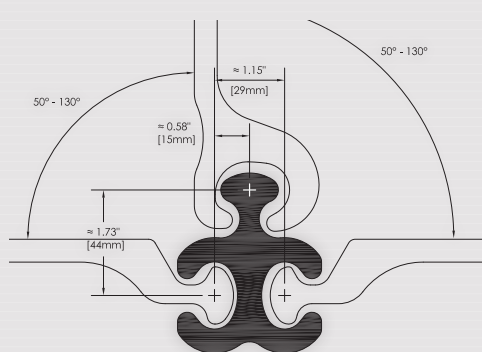
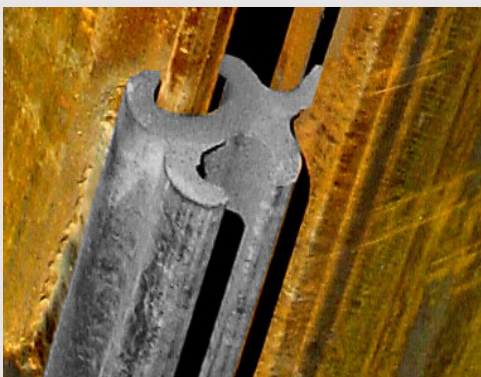




iSheetPile

2020 PRODUCT CATALOG



PREDICTABLE, EFFICIENT, QUANTIFIABLE
RETAINING WALL FOR ANY APPLICATION

iSheetPile.com

Sheet Pile LLC operates isheetpile.com which utilizes sophisticated patented online tools that give the foundation construction industry the ability to research and customize projects.

Please see the corresponding US patents:
[US855481](#), [US7935406](#)

Technical and Sales Support
8am EST to 6pm EST
Live person should answer your call

Toll Free from the US:
866.666.7453

International Callers Please Dial:
+1.512.243.1228
or please text us stating when you would like us to call you.

Email us
info@isheetpile.com

To schedule a call
CLICK HERE 

Sheet Pile LLC
P.O. BOX 366
Austin, Texas
78767



iSheetPile

Table of Contents



www.O-Pile.com

Predictable, Quantifiable Retaining Wall System for All Soil Conditions

O-Pile® is a dynamic, cost-effective contiguous pipe-to-pipe system that allows you to drive predictably into pure rock, if necessary, as well as dial-in your corrosion and bending moment needs separately. O-Pile® is versatile and readily available, as you can use your local pipe plant or supply—no need to bring the majority of the steel from Luxembourg, anymore. Go to Opile.com to configure your system.

[O-Pile® Product Overview](#)

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[O-Pile® Global Projects](#)

[Go to Opile.com](#)

Please go to the O-Pile tool at O-Pile.com to configure your specific O-Pile system, call or text us at 866.666.7453 or +1.512.243.1228 for technical assistance about the O-Pile system or how to use the tool.



www.pilepro.com

The Leader in Innovative Sheet Pile Connectors

PilePro® offers a line of modular sheet pile connectors that enable distributors to offer the end user an off-the-shelf and ready-to-install component. PilePro® connectors effectively render fabricating corners and other connection processes in sheet piling projects a relic of the past. Go to Pilepro.com to configure your system.

[PilePro® Connector Catalog](#)

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[Quick & 24-HR Delivery Options](#)

[Go to PilePro.com](#)

Go to pilepro.com/specified to view some of the hundreds of specifications with the connectors.



www.wadit.com

The Proven Sheet Pile Sealing System

A purpose-built and globally proven sheet piling interlock sealant system, WADIT® (short for WASSERDICHT, German for waterproof) is an environmentally friendly sealant that was developed to deliver robust water-stopping protection. WADIT® is available for use anywhere with any type of sheet pile, including but not limited to O-Pile® and Z-Pile. The WADIT® system can be utilized before driving sheet pile, in the middle interlock of already paired sheet pile and after the sheet pile has already been installed.

[Click here for WADIT® presentation.](#)

[WADIT® Sealant System Catalog](#)

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Go to wadit.com/specified to view some of the hundreds of specifications with the connectors.

