

**GAP**  
GROUP

HIRE SOLUTIONS

**TRENCHING**

& SHORING

# TRENCHING & SHORING

Since its establishment in 2009, Trenching & Shoring has experienced considerable growth, now spanning strategically placed depots nationwide and achieving full UK coverage for our customers.

Our Trenching and Shoring product range includes the Modular Bracing Ultra 300 System, City Boxes, Light Trench Boxes, Standard Trench Boxes, Mini and Maxi Drag Boxes, Backhoe Boxes, Trench Sheets and Piles, Waler Systems, Edge Protection, and other related products and accessories. GAP's value-added Trenching & Shoring solutions tick all the boxes when it comes to reliability, quality and price. All our groundworks equipment is supplied with user guides and technical information, plus our customers enjoy the peace of mind that our highly trained specialists are just a phone call away.

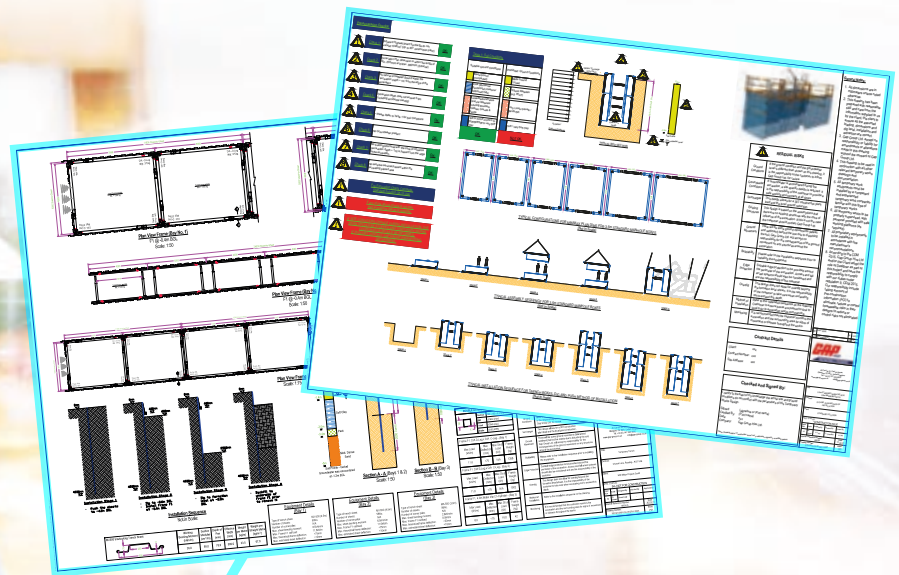
GAP is constantly reinvesting in our product fleet, people and processes to ensure our customers get the hire experience and quality they deserve on-site. With generous stock levels and our own transport, we can offer a quick response time for urgent requirements. If you can't come to us, our bespoke vehicles can come to you with Hiab delivery and collection, subject to availability, booked prior to placing orders. Ultimately giving you more time to get the job done.



# DESIGN SERVICE

GAP has established itself as one of the UK's most trusted and innovative hire equipment providers by having a clear understanding of how to help our customers achieve their goals.

To accompany our extensive product range, we offer a temporary works design service which is available for all Trenching & Shoring products. We work closely with our customers to supply the relevant equipment required by site. This often requires a site visit by our knowledgeable Technical Sales Representatives or regional hire desk and operational staff to discuss various options and obtain the best solution.



**Our design document provides a full technical design solution to cover your temporary works requirements**

- CDM 2015 Declaration
- Design brief summary
- Design solution summary
- Design specific notes
- Supplementary condition
- Calculations and drawing



# BOX SYSTEMS



### Aluminium Trench Shield

Aluminium Trench Shields are ideal for sewage, stormwater, and general excavation work. With a two-sided mechanical support system made from lightweight aluminium, they are durable and user-friendly. These shields can be stacked, inverted, and are excellent for maintenance work.

### Aluminium Manhole Boxes

Aluminium Manhole Boxes are perfect for rapid construction of manhole chambers using a small excavator. They support working loads up to 32kN/m<sup>2</sup> and feature spreader bars of 65 x 6 SHS. These boxes are stackable, come with available legs and are compliant with Global Standards.

### LITE Guard City Box

The City Box is a compact trench shield perfect for excavation in tight and limited access sites and roads due to the narrow panels. It serves as a two-sided mechanical excavation support system, ideal support of trenches up to 3.9m deep.

