CONDOR



ISCHEBECK

MANHOLE SHORING

OPERATING INSTRUCTIONS

Item Overview

1 LITEBOX Panel

The aluminium panel is the main element and can be comined with other components to build trench shoring for max. 3m deep trenches (3.00 x 0.50 m panel) or max 6 m deep trenches (2.00 x 0.50 m and smaller panels).

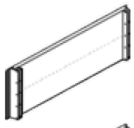
LITEBOX Panel 0.91 x 0.50 m

Weight 14.30 kg
Art-no. 655.0230500021



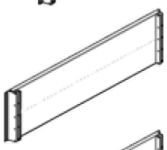
LITEBOX Panel 1.55 x 0.50 m

Weight 23.50 kg
Art.no. 655.0130500010



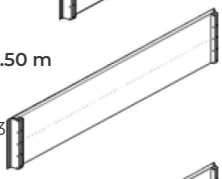
LITEBOX Panel 2.00 x 0.50 m

Weight 28.30 kg
Art.no. 655.0130500011



LITEBOX Panel 2.55 x 0.50 m

Weight 36.70 kg
Art.no. 655.0130500013



LITEBOX Panel 3.00 x 0.50 m

Weight 42.10 kg
Art.no. 655.0130500012



5 Standard Connecting Pin Ø 13 mm

With drop-down locking nib. For all connections between panel connectors, ligting eyes and rench struts.

Colour Black
Weight 0.25 kg
Art-no. 655.0130500088



6 Connecting Pin Ø 20 mm

With locking nib. For connecting aluminium manhole corner profiles and aluminium manhole corner connectors.

Colour Galvanised
Weight 0.34 kg
Art-no. 655.0130500099



7 Connecting Pin Ø 13 mm for manhole corners

For connecting aluminium LITEBOX panels to aluminium manhole corner profiles.

Colour Yellow
Weight 0.23 kg
Art-no. 655.0130500096



12 LITEBOX Universal Lifting Eye

One lifting eye is attached to each of the four corners of a trench box. A hook can then be attached to each one so that the trench box can be lifted and placed in a trench or lifted out of a trench.

- incl. 2 Standard connecting pins Ø 13 mm
- permissible load 10 kN

Weight 2.10 kg
Art-no. 655.0630504542



10 Lifting Eye for Manhole Profiles

Can be attached to the top of a manhole corner and used to lift either the entire manhole shoring or just the corner element out of the excavation.

- incl. connecting pins Ø 20 mm

Weight 2.10 kg
Art-no. 655.0630504542



8 Aluminium Manhole Corner Profile

Used to build a four-sided inspection chamber. Manhole corner profiles are available in lengths of 1.50 and 0.50 m, but can also be lengthened using the aluminium manhole corner connector.

Manhole Corner Profile 0.50 m

- incl. 4 connecting pins Ø 13 mm for manhole corners.

Weight 3.80 kg
Art-no. 655.0130504593



Manhole Corner Profile 1.50 m

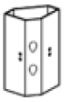
- incl. 12 connecting pins Ø 13 mm for manhole corners.

Weight 13.70 kg
Art-no. 655.0130504597

9 Manhole Corner Connector

Used with connecting pins to join together two manhole corner profiles
- incl. 2 connecting pins Ø 20 mm

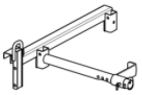
Size 300 mm
Weight 1.40 kg
Art-no. 655.0130504598



16 LITEBOX Ladder Support

Secures ladders 410 - 580 mm wide so that workers can enter and leave excavations safely. Two rail posts can be also insterted into the pockets in the support.
-incl. 3 Standard connectins pins Ø 13 mm
- galvanised

