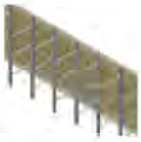
ALUMINUM HYDRAULIC SHORING



VERTICAL HYDRAULIC SHORES

SUPERIOR VERSATILITY IN TRENCHES UP TO 25 FT. DEEP AND 12 FT. WIDE

Uses:

Where Trench Shields are used to protect workers against cave-in's, Shores are used to actually apply pressure to trench walls to prevent cave-in's. TrenchTech Shores are an excellent lightweight resource for working around existing utilities, supporting trench walls near structures, curbs, or sidewalks, and for pipe installations where a larger backhoe can not be used. Most shores can be safely and easily installed and removed from the surface, thus avoiding the risk of working in an unshored trench. Shores offer superior versatility in trenches up to 25' deep and 12' wide. A cylinder extension system adds to the shores range which improves on-site adaptability when encountering excavations of varying widths. These high strength aluminum shores are available in standard or heavy-duty models and can be used to meet OSHA regulations in A, B, or C soils. FinForm sheets are used with shores to prevent sloughing of trench walls.

Shores, Walers, and FinForm

Shore, tools, fluid, and pump can

Release & Removal Tools

Standard Features:

- Two 8 in. wide rails ranging in size from 1.5 ft. to 16 ft. tall.
- 2 in. diameter hydraulic cylinders.
- Oversleeve to protect cylinder.
- Fittings & hose.
- Cylinder pads and socket pads.
- Swivel fitting protector.

Options & Accessories:

- Standard or Heavy-Duty Rails.
- Cylinder Extension System.
- 5 gal. Pump can (plastic or steel).
- Biodegradable Shoring fluid.
- Release tool (30, 48, 72, 96 inches).
- Removal hook (30, 48, 72, 96 inches).
- Finform (4 ft. x 8 ft. sheets)
- Cylinder barrel wrench (2").
- Finger guards.
- Repair kits.

Steel & Plastic Pump Cans

Hose Fitting & 90° Swivel Protector

Folded Shore and Finger Guard

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ALUMINUM HYDRAULIC SHORING

VERTICAL HYDRAULIC SHORES

SUPERIOR VERSATILITY IN TRENCHES UP TO 25 FT. DEEP AND 12 FT. WIDE

Installation and Removal

Installation

Installation 1

Connect hydraulic hose line from pump to shore. Hook release tool through handle and lower shore into trench.

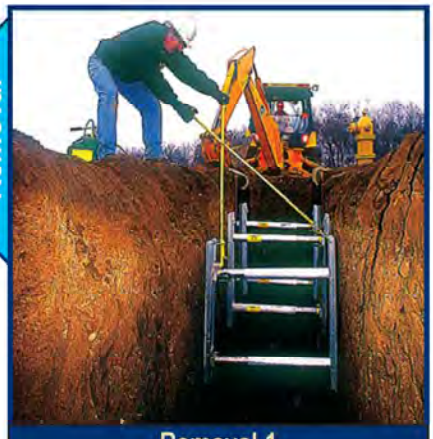
Installation 2

Pump shore to minimum pressure of 750 psi. Normal operating pressure is 750 psi to 1500 psi.

Installation 3

When shore is in place and pressurized to a safe working range disconnect the hose fitting with the release tool.

Removal



Removal 1

Release shoring fluid at hose fitting with the release tool and allow shore to depressurize. The released fluid is biodegradable.

Removal 2

Pull the shore from the trench with the removal hook and release tool.
The shore will scissor back toward a folded position.

Removal 3

Continue pulling the shore away from the trench until it folds flat. Finger guards will help to keep pinching points open.

Competent Person or Qualified Person must refer to manufacturers tab data for proper spacing and use for site conditions. Improper use can cause injury or death.

