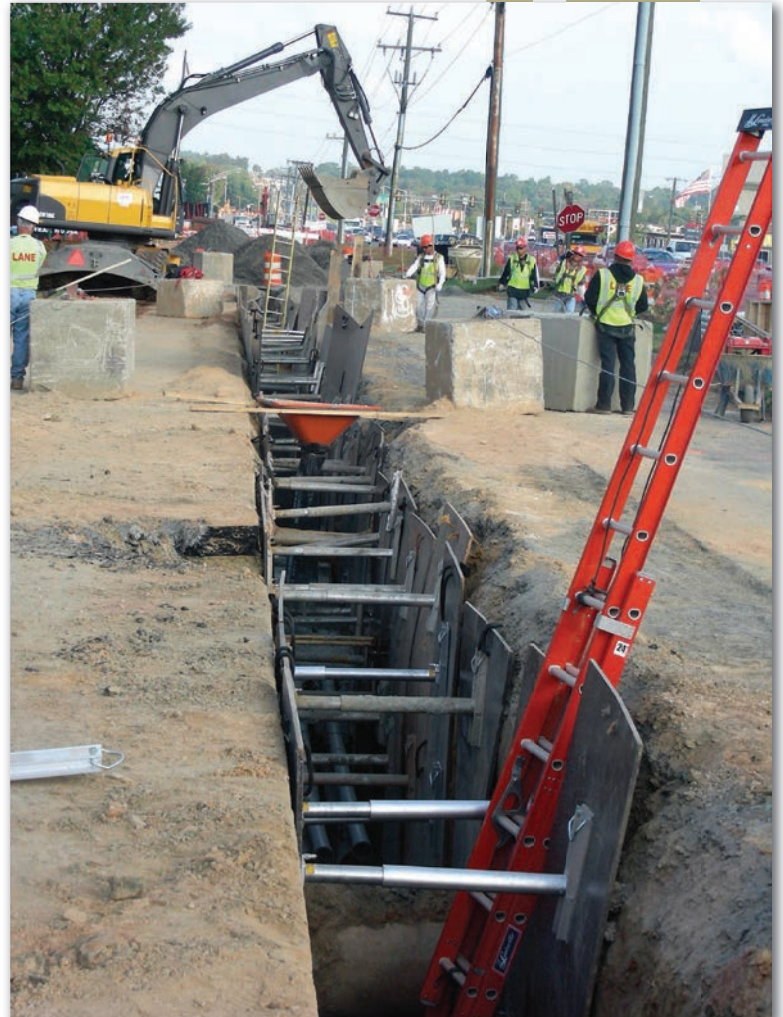


Hydraulic Shoring



Standard Duty Aluminum Hydraulic Shores

RAIL LENGTH	CYLINDER ADJUSTMENT	WEIGHT (LBS.)
1.5'	17"-27"	20
1.5'	22" to 36"	23
1.5'	28" to 46"	25
1.5'	34" to 55"	28
1.5'	40" to 64"	30
1.5'	52" to 88"	36
1.5'	108" to 144"	57
EXTENSIONS	EXTENSIONS LGTH	WEIGHT
	12"	6
	24"	9
	30"	10
	42"	12
	56"	14



HYDRAULIC SHORING SUPPORT EQUIPMENT

4' X 4' Finn Form Board w/ropes	45 lbs
4' X 8' Finn Form Board w/ropes	90 lbs
Release Tools	7 lbs / 9 lbs / 14 lbs
Removal Hook	7 lbs / 9 lbs / 14 lbs
5 gal. Plastic Pump Can	10 lbs. empty/50 lbs. with fluid

3.5' Rails, 5' Rails and 7' Rails are available.

We Deliver!

Luby Shoring Services has several options available for fast and reliable delivery of your trenching and shoring rental equipment including our own boom trucks.