Weight 10.60 kg
Art-no. 655.0630504590

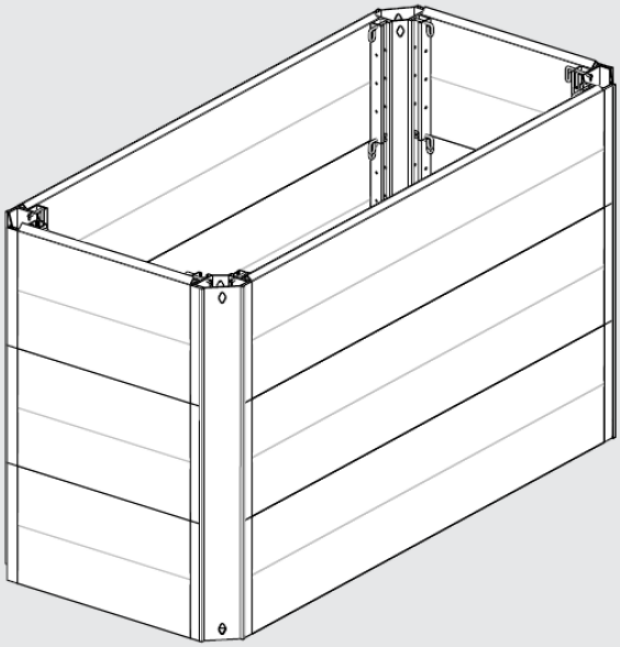


Note: Item overview shows standard Ischebeck products for its intended use only. Project specific variations may occur and substitute items from Ischebeck can be used. For project specific variations, always check suitability with Ischebeck Titan.

Safety accessories and edge protection are available upon request.

This document must be read in conjunction with ITAUS_SAFETY NOTES AND RISK ASSESMENT_12-2025. Always ensure that local and project specific regulations are adhered to.

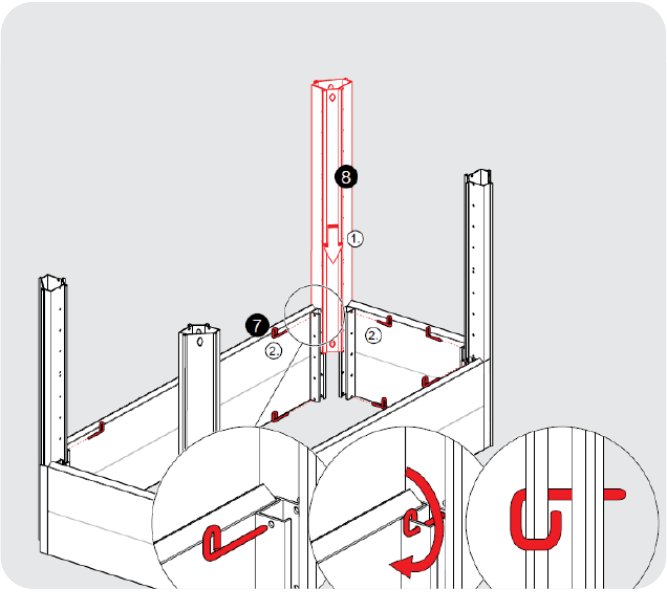
Sample Set Up: 1.50m Deep Manhole Trench Shoring



LITEBOX Panels	6/6
Connecting pins Ø 13 mm for manhole profiles	48
Manhole Corner Profiles	4

As an example, the next steps describe the assembly of a manhole trench shoring for max. 1.50m deep trenches.

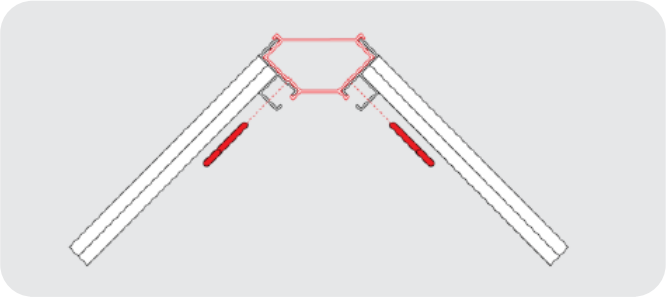
Various sizes and combinations of Litebox panels can be used to achieve the desired manhole size.

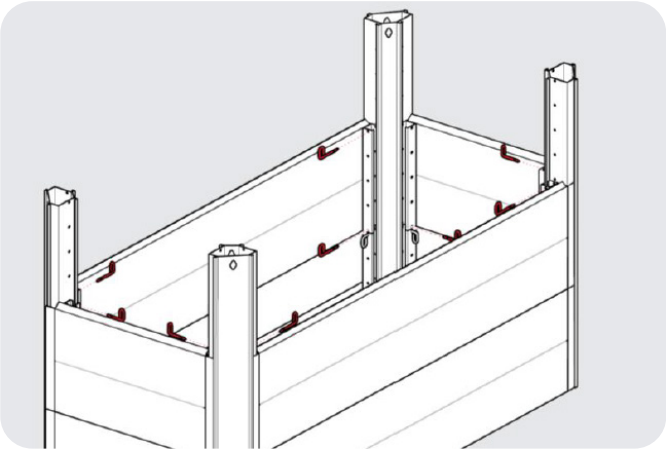


Start setting up the manhole trench box by inserting the manhole corner profile (8) from above into two aluminium Litebox panels. Complete 1 layer of panels with the manhole corner profiles.