#### Aluminium Trench Shield

Panel Height	Panel Length	Panel Weight	Clearance Between Struts	Min Trench Width	Max Trench Width	Max Depth	Max Lateral Earth Pressure
1200mm	2400mm	55kg	950 / 2150mm	708mm	1908mm	2400mm	20kN/m <sup>2</sup>

#### Aluminium Manhole Boxes

Panel Height	Panel Length	Panel Weight	Clearance Between Struts	Trench Width	Max Depth	Max Lateral Earth Pressure
2000mm	2400mm	212kg	2290mm	1850mm	4000mm	32kN/m <sup>2</sup>

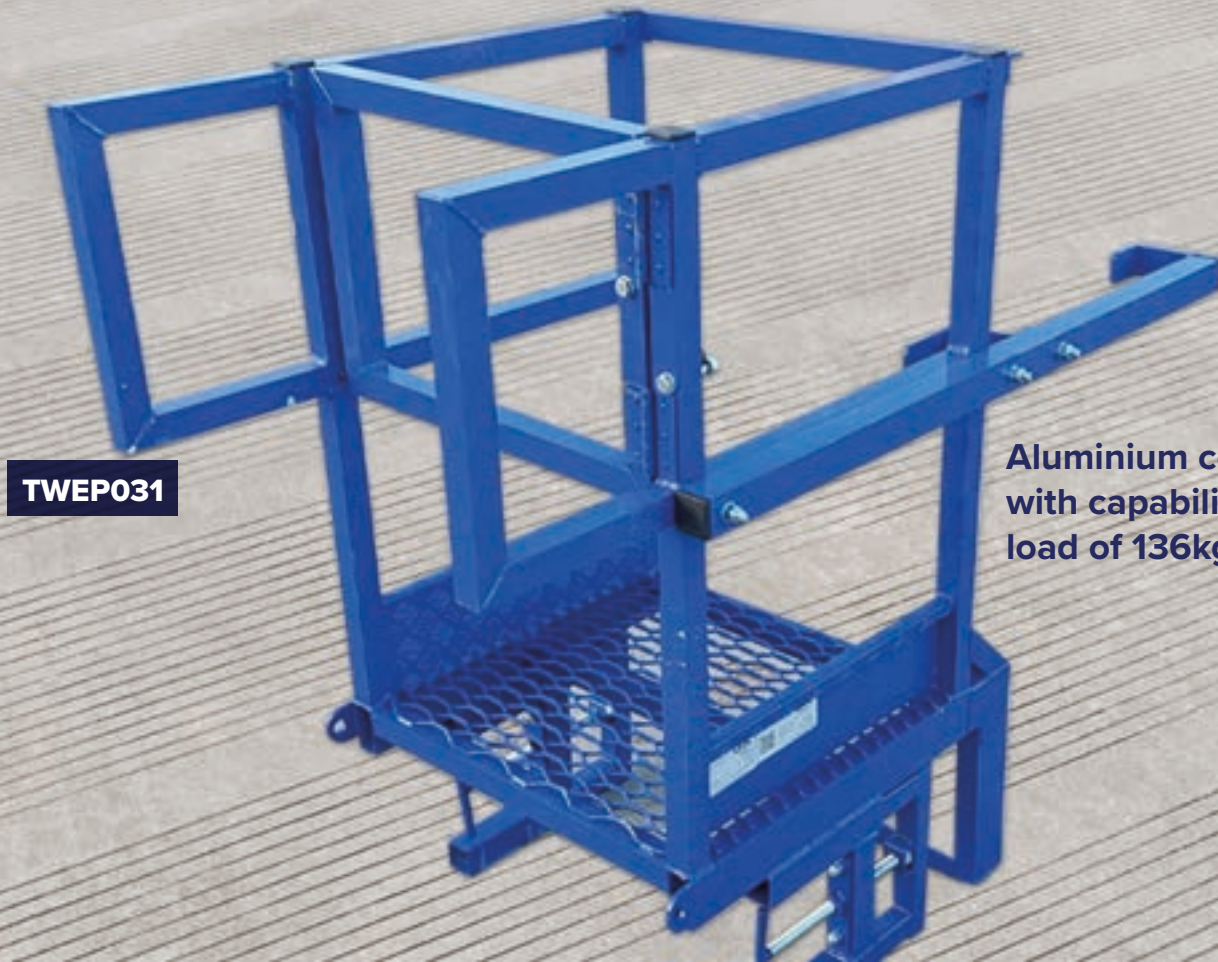
#### LITE Guard City Box

Panel Height	Panel Length	Panel Weight	Clearance Between Struts	Min Trench Width	Max Trench Width	Max Depth	Max Lateral Earth Pressure
1965mm	3012mm	192.4kg	2622mm	800mm	1900mm	3900mm	32kN/m <sup>2</sup>

## LITE GUARD LADDER MATE

Our LITE guard Ladder Mate Platform is a safe means of access into the city box from the ground. This system features high quality lightweight aluminium (38.3kg) extrusions and easy to adjust clamping screws.