www.lubyshoring.com / 11

EFFICIENCY PRODUCTION



AMERICA'S TRENCH BOX BUILDER™

Hydraulic Shoring Product Guide

VERTICAL SHORES



HORIZONTAL WALERS

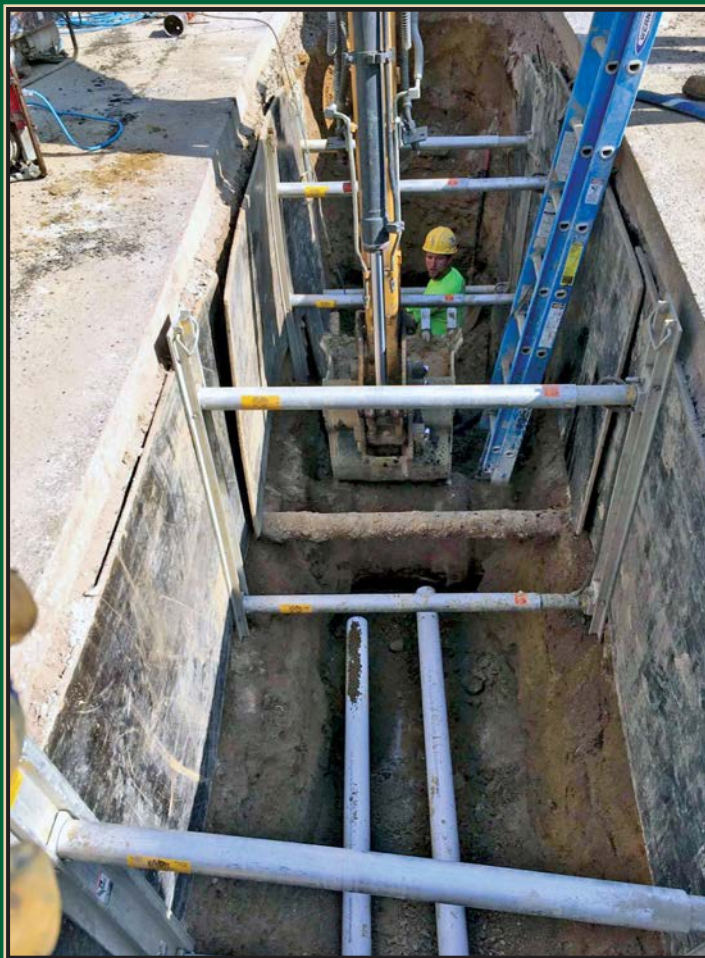


END SHORES



ALUM-A-SHIELD

22"
CYLINDER SPACING
48"



1.5'
2'
3.5'
5'
SHORE RAILS
7'
9'
12'
16'

750 CYLINDER PRESSURE (PSF) 1,500

EFFICIENCY PRODUCTION
Hydraulic Shoring Product Guide

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America's Trench Box Builder™

800-552-8800

www.encyproduction.com



Hydraulic Vertical 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-ins, hydraulic shores are used to actually apply pressure to trench walls to prevent cave-ins.

Efficiency's aluminum hydraulic shores and shields 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 cannot be used.

Hydraulic shores are installed and removed from the surface, thus avoiding the risk of working in an unshored trench.

Hydraulic shores offer superior versatility in trenches up to 25 ft. deep and 12 ft. 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.

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 and 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 & removal hook
- Chudoform (4 ft. x 8 ft. sheets)
- Finger guards
- Repair kit



Installation & Removal

Safe, easy shoring installation & removal process



Installation 1

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



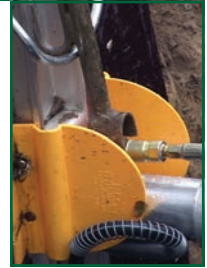
Installation 2

Place shores in accordance with the Tabulated Data and begin pressurizing the shore. Normal operating pressure is 750 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.



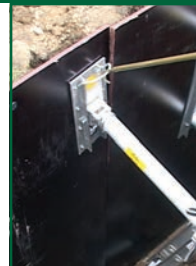
Removal 1

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.



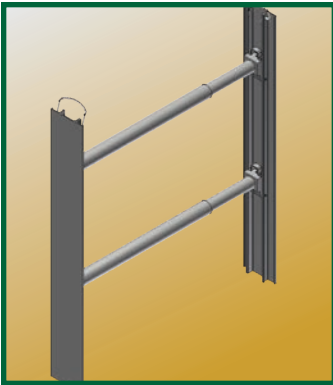
Removal 3

Continue pulling the shore away from the trench until it folds flat. Finger guards help protect from pinch points.

