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TRENCH SHORING CATALOG

V

2024 Edition

ESC TRENCH SHORING, INC.

ESC has fully developed its Trench Shield Series (also known as Trench Boxes)

A two-sided, high-quality and economical excavation support system that provides a safe working environment in trenches up to 40 feet deep.

ESC's trench shields are a heavy duty and robust product designed and

manufactured in compliance with both National and International Standards.

All shields are certified by third party professional engineers, following the guidelines and recommendations of NAXSA (North American Excavation Shoring Association) and comply with all OSHA Standards.

Produced in manufacturing facilities in Abu Dhabi, UAE, USA and Mexico.



Table of **CONTENTS**

All About Trench Shoring	04
ESC Trench Shields Series	06
Manhole Trench Shield Series	12
Tapping Boxes	13
Aluminum Trench Shields	14
Modular Box Series	16
Spreader/Strut Solutions	17
Trench Shield Assembly Guide	18
Common Trench Sheets	20
Bedding Boxes	21
Product & Project Photos	22
ESC Product Catalogs	23

All About Trench Shoring

The ESC trench shield product range is specifically designed to cater to the unique requirements of the US and North American construction practices, and has been verified and certified by a third-party professional Engineer in the USA.

Features

- ✓ Designed & manufactured in accordance with OSHA 29 CFR 1926.650, 29 CFR 1926.651 and CFR 1926.652, Sub-part P, Excavations.
- ✓ 3rd party product certificates available for all products.
- ✓ Heavy duty robust design.
- ✓ Flat pack delivery.
- ✓ Fixed or adjustable spreaders available.
- ✓ Custom box sizes are available.
- ✓ Follow NAXSA Approved shoring shield Tab Data Sheet.
- All TSB Series panels are fully welded for maximum strength. No stitch welds or spot welds used.

- ✓ 3/4" standard push pads.
- Reinforced knife edge supplied as standard on 8ft and 10ft height shields. 4ft and 6ft shields supplied with flat bottoms as standard.
- Knife edge and flat bottom interchangeable on request.

Options

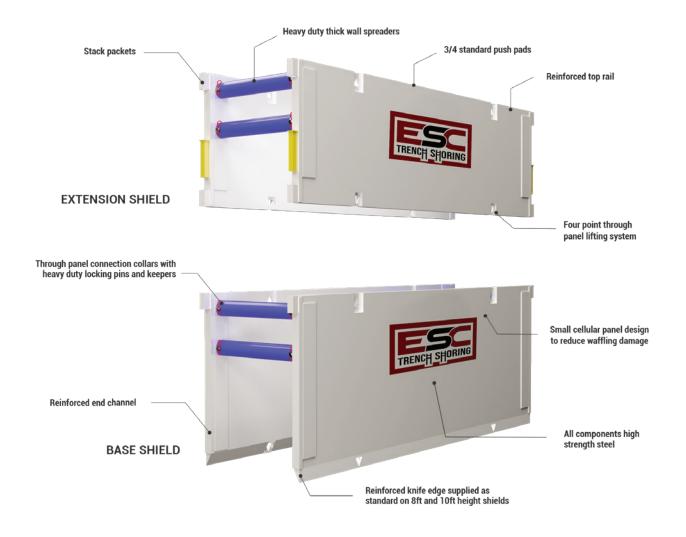
- ✓ Additional Stack pockets.
- \checkmark Fifth lower spreader.
- Pulling Lugs.

Safety Guide

- ✓ Soil type to be determined by qualified competent person.
- \checkmark Assembly as per ESC procedures.
- As member of NAXSA (North American Excavation Shoring Association), ESC adheres to all industry norms and regulations.



ESC TRENCH SHIELD



BUILT TO LAST ROBUST CELLULAR DESIGN



ESC Trench Shield Series

ESC's trench shoring product line comprises of 4ft, 6ft, 8ft and 10ft panel heights and a range of panel lengths from 10ft to 24ft. Each panel size is available in 4", 6" or 8" thickness depending on the end user requirements. All the shields are stackable and may be used as extension shields to achieve protection in deeper trench cuts.