ALUMINUM HYDRAULIC SHORING

VERTICAL HYDRAULIC SHORES

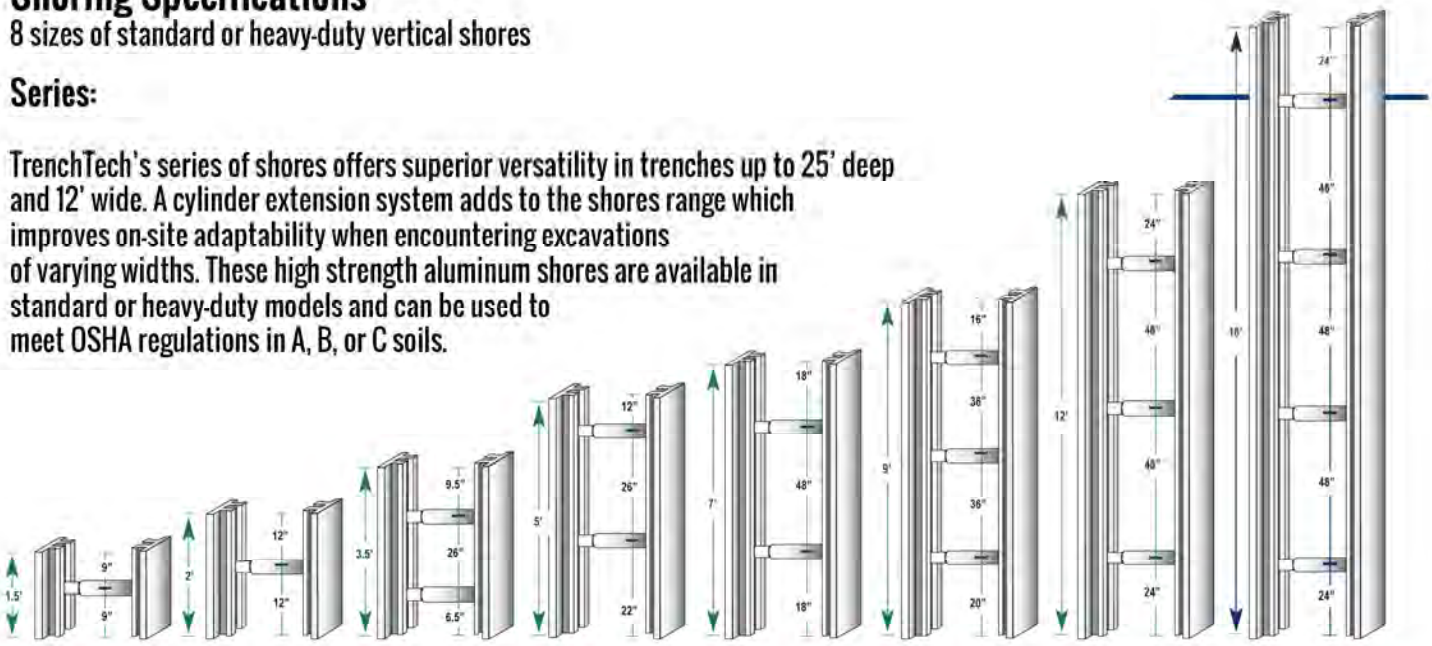
SUPERIOR VERSATILITY IN TRENCHES UP TO 25 FT. DEEP AND 12 FT. WIDE

Shoring Specifications

8 sizes of standard or heavy-duty vertical shores

Series:

TrenchTech's series of shores offers superior versatility in trenches up to 25' deep and 12' wide. A cylinder extension system adds to the shores range which improves on-site adaptability when encountering excavations of varying widths. These high strength aluminum shores are available in standard or heavy-duty models and can be used to meet OSHA regulations in A, B, or C soils.



1.5' Rails | 2' Rails | 3.5' Rails | 5' Rails | 7' Rails | 9' Rails | 12' Heavy Duty Rails | 16' Heavy Duty Rails

Vertical Shore Rails Standard and Heavy-Duty Aluminum Rails

Standard Rail (Sets of 2)	Weight (lbs.)	Heavy-duty Rail (Sets of 2)	Weight (lbs.)	Rail length (ft.)	Cross Brace width (in.)	No. of cylinders
1.5x1727-S	20	1.5x1727-H	25	1.5	17-27	1
1.5x2236-S	23	1.5x2236-H	28	1.5	22-36	1
1.5x2846-S	25	1.5x2846-H	30	1.5	28-46	1
1.5x3455-S	28	1.5x3455-H	33	1.5	34-55	1
1.5x4269-S	32	1.5x4269-H	37	1.5	42-69	1
1.5x5288-S	36	1.5x5288-H	41	1.5	52-88	1
2x1727-S	22	2x1727-H	27	2	17-27	1
2x2236-S	24	2x2236-H	29	2	22-36	1
2x2846-S	28	2x2846-H	33	2	28-46	1
2x3455-S	30	2x3455-H	35	2	34-55	1
2x4269-S	34	2x4269-H	39	2	42-69	1
2x5288-S	38	2x5288-H	43	2	52-88	1
3.5x1727-S	41	3.5x1727-H	50	3.5	17-27	2
3.5x2236-S	50	3.5x2236-H	54	3.5	22-36	2
3.5x2846-S	55	3.5x2846-H	61	3.5	28-46	2
3.5x3455-S	60	3.5x3455-H	66	3.5	34-55	2
3.5x4269-S	68	3.5x4269-H	74	3.5	42-69	2
3.5x5288-S	70	3.5x5288-H	82	3.5	52-88	2
5x1727-S	55	5x1727-H	61	5	17-27	2
5x2236-S	60	5x2236-H	65	5	22-36	2
5x2846-S	65	5x2846-H	72	5	28-46	2
5x3455-S	70	5x3455-H	77	5	34-55	2
5x4269-S	78	5x4269-H	85	5	42-69	2
5x5288-S	87	5x5288-H	93	5	52-88	2

Manufacturers tabulated data is available for FinForm sheets at time of order.
Finform is used to prevent sloughing of trench walls and is not considered to be a structural member.