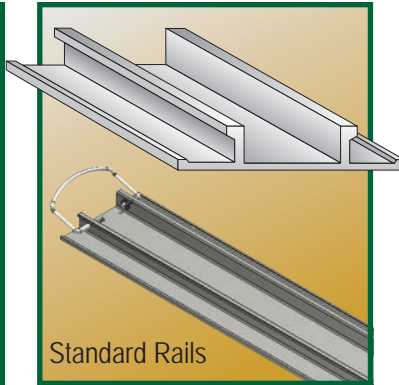


Shoring Specifications

Six sizes of STANDARD vertical shores



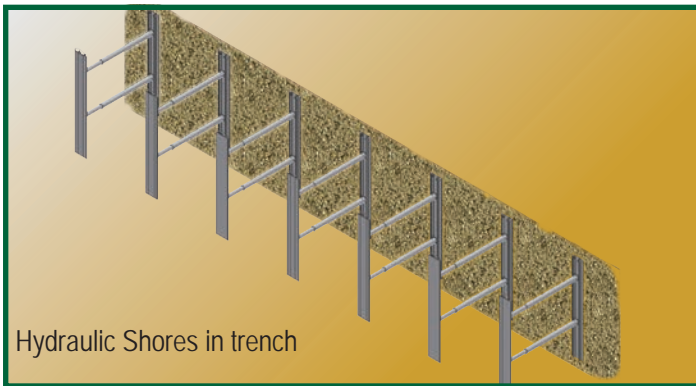
Hydraulic Vertical Shore with two cylinders



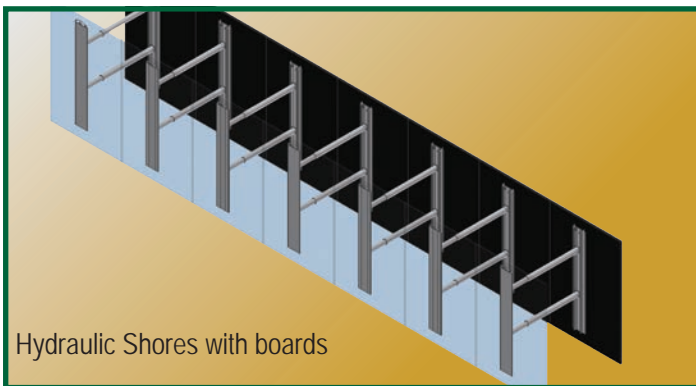
Standard Rails

Vertical Shore Rails - Standard

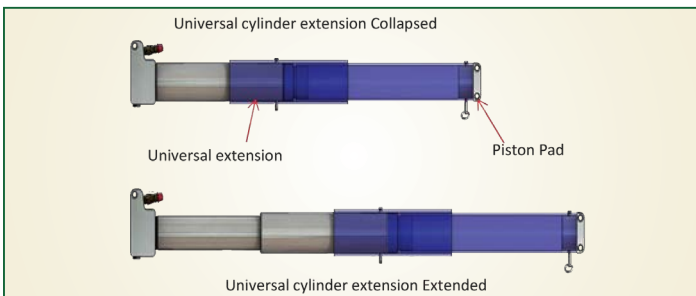
STANDARD Rail (Lg. x CB)	Cross Brace Width (In.)	Cylinders	Weight (Lbs.)
HVS-1.5-1727	17 - 27	1	20
HVS-1.5-2236	22 - 36	1	23
HVS-1.5-2846	28 - 46	1	25
HVS-1.5-3455	34 - 55	1	28
HVS-1.5-4064	40 - 64	1	31
HVS-1.5-5288	52 - 88	1	36
HVS-2-1727	17 - 27	1	22
HVS-2-2236	22 - 36	1	24
HVS-2-2846	28 - 46	1	28
HVS-2-3455	34 - 55	1	30
HVS-2-4064	40 - 64	1	31
HVS-2-5288	52 - 88	1	38
HVS-3.5-1727	17 - 27	2	41
HVS-3.5-2236	22 - 36	2	50
HVS-3.5-2846	28 - 46	2	55
HVS-3.5-3455	34 - 55	2	60
HVS-3.5-4064	40 - 64	2	67
HVS-3.5-5288	52 - 88	2	77
HVS-5-1727	17 - 27	2	55
HVS-5-2236	22 - 36	2	60
HVS-5-2846	28 - 46	2	65
HVS-5-3455	34 - 55	2	70
HVS-5-4064	40 - 64	2	78
HVS-5-5288	52 - 88	2	87
HVS-7-1727	17 - 27	2	65
HVS-7-2236	22 - 36	2	70
HVS-7-2846	28 - 46	2	75
HVS-7-3455	34 - 55	2	80
HVS-7-4064	40 - 64	2	88
HVS-7-5288	52 - 88	2	97
HVS-9-1727	17 - 27	3	84
HVS-9-2236	22 - 36	3	90
HVS-9-2846	28 - 46	3	102
HVS-9-3455	34 - 55	3	108
HVS-9-4064	40 - 64	3	120
HVS-9-5288	52 - 88	3	132



