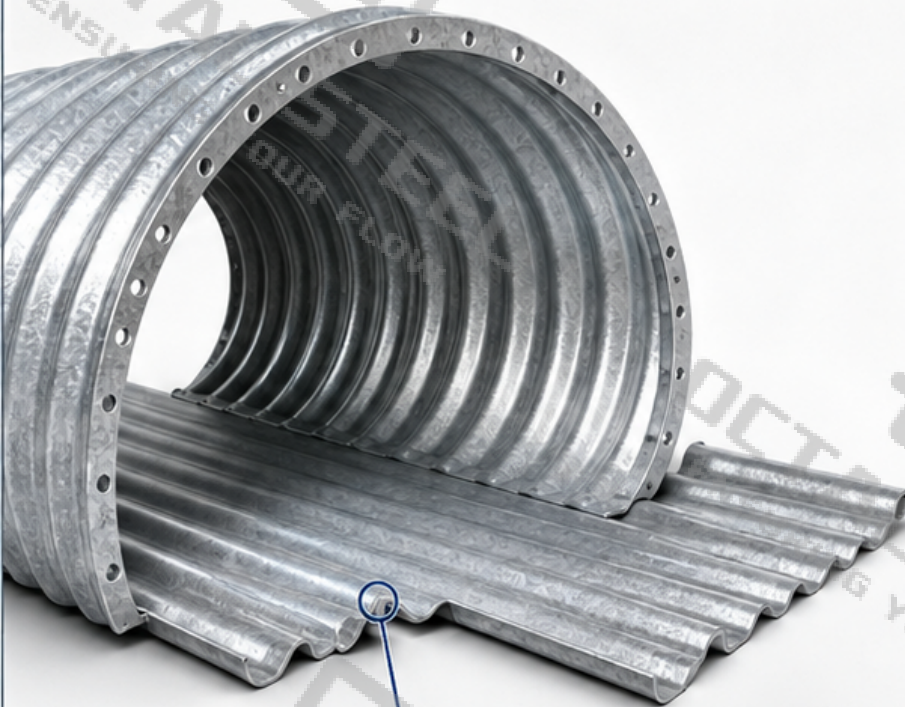
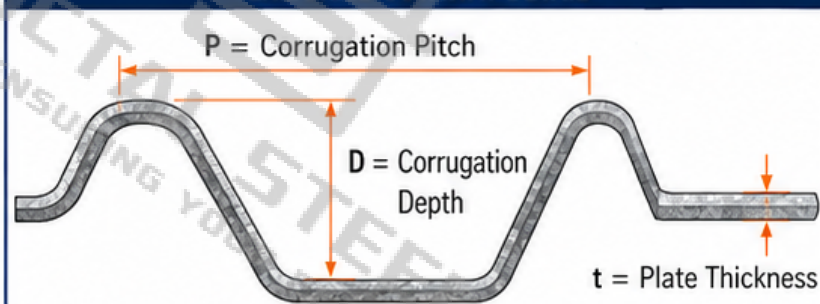


Corrugated Steel Plate Geometry and Corrugation Profiles

TECHNICAL REFERENCE SHEET



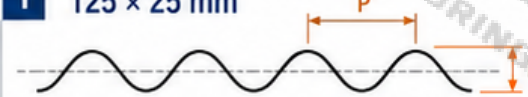
ENLARGED CUTAWAY DETAIL



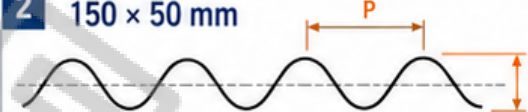
Representative Corrugation Profiles

Pitch × Depth

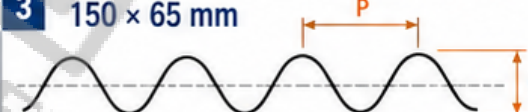
1 125 × 25 mm



2 150 × 50 mm



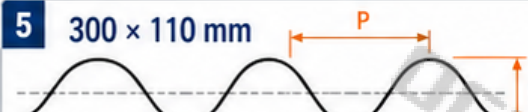
3 150 × 65 mm



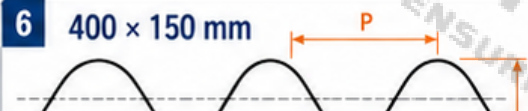
4 200 × 55 mm



5 300 × 110 mm



6 400 × 150 mm



Representative Product Parameters



Material:

