 9001 Quality Management Systems CERTIFIED

RISQS RAILWAY INDUSTRY SUPPLIER QUALIFICATION SCHEME VERIFIED

BBA APPROVAL INSPECTION TESTING CERTIFICATION CERTIFICATE 18/H282

CE UKCA

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