- Provides safe access for workers when entering or leaving a trench shield, whether it is protruding from the ground or benched. Ladder Mate ensures a non-slip surface for workers, especially in wet or muddy conditions.
- Ladder Mate ensures a non-slip surface for workers, especially in wet or muddy conditions.
- The ladder mate platform can be used on all our aluminium shoring panels with minimum thickness of 50mm and up to 200mm.



**TWEP031**

**Aluminium construction  
with capability to carry a  
load of 136kg**



## Backhoe Trench Boxes

Lightweight Backhoe Trench Boxes are designed for use with small excavators that have a limited lifting capacity.



## Light Trench Boxes

Light trench boxes provide ground support for excavations and protect workers. The lightweight shoring equipment is ideal for the installation of sewers and utility work.



## Standard Trench Boxes

GAP's standard trench boxes are suitable for a large range of trench depths and widths. Trench box tops are available to add extra height in a deeper trench. Pinned struts allow for easy adjustment.

### Backhoe Trench Box

Trench Width (Internal)	Clearance Between Struts	Base Panel Length	Base Panel Height	Extension Panel Height	Clearance Under Strut	Thickness of panel	Max. Lateral earth Pressure	Max. Trench Depth	Weight of Base Box	Weight of Extension Box
603-2403mm	2660mm	2840mm	2012mm	1024mm	1200mm	60mm	20kN/M <sup>2</sup>	2900mm	805kg	415kg

### Light Trench Box

Trench Width (Internal)	Clearance Between Struts	Base Panel Length	Base Panel Height	Extension Panel Height	Clearance Under Strut	Thickness of panel	Max. Lateral earth Pressure	Max. Trench Depth	Weight of Base Panel	Weight of Extension Panel
620-3190mm	2696mm	3020mm	2015mm	1025mm	1100mm	80mm	28kN/M <sup>2</sup>	4000mm	567kg	320kg

### Standard Trench Box

Trench Width (Internal)	Clearance Between Struts	Base Panel Length	Base Panel Height	Extension Panel Height	Clearance Under Strut	Thickness of panel	Max. Lateral earth Pressure	Max. Trench Depth	Weight of Base Panel	Weight of Extension Box
620-3190mm	3220mm	3520mm	2520mm	1525mm	1500mm	100mm	40kN/M <sup>2</sup>	5500mm	1040kg	685kg



## DRAG BOXES



Our drag boxes provide a safe and quick means of pipe laying. Excavators are used to drag the box forward by pulling on the front strut. Pinned struts allow for easy adjustment.

### Mini Drag Box

Trench Width (Internal)	Clearance Between Struts	Base Panel Length	Base Panel Height	Extension Panel Height	Clearance Under Strut	Thickness of panel	Max. Lateral earth Pressure	Max. Trench Depth	Weight of Base Panel	Weight of Extension Panel
560-3000mm	2600mm	3034mm	2005mm	1030mm	1200mm	60mm	25kN/M <sup>2</sup>	3900mm	604kg	365kg

### Maxi Drag Box

Trench Width (Internal)	Clearance Between Struts	Base Panel Length	Base Panel Height	Extension Panel Height	Clearance Under Strut	Thickness of panel	Max. Lateral earth Pressure	Max. Trench Depth	Weight of Base Panel	Weight of Extension Panel
574-3014mm	4654mm	5040mm	2000mm	1000mm	1200mm	80mm	20kN/M <sup>2</sup>	2900mm	1076kg	650kg

### 5.1m Drag Box

Trench Width (Internal)	Clearance Between Struts	Base Panel Length	Base Panel Height	Extension Panel Height	Clearance Under Strut at the Front	Clearance Under Strut at the Back	Thickness of panel	Max. Lateral earth Pressure	Max. Trench Depth	Weight of Base Panel	Weight of Extension Panel
600 - 4100mm	4245mm	5100mm	2424mm	1824mm	1380mm	380mm	100mm	30kN/M <sup>2</sup>	4200mm	1335kg	1045kg

### 7.1m Drag Box

Trench Width (Internal)	Clearance Between Struts	Base Panel Length	Base Panel Height	Extension Panel Height	Clearance Under Strut at the Front	Clearance Under Strut at the Back	Thickness of panel	Max. Lateral earth Pressure	Max. Trench Depth	Weight of Base Panel	Weight of Extension Panel
600 - 4100mm	6245mm	7100mm	2424mm	1824mm	1380mm	380mm	100mm	30kN/M <sup>2</sup>	4200mm	2270kg	1800kg



## Manhole Boxes

GAP's manhole boxes are designed for use in conjunction with our manhole shutters, allowing fast manhole construction without the need for a worker to enter the unsupported excavation.