Vertical Shore Rails Standard and Heavy-Duty Aluminum Rails

Standard Rail (Sets of 2)	Weight (lbs.)	Heavy-duty Rail (Sets of 2)	Weight (lbs.)	Rail length (ft.)	Cross Brace width (in.)	No. of cylinders
7x1727-S	65	7x1727-H	78	7	17-27	2
7x2236-S	70	7x2236-H	82	7	22-36	2
7x2846-S	75	7x2846-H	89	7	28-46	2
7x3455-S	80	7x3455-H	94	7	34-55	2
7x4269-S	88	7x4269-H	102	7	42-69	2
7x5288-S	97	7x5288-H	110	7	52-88	2
9x1727-S	84	9x1727-H	104	9	17-27	3
9x2236-S	90	9x2236-H	110	9	22-36	3
9x2846-S	102	9x2846-H	120	9	28-46	3
9x3455-S	108	9x3455-H	128	9	34-55	3
9x4269-S	120	9x4269-H	140	9	42-69	3
9x5288-S	132	9x5288-H	152	9	52-88	3
-	-	12x1727-H	128	12	17-27	3
-	-	12x2236-H	134	12	22-36	3
-	-	12x2846-H	145	12	28-46	3
-	-	12x3455-H	152	12	34-55	3
-	-	12x4269-H	164	12	42-69	3
-	-	12x5288-H	176	12	52-88	3
-	-					
-	-	16x1727-H	170	16	17-27	4
-	-	16x2236-H	177	16	22-36	4
-	-	16x2846-H	191	16	28-46	4
-	-	16x3455-H	202	16	34-55	4
-	-	16x4269-H	218	16	42-69	4
-	-	16x5288-H	234	16	52-88	4

All shores must be used in accordance with OSHA 29 CFR Part 1926 Subpart P (Federal, State, or local) under the direction of a competent person or qualified person.
Competent Person or Qualified Person must refer to manufacturers tab data for proper spacing and use for site conditions. Improper use can cause injury or death.