Attach the panels to the manhole corner profiles with standard connecting pin 13mm (7) dia.

Hint! Ensure that the 2 panels you are starting with are corresponding to the desired final box size.



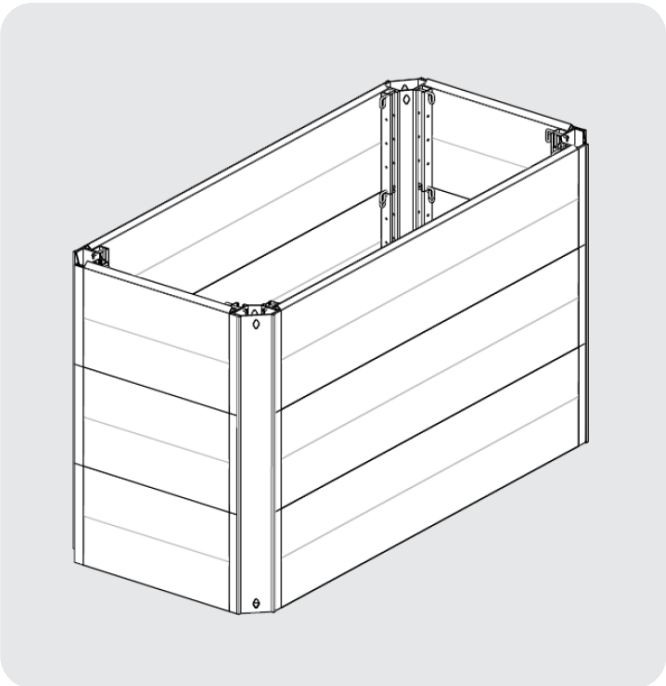


Add the second and third layer of panels by sliding them down the manhole corner profile.

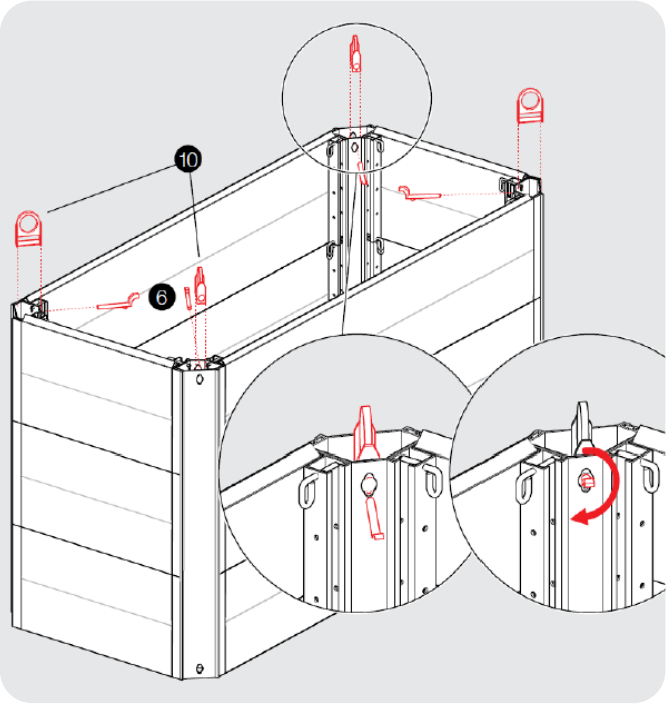
All panels need to be secured by 4 x standard connecting pin 13mm dia.

Important note!

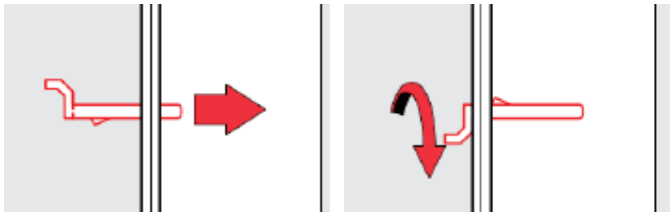
Beware when sliding panels over the manhole corner profile! Danger of Pinch Hazard: **Hand Injury Risk!**



Always ensure that the standard connecting pin 13mm dia is fully engaged and the gravity pin is closed when the panels are in an upright position.