Heavy duty spreaders are available in a variety of fixed lengths, or alternatively adjustable length spreaders may be used to achieve a range of excavation widths.



ESC Trench Shield Series

TECHNICAL SPECIFICATIONS										
SERIES	RIES HEIGHT WEIGHT PIPE LENGTH BETWEEN SHIE BY LENGTH CLEARANCE SPREADERS CAPA						EXCAVATION D	EPTH		
	ΗXL	(2 x panels)	СН	CL		B45-Soil	C-60 Soil	C-80 Soil		
	ft	lb	in	ft	psf	ft	ft	ft		
TSB4-410	4 x 10	2992	18	7'11″	4486	40	40	30		
TSB4-412	4 x 12	3402	18	9'11"	2871	40	40	30		
TSB4-416	4 x 16	4221	18	13'11"	1465	33	25	19		
TSB4-420	4 x 20	5665	18	17'11"	1053	24	18	14		
TSB4-610	6 X 10	4074	40	7'11″	3000	40	40	30		
TSB4-612	6 x 12	4594	40	9'11"	2748	40	40	30		
TSB4-616	6 x 16	5738	40	13'11"	1402	33	25	20		
TSB4-620	6 x 20	7871	40	17'11"	1020	24	19	15		
TSB4-810	8 x 10	4906	60	7'11″	2150	40	39	30		
TSB4-812	8 x 12	5627	60	9'11"	1780	40	32	25		
TSB4-816	8 x 16	7068	60	13'11"	1334	40	25	20		
TSB4-820	8 x 20	9923	60	17'11″	971	24	19	15		

 \checkmark All 4' and 6' shields can be used as Extension Shields.

✓ Depth ratings include consideration of surcharge load of 72 psf.

As per NAXSA recommendations, depth of cut has been limited to 40ft for types A, B and C60 soil, and 30ft for C80 soil regardless of the capacity of the shield. If deeper cuts are required, it is recommended that a professional engineer is engaged to evaluate the site and soil conditions and specify a suitable trench shield or other shoring solution.

ESC Trench Box Series 4" TSU SERIES

TECHNICAL SPECIFICATIONS									
MODEL	HEIGHT WEIGHT PIPE LENGTH BETWEEN SHIELD BY LENGTH CLEARANCE SPREADERS CAPACITY						EXCAVATION I	DEPTH	
	ΗXL	(2 x panels)	СН	CL		B-45 Soil	C-60 Soil	C-80 Soil	
	ft	lb	in	ft	psf	ft	ft	ft	
TSU4-416	4 x 16	4259	16"	13'-11"	1651	37	28	22	
TSU4-420	4 x 20	5122	16"	17'-11"	977	22	17	13	
TSU4-612	6 x 12	4533	40"	9'-11"	2820	40	40	30	
TSU4-616	6 x 16	5736	40"	13'-11"	1620	37	29	22	
TSU4-620	6 x 20	6887	40"	17'-11"	959	23	18	14	
TSU4-624	6 x 24	8046	40"	21'-11"	643	16	13	10	
TSU4-810	8 x 10	5261	64"	7'-11"	2400	40	40	30	
TSU4-812	8 x 12	5918	64"	9'-11"	2409	40	40	30	
TSU4-816	8 x 16	7658	64"	13'-11"	1560	37	29	23	
TSU4-820	8 x 20	8997	64"	17'-11"	950	24	19	15	
TSU4-824	8 x 24	10709	64"	21'-11"	650	17	14	11	
TSU4-1020	10 x 20	10999	84"	17'-11"	930	24	19	16	