ALUMINUM HYDRAULIC SHORING

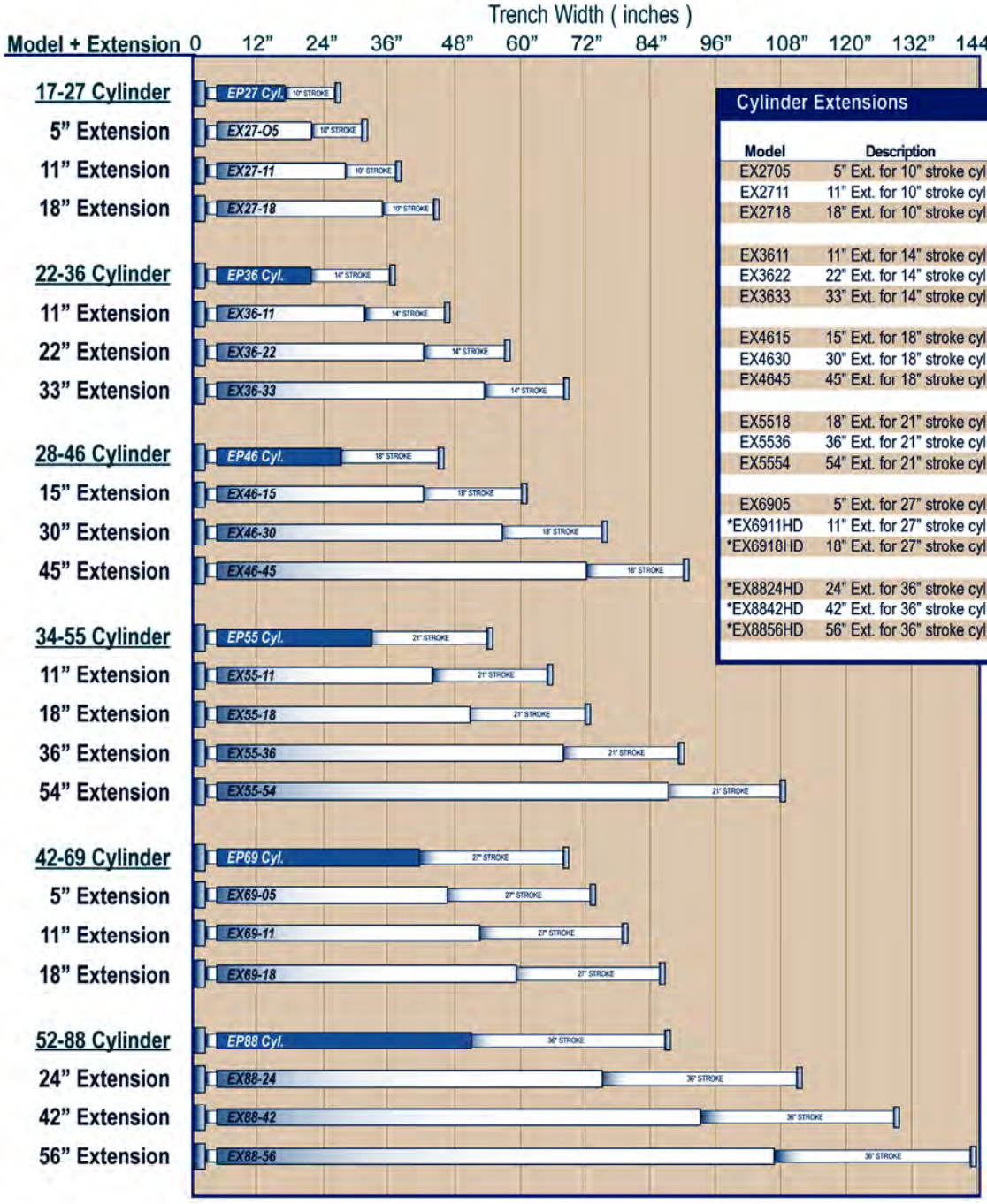
VERTICAL HYDRAULIC SHORES

SUPERIOR VERSATILITY IN TRENCHES UP TO 25 FT. DEEP AND 12 FT. WIDE

Cylinder & Extension Range

Cylinder extensions broaden the working range of shores

Cylinder & Extension Usage Chart



Cylinder Extensions

Model	Description	Standard Cyl. Range	Extension Cyl. Range
EX2705	5" Ext. for 10" stroke cyl.	17"-27"	22"-32"
EX2711	11" Ext. for 10" stroke cyl.	17"-27"	28"-38"
EX2718	18" Ext. for 10" stroke cyl.	17"-27"	35"-45"
EX3611	11" Ext. for 14" stroke cyl.	22"-36"	33"-47"
EX3622	22" Ext. for 14" stroke cyl.	22"-36"	44"-58"
EX3633	33" Ext. for 14" stroke cyl.	22"-36"	55"-69"
EX4615	15" Ext. for 18" stroke cyl.	28"-46"	43"-61"
EX4630	30" Ext. for 18" stroke cyl.	28"-46"	58"-76"
EX4645	45" Ext. for 18" stroke cyl.	28"-46"	73"-91"
EX5518	18" Ext. for 21" stroke cyl.	34"-55"	52"-73"
EX5536	36" Ext. for 21" stroke cyl.	34"-55"	70"-91"
EX5554	54" Ext. for 21" stroke cyl.	34"-55"	88"-109"
EX6905	5" Ext. for 27" stroke cyl.	42"-69"	47"-74"
*EX6911HD	11" Ext. for 27" stroke cyl.	42"-69"	53"-80"
*EX6918HD	18" Ext. for 27" stroke cyl.	42"-69"	60"-87"
*EX8824HD	24" Ext. for 36" stroke cyl.	52"-88"	76"-112"
*EX8842HD	42" Ext. for 36" stroke cyl.	52"-88"	94"-130"
*EX8856HD	56" Ext. for 36" stroke cyl.	52"-88"	108"-144"

*Heavy-Duty extensions require Heavy-Duty oversleeves.

Note:
Add approximately 2" to the minimum and maximum unit dimensions if FinForm is used.

ALUMINUM HYDRAULIC SHORING

HORIZONTAL WALERS

HYDRAULIC HORIZONTAL SHORING WITH FINFORM

Uses:

TrenchTech's Walers can be used in deeper excavations than vertical shores. Walers also provide a greater working area than vertical shores since the spacing between cylinders ranges from 60 inches to 87 inches. Rail lengths range from 6 ft. to 16 ft and cylinder widths range from 3 ft. to 12 ft. Walers are used with 4'x 8' FinForm sheets and are ideal for "close sheeting" job conditions. Walers are installed from above the trench and require a backhoe for placement. Standard lifting eyes allow for balanced picking and easy installation. Walers are available in standard and heavy-duty models.

Standard Features:

- Two 8 in. wide rails ranging from 3' to 16' long.
- Hydraulic cylinders.
- Oversleeve to protect cylinder.
- Fittings & Hose.
- Eye bolts.
- Cylinder pads and socket pads.
- Handles.
- Swivel fitting protector.

Options & Accessories:

- Standard or Heavy-Duty Rails.
- Cylinder Extension System.
- 5 gal. Pump can (plastic or steel).
- Shoring fluid (Summer Grade & Winter Grade).
- Release tool (48").
- Removal hook (30, 48, 72, 96 inches).
- Finform (4 ft. x 8 ft. sheets)
- Cylinder barrel wrench (2").
- Heavy-Duty extensions with steel oversleeves.
- Finger guards.
- Repair kit.
- Nylon lifting slings.
- 3 and 4 cylinder manifolds.