Hydraulic Shores in trench



Hydraulic Shores with boards



Universal One-Piece Extension

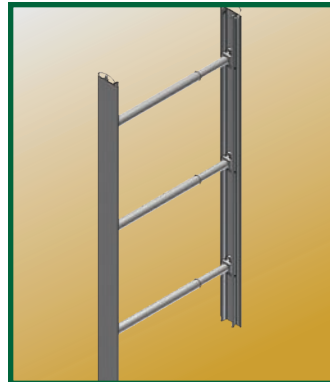
Part No.	Length (In.)	Weight (Lbs.)
HS-UNIVEX-12	12	6
HS-UNIVEX-18	18	7
HS-UNIVEX-24	24	8
HS-UNIVEX-30	30	9
HS-UNIVEX-36	36	11
HS-UNIVEX-42	42	12
HS-UNIVEX-48	48	13
HS-UNIVEX-56	56	15

Shoring Specifications

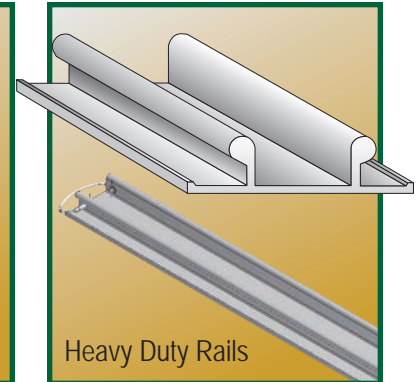
Eight sizes of HEAVY DUTY vertical shores

Vertical Shore Rails - Heavy Duty

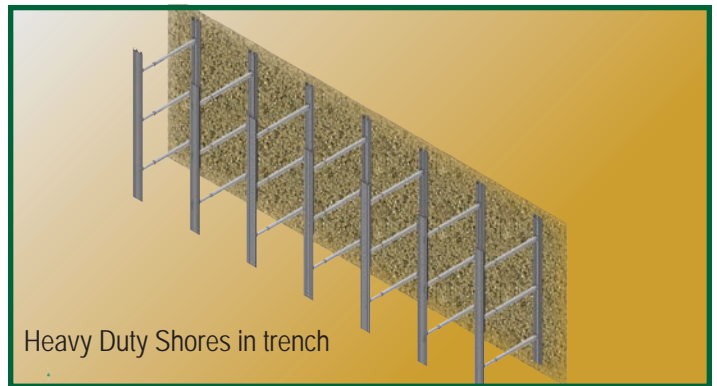
HEAVY DUTY Rail (Lg. x CB)	Cross Brace Width (In.)	Cylinders	Weight (Lbs.)
H-1.5X1727	17 - 27	1	26
H-1.5X2236	22 - 36	1	29
H-1.5X2846	28 - 46	1	25
H-1.5X3455	34 - 55	1	35
H-1.5X4064	40 - 64	1	40
H-1.5X5288	52 - 88	1	42
H-2X1727	17 - 27	1	27
H-2X2236	22 - 36	1	29
H-2X2846	28 - 46	1	33
H-2X3455	34 - 55	1	35
H-2X4064	40 - 64	1	40
H-2X5288	52 - 88	1	43
H-3.5X1727	17 - 27	2	50
H-3.5X2236	22 - 36	2	54
H-3.5X2846	28 - 46	2	61
H-3.5X3455	34 - 55	2	66
H-3.5X4064	40 - 64	2	74
H-3.5X5288	52 - 88	2	82
H-5X1727	17 - 27	2	61
H-5X2236	22 - 36	2	65
H-5X2846	28 - 46	2	72
H-5X3455	34 - 55	2	77
H-5X4064	40 - 64	2	85
H-5X5288	52 - 88	2	93
H-7X1727	17 - 27	2	78
H-7X2236	22 - 36	2	82
H-7X2846	28 - 46	2	89
H-7X3455	34 - 55	2	94
H-7X4064	40 - 64	2	102
H-7X5288	52 - 88	2	110
H-9X1727	17 - 27	3	104
H-9X2236	22 - 36	3	110
H-9X2846	28 - 46	3	120
H-9X3455	34 - 55	3	128
H-9X4064	40 - 64	3	140
H-9X5288	52 - 88	3	152
H-12X1727	17 - 27	3	128
H-12X2236	22 - 36	3	134
H-12X2846	28 - 46	3	145
H-12X3455	34 - 55	3	152
H-12X4064	40 - 64	3	164
H-12X5288	52 - 88	3	176
H-16X1727	17 - 27	4	170
H-16X2236	22 - 36	4	177
H-16X2846	28 - 46	4	191
H-16X3455	34 - 55	4	202
H-16X4064	40 - 64	4	218
H-16X5288	52 - 88	4	234



