



New Zealand's Excavation Safety Specialists



EXCAVATION SHORING SPECIALISTS

www.shorenz.co.nz



Company overview



Trench Shoring New Zealand Ltd (TSNZ)

TSNZ was formed in 2007 for the purposes of supplying proprietary shoring equipment for hire and for sale throughout New Zealand and the South Pacific.

TSNZ are excavation safety specialists offering a wide range of shoring systems and solutions for all types of excavations. This includes shoring for trenches and open pit excavations. TSNZ also offers specific design services for more complex projects or those requiring site specific certification.

TSNZ source proprietary mechanical shoring systems from the leading German shoring designer and manufacturer LTW. This includes steel trench and manhole boxes as well as a range of slide rail systems. Proprietary hydraulic shoring equipment is supplied to TSNZ by MGF in the UK. All equipment is certified to the world leading European standard EN 13331.

The experience TSNZ has gained since 2007, and its sole focus on excavation shoring, has positioned the company as New Zealand's market leader in the field.

Locations

TSNZ's head office and yard is located in Auckland, at 306 Neilson Street, Onehunga. In Christchurch TSNZ has an office and yard at Unit B1, 198 Springs Rd, Hornby.

Equipment Sales

Trench boxes, manhole boxes and trench sheets are available both new and used. Some new equipment is carried in stock but for large orders lead time for supply of new equipment from Europe is typically 3-4 months.

For slide rail or hydraulic shoring purchases, sufficient lead time is required as this equipment is manufactured to order in Europe and the UK.

Design and Support Services

TSNZ provides support to customers for:

1. Shoring design and advice for general and specific applications, including site specific temporary works designs.
2. Training in the safe and efficient use of the systems
3. Site support from TSNZ personnel

Visit www.shorenz.co.nz for information about shoring regulations, systems supplied by TSNZ and other valuable information.

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Trench Box Systems

TSNZ offer an extensive range of Box Systems to suit a wide variety of industry applications.

Ranging from our Mini KVL units, designed specifically for use where excavator size is limited, through to our KS100 units for larger and deeper schemes

All TSNZ boxes have been designed and continuously developed over many years to deliver maximum production, combined with optimum safety.

These key features are made possible by incorporating user friendly yet durable components, with all of our Box systems featuring telescopic strut assemblies which can be quickly assembled and adjusted to meet required dimensions.



KVL Mini Box



The Lightweight KVL Mini Box is ideal for urban areas with a 3000mm depth achievable

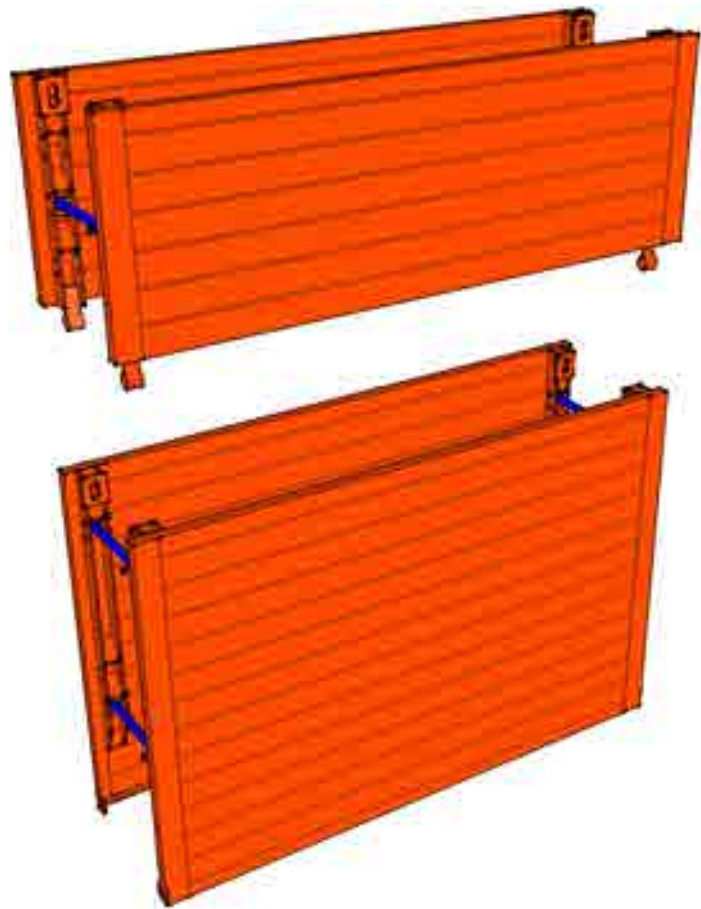
Inside width varies dependent upon the strut type:

Type A: 530mm – 630mm

Type B: 620mm – 810mm

Type C: 800mm – 1170mm

Type D: 1160mm – 1890mm



Description	Unit L X H (mm)	Clear Inside Width (mm)	Thickness (mm)	Clearance Beneath Struts (mm)	Clearance Between Struts (mm)	Weight (kg)	Limit State Design Load [kN/m ²]*
KVL Base	2000 x 2000	530 – 1890	60	980	1690	587	40.8
KVL Top	2000 x 1000	530 – 1890	60	–	1690	393	40.8
KVL Base	3000 x 2000	530 – 1890	60	980	2690	805	27.2
KVL Top	3000 x 1000	530 – 1890	60	–	2690	435	27.2

* max. load that can be applied to the trench box. Figures include a partial factor of safety Y_M of 1.1 for resistance (tolerances in material/steel). As stated in EN13331 and AS 4744.1

KVL Manhole Box



The Lightweight KVL Manhole Box is ideal for manhole installations up to 3000mm deep.

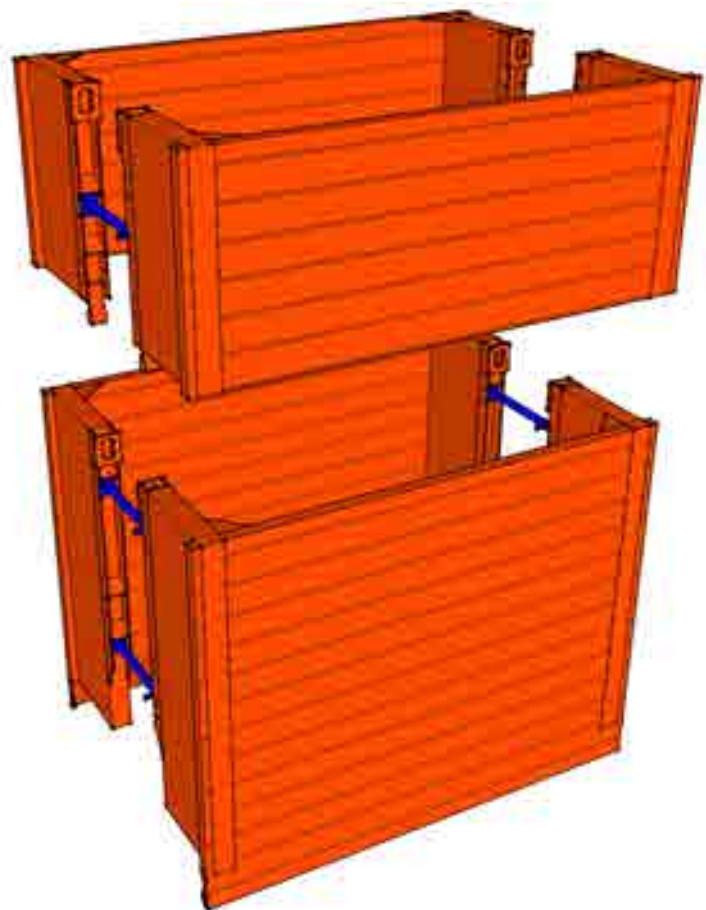
Inside widths are 2000mm x (strut width):

Type A: 1530mm – 1630mm

Type B: 1620mm – 1810mm

Type C: 1800mm – 2170mm

Type D: 2160mm – 2890mm



Description	Unit L X H (mm)	Clear Inside Width (mm)	Thickness (mm)	Clearance Beneath Struts (mm)	Clearance Between Struts (mm)	Weight (kg)	Limit State Design Load (kN/m ²)*
2m KVL MH Base	2000 x 2000	2000 – 2890	60	980	2080	1080	53.3
2m KVL MH Top	2000 x 1000	2000 – 2890	60	–	2080	600	53.3

* max. load that can be applied to the manhole box. Figures include a partial factor of safety Y_M of 1.1 for resistance (tolerances in material/steel). As stated in EN13331 and AS 4744.1