Horizontal Walers Standard & Heavy-Duty

Lg. x Cyl. WS = Standard WH = Hv-Duty	Weight Set of 2 (Lbs.)	Spacing between Cyl.'s (in)	Width between Walers (in.)	No. of Cyl.'s
6x36-WS	97	60	16-30	2
6x46-WS	105	60	22-40	2
6x55-WS	109	60	28-49	2
6x69-WS	117	60	36-63	2
6x88-WS	125	60	46-82	2
6x36-WH	167	60	12-26	2
6x46-WH	175	60	18-36	2
6x55-WH	179	60	24-45	2
6x69-WH	187	60	32-59	2
6x88-WH	195	60	42-78	2
8x36-WS	121	72	16-30	2
8x46-WS	129	72	22-40	2
8x55-WS	133	72	28-49	2
8x69-WS	141	72	36-63	2
8x88-WS	149	72	46-82	2
8x36-WH	215	84	12-26	2
8x46-WH	223	84	18-36	2
8x55-WH	227	84	24-45	2
8x69-WH	235	84	32-59	2
8x88-WH	243	84	42-78	2
12x36-WS	180	60	16-30	2
12x46-WS	188	60	22-40	2
12x55-WS	198	60	28-49	2
12x69-WS	210	60	36-63	2
12x88-WS	218	60	46-82	2

Manufacturers tabulated data is available for FinForm sheets at time of order.

Horizontal Walers Heavy-Duty

Lg. x Cyl. WH = Hv-Duty	Weight Set of 2 (Lbs.)	Spacing between Cyl.'s (in)	Width between Walers (in.)	No. of Cyl.'s
12x36-WH	309	96	12-26	2
12x46-WH	317	96	18-36	2
12x55-WH	321	96	24-45	2
12x69-WH	329	96	32-59	2
12x88-WH	337	96	42-78	2
12x36-WHX	309	126	12-26	2
12x46-WHX	317	126	18-36	2
12x55-WHX	321	126	24-45	2
12x69-WHX	329	126	32-59	2
12x88-WHX	337	126	42-78	2
12x36-WH3	321	63	12-26	3
12x46-WH3	333	63	18-36	3
12x55-WH3	339	63	24-45	3
12x69-WH3	351	63	32-59	3
12x88-WH3	363	63	42-78	3
16x36-WH3	416	87	12-26	3
16x46-WH3	428	87	18-36	3
16x55-WH3	434	87	24-45	3
16x69-WH3	446	87	32-59	3
16x88-WH3	458	87	42-78	3
16x36-WH4	428	75/87	12-26	4
16x46-WH4	444	75/87	18-36	4
16x55-WH4	452	75/87	24-45	4
16x69-WH4	468	75/87	32-59	4
16x88-WH4	484	75/87	42-78	4

Competent Person or Qualified Person must refer to manufacturers tab data for proper spacing and use for site conditions. Improper use can cause injury or death.

ALUMINUM HYDRAULIC SHORING

HI-CLEARANCE SHORES

SUPERIOR VERSATILITY IN TRENCHES UP TO 25 FT. DEEP AND 12 FT. WIDE

Uses:

TrenchTech Hi-Clearance Shores are an excellent lightweight resource for working around existing utilities, supporting trench walls near structures, curbs, or sidewalks and for pipe installations where increased vertical clearance is required. Hi-Clearance Shores offer superior versatility in trenches up to 25' deep and 12' wide with vertical clearances up to 84 inches. These shores can be used at the bottom of an excavation with standard or heavy-duty shores stacked on top. A cylinder extension system adds to the shores range which improves on-site adaptability when encountering excavations of varying widths. These high strength aluminum shores are available in heavy-duty models and can be used to meet OSHA regulations in A, B, or C soils. FinForm sheets are used with shores to prevent sloughing of trench walls.

Standard Features:

- Two 8 in. wide rails ranging in size from 8 ft. to 16 ft. tall.
- 2 in. diameter hydraulic cylinders.
- Oversleeve to protect cylinder.
- Fittings & hose.
- Cylinder pads and socket pads.
- Springs to assist with the retraction of the shores.

Options & Accessories:

- Standard or Heavy-Duty Rails.
- Cylinder Extension System.
- 5 gal. Pump can (plastic or steel).
- Biodegradable Shoring fluid.
- Finform (4 ft. x 8 ft. sheets)
- Nylon Lifting Sling.
- Cylinder barrel wrench (2").
- Finger guards.
- Repair kits.

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ALUMINUM HYDRAULIC SHORING

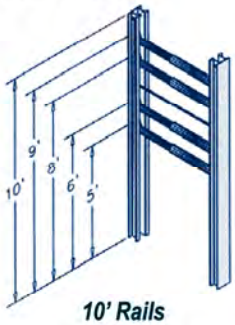
HI-CLEARANCE SHORES

SUPERIOR VERSATILITY IN TRENCHES UP TO 25 FT. DEEP AND 12 FT. WIDE

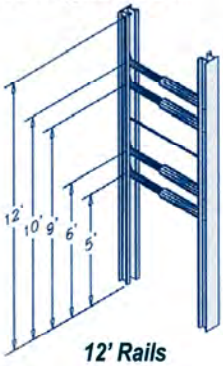
Hi-Clearance Shoring Specifications
4 sizes of Hi-Clearance vertical shores

Series: TrenchTech's series of Hi-Clearance Shores offers superior versatility in trenches up to 25' deep and 12' wide with up to 84 inches of clearance. A cylinder extension system adds to the shores range which improves on-site adaptability when encountering excavations of varying widths.