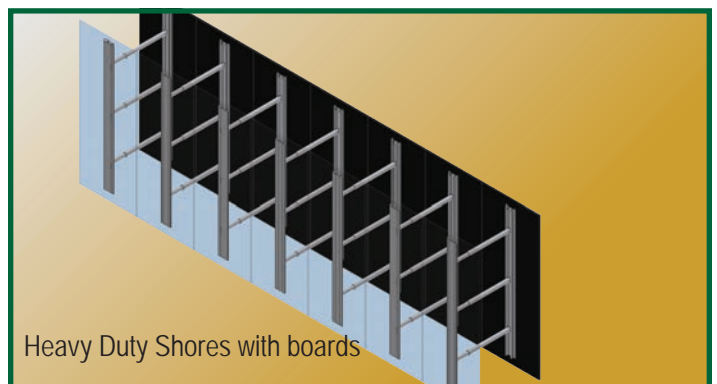
Heavy Duty Vertical Shore with three cylinders



Heavy Duty Rails



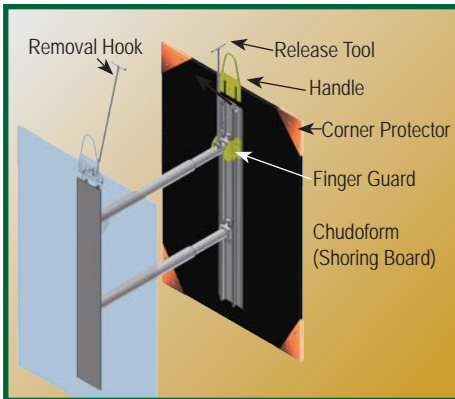
Heavy Duty Shores in trench



Heavy Duty Shores with boards

Shoring Accessories

Hydraulic shoring options and accessories



Installation & Removal Tools

Installation Tools

Part #	Description	Length
HVS-30-RT	Shoring Release Tool	30"
HVS-48-RT	Shoring Release Tool	48"
HVS-72-RT	Shoring Release Tool	72"
HVS-96-RT	Shoring Release Tool	96"
AS510013	Waler Release Tool	48"

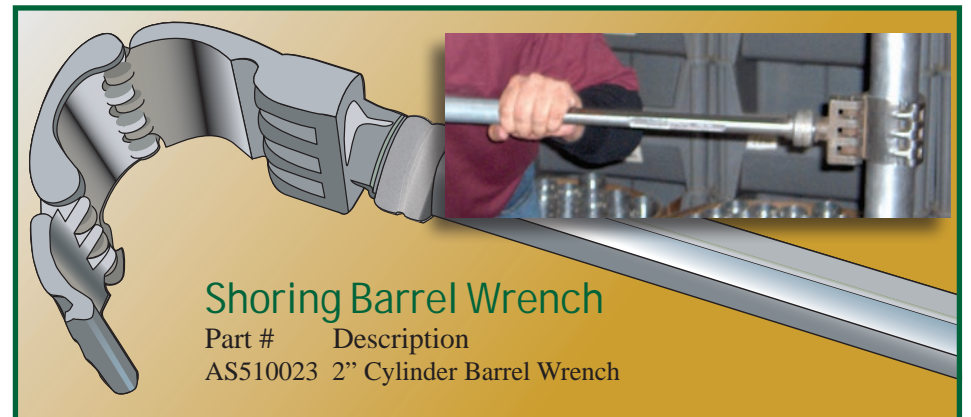
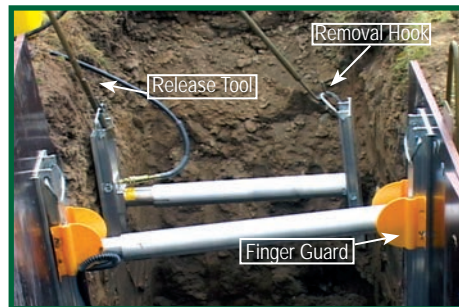
Removal Tools