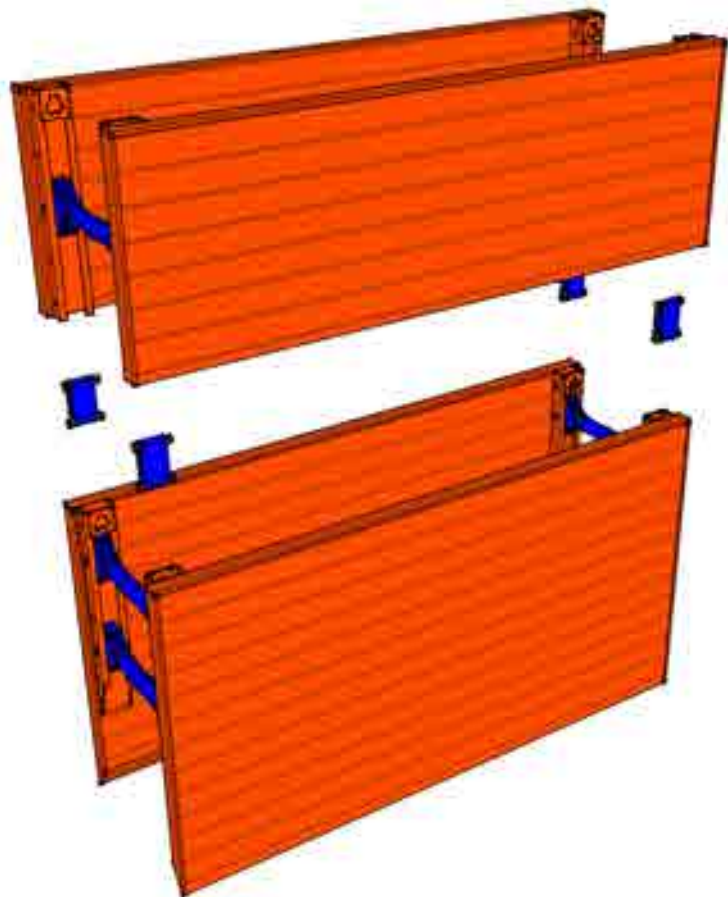
KS100 Trench Box



The Larger KS100 Box is designed to meet the majority of trench support requirements.

Suitable for trenches up to 3500mm deep and in some situations to 4800mm.

Inside width 600mm – 3300mm



Description	Unit L X H (mm)	Clear Inside Width (mm)	Thickness (mm)	Clearance Beneath Struts (mm)	Clearance Between Struts (mm)	Weight (kg)	Limit State Design Load [kN/m ²]*
2.5m KS100 Base	2500 x 2200	1000 – 3300	100	1400	2114	1662 – 1913	78
2.5m KS100 Top	2500 x 1300	1000 – 3300	100	–	2114	1044 – 1170	78
4.0m KS100 Base	4000 x 2200	1000 – 3300	100	1400	3614	2418 – 2669	44.6
4.0m KS100 Top	4000 x 1300	1000 – 3300	100	–	3614	1284 – 1410	44.6

* max. load that can be applied to the trench box. Figures include a partial factor of safety γ_M of 1.1 for resistance (tolerances in material/steel). As stated in EN13331 and AS 4744.1

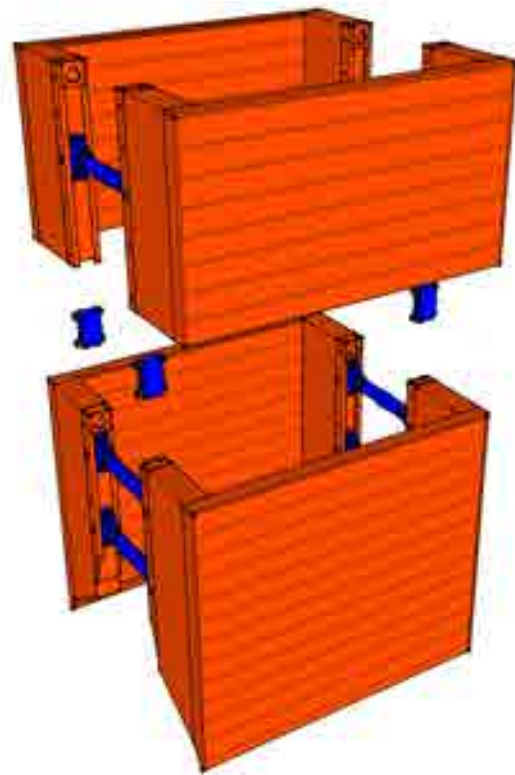
KS Manhole Box



The KS Manhole Box provides quick construction and can be used for a majority of manhole installation requirements

Suitable for depths up to 5200mm.

Inside widths are 2000mm x (2000mm - 3300mm)



Description	Unit L X H (mm)	Clear Inside Width (mm)	Thickness (mm)	Clearance Beneath Struts (mm)	Clearance Between Struts (mm)	Weight (kg)	Limit State Design Load (kN/m ²)*
KS Manhole Base	2500 x 2400	2000 – 3300	100	1540	2080	1934	78
KS Manhole Top	2500 x 1400	2000 – 3300	100	–	2080	1339	78

* max. load that can be applied to the manhole box. Figures include a partial factor of safety Y_M of 1.1 for resistance (tolerances in material/steel). As stated in EN13331 and AS 4744.1

MultiBox



The MultiBox is the ideal solution for situations where pipes/services are entering the excavation, yet a four sided support is required.