Options

✓ Knife edge or flat bottom

✓ 5th spreader collar

ESC Trench Box Series

			TECH	NICAL SPECIFICATIONS	5			
SERIES	HEIGHT BY LENGTH	WEIGHT	PIPE CLEARANCE	MAXI	MAX EXCAVATION DEPTH			
	ΗXL	(2 x panels)	СН	CL		B45-Soil	C-60 Soil	C-80 Soil
	ft	lb	in	ft	psf	ft	ft	ft
TSB6-416	4 x 16	4896	18	13'11"	2518	40	40	30
TSB6-420	4 x 20	5857	18	17'11"	1523	34	26	20
TSB6-424	4 x 24	7605	18	21'11"	1181	27	20	16
TSB6-616	6 X 16	6532	40	13'11"	2358	40	40	30
TSB6-620	6 x 20	7842	40	17'11"	1426	33	26	20
TSB6-624	6 x 24	10411	40	21'11"	1127	26	21	16
TSB6-816	8 x 16	7922	64	13'11"	2030	40	37	28
TSB6-820	8 x 20	10897	64	17'11"	1573	37	29	23
TSB6-824	8 x 24	12762	64	21'11"	1053	26	20	16
TSB6-1016	10 x 16	9403	76	13'11"	1501	37	29	23
TSB6-1020	10 x 20	13330	76	17'11"	1338	33	26	21
TSB6-1024	10 x 24	15624	76	21′11″	1046	27	21	17

 \checkmark All 4' and 6' shields can be used as Extension Shields.

✓ Depth ratings include consideration of surcharge load of 72 psf.

As per NAXSA recommendations, depth of cut has been limited to 40ft for types A, B and C60 soil, and 30ft for C80 soil regardless of the capacity of the shield. If deeper cuts are required, it is recommended that a professional engineer is engaged to evaluate the site and soil conditions and specify a suitable trench shield or other shoring solution.



ESC TSU Trench Box Series

	TECHNICAL SPECIFICATIONS									
MODEL	HEIGHT BY LENGTH	WEIGHT	PIPE CLEARANCE	LENGTH BETWEEN SPREADERS	SHIELD CAPACITY	MA>	EXCAVATION	DEPTH		
	ΗXL	(2 x anels)	СН	CL		B-45 Soil	C-60 Soil	C-80 Soil		
	ft	lb	in	ft	psf	ft	ft	ft		
TSU6-820	8 x 20	10080	64"	17'-11"	1550	37	29	22		
TSU6-824	8 x 24	11797	64"	21'-11"	1009	25	20	16		
TSU6-1012	10 x 12	8142	84"	13'-11"	2020	40	37	29		
TSU6-1020	10 x 20	12075	84"	17'-11"	1170	29	23	19		

Options

✓ Knife edge or flat bottom

✓ 5th spreader collar



ESC Trench Box Series

TECHNICAL SPECIFICATIONS PIPE CLEARANCE SHIELD CAPACITY MAX EXCAVATION DEPTH SERIES LENGTH BETWEEN **BY LENGTH** SPREADERS HXL CH CL B45-Soil C-60 Soil C-80 Soil (2 x panels) ft lb ft ft ft ft in psf TSB8-416 4 x 16 5720 18 13'11" 3878 40 40 30 TSB8-420 17'11" 4 x 20 6876 18 2346 40 40 30 TSB8-424 4 x 24 8033 18 21'11" 1571 35 27 21 TSB8-616 6 X 16 7563 40 13'11" 3150 40 40 30 TSB8-620 6 x 20 9119 40 17'11" 2172 40 38 29 TSB8-624 40 21'11" 1454 20 6 x 24 10676 34 26 TSB8-816 8 x 16 9175 64 13'11" 2030 40 37 28 TSB8-820 8 x 20 12380 64 17'11" 1620 38 30 23 TSB8-824 8 x 24 14526 64 21'11" 1350 32 25 20 TSB8-1016 10 x 16 11252 76 13'11" 1680 40 32 25 TSB8-1020 10 x 20 13547 76 17'11" 1345 33 26 21 TSB8-1024 10 x 24 18142 76 21'11" 1120 28 22 18

 \checkmark All 4' and 6' shields can be used as Extension Shields.