O-Pile®

Predictable, Quantifiable Retaining Wall Systems for All Soil Types

Please see the corresponding US patents:
US8088469, US8323765

Technical and Sales Support
8am EST to 6pm EST
Live person should answer your call

Toll Free from the US:
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International Callers Please Dial:
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or please text us stating when
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Email us
info@isheetpile.com

To schedule a call
CLICK HERE 



O-Pile®

Overview

O-Pile® is a leader in predictable, quantifiable retaining wall systems that can be driven in all soil conditions. O-Pile® systems are a stronger, more efficient, durable, faster and cost-effective alternative to heavy Z-sheet pile, combined sheet pile utilizing pipes or beams, slurry, secant, continuous concrete walls and other conventional concrete constructions.

O-Pile® Attributes

1. Bending Moment Capacity (BMC) –

O-Pile® systems typically have a higher strength to weight ratio when compared to Z, U or combined sheet pile walls as they can be made using high strength coiled steel that exceeds the capabilities of hot rolled sheet pile, allowing for a much larger Bending Moment Capacity. For example O-Pile® is available in X80 to provide 80,000 yield strength, where by hot rolling sheet piling is limited to less than 65,000 and typically uses steel with a yield strength of 36,000 or 50,000. The selection of the steel grade has a marked impact on the structural resistance of the pile wall. Selecting a stronger steel grade such as X70 or X80 often allows using piles of smaller diameter or wall thickness.

2. Strong Efficient Connection –

WOM/WOF connectors have an interlock strength of 19.5 kips/inch (3418 kN/m); Figure 1 on the right clearly shows the high pull-out resistance of this connection which is over 4 times stronger than Larsen interlocking hot rolled sheet pile made in Luxembourg or China.

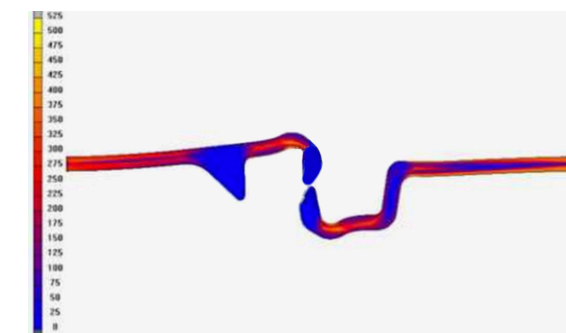
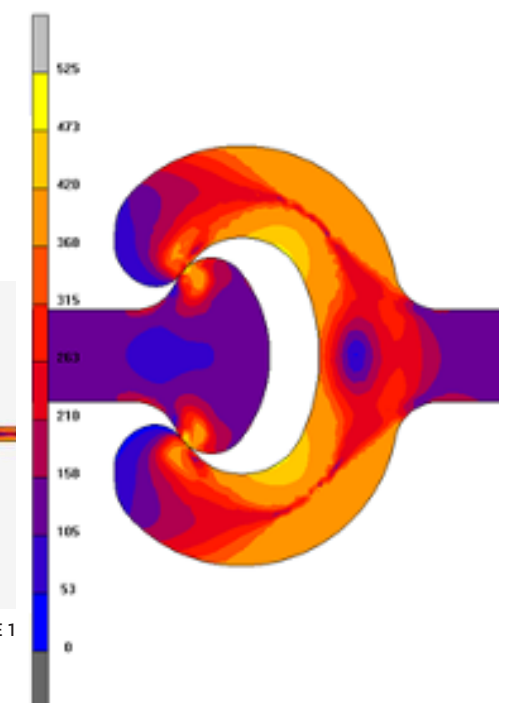
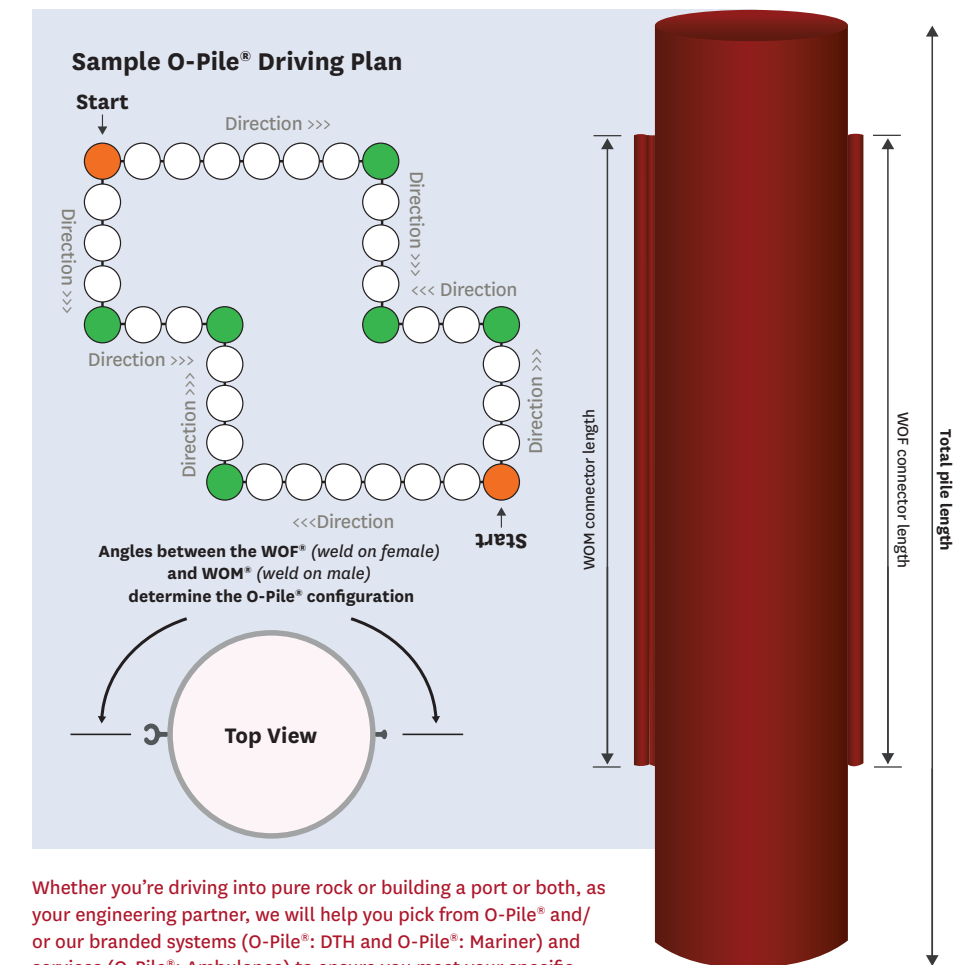


