

TRENCH COVER SYSTEMS

Common metric specifications / Southeast Asia & Middle East / RFQ-ready

Typical standard configuration

SYSTEM BASELINE

TRENCH BASELINE - CATALOG START

- Clear opening: 300-1000 mm common range
- Panel length modules: 500 / 1000 mm common
- Bearing bars: 30 x 5 to 50 x 5 mm typical
- Frames: L50 x 50 x 5 or L65 x 65 x 6 common
- M10 / M12 locks or lift holes for pedestrian duty
- Vehicle zones require frame/anchor/concrete design
- Wiberg makes covers; sourced frames/hardware integrated

300-1000 mm

Common clear opening range

500 / 1000 mm

Common panel length modules

30 x 5 to 50 x 5

Typical bearing-bar range

Opening-based

Covers, frames, locks, marks

Wiberg manufactures cover panels and coordinates project-sourced frames, anchors, locks and lifting details. Vehicle zones require system design, not a panel-only rating.

Select cover and frame

Clear opening and traffic load determine the cover panel, support frame, anchors, locking and lifting details.

0
1**Environment**0
2**Traffic / load**0
3**Clear span**0
4**Opening / mesh**0
5**Surface**0
6**Material / finish**

Application	Starting product	Key confirmation
Pedestrian trench	WTC-305-30/100	Opening + service load
Drainage channel	Open-area grating	Flow + debris + cleaning
Industrial trench	WTC-405-30/100	Point load + clear span
Vehicle zone	Project-designed system	Wheel load + frame + anchors
Wet / chemical	HDG / SS / FRP option	Compatibility + slip
Secure / removable	Locks + lift points	Opening cycle + marking

Standard Trench Covers

PRODUCT



Removable cover panels for cable trenches, drains and utility pits. Cover and support frame are selected together.

STANDARD MANUFACTURING RANGE

Parameter	Typical range
Duty basis	Pedestrian + maintenance; project load controls
Typical grating	WTC-305-30/100-P/S-HDG
Panel width	300 / 400 / 500 / 600 mm openings; 500/1000 modules
Frame	L50 x 50 x 5 or L65 x 65 x 6 common
Fixing	M10 / M12; lock or lift hole optional

COMMON MODELS

COMMON COVER SCHEDULE

- Openings: 300 / 400 / 500 / 600 / 900 / 1000 mm
- Bars: 30 x 5 to 50 x 5 mm by span and load
- Frame: L50 x 50 x 5 or L65 x 65 x 6 common
- Panel length: 500 / 1000 mm common modules
- Fixing: M10 / M12 lock or lift-hole option

WTC-300 / 400 / 500 / 600-305S-HDG

30 x 5 bearing bars / 30-100 pitch / serrated or plain / HDG

Catalog models are for configuration. Confirm actual clear opening, bearing ledge, panel length, support direction and applied load before release.

ORDERING INPUT

clear opening / panel length / pedestrian load / frame / locking / finish

Standard ranges shown for catalog selection. Final section, span, load, finish and compliance basis must be confirmed against project drawings.

Drainage Channel Covers

PRODUCT



Continuous open-area covers for surface-water drainage routes and chemical bund channels.

STANDARD MANUFACTURING RANGE

Parameter	Typical range
Duty basis	Pedestrian drainage; vehicle zones by design
Frame	L65 x 65 x 6 / L75 x 75 x 6 common
Mid supports	By clear span and applied load
Fixing	M10 / M12 lock or hold-down
Materials	Carbon steel HDG; SS 316L

CONFIGURATION RULE

DRAINAGE INPUTS

- Clear channel width and total run length
- Required flow/open area and debris condition
- Pedestrian, maintenance or vehicle exposure
- Intermediate supports set by span and applied load
- Removable panels and cleaning access

DRAINAGE + TRAFFIC MUST BOTH BE STATED

Confirm open area, debris size, cleaning access and traffic zone.

A drainage requirement alone does not establish structural capacity. Vehicle, forklift or airport equipment zones require wheel-load system design.

ORDERING INPUT

channel width / run length / flow/open area / traffic / frame / finish

Standard ranges shown for catalog selection. Final section, span, load, finish and compliance basis must be confirmed against project drawings.

Vehicle-Zone Trench Cover Design Gate

TECHNICAL ILLUSTRATION

VEHICLE-DESIGN INPUTS

- Wheel load and dynamic factor
- Contact patch and worst wheel position
- Clear span and bearing-bar direction
- Frame section, support seat and anchor layout
- Concrete strength and edge condition

Do not assign a traffic class from bearing-bar size alone. Verify cover, frame, anchors, concrete ledge and fixing arrangement as one system.