Manhole Box Type	Clearance Between Struts	Int. Trench Width	Max. Lateral earth Pressure	Max. Trench Depth	Weight of Base Panel	Weight of Extension Panel
Standard 2.0m	2000mm	1532mm / 4520mm	40kN/M <sup>2</sup>	3000mm	555kg	220kg
Backhoe 2.5m	2298mm	1485mm / 3285mm	20kN/M <sup>2</sup>	2900mm	960kg	580kg
Standard 2.5m	2212mm	1550mm / 4520mm	55kN/M <sup>2</sup>	5500mm	1156kg	830kg
Standard 3.0m	2712mm	1550mm / 4520mm	45kN/M <sup>2</sup>	5500mm	1278kg	910kg
Standard 3.5m	3212mm	1550mm / 4520mm	40kN/M <sup>2</sup>	5500mm	1395kg	985kg
Standard 4m	3749mm	3030mm / 4510mm	35kN/M <sup>2</sup>	5500mm	1812kg	1325kg
Standard 4.7m	4449mm	3030mm / 4510mm	35kN/M <sup>2</sup>	5500mm	1982kg	1440kg



## Edge Protection for Boxes

A lightweight barrier system used to provide enhanced safety on site, helping to prevent falls into excavations. Often used with GAP's range of trench boxes, drag boxes and manhole boxes.

- Kickboards to prevent debris falling into excavations
- Not intended to restrain or support excessive loads
- Weight of Edge Protection Barriers: 9.2kg to 40.5kg
- Size lengths: 2000mm, 2500mm, 3000mm & 3500mm

Edge Protection Type	Panel Height
Standard Box	1000mm
Backhoe Box	1000mm
Standard Manhole Box (2.5m)	1000mm
Backhoe Manhole Box (2.5m)	1000mm
Drag Box (5.0m)	1000mm



## GAP Sheetguard Edge Protection

The GAP Sheetguard supplies edge protection to the excavation. Using the 1200mm or 2600mm mesh panels, they can provide a complete enclosure. The Sheetguard is ideal for safety purposes with its highly visible paint coating.

Dimensions (L x H)	Weight
1245mm   1121mm	10.6kg
2609mm   1121mm	22.9kg



## Trench Box/Trench Sheet Ladder Access

Ladder access can be used in conjunction with the edge protection boxes to provide safe and secure ladder access into any excavation.

- Ladder can be secured in either left-hand or right-hand orientation

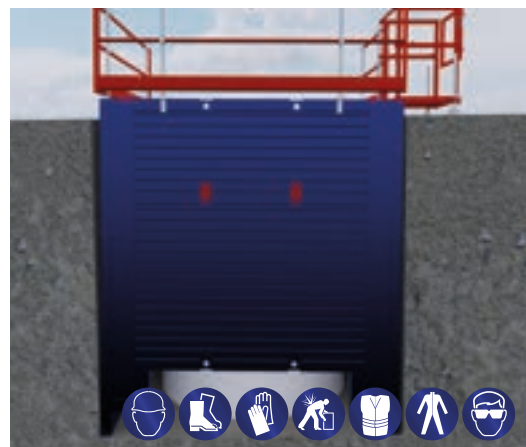
Dimensions (L x H x W)	Weight
1100mm   1300mm   850mm	110kg



## Trench Box End Closure Panels

Trench Box End Panels play a part in ground shoring systems by supplying a safe way to close off open excavations.

Panel Specification	Width (m)	Height (m)	Thickness (mm)	Weight (kg)
Base Panel	3.5	2.0	60	775
Top Panel	3.5	1.0	60	440
Base Panel	3.0	2.0	60	525
Top Panel	3.0	1.0	60	300
Base Panel	2.5	2.0	60	445
Top Panel	2.5	1.0	60	265
Base Panel	1.5	2.0	60	300
Top Panel	1.5	1.0	60	175



## NON-MECHANICAL DIVISION

In addition to all types of trenching products, GAP's Non-Mechanical division offers customers fencing and barriers, bogmats, magnetic rail barriers, road plates and more.