FIGURE 1

“Greater interlock strength improves integrity during driving and allows forces to be redistributed laterally along the wall.”

USACE: 2.1 Metal Sheet Piling UFGS -31 41 16 Page 13

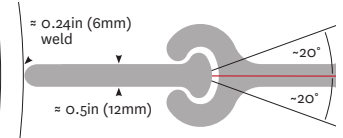
Whether you're driving into pure rock or building a port or both, as your engineering partner, we will help you pick from O-Pile® and/or our branded systems (O-Pile®: DTH and O-Pile®: Mariner) and services (O-Pile®: Ambulance) to ensure you meet your specific project needs.



A WOM/WOF® has a high pull out capacity of 19.5 kips/inch (3418 kN/m) compared to a Larsen 4.57 kips/inch (801 kN/m).

3. Superior Geometry for Durability – Each WOF/WOM connection provides 20 degrees of rotation to ease placement. O-Pile® has a distinct advantage over combined, Z and U sheet piles: O-Pile® saves costs with easier application of corrosion protection compared to other geometries, and by having a minimized exposed surface (See figure 2).

Furthermore, the interior of the pipe can be sealed off (capped or filled) from oxygen infiltration in order to avoid inside corrosion. Also, concrete can be poured inside the O- Pile® itself, thus further increasing strength while also preventing oxidization or corrosion on the interior surface, so O-Piles® have only the exterior face exposed to corrosion. This is in contrast to a beam king pile, which has all of its surface faces exposed to corrosive elements. O-Pile used in corrosive soil and/or water need only have corrosion allowance factored for the exterior surface of the pile.