✓ Depth ratings include consideration of surcharge load of 72 psf.

As per NAXSA recommendations, depth of cut has been limited to 40ft for types A, B and C60 soil, and 30ft for C80 soil regardless of the capacity of the shield. If deeper cuts are required, it is recommended that a professional engineer is engaged to evaluate the site and soil conditions and specify a suitable trench shield or other shoring solution.



ESC Trench Shield Manhole Series

			TECHNI	CAL SPECIFICATIONS				
SERIES	HEIGHT BY LENGTH	WEIGHT	PIPE CLEARANCE	LENGTH BETWEEN SPREADERS	SHIELD CAPACITY	MAX	EXCAVATION D	EPTH
	ΗXL	(2 x panels)	СН	CL		B45-Soil	C-60 Soil	C-80 Soil
	ft	lb	in	ft	psf	ft	ft	ft
MSB4-48	4 x 8	2826	24	7'2"	2400	53	40	30
MSB4-410	4 x 10	3143	24	9'2"	2400	53	40	30
MSB4-68	6 x 8	3775	48	7'2"	2200	49	37	28
MSB4-610	6 x 10	4276	48	9'2"	2200	49	37	28
MSB4-88	8 x 8	4672	52	7'2"	2100	47	35	25
MSB4-810	8 X 10	5358	52	9'2"	2100	47	35	25
MSB4-1010	10 X 10	6442	76	9'2"	2000	47	35	25

UNO

ESC Manhole Boxes provide a four-wall shield for utmost worker safety. They are specially built for maintenance hole installations, tie-ins, and repair work. ESC Manhole Boxes offer the flexibility you need with the protection compliant with OSHA requirements. Manhole boxes can be used in combination with the standard trench shields for different applications.



.5" sch 80 spreaders

ESC X Series 4-Sided Manhole Boxes

4" MANHOLE SERIES

	TECHNICAL SPECIFICATIONS										
SERIES	HEIGHT BY LENGTH	WEIGHT	PIPE CLEARANCE	LENGTH BETWEEN SPREADERS	SHIELD CAPACITY	MAX E	XCAVATION DE	EPTH			
	ΗXL	(2 x panels)	СН	CL		B45-Soil	C-60 Soil	C-80 Soil			
	ft	lb	in	ft	psf	ft	ft	ft			
XMH4-48	4x8	3000	15"	6' 11.75"	2500	30'	35'	30'			
XMH4-410	4x10	3500	15"	8' 11.75"	2500	30'	35'	30'			
XMH4-412	4x12	4000	15"	10' 11.75	2500	30'	35'	30'			
XMH4-88	8x8	5200	63"	6' 11.75"	3012	40'	40'	30'			
XMH4-810	8x10	5700	63"	8' 11.75"	1934	40'	32'	24'			
XMH4-812	8x12	6100	63"	10' 11.75	1628	36'	27'	20'			

ESC X Series 4-Sided Tapping Boxes

		Т	ECHNICAL SPECIFIC	ATIONS			
SERIES	HEIGHT BY LENGTH	WEIGHT	LENGTH BETWEEN SPREADERS	SHIELD CAPACITY	MAX E	XCAVATION I	DEPTH
	ΗXL	(2 x panels)	CL		B45-Soil	C-60 Soil	C-80 Soil
	ft	lb	ft	psf	ft	ft	ft
XTB4-48	4x8	3500	7' 4"	2900	40'	40'	40'
XTB4-410	4x10	3800	9' 4"	2900	40'	40'	40'
XTB4-412	4x12	4100	11' 4"	2900	40'	40'	40'
XTB4-88	8x8	5000	7' 4"	2909	40'	40'	30'
XTB4-810	8x10	6000	9' 4"	2304	40'	37'	27'
XTB4-812	8x12	7000	11' 4"	2000	40'	31'	25'

Options

- Optional knife edge or flat bottom
- Trapezoid cutouts 3' x 5'







MADE IN USA

ESC Aluminum Trench Shield Series

ESC Trench Shoring's ABX Aluminum Trench Shields are lightweight and high strength. Built from high grade tempered aluminum, ESC offer a standard range or can custom build a shield to suit your requirements.