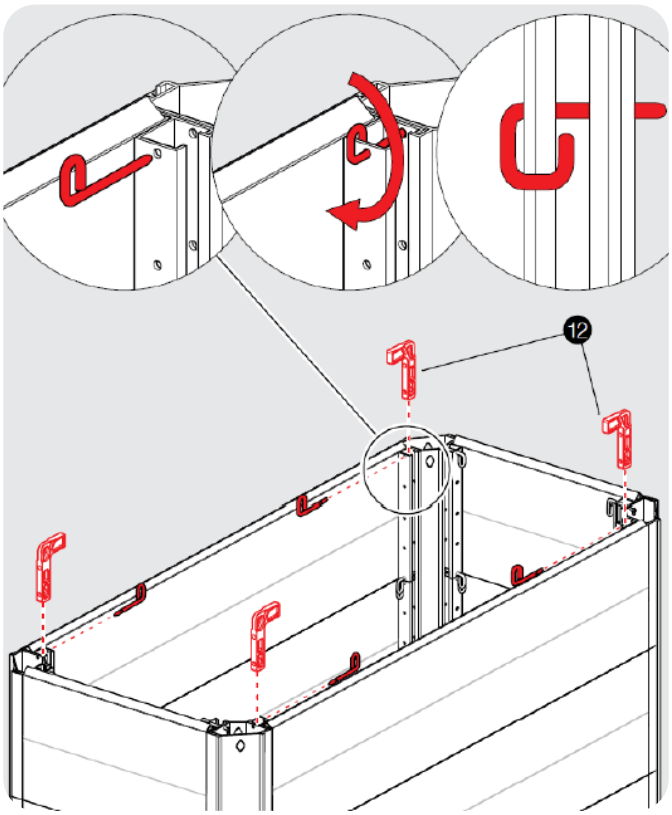
Attach the lifting eyes (10) to the manhole corner profiles with connecting pins 20mm dia (6) in order to lower the manhole shoring unit into position with the help of adequate plant and lifting devices.



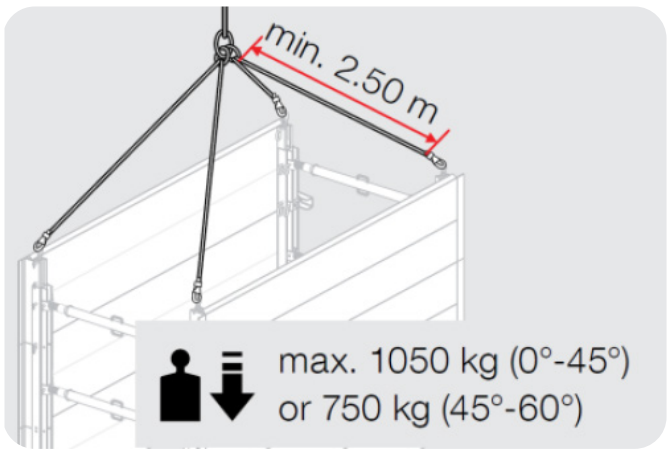
Insert connecting pin

Turn the pin to secure it

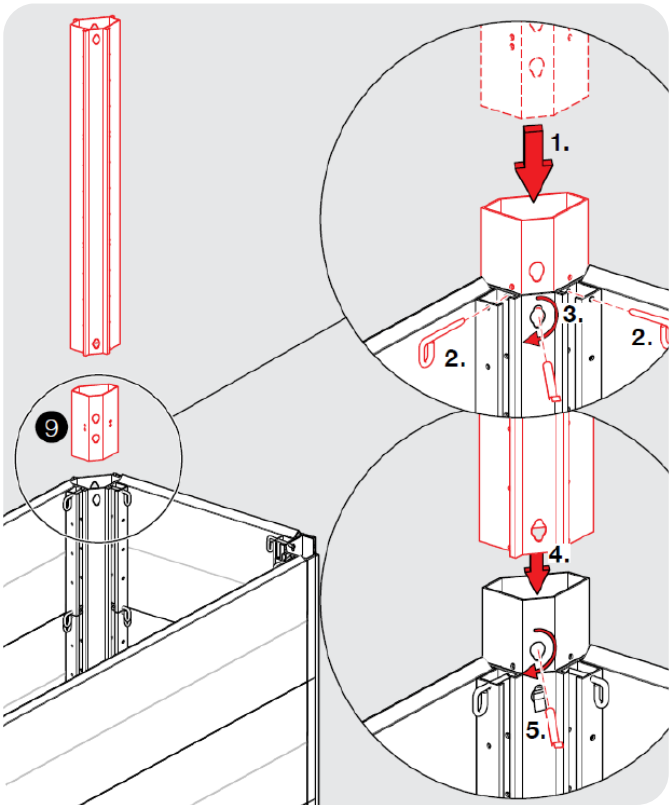
Ensure that all pins are installed and engaged properly prior to any lifting is undertaken!