SS400 or Q235
hot-rolled steel plate



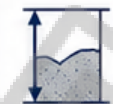
Plate
Thickness:

1.6–7.0 mm



Representative
Diameter /
Span:

0.3–12 m



Representative
Fill Height:

0.5–60 m



Assembly:

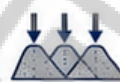
Factory-formed or
field-assembled



OPENING / SPAN



STRUCTURAL SHAPE



FILL / LOADING



CORRUGATION
PROFILE



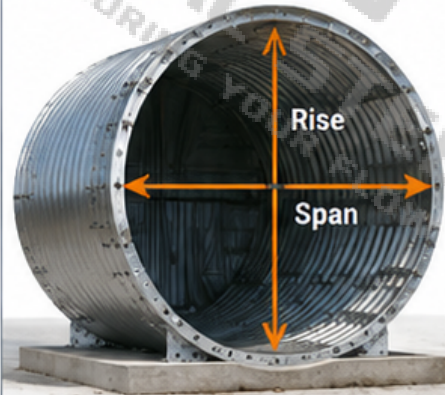
PLATE
THICKNESS



Plate thickness and corrugation profile must be reviewed together; the listed dimensions are not universally interchangeable.

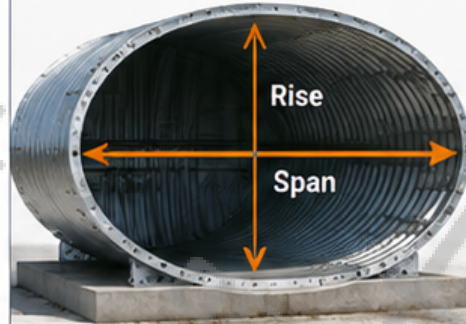
Corrugated Steel Plate Structural Shapes, Span and Rise

ROUND



Balanced closed section for conventional drainage and underground crossings.

ELLIPTICAL



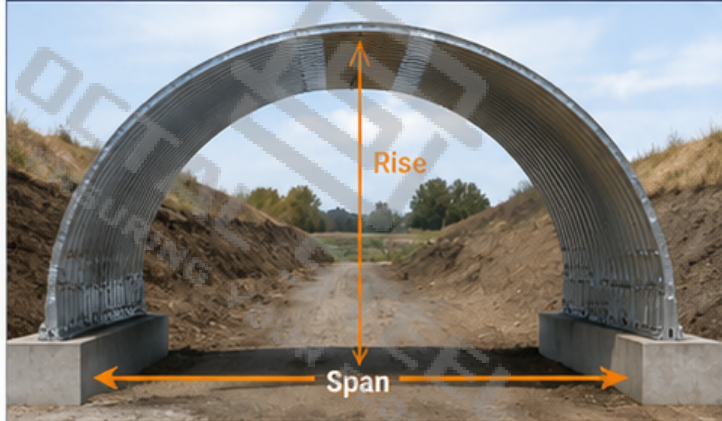
Width and height can be adjusted where a circular opening does not fit site clearance.

PIPE ARCH



Provides greater width with lower rise where cover is limited.

ARCH



Large open-bottom structural form supported at its foundations.

HORSESHOE



Broad lower opening for passage or large buried-structure geometry.

DESIGN REVIEW CONSIDERATIONS



Required Hydraulic Opening

- Define the clear opening needed for flow capacity and hydraulic performance.



Available Vertical Clearance

- Confirm available cover and overall height restrictions at the installation site.



Span and Rise

- Select span and rise to meet structural needs, hydraulic requirements and site constraints.



Earth Cover

- Verify minimum and maximum earth cover for structural performance and durability.



Foundation Geometry

- Confirm foundation type, width, embedment and alignment for safe load transfer.



Structural shape affects opening geometry and installation conditions; it does not determine plate thickness by itself.