Inside width varies dependent upon the panel length opted for with 1500mm, 2000mm, 2500mm & 3000mm panel lengths



Panel Size (mm)	Panel Weight (kg)	Limit State Design Load (kN/m ²)*
1500 x 600 x 60	70	82.7
2000 x 600 x 60	85	69.3
2500 x 600 x 60	100	43.2
3000 x 600 x 60	120	29.5

* max. load that can be applied to the panels. Figures include a partial factor of safety Y_M of 1.1 for resistance (tolerances in material/steel). As stated in EN13331 and AS 4744.1

Post Size (mm)	Post Weight (kg)	Limit State Design Load (kN/m ²)*
1800	61	48.4
2400	78	48.4
3000	92	48.4

KKP Sheet Pile Frames – Mini & Standard



Ideal for areas where services crossing the trench, like power, water, gas, telecom etc create problems.

KKP Mini

To be used in conjunction with the KVL Mini Boxes as it uses the same strut.

Suitable for trenches up to 4000mm deep. Inside width is as per KVL Mini Box.

Units are 2840mm long with a panel depth of 600mm.

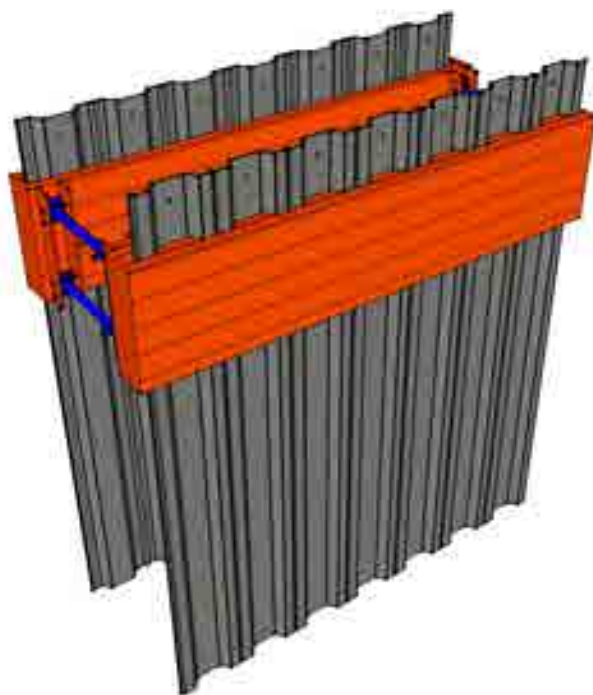
KKP Standard

This larger is dual fitted for use with VB100 struts and slide rail systems.

Suitable for trenches up to 3500mm deep and inside width of 600mm to 3300mm when used with the KS100.

6000mm deep and inside width to 7400mm when used as part of the slide rail system.

Units are 4000mm long with a panel depth of 1000mm.



Description	Unit L X H (mm)	Clear Inside Width (mm)	Thickness (mm)	Clearance Between Struts (mm)	Weight (kg)	Limit State Design Load (kN/m ²)*
Mini Pile Guide KKP	2840 x 600	530 – 1890	60	2540	730	44.2
Pile Guide KKP	4020 x 1000	1000 – 3300	120	3590	2170	81.6

* max. load that can be applied to the guide panels. Figures include a partial factor of safety γ_M of 1.1 for resistance [tolerances in material/steel]. As stated in EN13331 and AS 4744.1

Slide Rail Systems

TSNZ offer a range of Slide Rail Shoring Systems to suit a wide variety of industry applications.

Ranging from our Single Slide Rail system for installation of large diameter pipe or box culverts, to our Double Slide Rail for very deep applications and Combination Systems for installation of larger Structures requiring clear spans.

Slide Rail systems are designed and built to deliver maximum production, combined with total safety.

Ideal to use in poor soil conditions, this “dig and push” system allows low vibration installations, provides soil support for the excavations, adjacent structures and existing services or utilities, and minimizes trench width. This system is installed from the top down and removed from the bottom up. Minimises restoration time and cost.



Single Slide Rail



It is designed for use in situations where a Trench Box system is not suitable i.e larger diameter pipes or culverts and poor soil conditions.