Alternative to the lifting eyes (10), the universal lifting eyes (12) can be fixed to the topmost panels by standard connecting pin 13mm dia.

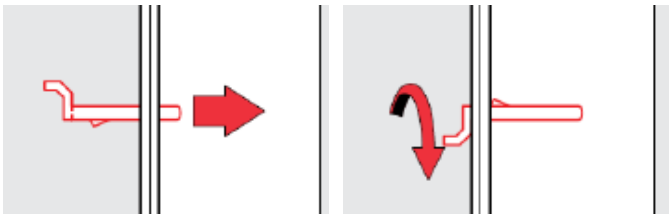






Option / extension for manhole >1.5m

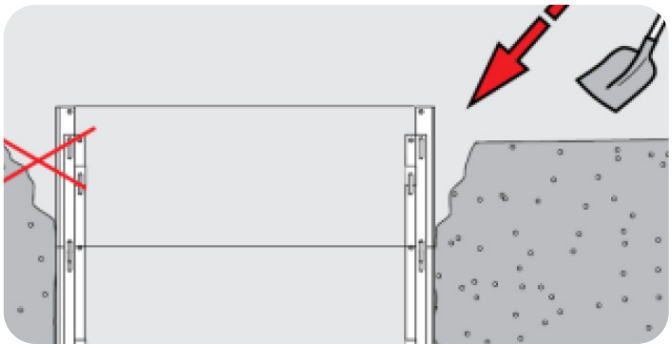
The shoring unit can be extended for manholes >1.5m depth. To do so, fix the aluminium manhole connectors (9) to each corner and secure with connecting pins 20mm dia.



Insert connecting pin

Turn the pin to secure it

Always refer to datasheets and certifications for max allowable height and earth pressure!



Backfill any voids between the panels and the excavation.

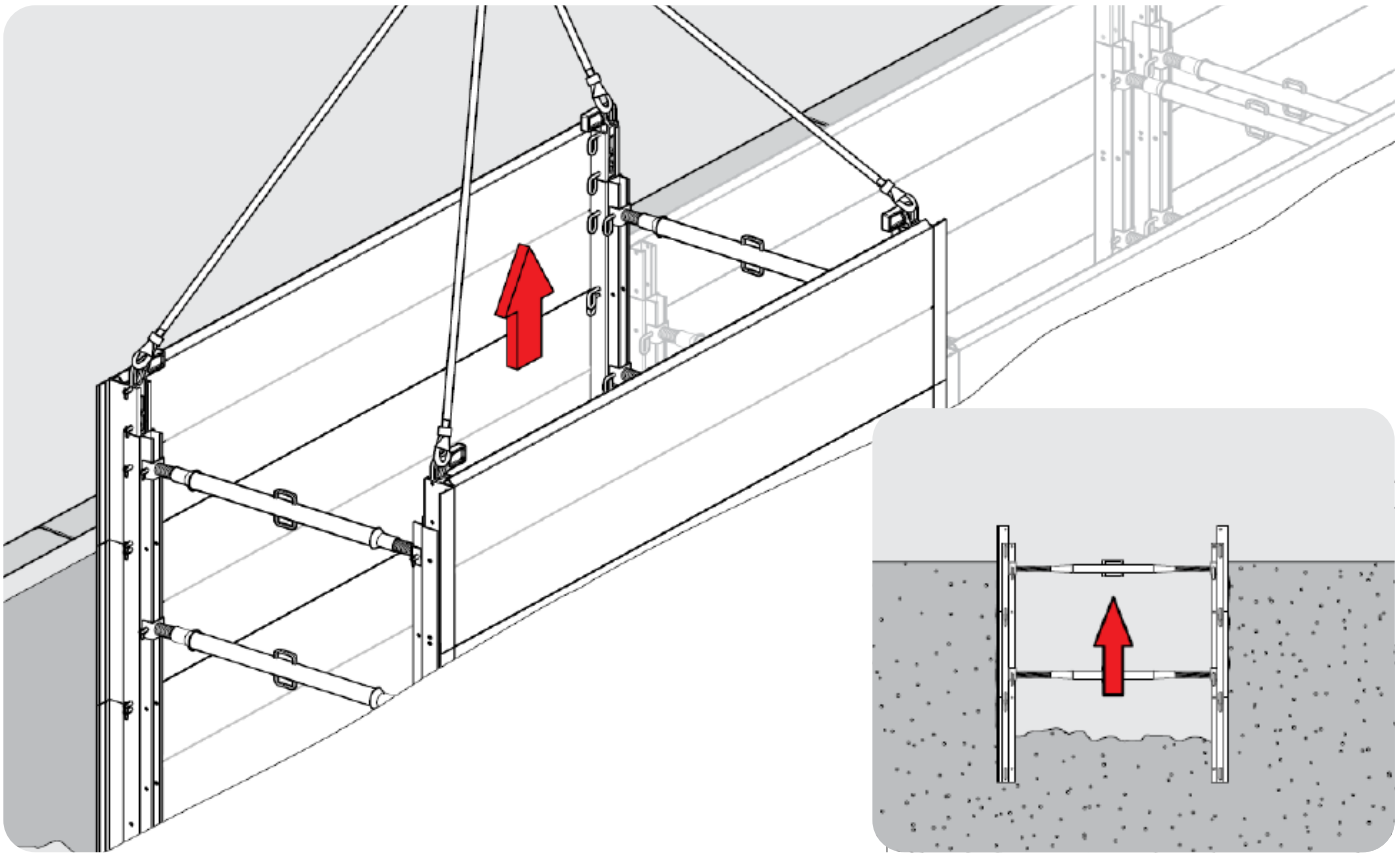
HINT! Let the trenchbox extend about 50mm beyond the excavation to avoid excess materials falling into the trench.