Part #	Description	Length
HVS-30-RH	Shoring Removal Hook	30"
HVS-48-RH	Shoring Removal Hook	48"
HVS-72-RH	Shoring Removal Hook	72"
HVS-96-RH	Shoring Removal Hook	96"



Chudoform, Handle, Finger Guards & Corner Protectors

Part #	Description
59425-RAW	4x8 Sheet of Chudoform
8345187-A	Std. Universal Handle
59246	Finger Guards
59244	Corner Protector



Shoring Hand Pump

Metal or plastic hand pump for hydraulic shores

Efficiency Production's hydraulic shoring pump and container were developed especially for hydraulic shoring systems. The patented, corrosion-resistant pump assembly and five-gallon plastic container give a more reliable pumping system for your hydraulic shores.

Features

- Five gallon, rust-proof container
- Stainless steel plunger rod
- Only two internal working parts
- Adjustable handle with rubber grip
- Front lifting handle
- Internal check valve
- UV stabilized, high-impact polymer
- Foot hold
- Dent resistant
- Protected recessed fitting guard

Hydraulic Pump Can

Part #	Description
AS512039	5 Gallon Hand Pump-Plastic
AS512001	5 Gallon Hand Pump-Steel

Shoring Fluid

Part #	Description	Quantity
AS510028	All-Season	1 Gal Bottle
AS510032	All-Season	6 Gal/Case
AS510036	All-Season	4 Gal/Case

*All shoring fluid is environmentally safe

FLUID TO WATER RATIOS

Mix one (1) part **All-Season SF** to one (1) part clean water for protection to -25° F

Mix one (1) part **All-Season SF** to two (2) part clean water for protection to 0° F

Mix one (1) part **All-Season SF** to three (3) part clean water for protection to 30° F

Mix one (1) part **All-Season SF** to four (4) parts clean water for protection over 30° F



5 Gallon Plastic Pump Can
Part # AS512039



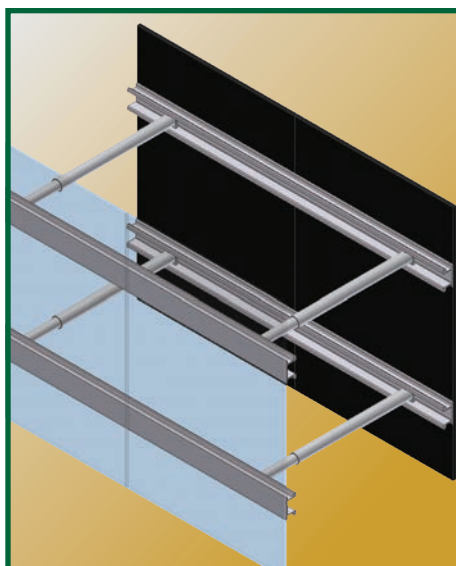
5 Gallon Steel Pump Can
Part # AS512001



Custom colors and logos available with quantity purchase, plastic pump can only

Horizontal Walers

Provides larger working space at greater depths



Horizontal Hydraulic Walers



Walers - Standard Rails

STANDARD Rail Lg. x Cr. Br.	Cross Brace Width (In.)	Cylinders	Weight (Lbs.)
WS-6X36	22 - 36	2	97
WS-6X46	28 - 46	2	105
WS-6X55	34 - 55	2	109
WS-6X88	52 - 88	2	125
WS-8X36	22 - 36	2	121
WS-8X46	28 - 46	2	129
WS-8X55	34 - 55	2	133
WS-8X88	52 - 88	2	149
WS-12X36	22 - 36	3	180
WS-12X46	28 - 46	3	188
WS-12X55	34 - 55	3	198
WS-12X88	52 - 88	3	218