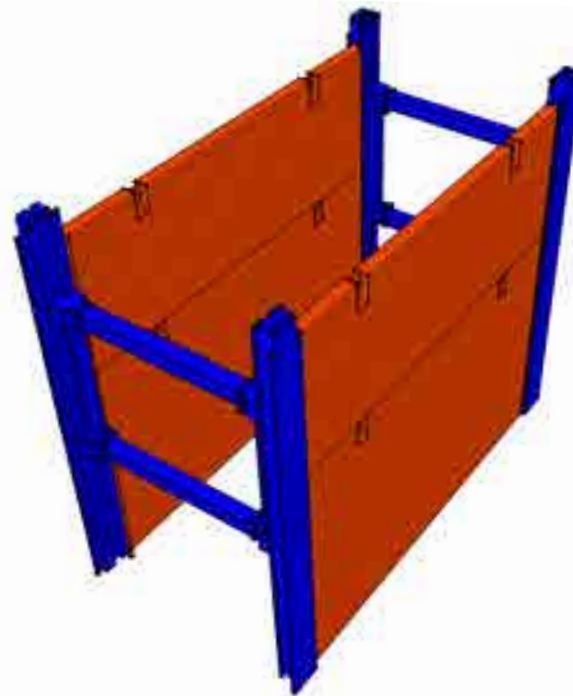
Suitable for trenches up to 4000mm deep.

Panels are available in 2000mm, 3000mm and 4000mm lengths

Transverse Frames are able to move up or down within the Slide Rail tracks to achieve the desired clearance, up to 2000mm.

Inside width up to a maximum of 5800mm.

Recommended for hydraulic excavators from 15 tonnes to 25 tonnes for ease of installation.



Description	Weight (kg)	Thickness (mm)	Module Length (mm)	Clearance Between Transverse Beams (mm)	Limit State Design Load (kN/m ²)*
KR 2000 x 2400	509	100	2562	2102	171.6
KR 3000 x 2400	692	100	3482	3022	81.1
KR 4000 x 2400	1165	120	4562	4102	71.0
KR 2000 x 1300	336	100	2562	2102	171.6
KR 3000 x 1300	452	100	3482	3022	81.1
KR 4000 x 1300	744	120	4562	4102	71.0

* max. load that can be applied to the slide rail panels. Figures include a partial factor of safety Y_M of 1.1 for resistance (tolerances in material/steel). As stated in EN13331 and AS 4744.1

Double Slide Rail



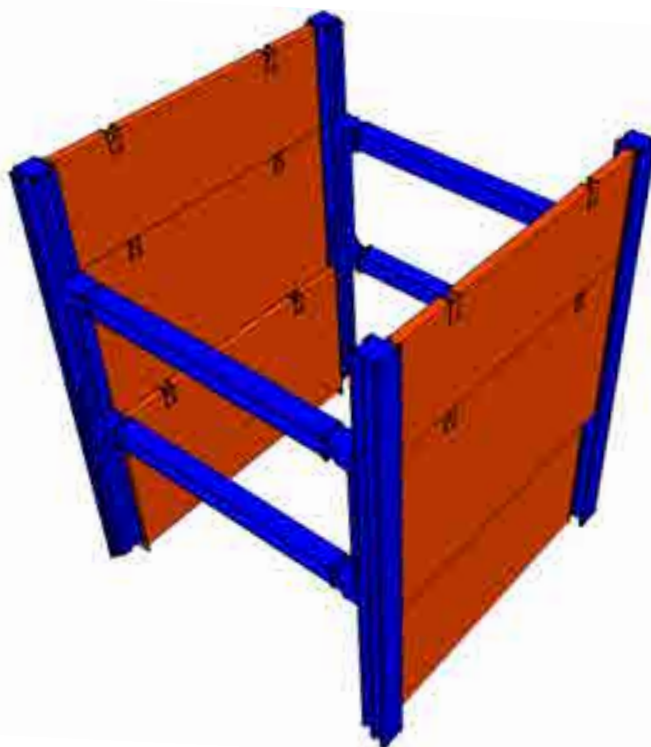
This system is used for larger and deeper excavations for large diameter or very deep pipelines or major culverts.

Suitable for trenches up to 6000mm deep.

Transverse Frames are able to move up or down within the Slide Rail tracks to achieve the desired clearance.

Inside width up to a maximum of 7400mm (or greater with special strengthening)

Recommended for hydraulic excavators from 25 tonnes to 45 tonnes for ease of installation.



Description	Weight (kg)	Thickness (mm)	Module Length (mm)	Clearance Between Transverse Beams (mm)	Limit State Design Load (kN/m ²)*
KR 2000 x 2400	509	100	2662	2102	171.6
KR 3000 x 2400	692	100	3582	3022	81.6
KR 4000 x 2400	1165	120	4662	4102	71.0
KR 2000 x 1300	336	100	2662	2102	171.6
KR 3000 x 1300	452	100	3582	3022	81.1
KR 4000 x 1300	744	120	4662	4102	71.0

* max. load that can be applied to the slide rail panels. Figures include a partial factor of safety Y_M of 1.1 for resistance (tolerances in material/steel). As stated in EN13331 and AS 4744.1