Install all required safety accessories (i.e. handrails, davit arm with winches, ladder access) as required.





Removal of Manhole/Trenchbox



Shoring removal must be planned and carried out in reverse order of installation.

No person is permitted in an unsupported trench at any time.

Basic Maintenance

Regularly check that all pins are in place and secured.

Replace damaged components.

Avoid laterally loading the struts-either by hanging or propping from them or accidentally striking them with the site plant.

Do's and Don'ts

DO use a ladder to enter the working space between the struts of the shield.

DO wear a safety helmet and PPE to minimise the risk of injury.

DO ensure that the excavator operator is aware of your intentions.

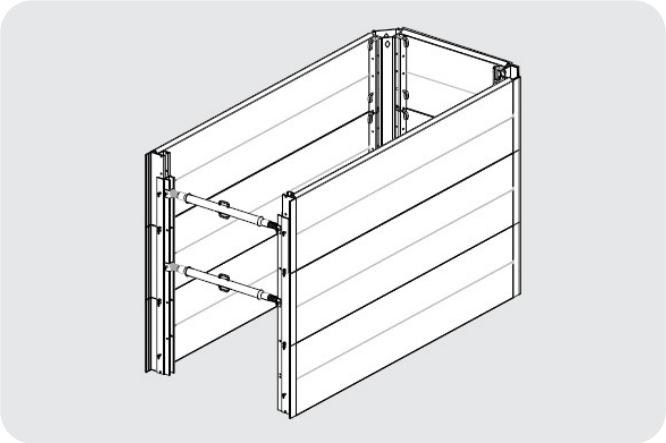
DO ensure that the unsupported part of the trench is safely battered.

DO NOT climb up or down the struts.

DO NOT use any unsupported part of the trench of access.

DO NOT move the shield when personnel is inside it.

DO NOT attach lifting chains to struts.