# HYDRAULIC SYSTEMS



## Double Acting Manhole Brace

Our Double Acting Manhole Brace range is popular with the utilities, construction and infrastructure sectors. It is used with trench sheets to support four-sided excavations i.e. tank installs/bridge footings/manholes.

Easy to assemble with pinned connections, they are available in lengths from 2-7 squared metres.

Manhole Brace Type	External Minimum	External Maximum	Weight
Manhole Brace A	2000mm	3000mm	219kg
Manhole Brace B	3000mm	4000mm	271kg
Manhole Brace C	4000mm	5000mm	324kg
Manhole Brace D	5000mm	6000mm	375kg
Manhole Brace E	6000mm	7000mm	627kg

## Waler End Bearer

	Range	Weight
Waler End Bearer - Type B	780mm - 1310mm	20.0kg
Waler End Bearer - Type C	1260mm to 2010mm	30.5kg

## Waler Rail

Rail Length	Height	Width	Material	Weight	Strut Centres
2.0m	180mm	120mm	Aluminium	21kg	1420mm
3.0m	180mm	120mm	Aluminium	31kg	2520mm
4.0m	180mm	120mm	Aluminium	41kg	3500mm



## Aluminium Waler System

Used with trench sheets to support trench runs, allowing a clear working area. Compact and easy to install, the shoring units are commonly used for working around utility installations.

Waler Cylinders Type	External Minimum	External Maximum	Weight
Waler Cylinder Type A	530mm	830mm	13kg
Waler Cylinder Type B	780mm	1310mm	16kg
Waler Cylinder Type C	1260mm	1800mm	23kg

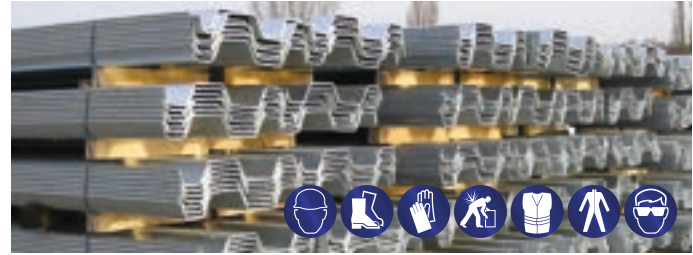
Waler Extension Type	External Minimum	External Maximum	Weight
Waler Extension Type B1	1180mm	1710mm	25kg
Waler Extension Type B2	1500mm	2030mm	28kg
Waler Extension Type C1	2000mm	2500mm	38kg



# TRENCH SHEETS & ANCILLARIES

## Trench Sheets

Standard Trench Sheets, available in a range of lengths, are primarily used for ground support and trench work. Groundworkers and utility companies use the lightweight steel trench sheets to provide a safe working environment in various excavations.



Dimensions (L x W)					
Description	Trench Sheet 330mm x 2m	Trench Sheet 330mm x 2.5m	Trench Sheet 330mm x 3m	Trench Sheet 330mm x 3.5m	Trench Sheet 330mm x 4m

### Standard Trench Pile

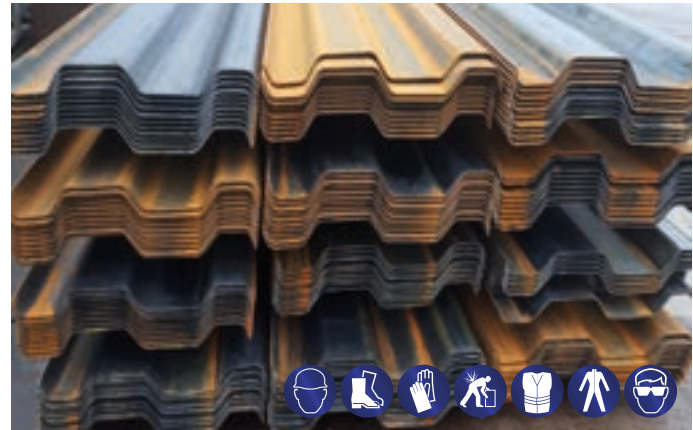
Working Bending Moment (kN/m)	Section Modulus (cm/m <sup>3</sup> )	Moment of Inertia (cm/m <sup>4</sup> )	Weight per Metre (kg/m)	Weight per Straight Metre (cm/m <sup>2</sup> )
8.0	68.7	124.0	11.3	32.3

## KD4/KD6 Trench Sheets

KD4/KD6 Trench Sheets are commonly used in construction and civil engineering projects.