Corner Slide Rail – Single & Double



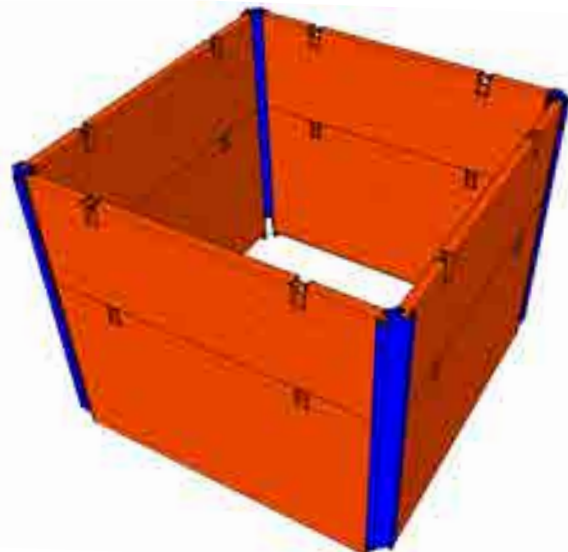
This system is used where there is a requirement for shoring four sides of an excavation.

Single corner rail is suitable for excavations to 3500mm deep and the Double Corner rail to 7500mm deep.

Panels are available in 2000mm, 3000mm and 4000mm lengths.

For the single recommended excavator size is 15 tonnes to 25 tonnes and, for the double, recommended excavator size is 25 tonnes to 45 tonnes.

Note – KKP standard sheet pile frames can be substituted for solid panels on two sides where entry and exit is required or where services cross the excavation.



Combination Pit Shoring

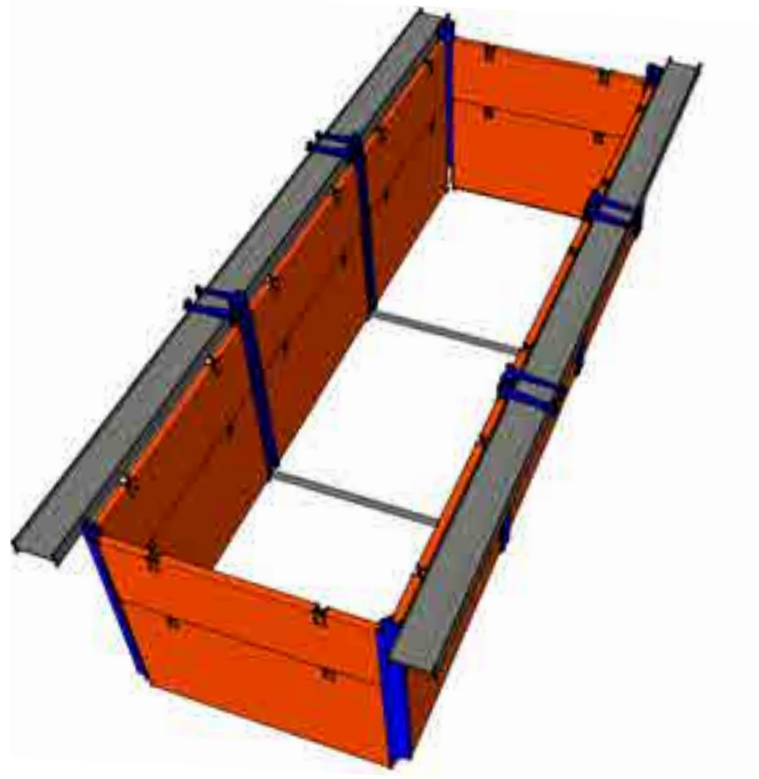


The Combination pit is used in situations where an excavation with a larger clear opening is needed that still has the requirement for shoring to four sides.

Depths achievable are the same as the standard slide rail systems.

Sliding frame assembly can be removed to provide a completely clear opening.

The system consists of Standard and Corner Rails along with panels. Panels are available in 2000mm, 3000mm and 4000mm lengths. Using a combination of these, various lengths and widths can be achieved.



Hydraulic Systems

Hydraulic bracing systems are designed to operate in conjunction with trench sheets or sheet piles.

These systems satisfy the many permutations for two sided trench and four sided manhole, chamber or small cofferdam type excavations that are typically encountered in groundwork, utility and other general industry applications.

Simple Pin and Clip connections enable rapid assembly and installation and precise adjustment of dimensions can be achieved via integral hydraulic rams.

Site safety is assured by utilising our range of compatible safety products and ancillary tools.



203 Series Hydraulic Brace



Modular hydraulic braces that can be configured for multi-sided excavations with trench sheets or sheet piles.