STANDARD MANUFACTURING RANGE

Parameter	Typical range
Required design input	Wheel load + contact patch + clear span
Typical grating	40 x 5 or 50 x 5; section by calculation
Frame	Reinforced angle/channel + cross-members
Fixing	M12 / M16 locking by design
Material	Q235B / S275JR / A36; HDG

RELEASE GATE

NO CATALOG VEHICLE RATING

- Cover, frame, anchors and concrete act as one system
- Do not assign EN 124 class without matching evidence
- Check panel bending, frame bending and anchorage
- Check deflection, rocking and adjacent settlement
- Project calculation or qualified test required

NO VEHICLE RATING WITHOUT PROJECT DATA

Submit wheel load, tyre/contact area, impact allowance, traffic path, opening and concrete details.

Final capacity statement must be supported by calculation and, where specified, system testing or third-party verification. Catalog dimensions are not a D400/E600/F900 certification.

ORDERING INPUT

axle/wheel load / contact patch / opening / frame support / anchors / deflection

Standard ranges shown for catalog selection. Final section, span, load, finish and compliance basis must be confirmed against project drawings.

Custom Fabricated Covers

PRODUCT

CUSTOM COVER GEOMETRY

- Rectangular, circular or irregular opening
- Hinged, removable, nested or security-locked
- Pipe/cable penetrations and lifting points
- Clear span and bearing-bar direction
- CAD profile plus support-section detail required

Irregular covers incorporate pipe cut-outs, hinged sections, handles and project-specific locking details.

STANDARD MANUFACTURING RANGE

Parameter	Typical range
Geometry	Rectangular / circular / irregular
Options	Cut-outs / hinges / handles
Locking	Security bolt / padlock eye
Materials	Steel HDG; stainless/FRP sourced options
Basis	CAD profile + load required

MANUFACTURING

CUSTOM RELEASE DATA

- Uniform/point/wheel load and contact area
- Frame seat, anchors and concrete interface
- Locking, hinge and opening cycle
- Panel marks, paired parts and packing sequence
- Finish, drainage and maintenance access

CAD PROFILE + LOAD REQUIRED

Cut-outs / hinges / handles / locks / panel marks

Wiberg fabricates steel cover panels to the approved opening survey. Sourced hinges, security hardware and lifting devices are coordinated in the same drawing.

ORDERING INPUT

CAD profile / penetrations / load / removability / marking / finish

Standard ranges shown for catalog selection. Final section, span, load, finish and compliance basis must be confirmed against project drawings.

Frames, locking and anchoring

The support interface controls installation reliability as much as the cover panel.



LOCKING AND LIFTING

- M10 / M12 pedestrian lock bolts common
- M16 may be used by design for larger duty
- Socket bolts, security heads, hinges or padlock eyes
- Lift holes or handles coordinated with panel mass
- Opening cycle and maintenance method stated

Angle & Reinforced Frames

L-angle for pedestrian channels; channel frames and stiffeners for vehicle zones.

Parameter	Typical range
Angles	L50x50x5 / L65x65x6 / L75x75x6 / L100x100x10
Channels	Channel series by system design
Classes	Pedestrian / industrial / vehicle by design
Finish	HDG / SS

Locks & Anchors

Socket bolts, security heads, hinges and anchors are coordinated to the opening cycle and base material.

Parameter	Typical range
Lock bolts	M10 / M12 common; M16 by design
Anchors	M10-M24 common; heavier by design
Grades	8.8 / 10.9
Materials	HDG / SS 316L

FRAME INTERFACE

- L50 x 50 x 5 / L65 x 65 x 6 common starts
- Reinforced channel/beam for vehicle zones
- Support seat, drainage gap and construction tolerance
- Anchor edge distance and concrete condition
- Engineer releases vehicle-zone arrangement

INTEGRATED AND SUPPLIED BY WIBERG

Cover panel: manufactured by Wiberg. Frame, anchors and hardware: sourced or fabricated to the approved design.

Concrete strength, edge distance, bearing ledge, reinforcement and anchor design are civil/structural inputs. Provide them before vehicle-zone release.

Panel Fixings, Banding & Hardware

Match the fixing to the grating geometry, support flange and removal requirement.

FIXING STARTING POINT

- Saddle / hold-down / joining clips
- M8 or M10 hardware commonly sourced
- Minimum 4 clips per panel is a catalog start
- Increase near cut-outs, joints and uplift zones
- Final type must match mesh and support flange

BANDING AND TOE PLATE

- Banding depth normally matches bearing-bar depth
- 100 x 5 mm toe plate is a common project baseline
- Confirm edge gaps, openings and removable sides
- Welded or bolted detail must be stated
- Match finish to the fabricated panel

Panel Fixings

Hold-down, saddle and joining clips secure panels without site welding.

Banding & Lift Hardware

Edge bars close panel openings and provide interfaces for locks and lifting points.