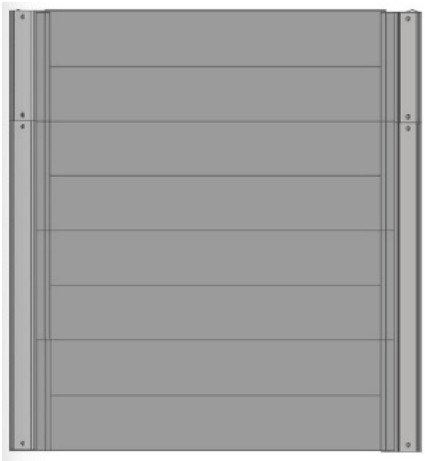


Manhole Shoring Open to One Side

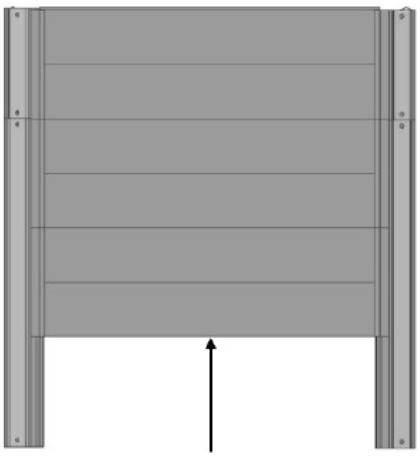
Where required, use manhole shoring open to one side at the start or end of a trench. This solution can also be used in applications where services are connected (T section) and panels can be removed to allow services to cross. Always refer to datasheets and certifications! Note: This solution requires manhole corner profiles and panel connectors for strut fixation

Tech Data - Manhole Arrangements:

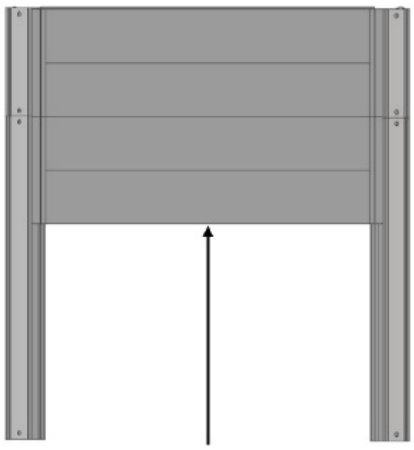
Refer to structural certification SSCE-25218-C1 dated 5th Dec 2025.



No panel missing



1 x panel missing = 0.50m clearance



2x panel missing = 1.00m clearance

When manhole boxes have varied panel sizes in plan, the lowest KPA values from the box performance tables must be taken.

Example

2.55m x 1.55m manhole box @ 3.0m depth no missing panel = 40/43.6 kPa (Rec/Tri)

2.55m x 1.55m manhole box @ 3.0m depth 2 x missing panel = 20.9/22.8 kPa (Rec/Tri)

Manhole Corners Boxes - 0.9m Panel No Panels Missing		
Depth	Rec Max Kpa	Tri Max Kpa
0.50	120.00	239.90
1.00	120.00	160.00
1.50	120.00	143.90
2.00	120.00	137.10
2.50	120.00	133.30
3.00	120.00	130.90
3.50	120.00	129.20
4.00	120.00	128.00
4.50	120.00	127.00
5.00	120.00	126.30

Manhole Corners Boxes - 0.9m Panel 1 No Panels Missing - 0.5m Clearance		
Depth	Rec Max Kpa	Tri Max Kpa
0.50	-	-
1.00	-	-
1.50	95.00	114.00
2.00	95.00	108.50
2.50	95.00	105.50
3.00	95.00	103.60
3.50	95.00	102.30
4.00	95.00	101.30
4.50	95.00	100.50
5.00	95.00	100.00

Manhole Corners Boxes - 0.9m Panel 2 No Panels Missing - 1.0m Clearance		
Depth	Rec Max Kpa	Tri Max Kpa
0.5	-	-
1.00	-	-
1.50	-	-
2.00	58.60	66.90
2.50	58.60	65.10
3.00	58.60	63.90
3.50	58.60	63.10
4.00	58.60	62.50
4.50	58.60	62.00
5.00	58.60	61.60

Manhole Corners Boxes - 1.55m Panel No Panels Missing		
Depth	Rec Max Kpa	Tri Max Kpa
0.50	70.00	140.00
1.00	70.00	93.30
1.50	70.00	84.00
2.00	70.00	80.00
2.50	70.00	77.70
3.00	70.00	76.30
3.50	70.00	75.30
4.00	70.00	74.60
4.50	70.00	74.10
5.00	70.00	73.60

Manhole Corners Boxes - 1.55m Panel 1 No Panels Missing - 0.5m Clearance		
Depth	Rec Max Kpa	Tri Max Kpa
0.50	-	-
1.00	-	-
1.50	55.90	67.00
2.00	55.90	63.80
2.50	55.90	62.10
3.00	55.90	60.90
3.50	55.90	60.10
4.00	55.90	59.60
4.50	55.90	59.10
5.00	55.90	58.80