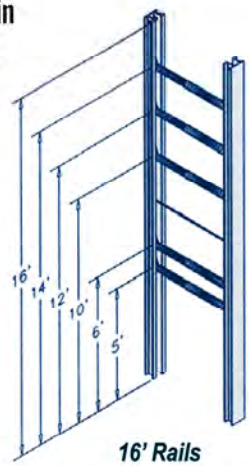
These high strength aluminum shores are available in heavy-duty models of 8, 10, 12, and 16 foot high rails and can be used to meet OSHA regulations in A, B, or C soils.



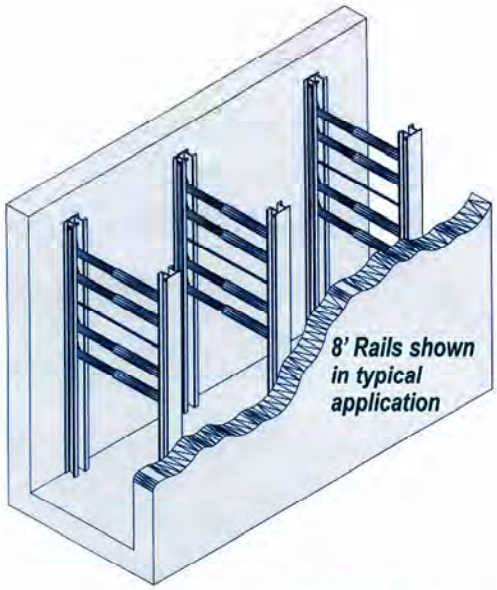
10' Rails

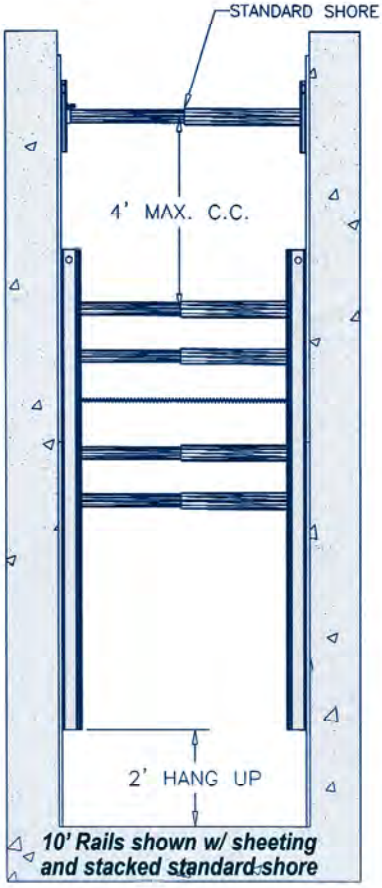


12' Rails



16' Rails





10' Rails shown w/ sheeting and stacked standard shore

Hi-Clearance Vertical Shore Rails	Heavy-Duty Aluminum Rails			
Standard Rail (Sets of 2)	Rail length (ft.)	Weight (lbs.)	No. of cylinders	Cross Brace width (in.)
HI-CLEAR 8x36	8	244	3	22-36
HI-CLEAR 8x46	8	256	3	28-46
HI-CLEAR 8x55	8	262	3	34-55
HI-CLEAR 8x69	8	274	3	42-69
HI-CLEAR 8x88	8	286	3	52-88
HI-CLEAR 10x36	10	300	4	22-36
HI-CLEAR 10x46	10	316	4	28-46
HI-CLEAR 10x55	10	324	4	34-55
HI-CLEAR 10x69	10	340	4	42-69
HI-CLEAR 10x88	10	356	4	52-88
HI-CLEAR 12x36	12	343	4	22-36
HI-CLEAR 12x46	12	359	4	28-46
HI-CLEAR 12x55	12	367	4	34-55
HI-CLEAR 12x69	12	383	4	42-69
HI-CLEAR 12x88	12	399	4	52-88
HI-CLEAR 16x36	16	450	5	22-36
HI-CLEAR 16x46	16	470	5	28-46
HI-CLEAR 16x55	16	480	5	34-55
HI-CLEAR 16x69	16	500	5	42-69
HI-CLEAR 16x88	16	520	5	52-88

Manufacturers tabulated data is available for FinForm sheets at time of order.
Finform is used to prevent sloughing of trench walls and is not considered to be a structural member.
All shores must be used in accordance with OSHA 29 CFR Part 1926 Subpart P (Federal, State, or local) under the direction of a competent person or qualified person. Competent Person or Qualified Person must refer to manufacturers tab data for proper spacing and use for site conditions. Improper use can cause injury or death.