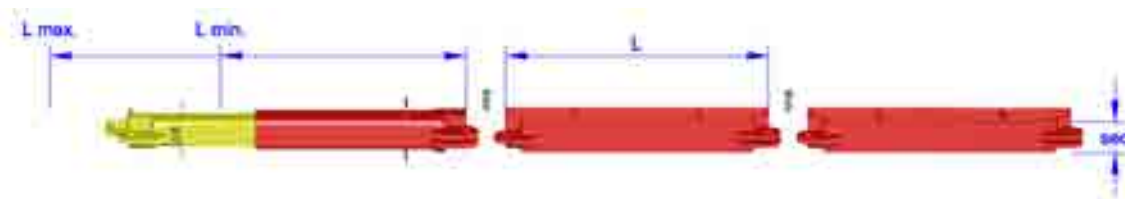
Modular systems with a range of extension sections to provide clear frame dimensions from 2m to 12m.

Spans able to be increased with the addition of cross struts and/or knee braces.

Simple pinned connections for speed and ease of assembly, installation and extraction.

Double acting hydraulics, can be pumped in and out making installation and extraction easy and safe.

Temporary works designs are recommended for some applications and are available on request to meet specific site conditions.



Description	Length L (mm)	Section (mm)	Weight	Safe Working Load
Hydraulic Pack (15t)	1920 – 2920	200 SHS	252kg	150kN
203 Series Extension	500 – 3000	203 UC	100kg/m	238kNm

200 Series Hydraulic Strut

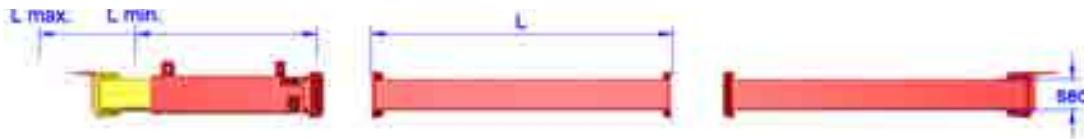
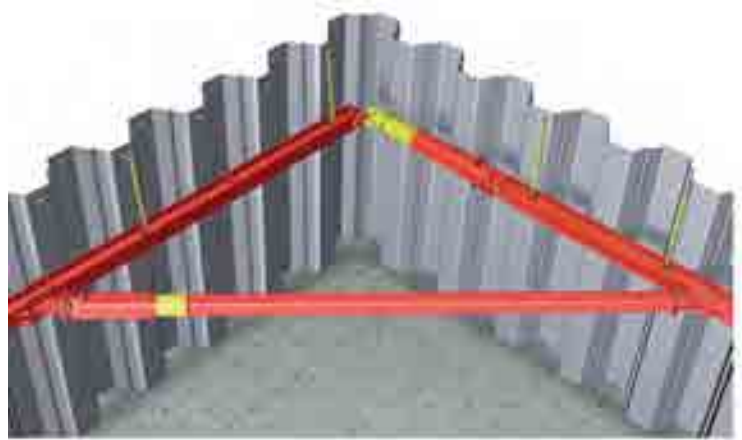


For use with the 203 series bracing to provide effective cross struts and knee braces.

And, for effective propping systems to support piled or other retaining wall types.

Modular system with a range of dedicated extension sections.

Compatible with the 203 brace frames to provide heavy duty support for deep parallel shoring or large in ground tanks.



Description	Length L (mm)	Section (mm)	Weight	Safe Working Load (kN)
Hydraulic Pack (54t)	1150 – 1750	250 SHS	275kg	540
200 Series Extension	500 – 3000	200 SHS	70kg/m	540

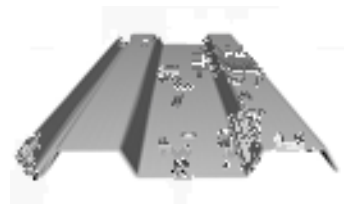
Trench Sheets



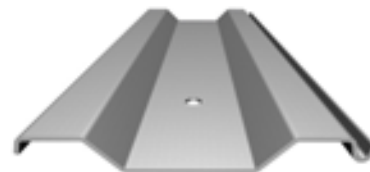
Steel Trench Sheets provide efficient and flexible ground support solutions for general trenches, manholes, tank excavations and other applications encountered in typical groundworks and utility projects.

Profiles, widths, lengths and thicknesses to suit KKP Mini Pile frame, KKP Standard Pile frame, MGF Walers and MGF 203 Series Brace System.

Lengths available from 2.5m to 6m



STD



KD 4/6



KD 6/6 - 6/8

Description	Width (mm)	Profile Depth (mm)	Steel Thickness (mm)	Weight (kg/m)	Section Modulus (cm ³ /m)	Moment Capacity (kNm/m)
STD	330	35	3.5	11.3	45.7	7.3
KD 4/6	400	50	6	22.1	102	25.5
KD 6/6	600	78	6	37.5	184	33.7
KD 6/8	600	80	8	50	242	60.5

GRiPSHORE Soldiers



Two sided lightweight hydraulic bracing system that is quick and easy to assemble GRiPSHORE can be installed and extracted by hand.