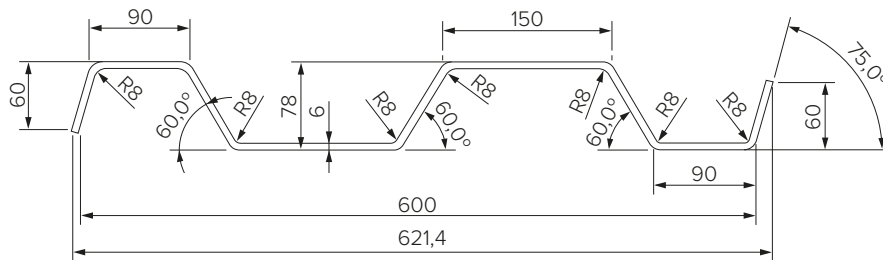
KD4 Trench Sheets are more light-duty, primarily used for temporary works. These sheets are suited for shallow excavation where soil conditions are favourable. These are only available in selected depots.

KD6 Trench Sheets are heavy-duty sheet piles, designed for deeper trenches and more challenging soil conditions.

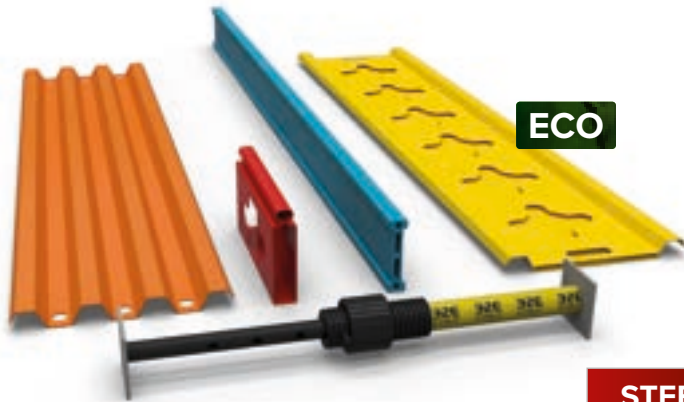


Dimensions		
Trench Sheet 6m	Trench Sheet 5m	Trench Sheet 4m

Product	Working Bending Moment (kN/m)	Section Modulus (cm/m <sup>3</sup> )	Moment of Inertia (cm/m <sup>4</sup> )	Working Stress (N/mm <sup>2</sup> )	Weight per Metre (kg/m)	Weight per Straight Metre (cm/m <sup>2</sup> )
KD6	34.0	184.0	717.5	183.0	37.5	62.5
KD4	18.1	98.8	250.0	275.0	22.2	55.6



# EZE SHORING



Up to depths of 2.5m

Five components

Non-conductive

## EZE SHORING DEPTHS

1380mm	1760mm	2140mm	2520mm
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## STEEL EZE STRUTS

EZE Strut Type	Closed	Open
Size 1	511mm	711mm
Size 2	706mm	1107mm
Size 3	1041mm	1741mm

## COMPOSITE EZE STRUTS

EZE Strut Type	Closed	Open
Size 1	511mm	711mm
Size 2	706mm	1107mm
Size 3	1041mm	1741mm
Size 4	1750mm	2438mm

## EZE SHORING KIT

LENGTH	Hub Board	Infill Board	Waler	Slider	End Waler 1.5m	End Bracket
1500	4	8	4	8	4	8
2000	6	8	4	8	4	8
2500	6	10	4	8	4	8
3000	6	12	4	8	4	8



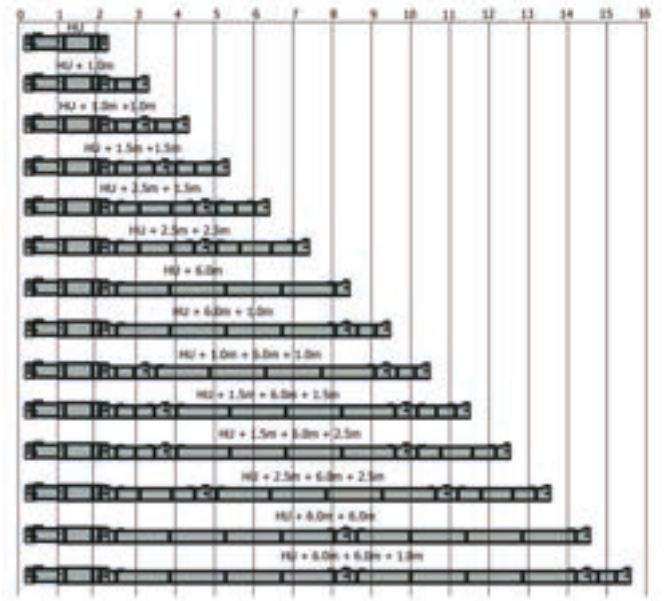


## Modular Bracing

The Ultra 300 Modular bracing system comprises of five different extension lengths and a adjustable hydraulic ram unit which simply pins together at the joints to improve the installation process compared to other pins/bolt systems, eliminating the need of spanners or air tools. This modular brace is capable of clear a 15.5m span in both directions, with larger excavation supported with the use of Ultra 300 cross strut arrangement and corner bracing.