 \mathbf{C}

6' ALUMINUM TRENCH SHIELD SERIES 3" WALL

	_		ТЕСН	NICAL SPECIFICATION	c						
SERIES											
JENIES	BY LENGTH	WEIGHT	CLEARANCE	SPREADERS	CAPACITY						
	ΗXL	(2 x panels)	СН	CL		B45-Soil	C-60 Soil	C-80 Soil			
	ft	lb	in	ft	psf	ft	ft	ft			
ABX3-68	6 x 8	1,031	34	6'2"	1,404	25	20	18			
ABX3-610	6 x 10	1,200	34	8'2"	1,124	25	20	16			
ABX3-612	6 x 12	1,369	34	10'2"	936	22	17	14			
ABX3-614	6 x 14	1,538	34	12'2"	803	19	15	12			
ABX3-616	6 x 16	1,707	34	14'2"	634	15	12	10			

8' ALUMINUM TRENCH SHIELD SERIES 3" WALL

MOD.

	TECHNICAL SPECIFICATIONS									
SERIES	HEIGHT BY LENGTH	WEIGHT	MAX EXCAVATION DEPTH							
	HXL	(2 x panels)	СН	CL		B45-Soil	C-60 Soil	C-80 Soil		
	ft	lb	in	ft	psf	ft	ft	ft		
ABX3-88	8 x 8	1,371	40	6'2"	1,229	25	20	18		
ABX3-810	8 x 10	1,597	40	8'2"	982	24	19	15		
ABX3-812	8 x 12	1,823	40	10'2"	819	21	16	13		
ABX3-814	8 x 14	2,048	40	12'2"	640	17	13	11		
ABX3-816	8 x 16	2,274	40	14'2"	475	13	11	9		



ESC Modular Box Series

2.8" PANEL SERIES

AP3-214

AP3-216

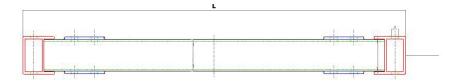
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2 x 16

205

233

							CORNER	END PO	STS	THREE V	VAY T PO	STS
		TECHNICAL	SPECIFICA	TIONS		TECHNIC/	AL SPECIFI	CATIONS	TECHNIC	AL SPECIFIC	CATIONS	
SERIES	HEIGHT BY LENGTH	WEIGHT	SHIELD CAPACITY	MAX E	XCAVATION	I DEPTH	SERIES	LENGTH	WEIGHT	SERIES	LENGTH	WEIGHT
	ΗXL	(2 x panels)		B45-Soil	C-60 Soil	C-80 Soil		ft	lb		ft	lb
	ft	lb	psf	ft	ft	ft	ACC-2	2	14	ATC-2	2	19
AP3-22	2 x 2	35	2250	50	40	30	ACC-4	4	29	ATC-4	4	38
AP3-24	2 x 4	63	2237	50	40	30	ACC-6	6	43	ATC-6	6	57
AP3-26	2 x 6	92	1491	50	40	30	ACC-8	8	57	ATC-8	8	76
AP3-28	2 x 8	120	1119	37	28	21	ACC-10	10	72	ATC-10	10	95
AP3-210	2 x 10	148	895	23	18	13	ACC-12	12	86	ATC-12	12	114
AP3-212	2 x 12	177	746	16	12	9						
										312 275		



558

425

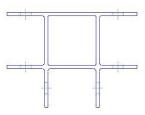
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9

7







Spreader/Strut Solutions

Heavy duty spreaders are available in a variety of fixed lengths, or alternatively adjustable length spreaders may be used to achieve a range of excavation widths.