Manhole Corners Boxes - 1.55m Panel 2 No Panels Missing - 1.0m Clearance		
Depth	Rec Max Kpa	Tri Max Kpa
0.5	-	-
1.00	-	-
1.50	-	-
2.00	34.40	39.30
2.50	34.40	38.20
3.00	34.40	37.50
3.50	34.40	37.00
4.00	34.40	36.60
4.50	34.40	36.40
5.00	34.40	36.20

Manhole Corners Boxes - 2.00m Panel No Panels Missing		
Depth	Rec Max Kpa	Tri Max Kpa
0.50	57.50	116.00
1.00	57.50	77.30
1.50	57.50	69.60
2.00	57.50	66.20
2.50	57.50	64.40
3.00	57.50	63.20
3.50	57.50	61.90
4.00	57.50	61.30
4.50	57.50	60.80
5.00	57.50	60.50

Manhole Corners Boxes - 2.00m Panel 1 No Panels Missing - 0.5m Clearance		
Depth	Rec Max Kpa	Tri Max Kpa
0.50	-	-
1.00	-	-
1.50	43.30	51.90
2.00	43.30	49.40
2.50	43.30	48.10
3.00	43.30	47.20
3.50	43.30	46.60
4.00	43.30	46.10
4.50	43.30	45.80
5.00	43.30	45.50

Manhole Corners Boxes - 2.00m Panel 2 No Panels Missing - 1.0m Clearance		
Depth	Rec Max Kpa	Tri Max Kpa
0.5	-	-
1.00	-	-
1.50	-	-
2.00	26.70	30.50
2.50	26.70	29.60
3.00	26.70	29.10
3.50	26.70	28.70
4.00	26.70	28.40
4.50	26.70	28.20
5.00	26.70	26.10

Manhole Corners Boxes - 2.55m Panel No Panels Missing		
Depth	Rec Max Kpa	Tri Max Kpa
0.50	40.00	80.00
1.00	40.00	53.30
1.50	40.00	48.00
2.00	40.00	45.70
2.50	40.00	44.40
3.00	40.00	43.60
3.50	40.00	43.00
4.00	40.00	42.60
4.50	40.00	42.30
5.00	40.00	42.10

Manhole Corners Boxes - 2.55m Panel 1 No Panels Missing - 0.5m Clearance		
Depth	Rec Max Kpa	Tri Max Kpa
0.50	-	-
1.00	-	-
1.50	34.00	40.80
2.00	34.00	38.80
2.50	34.00	37.70
3.00	34.00	37.00
3.50	34.00	36.60
4.00	34.00	36.20
4.50	34.00	36.00
5.00	34.00	35.70

Manhole Corners Boxes - 2.55m Panel 2 No Panels Missing - 1.0m Clearance		
Depth	Rec Max Kpa	Tri Max Kpa
0.5	-	-
1.00	-	-
1.50	-	-
2.00	20.90	23.80
2.50	20.90	23.20
3.00	20.90	22.80
3.50	20.90	22.50
4.00	20.90	22.20
4.50	20.90	22.10
5.00	20.90	22.00

Manhole Corners Boxes - 3.00m Panel No Panels Missing		
Depth	Rec Max Kpa	Tri Max Kpa
0.50	22.50	45.00
1.00	22.50	29.90
1.50	22.50	27.00
2.00	22.50	25.70
2.50	22.50	25.00
3.00	22.50	24.50
3.50	22.50	24.20
4.00	22.50	24.00
4.50	22.50	23.80
5.00	22.50	23.60

Manhole Corners Boxes - 2.50m Panel 1 No Panels Missing - 0.5m Clearance		
Depth	Rec Max Kpa	Tri Max Kpa
0.50	-	-
1.00	-	-
1.50	22.50	27.00
2.00	22.50	25.70
2.50	22.50	25.00
3.00	22.50	24.50
3.50	22.50	24.20
4.00	22.50	24.00
4.50	22.50	23.80
5.00	22.50	23.60

Manhole Corners Boxes - 2.50m Panel 2 No Panels Missing - 1.0m Clearance		
Depth	Rec Max Kpa	Tri Max Kpa
0.5	-	-
1.00	-	-
1.50	-	-
2.00	17.80	19.40
2.50	17.80	18.80
3.00	17.80	18.50
3.50	17.80	18.30
4.00	17.80	18.10
4.50	17.80	18.00
5.00	17.80	17.80



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