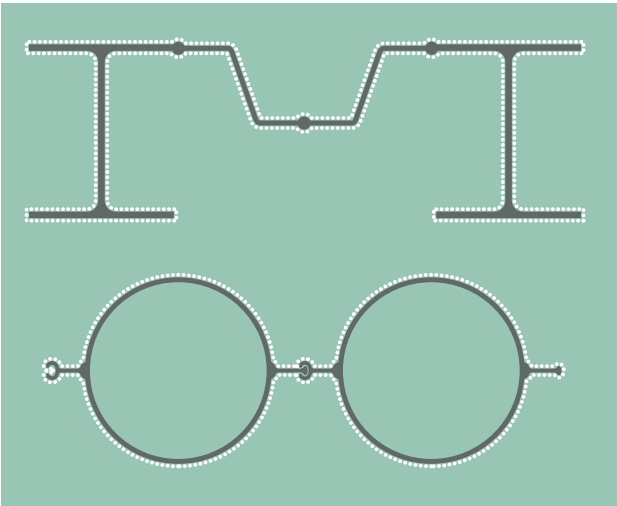


4. Positional Flexibility – Each WOF/WOM connection provides 20 degrees of rotation to ease placement.

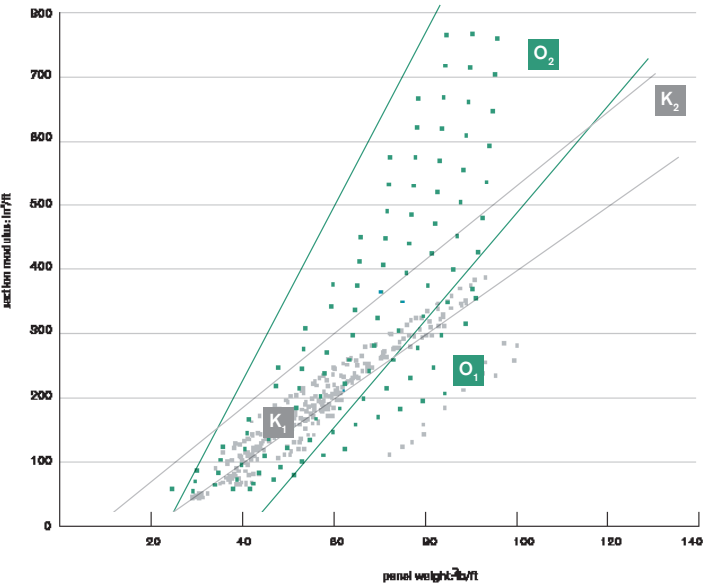
5. Unmatched Strength – O-Pile systems offer unmatched efficiency particularly where high capacity structures are involved. O-Pile systems achieve strength by increasing pipe diameter, which spreads weight gained over an increased width. This minimizes weight gain per sqft (sqm) and radically improves efficiency. This is in stark comparison to how a beam-based combi-wall system develops strength.

To illustrate this efficiency, below is a comparison of strength to weight for an O-Pile system and a King pile system.

	System	System Measurements	Strength Increase	Weight Increase
O ₁	O-Pile	762 x 25.4mm; 11,116 cm³/m; 207 ins²/ft; 410 kg/m²; 84 lbs/ft		
O ₂	O-Pile	2,134 x 25.4mm; 37,826 cm³/m; 703² ins²/ft; 464 kg/m²; 95 lbs/ft	X 3.4	X 1.13
K ₁	King pile beam system (1080mm beam with a 77mm sheet pile)	8,753 cm³/m; 163 ins³/ft; 205 kg/m²; 42 lbs/ft		
K ₂	King pile beam system (1080mm beam to beam)	29,330 cm³/m; 546 ins³/ft; 656 kg/m²; 134 lbs/ft²	X 3.3	X 3.2



Dotted white lines = exposed surface



6. Load-Bearing Capacity – The surcharge and lateral load-bearing capacity of pipe sheet pile is significantly higher than standard U- or Z-type sheet piles or combined wall systems of similar weight, because of its natural geometry.

7. Superior Durability – O-Pile systems have a distinct advantage over Z,U and combined sheet piles by having a minimized exposed surface. O-Pile only have a corrosion allowance factored for the exterior surface of the pile, unlike the other systems.