Code	Description
TWUB0001	ULTRA 300 Extension 550mm
TWUB0002	ULTRA 300 Extension 1000mm
TWUB0003	ULTRA 300 Extension 1500mm
TWUB0004	ULTRA 300 Extension 2500mm
TWUB0005	ULTRA 300 Extension 6000mm
TWUB0006	ULTRA 300 Hydraulic Unit Assembly
TWUB0007	ULTRA 300 Pin
TWUB0008	ULTRA 300 Cross Brace Extension 500mm
TWUB0009	ULTRA 300 Cross Brace Extension 1000mm
TWUB0010	ULTRA 300 Cross Brace Extension 1500mm
TWUB0011	ULTRA 300 Cross Brace Extension 2500mm
TWUB0012	ULTRA 300 Cross Brace Extension 6000mm
TWUB0013	ULTRA 300 Cross Brace Hydraulic Unit Assembly
TWUB0016	ULTRA 300 Hook End Plate Assembly
TWUB0018	ULTRA 300 Diesel Pump
TWUB0019	ULTRA 300 9Corner Unit (Knee Brace)
TWUB0020	Heavy Duty Hanging Chains



## Steel Sheet Piling

Interlocking steel sheet piles serve as a robust solution for ground support in a variety of construction applications, offering versatility and reliability for both permanent and temporary works, that may include cofferdams and retaining wall structures.

- High strength
- Various shapes and sizes offered to suit your requirements
- Requires minimal maintenance



Sheet Pile Type	Width	Height	Back Thickness	Web Thickness	Mass		Moment of Inertia	Section Modulus
L602	600mm	310mm	8.4mm	7.6mm	53.4 Kg/Lin mtr	89 Kg/m <sup>2</sup> of Wall	13046 cm <sup>4</sup> /m	842 cm <sup>3</sup> /m
L603	600mm	320mm	9.6mm	8.2mm	64.2 Kg/Lin mtr	107 Kg/m <sup>2</sup> of Wall	19199 cm <sup>4</sup> /m	1200 cm <sup>3</sup> /m
L603N	600mm	422.6mm	9.1mm	7.3mm	59.7 Kg/Lin mtr	99.6 Kg/m <sup>2</sup> of Wall	27020 cm <sup>4</sup> /m	1279 cm <sup>3</sup> /m
L603 10/10	600mm	322mm	10mm	10mm	72.1 Kg/Lin mtr	120.2 Kg/m <sup>2</sup> of Wall	20930 cm <sup>4</sup> /m	1300 cm <sup>3</sup> /m
L604	600mm	390mm	10mm	9mm	73.1 Kg/Lin mtr	121.8 Kg/m <sup>2</sup> of Wall	31548 cm <sup>4</sup> /m	1618 cm <sup>3</sup> /m
L605A	600mm	420mm	10.7mm	9mm	76.5 Kg/Lin mtr	127.5 Kg/m <sup>2</sup> of Wall	38243 cm <sup>4</sup> /m	1821 cm <sup>3</sup> /m
L605	600mm	420mm	12.3mm	9.2mm	82.1 Kg/Lin mtr	136.8 Kg/m <sup>2</sup> of Wall	42433 cm <sup>4</sup> /m	2021 cm <sup>3</sup> /m
L606A	600mm	430mm	13.4mm	9mm	85.4 Kg/Lin mtr	142.3 Kg/m <sup>2</sup> of Wall	17402 cm <sup>4</sup> /m	2205 cm <sup>3</sup> /m
L623	600mm	431mm	14.4mm	9.4mm	89.8 Kg/Lin mtr	149.7 Kg/m <sup>2</sup> of Wall	50880 cm <sup>4</sup> /m	1356 cm <sup>3</sup> /m
L606	600mm	430mm	15.8mm	9.3mm	93.9 Kg/Lin mtr	156.5 Kg/m <sup>2</sup> of Wall	53785 cm <sup>4</sup> /m	2502 cm <sup>3</sup> /m
L626	600mm	431mm	16.5mm	9.5mm	96.6 Kg/Lin mtr	161 Kg/m <sup>2</sup> of Wall	56116 cm <sup>4</sup> /m	2602 cm <sup>3</sup> /m
L628	600mm	433.4mm	17.5mm	10.3mm	102.3 Kg/Lin mtr	170.5 Kg/m <sup>2</sup> of Wall	60112 cm <sup>4</sup> /m	2774 cm <sup>3</sup> /m
L607	600mm	456.5mm	19mm	10.6mm	112.4 Kg/Lin mtr	187.3 Kg/m <sup>2</sup> of Wall	73300 cm <sup>4</sup> /m	3211 cm <sup>3</sup> /m