ALUMINUM HYDRAULIC SHORING

HYDRASHIELD

HYDRAULIC ALUMINUM TRENCH SHIELD

Advantages:

TrenchTech's HydraShield is an extremely versatile aluminum trench shield that supports trench walls and structures and adapts to on-the-spot requirements by using hydraulic cylinders for spreaders to accommodate varying trench widths.

- It is easily handled with a rubbertired backhoe and is ideal for municipal maintenance and repair work, fiber optic and cable installations, side sewer installations, water and gas connections, and any utility installations.

- A multi-valve manifold provides control of all cylinders with only one hose connection from a pump can.

- A retraction spring returns the cylinder to its contracted position for easy removal from the trench.

- Smooth walls prevent dirt build-up and reduce friction when positioning in the trench and extra-strength pulling and lifting lugs make handling the HydraShield fast, easy, and safe.

- The walls are constructed of foamfilled 6061-T6 extrusions.

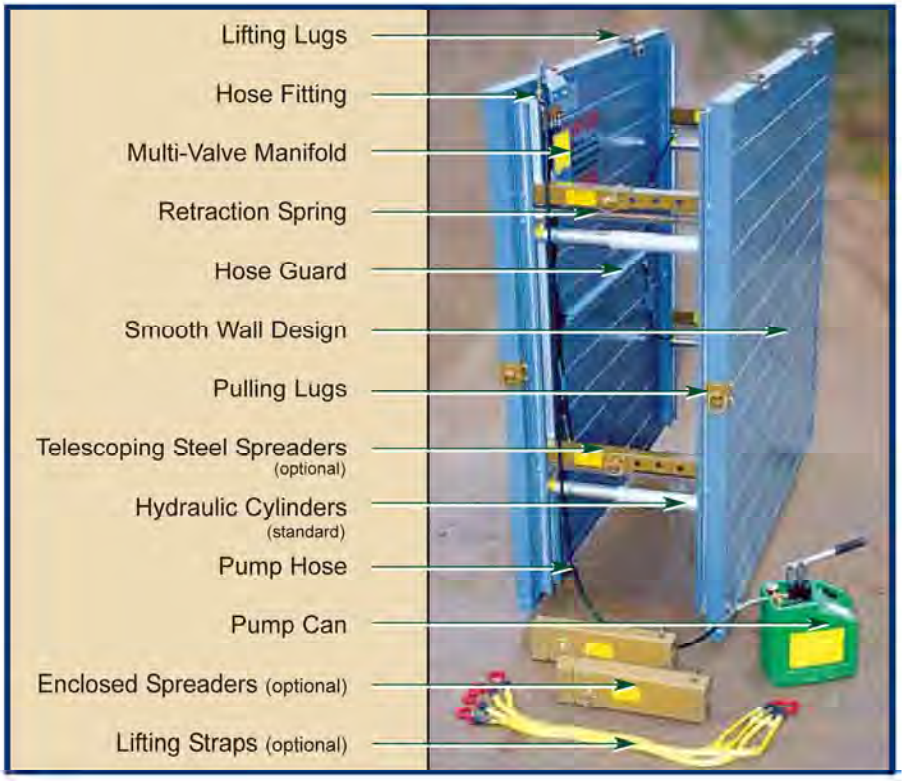
- Optional Enclosed Spreaders cover the cylinders & springs and protect them from damaging accidental impact and dirt build-up.

- Optional telescoping steel spreaders may be substituted in order to use the HydraShield in a static mode.

- Stack Pocket sets allow the HydraShield to be stacked on top of another HydraShield, an XLAP, or a TrenchTech Build-A-Box modular aluminum trench shield when used in the static mode.

Carried by rubber-tired backhoe

Pumps to various widths



- Optional End Panels convert the HydraShield into a 3 and 4 sided shield.

*Hydraulic mode offers greater shieldcapacity than the static mode.

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ALUMINUM HYDRAULIC SHORING

HYDRASHIELD

HYDRAULIC ALUMINUM TRENCH SHIELD

Pump can hose connection to manifold

Multi-valve manifold

Spring contracts cylinder for removal

HydraShield Sidewalls Hydraulic Aluminum Trench Shield

Model (Ht x Lg) (ft.)	Weight (lbs.)	Shield Capacity *Hydraulic Mode* (psf)	Depth of Cut (ft.) Soil Type A	B	C	Pipe Clearance (in.)	Shield Capacity *Static Mode* (psf)	Depth of Cut (ft.) Soil Type A	B	C	Pipe Clearance (in.)
46 HS	520	1,500	25	25	25	16.25	1,500	30	30	25	22
48 HS	640	1,500	25	25	25	16.25	1,500	30	30	25	22
410 HS	750	1,140	25	23	19	16.25	1,140	30	23	19	22
412 HS	870	840	25	17	14	16.25	840	30	17	14	22
416 HS	1100	480	19	10	8	16.25	480	19	10	8	22
66 HS	740	1,500	25	25	25	24	1,500	30	30	25	31.25
68 HS	900	1,500	25	25	25	24	1,260	30	25	21	31.25
610 HS	1070	1,200	25	25	20	24	1,020	30	20	17	31.25
612 HS	1240	780	25	17	13	24	840	30	17	14	31.25
616 HS	1570	480	19	10	8	24	480	19	10	8	31.25
86 HS	950	1,500	25	25	25	24	1,500	30	30	25	31.25
88 HS	1160	1,500	25	25	25	24	1,260	30	25	21	31.25
810 HS	1390	1,200	25	25	20	24	1,020	30	20	17	31.25
812 HS	1610	900	25	18	15	24	840	30	17	14	31.25
816 HS	2040	600	24	12	10	24	480	19	10	8	31.25