8. O-Pile: Mariner = Double Pipe thickness – allows you to “dial-in” thickness to meet your specific structural load and durability needs to ensure overall safety. Thickness can be increased specifically at the splash- and low-water zones for increased durability (See Figure on the right). Additional costly measures, such as coatings, special steel grades or cathodic protection, become unnecessary. This gives the most efficient use of steel and the most cost-effective solution for durability.

O-Pile® Mariner’s double pipe thickness targets design life and the use of sacrificial thickness, exactly where you need it–the “Zone of High Attack.” With a 100’ pipe, the thickness of the upper 10’ of pipe (denoted by arrows) beats the corrosion allowance, while the bottom 90’ of the pipe is dialed-in to meet load bearing needs (See Figure 3).

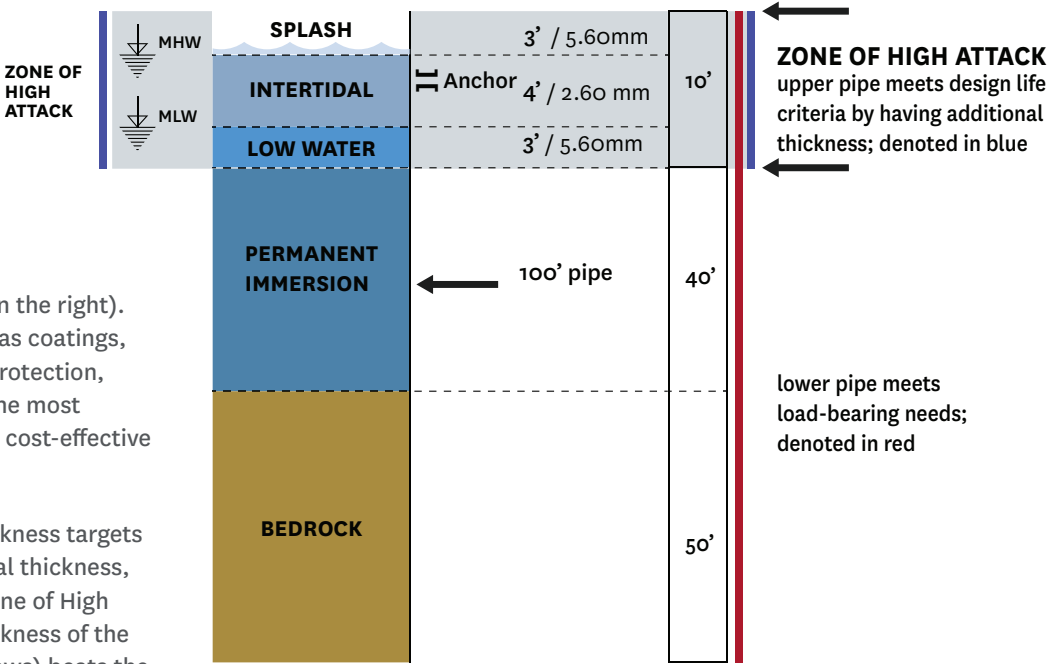
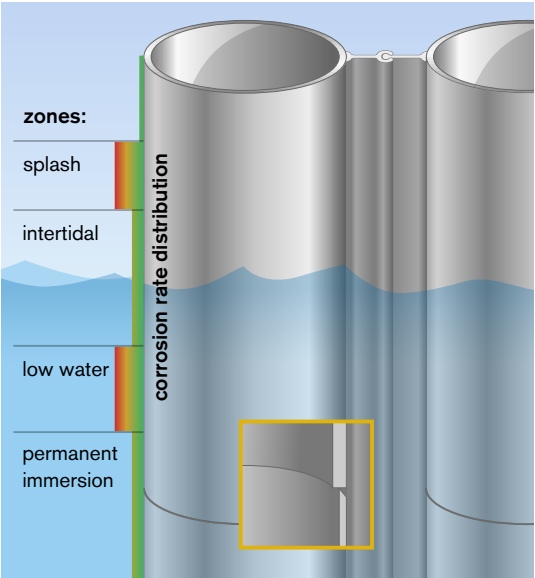


FIGURE 3



Yellow call out box shows how thickness can be “dialed in” to meet safety needs (e.g. structural load and durability).