FIELD-ASSEMBLED CORRUGATED STEEL PLATE

Curved Plate Section



Field Assembly



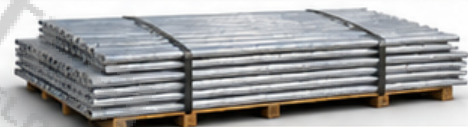
Structural Plate Culvert



Span / Rise Based Selection



Transportable Individual Plates



Representative Data (Field-Assembled Plate)

Thickness: 1.6–7.0 mm

Profiles:

125 × 25 mm



150 × 50 mm



150 × 65 mm



200 × 55 mm



300 × 110 mm

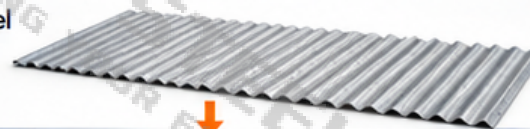


400 × 150 mm

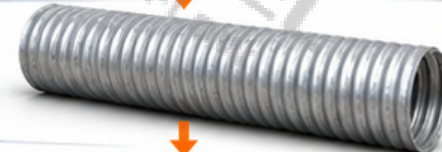


SPIRAL CORRUGATED STEEL PIPE

Corrugated Steel Strip / Plate



Helical Forming



Lock-Seam



Completed Round Pipe



Coupling Connection



Flange Connection



Representative Data (Spiral Corrugated Pipe)

Inside Diameter:
300–3600 mm

Thickness:
1.6–4.2 mm

Profiles:

68 × 13 mm



75 × 25 mm



125 × 25 mm



Comparison Criteria		Field-Assembled Corrugated Steel Plate	Spiral Corrugated Steel Pipe
 Product Form		Individual curved corrugated plates	Continuous spiral corrugated pipe
 Manufacturing / Assembly		Factory-curved plates; assembled and bolted on site	Helically formed from coil; lock-seam in factory or field
 Typical Geometry		Large spans and rises; pipe-arch, arch, or structural plate culverts	Round pipe for conveying and cross-drainage applications
 Connection		Bolted lap joints between plates; optional flanges at ends	Lock-seam longitudinal joint; couplings or flanges at joints/ends
 Selection Basis		Span and rise requirements; fill height; site access and logistics	Required diameter; hydraulic capacity; cover height; alignment



Do not transfer plate profiles, thickness ranges or coating requirements directly between the two product systems.

1. LARGE SPAN / TRANSPORT LIMIT



Focus: Field-assembled structural plate
Transportable plate sections; assembled on site for large spans and restricted transport.

2. LIMITED VERTICAL CLEARANCE



Focus: Pipe arch / elliptical geometry
Low-rise solutions where cover or vertical clearance is restricted.

3. HIGH EARTH FILL



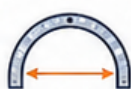
Focus: Profile + thickness + backfill design
Greater cover requires appropriate corrugation, plate thickness and backfill design.

1



Required Opening
Define the required clear opening.

2



Diameter OR Span × Rise
Select pipe diameter or span and rise.

3



Fill Height and Loading
Evaluate fill height, cover and design loads.

4



Corrugation Profile
Select appropriate pitch and depth profile.

5

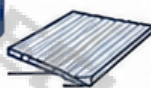


Plate Thickness
Select plate thickness to meet strength and durability needs.

6



Structural Shape
Choose structural shape to fit hydraulic and site constraints.

7



Corrosion Protection
Specify galvanizing and any secondary protection.

8



Connection / Assembly Method
Define joint type, flanges, couplings and assembly method.

1. WEAK OR VARIABLE FOUNDATION



Focus: Granular support + soil interaction
Use engineered granular foundation and consider soil-structure interaction and settlement.

2. CORROSIVE SOIL / WATER



Focus: Galvanized steel + specified secondary protection
Evaluate exposure conditions and specify coatings for long-term durability.

3. EXISTING CULVERT REHABILITATION



Focus: Site-specific geometry and fabrication
Adapt to irregular site conditions; fabricate sections to match existing geometry.

CONFIGURATION
CHECK



☐ Opening
Confirmed

☐ Span / Rise
Confirmed

☐ Fill Condition
Confirmed

☐ Corrugation
Confirmed

☐ Coating
Confirmed

☐ Connection
Confirmed



Same nominal opening can require a different corrugated steel plate configuration when fill, soil, shape or exposure changes.