Enclosed spreaders protect cylinders

Spreader Sets

Model (Sets of 4)	Weight (lbs.)	Inside Width (in.)
HS-4-1727	145	17-27
HS-4-2236	180	22-36
HS-4-2846	230	28-46
HS-4-3455	275	34-55
HS-4-4269	337	42-69
HS-4-5288	410	52-88

Includes: 4 Cylinders, 4 Static Braces, Springs, Pins

Enclosed Spreader Sets

Model (Sets of 4)	Weight (lbs.)	Inside Width (in.)
EHS-4-1727	215	17-27
EHS-4-2236	265	22-36
EHS-4-2846	339	28-46
EHS-4-3455	395	34-55
EHS-4-4269	467	42-69
EHS-4-5288	555	52-88

Includes: 4 Cylinders, 4 Static Braces, Springs, Pins

foam-filled 6061-T6 extrusions

Excavations open for periods exceeding 24 hours require careful monitoring of changing soil conditions and/or dewatering systems. For instance, if the backfill changes from free draining to a water table at the top of the shield, the lateral pressures may double in magnitude. A change from "wet" to "fully saturated" may increase lateral pressures 30%. Excavations open for a period exceeding 5 days may experience "loss of cohesion" due to changes in moisture content, oxidation, tension cracks, etc. The Competent Person shall be responsible for monitoring, evaluating, reporting, and/or taking action for any adverse soil conditions that may exist as a result of changes to a construction site over time.

Competent Person or Qualified Person must refer to manufacturers tab data for proper spacing and use for site conditions. Improper use can cause injury or death.

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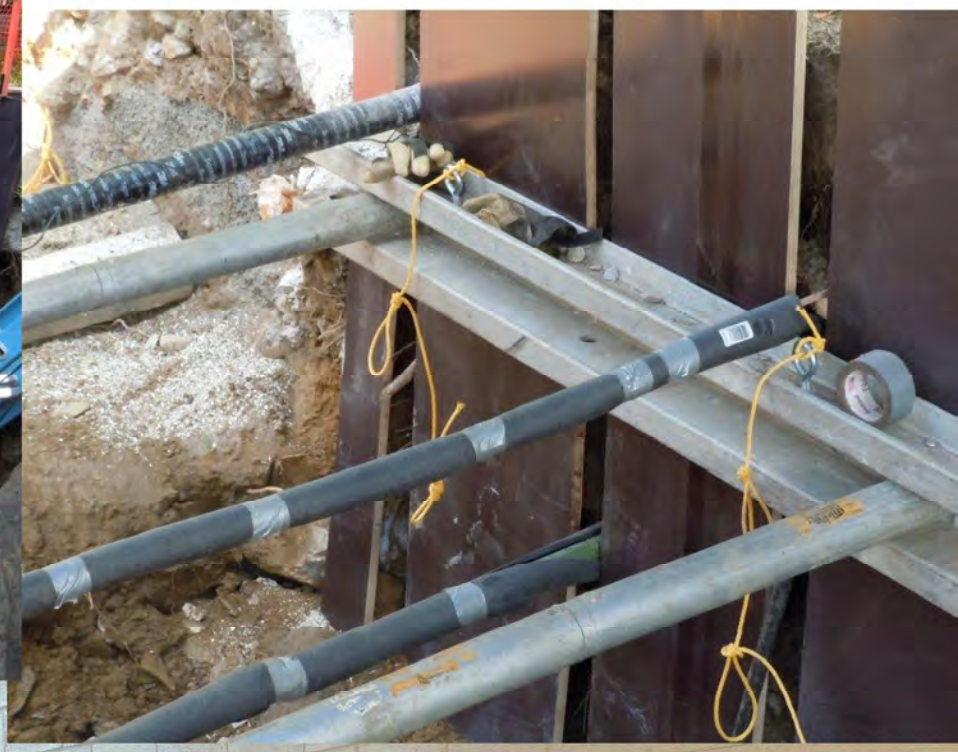
ALUMINUM HYDRAULIC SHORING - SHOWCASE



Top & Left: Aluminum Hydraulic Shoring with Finform

Aluminum Hydraulic Shoring

Bottom: Aluminum Hydraulic Shoring - Stacked and Ready to GO!