9. Increased Savings – The increased Bending moment capabilities of O-Pile® allow the user to construct a stronger wall using much less steel, and hence at a much lower cost. O-Pile® works with our customers to ensure we meet your specific project needs. We don’t just sell you a product, we enter into a partnership that starts at the design stage and extends through implementation. Simply put, we deliver the most technically advanced and highly economical system available. Since we locally source pipes, we can always help you find the correct pile size in a broad range of steel grades, which allows you to implement a retaining wall or foundation structure with the best overall economy for all soil conditions and loading situations. O-Pile® offers a truly unmatched proven solution.

10. Ease of Installation – An O-Pile is much less challenging due to one single fact: O-Piles are supported throughout their installation, whereas combined sheet pile systems are not. Installation using WOF/WOM connections are simplified by the use of a template and panel installation method. The installation of the O-Pile section is similar to driving Z sheet pile pairs in a basic two frame template. At no stage is there a pipe pile entirely unsupported throughout its length as it is driven to grade. Each pipe is supported by adjacent pipes with a small lead ahead of the rest, ensuring accurate wall alignment.

11. O-Pile: via WADIT System = Watertight wall – WADIT, the globally proven sheet pile interlock sealant, comes pre-applied in the WOF interlock chamber before delivery to the job site. A purpose-built and globally proven sheet piling interlock sealant system, WADIT (short for WASSERDICHT, German for waterproof) is an environmentally friendly sealant that was developed to deliver robust water-stopping protection. WADIT is available for use anywhere with any type of sheet pile, including but not limited to O-Pile® and Z-Pile. The WADIT system can be utilized before driving sheet pile, in the middle interlock of already paired sheet pile and after the sheet pile has already been installed.

12. O-PILE: DTH (Down the Hole) Drilling – O-Pile®: DTH utilizes state-of-the-art DTH drilling techniques that allows its systems to be driven into any ground or rock strata at levels of productivity not achieved before. DTH drilling has been used in these challenging environments: post glacial soils of Norway, boulders of Sweden, granite of Finland, deep bed rock of Hong Kong, through heavy structure in Macau, etc. The O-Pile®: DTH Pile is installed with the centric drilling method using ring bits of a larger diameter than standard bits. The ring bit drills a hole larger than the pile to accommodate the WOF/ WOM connectors. Diameter from 16” (323mm) to 36” (914.4mm), ranging from a wide range of diameter pipe can be installed using O-Pile®: DTH. See O-Pile®: DTH Grid on page XX.

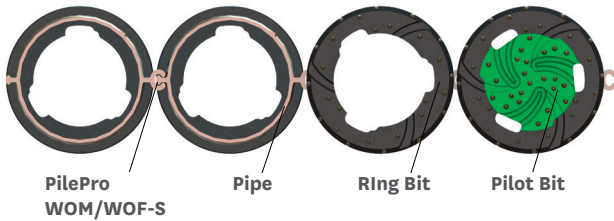
Predictable, quantifiable installation is possible even with difficult driving conditions, such as bed rock or job sites with heavy debris. Compared to driving a conventional combined sheet piles with beams or pipes, the installation using an O-Pile®: DTH system is much less challenging due to one single fact: O-Pile® systems are supported throughout their installation, whereas King pile combi-wall systems with pipes and beams are not.



Installation using flexible strong WOM/WOF connections are simplified by the use of a template and panel installation method.

The installation of O-Pile®: DTH Piles is similar to driving sheet pile pairs in a basic two frame template. At no stage is there a pipe pile entirely unsupported throughout its length as it is driven to grade. Each pipe is supported by adjacent pipes with a small lead ahead of the rest, ensuring accurate wall alignment. (See Figure 4.)

FIGURE 4
DTH-O-Pile
The Only SSP System that Can Be Driven Through Solid Rock.