Design for use as a temporary support for small trenches.

System inside widths between 550 – 1375mm.

Suitable for depths up to 2.0m



Description	Weight (kg)	Inside Width Between Rails (mm)	Clearance Under Lowest Jack (mm)	Clearance Between Jacks (mm)	Working Load Moment Capacity (kN/m)
2100mm GRP Rail	8.1	550 – 1375	570	1100	40.8
1600mm GRP Rail CW Backing Board	12.5	550 – 1375	570	600	40.8
2100mm GRP Rail CW Backing Board	16.1	550 – 1375	570	1100	27.2

Description	Weight (kg)	Range (mm)	Axial Safe Working Load (kN/m)
Type A Jack	5.7	550 – 900	60
Type B Jack	8	850 – 1375	30

GRiPSHORE Modular Box



Two sided lightweight hydraulic bracing system that is quick and easy to assemble GRiPSHORE can be installed and extracted by hand.

Design for use as a temporary support for small trenches.

System inside widths between 550 – 1375mm.

Suitable for depths up to 2.0m



Description	Weight (kg)	Inside Width Between Rails (mm)	Clearance Under Lowest Jack (mm)	Working Load Moment Capacity (kN/m)
1500mm x 1000mm Panel	19	550 – 2000	570	16.5

Description	Weight (kg)	Range (mm)	Axial Safe Working Load (kN/m)
Type A Jack	5.7	550 – 900	60
Type B Jack	8	850 – 1375	30

Pipe Grabs & Lifters



LTW Pipe Grabs

Pipe Grabs enable quick and efficient pipe laying.

The Grab works on a scissor principal i.e. when the pipe is lifted the weight of the pipe causes the grabber arms to lock automatically.

The Pipe Grab has to be adjusted to suit the external pipe diameter, with different grab arms being required to suit the pipe diameter.

2 types of Pipe Grab are available with a 2.5t and 5t lifting capacity.

Pipe Grab Type (Lifting Capacity)	Arm Type	Concrete Pipe Range (mm)
2.5t	50	275 – 650
2.5t	80	580 – 950
5t	90	700 – 1100
5t	125	1050 – 1480
5t	150	1300 – 1800



MGF Pipe Lifters

The Pipe Lifter is a high capacity excavator quick hitch attachment for safe and rapid handling for laying of concrete pipes.

Suitable for concrete pipes in range from 300mm to 1200mm nominal bore.

30 degree tilt for guiding pipes in to position.

Avoids need to access wagon bed during unloading.

Avoids need for ground workers in the trench during pipe installation.

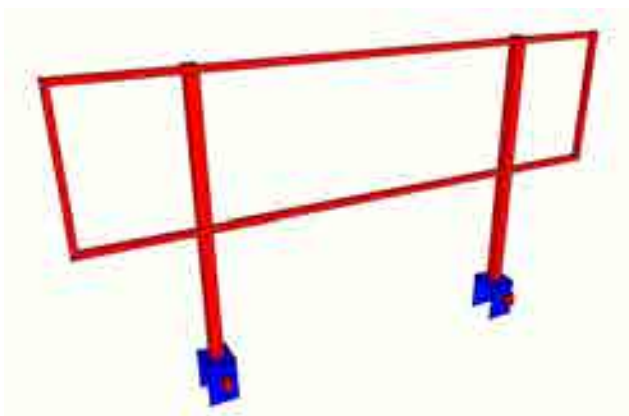
Pipe Grab Type (Lifting Capacity)	Concrete Pipe Range (mm)
3.7t	300 – 1200

Ancillaries



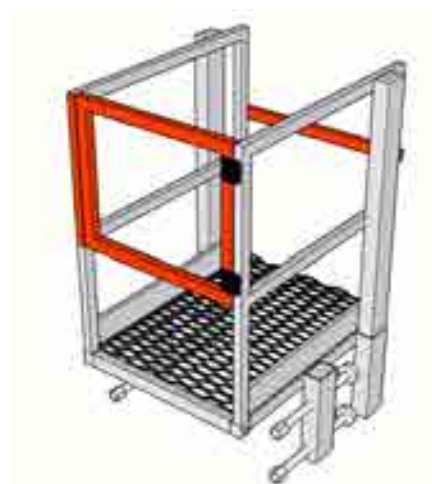
Edge Safe

Lightweight easy to install system. Able to be used with a range of trench boxes and slide rail.



Aluminium Ladder Access Platform & Ramp

Robust and safe access platform for use with various shoring types. Self closing gate.



Road Plates

2.4m x 1.2m plates available

Contacts

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