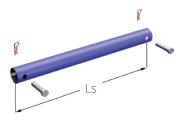
AS SERIES



AS SERIES COMMON ADJUSTABLE STRUTS

AS SPREADER RANGE										
REFERENCE	MIN LENGTH	MAX LENGTH	WEIGHT							
			AS3 +AS4							
	in	in	lb							
AS-3036	30	36	78.59							
AS-3648	36	48	92.52							
AS-4260	42	60	108.76							
AS-5484	54	84	136.60							
AS-6096	60	96	150.52							
AS-72120	72	120	183.04							
AS-84144	84	144	210.90							

SN8 SERIES



SN8 SERIES FIXED LENGTH SPREADERS

TECHNICAL SPECIFICATIONS							
MODEL	LENGTH	WEIGHT					
	LS	(per spreader)*					
	in	lb					
SN8-24	24	87					
SN8-30	30	108					
SN8-36	36	130					
SN8-42	42	152					
SN8-48	48	174					
SN8-54	54	195					
SN8-60	60	217					
SN8-66	66	239					
SN8-72	72	260					
SN8-78	78	282					
SN8-84	84	304					
SN8-96	96	347					
SN8-108	108	391					
SN8-120	120	434					
SN8-144	144	521					
SN8-168	168	607					

* SN Series spreaders are for standard steel trench shields;
* AS Series spreaders are for aluminum trench shields.
* spreader weights exclude weights of pins and keepers A. Flat pack delivery.

ESC Trench Shield Assembly Guide

ESC Trench Shields are easy to assemble. It is advisable for users to strictly follow the procedures supplied by ESC.



SAFETY TIPS

- Remember to inspect lifting points prior to every lifting operation and ensure that all personnel are well informed of the operation.
- ✓ Ensure all pins and retaining clips are correctly fitted.
- ✓ Use only certified lifting slings.
- ✓ Assemble on flat ground.

B. Cut packing straps/lift top panel.



C. Erect 4 spreaders, insert pin and R-clip.





Assembly Guide

D. Place top panel, pins and R-clips.



SAFETY TIPS

- ✓ Do not allow personnel to enter the box/ shield while excavator is moving the trench shield/box.
- Always ensure the shield/box is evenly supported by the ground to avoid shield/box becoming unstable.
- ✓ Do not use box if panel, pins or spreaders are damaged.
- \checkmark Use only components supplied by ESC.

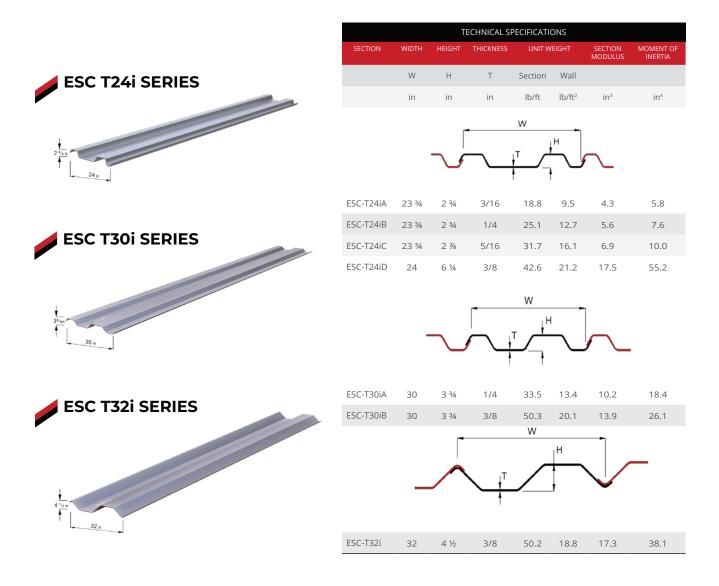






Common Trench Sheets

ESC trench sheet products offer a highly efficient retention system for shallow excavations. ESC trench sheets can be used to support earth banks for the safety of construction workers, and are ideal for reinforcement of waterway banks and services trenches. The strength, speed and flexibility of light trench sheets makes them ideal for all forms of temporary and permanent works. The trench sheets also offer good durability and ease of installation and extraction allows sustainable construction. Lou



ESC Bedding Boxes

ESC Trench Shoring bedding boxes offer you a convenient way to manage your trench bedding materials wisely. Utilizing a bedding box allows you to move the material quickly and efficiently to and from the trench precisely when and where needed.