When to use O-Pile®: DTH (Down the Hole)

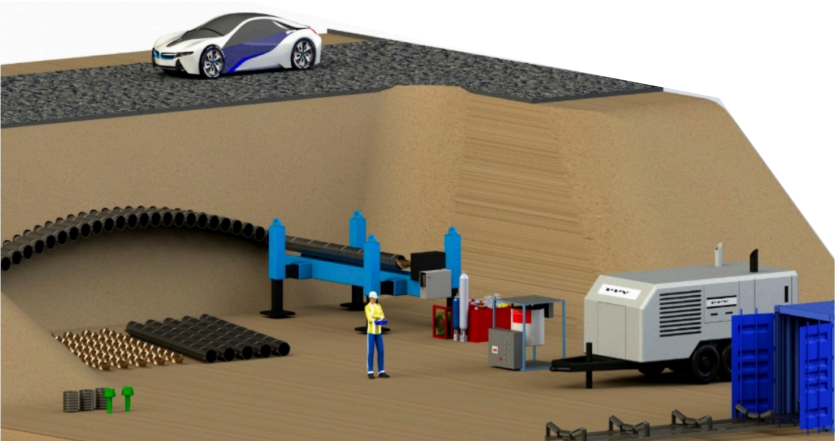
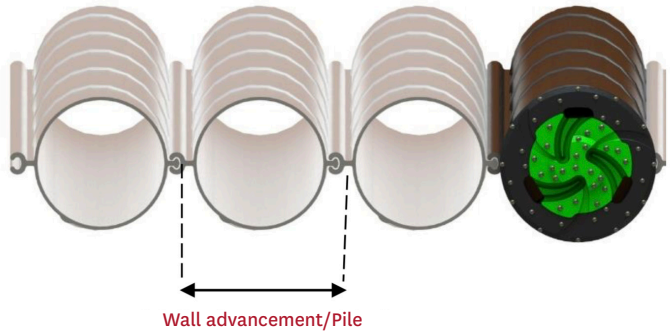
Environments and Uses. O-Pile®: DTH systems can be driven into environments where the rock strata exceeds 120 megapascals or other difficult environments at levels of productivity not achieved before by using the state-of-the-art Down-the-Hole (DTH) drilling technique.

Development of new Down The Hole (DTH) techniques, especially the introduction of new air control bits, is making DTH drilling safer and more environmentally friendly than ever before. Using DTH in urban areas and in sensitive ground is now possible; plus, there is no danger of overdrilling or air escaping, which could otherwise cause settlements to existing structures.

O-Pile® is an economical and reliable solution that suits all ground conditions. The product is on hand and ready to ship to most US destinations within two weeks to most destinations in North America.



O-Pile® template in marine environment.



Example of tunnel using O-Pile®:DTH using horizontal drilling. While vertical walls are assembled with standard DTH piling rigs, horizontal applications require special HZ rigs that can handle long element lengths as the space allows.



Frequently Asked Questions for O-Pile®

Can you install on O-Pile system in solid rock?

Yes, using the O-Pile “DTH Down the Hole” system. Click here for presentaiton.

What is an O-Pile system?

An O-shaped sheet pile is a pipe section with attached connector sections so that one section can be driven into the next to form a continuous steel wall with the same load bearing element.

The connector sections are connected together through an interlocking system. Eurocode 3 BS EN 1993-1995: 2007 Section 1.8.12 defines interlock as: The portion of a steel sheet pile or other sheeting that connects adjacent elements by means of a thumb and finger or similar configuration to make a continuous wall.



Picture illustrates the superior template and panel installation method that O-Pile systems utilize.

According to BS EN 10248-2 (European version of ASTM), “Interlocks shall have adequate free play, so that the piles can be fitted into each other and they must engage in such a manner that the in service forces can be transmitted.” For non-flat sheet piling such as the interlock connecting system in contiguous o-sheet piling, BS EN 10248-2 also allows for a 4 mm minimum engagement distance in the interlocks in order to effectively transfer forces.

It is important to note that hot rolled sheet piling has this minimum engagement distance of 4 mm while cold formed does not necessarily. This is why cold formed does not always transfer shear forces as effectively as hot rolled sheet piling.

US Army Corps of Engineers Unified Facilities Guide Specifications Document UFGS-31 41 16 page 13 notes: “interlock connections between hot rolled sheets provide much greater strength than cold formed connections. Greater interlock strength improves integrity during driving and allows forces to be redistributed laterally along the wall at changes in wall alignment...”

Why use an O-Pile sheet pile system?