A Guide to Safe and  
Effective Excavations Blog

## Hydraulic Pump for Modular Bracing System

The pump allows for the safe and efficient installation of the hydraulic ram to be extended and retracted with the ease on site.

- Capacity of Shoring Fluid Tank - 55 litres
- Capacity of Fuel Tank - 3.3 litres

Code	Description
TWUB0018	ULTRA 300 Diesel Pump



## Pitching Shackles

For pitching of trench sheets and piles using a spring-loaded pin mechanism.



## Universal Driving Caps

For driving standard lap trench sheets.



## Trench Sheet Extractors

For the safe and efficient extraction of trench sheets and sheet piling.



Scan to find your local  
Trenching & Shoring depot!

## Trench Struts

Versatile Trench Struts are designed to be used horizontally to support trench walls, improving user safety and protecting other equipment in small, shallow excavations.

- Clawed ends to ensure maximum grip

Trench Strut Types	Closed Height	Open Height
Trench Struts Size 0	300mm	450mm
Trench Struts Size 1	450mm	710mm
Trench Struts Size 2	680mm	1140mm
Trench Struts Size 3	1040mm	1750mm



## Road Forms

Square-edged rigid Road Forms are used in the construction of ground slabs, roadways, foundations and drives. Available with a true square or flexible edge, ensuring a smooth radius bend. Typically supplied with 1' stakes/pins per metre (3 pins per road form). Pins are an add-on hire under code 'STAK'.

- High quality, reinforced concrete

Code	Description
RS560	Road Form - Straight 100mm
RS561	Road Form - Straight 150mm
RS562	Road Form - Straight 200mm
RS573	Road Form - Rigid 250mm
RS574	Road Form - Rigid 300mm
RS565	Road Form - Flexi 150mm
RS566	Road Form - Flexi 200mm
RS042	Road Form - Flexi 300mm



## Manhole Shutters

Pre-formed steel shutters for forming concrete surrounds to manholes.

- Each manhole shutter is made up of a combination of the modular panel components listed in the table below (A, B & C)
- Two panel heights of 900mm and 1800mm
- Three panel sizes combine for manhole ring diameters from 675mm to 2700mm
- Rapid assembly using simple pin-and-wedge systems



Normal Int. Dia. of Manhole (mm)	Manhole Ring Wall Thickness (mm)	Modular Panel Components			External Dia. of concrete (mm)	Thickness of Concrete Surround (mm)	Vol. of concrete required (m <sup>3</sup> )	
		A	B	C			900	1800
675	65	2	1	-	1171	183	0.51	1.02
900	75	2	2	-	1368	159	0.54	1.09
1050	85	3	-	1	1541	160	0.63	1.25
1200	100	3	1	1	1738	169	0.75	1.50
1350	112	3	2	-	1855	141	0.68	1.36
		3	2	1	1935	181	0.90	1.80
1500	115	4	-	1	2028	150	0.79	1.58
		4	-	2	2107	189	1.02	2.05
1800	115	4	2	-	2342	156	0.96	1.93
2100	120	5	1	-	2632	146	1.03	2.05
		5	1	1	2712	186	1.33	2.66
2400	135	6	-	1	3002	166	1.33	2.66
2700	162	6	2	-	3316	146	1.31	2.62
		6	2	1	3396	186	1.69	3.38

Panel height	Panel Reference	Panel Width (mm)	Panel Weight (kg)
1800	A	1530	66
1800	B	620	36
1800	C	250	27

# COMPLEMENTARY PRODUCTS

GAP has a wide range of products available for hire which will help put your trench boxes and sheet piling in place.

**Chain Slings**



**Manhole Lifter**



**Ladders**



**Lifting Pins**



**Manhole Chain Clamps**



**Counter Balance Davit System**





**TRENCHING & SHORING  
DEPOTS**

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