Parameter	Typical range
Types	Hold-down / saddle / joining
Materials	Carbon steel / SS 304 / 316
Finish	HDG / painted / stainless
Spacing	4 per panel typical; increase by design

Parameter	Typical range
Banding	Flat bar to panel depth
Lift points	Handles / lift holes by drawing
Install	Welded / bolted
Finish	Match assembly

RELEASE BEFORE FABRICATION

- Bearing-bar span direction
- Support flange width and panel seat
- Cut-outs, removable panels and lifting access
- Clip material, finish and installation method
- Panel marks and packing sequence

MANUFACTURED + SOURCED PACKAGE

Banding: manufactured with panels. Clips / locks / lifting hardware: selected and supplied to project requirements.

Fixing type must match the support flange, grating pitch, removability and finish. Final quantity and spacing follow the approved installation drawing.

Anchors & Frame Connections

Bolt grade, hole pattern and base material must be coordinated before fabrication.

ANCHOR INPUTS

- Mechanical, chemical or cast-in system
- Concrete strength, embedment and edge distance
- Shear, uplift and cyclic traffic effects
- Corrosion grade and drainage condition
- Supplier data plus engineer acceptance

FRAME CONNECTIONS

- Plates: 10-16 mm common starting range
- Bolts: M12-M20 common, grade by design
- Welds and stiffeners shown on released drawing
- Avoid site cutting without approved repair detail
- Final seat level controls cover rocking

Anchors

Cast-in, wedge, chemical and plate-welded anchors for frames and rail bases.

Frame Connections

Frame lugs, base plates and connection holes follow the approved cover-system drawing.

Parameter	Typical range
Typical sizes	M12-M36 by design
Anchor type	Mechanical / chemical / cast-in
Bolt grades	8.8 / 10.9
Materials	HDG / SS 304 / 316L

Parameter	Typical range
Frame lugs	50 x 50 x 6 angle typical
Plates	10-16 mm
Bolts	M12-M20
Finish	HDG / SS 316L

CONCRETE / STEEL GATE

- Confirm cast-in frame or post-installed anchors
- Confirm level tolerance and non-shrink grout
- Confirm drainage and debris-cleanout path
- Coordinate adjacent paving and wheel path

INTEGRATED AND SUPPLIED BY WIBERG

Anchor manufacturer data, base material and design load control selection.

Wiberg coordinates bolt size, hole pattern, edge distance, coating and connection marks to the approved frame drawing.

Select material and finish from the operating environment

Carbon steel

Q235B / S275JR / ASTM A36

HDG / painted / untreated

Stainless steel

304 / 316; supplier certificate

As-fabricated / passivated scope

Aluminum - sourced

6063-T6 / 6061-T6

Mill / anodized

FRP - sourced

Isophthalic / vinyl ester

Concave / grit top

Environment	Starting point	Confirm
Dry indoor	Carbon steel / paint system	Maintenance coating
Outdoor	HDG after fabrication	Coating standard
Coastal / hygienic	304 / 316 by exposure	Grade + cleaning
Chemical / wet	FRP or stainless by compatibility	Compatibility + fire
Low mass rooftop	Aluminum / FRP sourced option	Wind + roof reaction

Inspection and turnover records follow the purchase specification

PRODUCT INSPECTION

- Material certificate / heat traceability
- Bearing-bar size, pitch and span direction
- Length, width, diagonals and flatness
- Cut-outs, banding, toe plates and weld details
- Surface finish and coating certificate

TURNOVER PACKAGE

- Approved drawing and panel mark schedule
- Material and coating records
- Inspection report and deviation closure
- Packing list linked to panel marks
- Supplier documents for sourced components

Inspection point	Typical evidence
Base material	Material certificate / traceability
Panel geometry	Length, width, diagonals, flatness
Bar pattern	Bar section, pitch, direction, alignment
Fabrication	Banding, cut-outs, tread details
Finish	Galvanizing or coating certificate
Release	Panel mark schedule + packing list

Common references: ISO 14122-2/-3 / ANSI-NAAMM MBG 531-24 / YB/T 4001.1 / ISO 1461:2022 / ASTM A123/A123M / project specification. Legacy EPC specifications may cite BS 4592-1.

Inputs for a comparable quotation

Send drawings when available. If they are not available, the following ten inputs are enough to start a controlled selection.

- | | | | |
|----|--|----|--|
| 01 | Clear opening, run length and environment | 02 | Pedestrian or vehicle operating zone |
| 03 | Uniform load or wheel load and contact patch | 04 | Cover model, panel length and span direction |
| 05 | Frame type and concrete support interface | 06 | Locking, hinges, lifting and removability |
| 07 | Anchors, drainage and panel marking | 08 | Required standard and document package |
| 09 | Quantity, destination and Incoterms | 10 | Required delivery sequence |

info@wibergmetal.com

WhatsApp +86 132 9058 8615
WhatsApp +86 132 7317 7087
Shanghai, China / UTC+8
Mon-Sat / 09:00-18:00



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wibergmetal.com
info@wibergmetal.com
WhatsApp +86 132 9058 8615
Shanghai, China



WEBSITE