Walers - Heavy Duty Rails

HEAVY DUTY Rail Lg. x Cr. Br.	Cross Brace Width (In.)	Cylinders	Weight (Lbs.)
WH-6X36	22 - 36	2	167
WH-6X46	28 - 46	2	175
WH-6X55	34 - 55	2	179
WH-6X88	52 - 88	2	195
WH-8X36	22 - 36	2	215
WH-8X46	28 - 46	2	223
WH-8X55	34 - 55	2	227
WH-8X88	52 - 88	2	243
WH-10X36	22 - 36	2	262
WH-10X46	28 - 46	2	270
WH-10X55	34 - 55	2	274
WH-10X88	52 - 88	2	290
WH-12X36	22 - 36	2	309
WH-12X46	28 - 46	2	317
WH-12X55	34 - 55	2	321
WH-12X88	52 - 88	2	337

Alum-A-Shield™

Corrugated aluminum trench shield with hydraulic spreaders

Alum-A-Shield is a single wall corrugated aluminum trench shield that is designed to be light and strong. Available with static or hydraulic spreader sets, Alum-A-Shield is designed specifically for municipalities, utility workers, and contractors who use rubber-tired backhoe/loaders and small excavators for trenching.

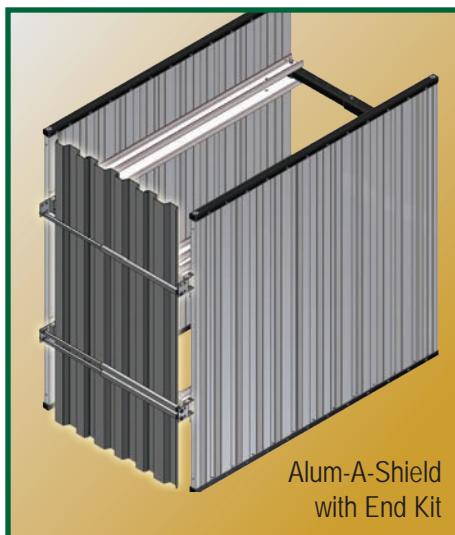
Side cut-out doors can be added for crossing utilities, and end kits allow for three or four-sided protection.

Features:

- Interchangeable static or hydraulic telescoping QuickBraces as spreaders
- Horizontal waler along sidewall for maximum depth rating
- Reinforced steel caps on top and bottom for added durability
- Molded tubular end members for additional strength and durability
- Recessed stacking pockets
- Leg kit (Optional)

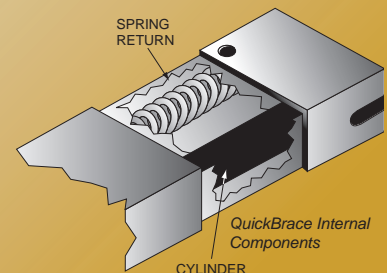
Alum-A-Shield - Hydraulic QuickBraces

Model - Rail Lg. x Cr. Br.	Depth of Cut (Ft.)		Weight (Lbs.)
	C-60	C-80	
AH46	21	16	610
AH48	21	16	800
AH410	18	14	1,000
AH412	12	9	1,200
AH66	21	16	715
AH68	21	16	940
AH610	18	14	1,165
AH612	12	9	1,390
AH86	21	16	815
AH88	21	16	1,070
AH810	18	14	1,330
AH812	12	9	1,640
AH106	21	16	1,060
AH108	21	16	1,200
AH1010	18	14	1,495
AH101	12	9	1,780



Hydraulic QuickBraces

- Rectangular steel tubing fully protects enclosed cylinder system and spring return
- Single-pin connection to waler allows for easy assembly
- Adjustable sizes to accommodate various shielding widths
- Telescoping oversleeves that pin every 2 in. for extra protection
- Quick-connect hydraulic fittings and pins allow for easy assembly, disassembly, or change out
- Custom needle valves give bi-directional sealing capabilities for independent pressure control
- Manifold has bleed-off valve to relieve hydraulic pressure
- No special tools needed for disassembly or maintenance



End Shores

Corrugated aluminum rails & end panels

Efficiency Production's corrugated aluminum hydraulic end shores are ideal for adding third-sided protection to a trench when working closely to buildings or existing structures.