ESC heavy-duty bedding boxes are reinforced to provide you with durability and reusability to ensure high performance on every job.

ESC bedding boxes can accommodate all of your multipurpose construction requirements. Made with sturdy high tensile steel, well equipped to suit your every project need, maximizing efficiency at the job site.

Features

- Heavy-duty design;
- Welded lifting bar;
- Lifting lugs;
- Stackable;

Benefits

- Production safety;
- \checkmark Eliminates project delays;
- \checkmark Reduces costly labors;
- \checkmark Multipurpose construction use;

Options

- Adjustable lift bar;
- Wheel Kit;
- Custom Sizes and Designs Available;

TECHNICAL SPECIFICATIONS										
MODEL NUMBER	OUTSIDE DIMENSION (in)			ID	WEIGHT	CAPACITY	INSIDE DIMENSIONS (in)			GRAB BAR
	LENGTH	WIDTH	HEIGHT	in	lbs	cu. yds.	SIDE WALL	END WALL	BASE PLATE	in
ESC-BB-2	8' 3"	4' 0"	3' 0"	40"	2,340	2	1/4″	3/8″	3/8"	5" SCH 80
ESC-BB-3	10' 0"	4′ 9″	3′ 6″	42″	2,730	3	1/4″	3/8″	3/8"	5" SCH 80
ESC-BB-5	13' 6"	5′ 4″	3′ 6″	54"	3,975	5	1/4″	3/8″	5/8″	6" SCH 80
ESC-BB-7	14' 6"	5′ 9″	4' 0"	60″	5,100	7	1/4″	3/8″	5/8"	8" SCH 80
ESC-BB-7W	13' 4"	7′ 0″	4' 0"	72″	5,850	7	1/4″	3/8″	5/8"	8" SCH 80
ESC-BB-9	15' 6"	6′ 7″	4' 0"	69″	5,990	9	1/4″	3/8″	5/8"	8" SCH 80
ESC-BB-12	18' 6"	7′ 2″	4' 0"	76″	8,700	12	1/2"	1/2"	3/4″	8" SCH 120



BUILT FOR THE TOUGHEST WORKING CONDITIONS



Product & Project Photos



























ESC Product Catalogs

You may download all our product catalogs on this https://www.escsteel.com/construction-product-catalogs or request via email: info@escsteel.com. If you are viewing online, you may click on the image below to download.



ESC Capability Statement



Sheet Pile Installation Procedures



Marine Fender Catalog



Combination Walls Project



Marine & Foundation Piling Catalog



Steel Structures Brochure



Project Case Study - Book I



Steel Pipes Projects Case Study



Vinyl Sheet Pile Catalog



Marine Mooring Bollards Catalog



Project Case Study - Book II



Vinyl Sheet Pile Installation Guide



Port & Offshore Structures Capability Statement



Project Case Study - Book III

ESC CAPABILITY STATEMENT

MARINE & FOUNDATION PILING CATALOG

SHEET PILE INSTALLATION PROCEDURES

VINYL SHEET PILE CATALOG

VINYL SHEET PILE INSTALLATION GUIDE

STEEL STRUCTURES CAPABILITIES

MOORING BOLLARDS CATALOG

MARINE FENDERS CATALOG

PORTS & OFFSHORE STRUCTURES

ESC PROJECT CASE STUDIES

COMBINATION WALL PROJECTS

STEEL PIPE PILING PROJECTS











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