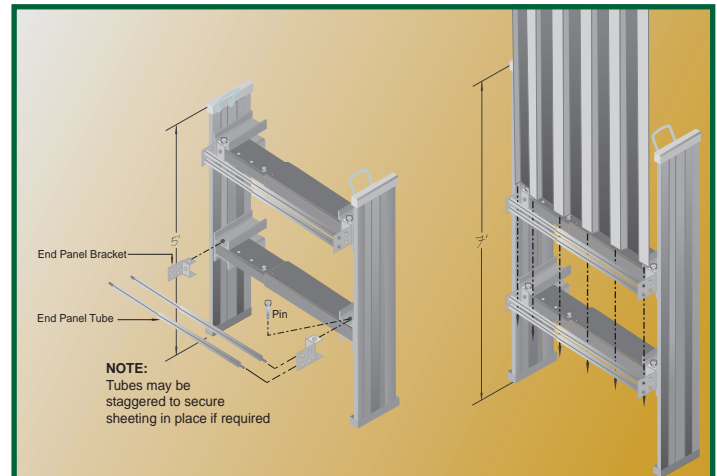
End Shores are equipped with end panel tubes and brackets to secure corrugated aluminum sheeting to the enclosed hydraulic cylinders. The end panel tubes can secure sheeting up to 4 ft. off the bottom of the trench to accommodate utility installation under the end panel.

End Shores are designed to work in combination with vertical hydraulic shores.

Features:

- Designed to work in combination with vertical hydraulic shores
- 8 in. wide corrugated aluminum rails
- Two 8 in. wide horizontal walers attach rail for maximum depth rating
- Reinforced steel caps on rail's top and bottom for added durability
- Utilizes hydraulic telescoping QuickBraces

Vertical Corrugated Alum. Rails - Standard			
STANDARD Rail (Lg. x CB)	Cross Brace Width (In.)	Cylinders	Weight (Lbs.)
S-3.5X1727-E	17 - 27	2	215
S-3.5X2236-E	22 - 36	2	230
S-3.5X2846-E	28 - 46	2	235
S-3.5X3455-E	34 - 55	2	240
S-3.5X5288-E	52 - 88	2	270
S-5X1727-E	17 - 27	2	240
S-5X2236-E	22 - 36	2	250
S-5X2846-E	28 - 46	2	260
S-5X3455-E	34 - 55	2	280
S-5X5288-E	52 - 88	2	350
S-7X1727-E	17 - 27	2	240
S-7X2236-E	22 - 36	2	270
S-7X2846-E	28 - 46	2	315
S-7X3455-E	34 - 55	2	320
S-7X5288-E	52 - 88	2	480



Shoring Trailer

FullStock Aluminum Shoring Trailer (FAST)

Efficiency's **FullStock Aluminum Shoring Trailer (FAST)** is equipped with a variety of custom-built options for stocking shoring equipment for fast, resourceful use in the field.

Shoring trailers are ideal for Public Works crews encountering a variety of trench projects each day, since all of the necessary tools are available... no return trips to the yard for missing equipment.

The FullStock trailer can also save storage space in the equipment garage since all of the pieces can remain loaded and locked on the trailer.

All racks and other options can be re-sized, repositioned, and re-configured to fit your specific needs.

Features:

- High strength steel construction
- Dual axle

Aluminum Shield Series:

- Aluminum shield racks that fit a XLAP™, Alum-A-Shield™ or Corru-Lite™
- Modular Build-A-Box™ panel and corner post racks
- Spreader racks
- Workbench and toolbox for Build-A-Box™ pins and keepers, slings, or other tools

Vertical Shores Series:

- Hydraulic shores rack
- Shoring board rack
- Tool box for shoring accessories, parts, and tools
- Toolbox with cylinder repair kit and workbench
- Hydraulic cylinder test stand



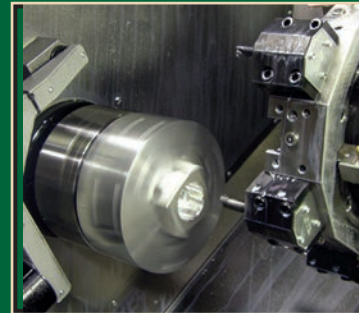
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CNC/Fabrication: Efficiency Production features the latest in CNC technology and equipment. Efficiency's CNC abilities include designing and developing prototype models, special machinery bases, fully integrated CAD-designed fabrication components, and the ability to fabricate any competitor's parts and components.

← CNC/FABRICATION →



← TECHNOLOGY →

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ENGINEERING

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