Because we can take readily available pipes and begin a project to meet/exceed virtually any steel sheet piling requirements and begin delivery a ready to install system in days versus months.

How are z sheet pile and the O-Pile system similar?

They are both contiguous walls and hence much easier to install than a combined sheet pile wall.

Can you build an O-Pile wall with grade 80 or higher steel?

Yes, unlike hot rolled or cold rolled sheet pile systems that are limited to aboout grade 65 and most often produced with grade 50 steel, Pipes can be produced in higher grade of steel there-by giving the user is much higher bending moment per pound of steel.

What is bending moment important?

The best method for comparing SSP is via bending moment capacity, which incorporates the strength of the section due to its geometry (section modulus) and takes into account the steel grade: Bending moment capacity = elastic section modulus [m3/m] × minimum yield strength [kN/m2] (without safety factor) The BMC of a sheet pile section with a section modulus of 4019 cm3/m in a Steel Grade of S 355 is: 1427 (kNm/m) = 4.019 (m3/m) x 355 (N/mm2) The BMC of a sheet pile section with a section modulus of 2290 cm3/m in a Steel Grade of X70 is: 1111 (kNm/m) = 2.290 (m3/m) x 485 (N/mm2) Decades ago, when there was predominantly only one steel grade, engineers used section modulus as the main design criteria. But now that many steel grades are available and production technology has evolved, we will likely see more and more higher grade steel options in the future. A higher grade of steel results in a stronger wall for less weight; thus, the best measure of strength to compare SSP systems is bending moment capacity, which incorporates section modulus and steel grade into one number independent of

lifespan or safety factor. Incidentally, moment of inertia has no relationship to bending moment and is not typically a stand-alone criteria. Certain steel companies have pushed for moment of inertia to be placed as part of a primary specification and have, as a result, confused the term with the vital bending moment.

Where has the O-Pile system been used?

US, Canada, Japan, Russia, Ukraine, Norway, Finland, Sweden, Philippines and many other places.

Has the US Navy build an O-Pile system?

Yes.

When should I consider using an O-Pile system?

- a) When you need a sheet pile section that is stronger than a Z 40 level under normal soil conditions.
- b) When you need to install a wall into rock or boulders and you can not install a z sheet pile, please see the full details of how this is done by clicking here: www.o-pile.com/s/dth



- C) When you have heavy loads where by filling the O-Pile with sand or cement increase the untily of the sheet pile system.
- D) For temporary applications, as you can reuse the O-Pile system easily.
- E) When you would like a sea wall to last a long time and be cost effective. You can make an O-Pile thicking in the zone of high attack the top section of the pile and also eliminate the need to coat the steel.





The world leader in sheet piling connections

Connectors for sheet piling and steel pipe walls

Technologically advanced

Verbindungsprofile für Spundwände

Technologisch überlegen

Perfiles de unión para tablestacas

Tecnológicamente avanzado

Profils de raccordement pour rideaux de palplanches

La supériorité technologique

Profili per connessioni in palancoati

Tecnologicamente all'avanguardia

Соединительные профильные элементы

для шпунтовых стенок

Интеллектуальная технология

www.pilepro.com

2020

Larssen 24

Ball & Socket 46

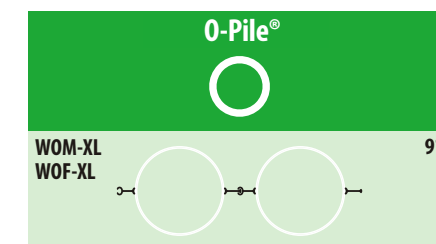
Flat Sheet 72

Cold Formed 90

Pipe Sheet Pile® 104

Product Catalog

Larssen	Ball & Socket	Flat Sheet	Cold Formed
V 20 13	Colt 35	SWC 30 A 61	CFC 90 79
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B-Tank I B-Tank II 27	BBS-M one leg BBS-F one leg 49	SWC 75	
Tank 29	PBS-M PBS-F 51		
LBM LBF 31	WOM WOF 53		
	WOM-XL WOF-XL 55		
	LBM LBF 57		



Please go to opile.com and configure your system with the O-Pile tool.

Combined Sheet Piles

V 22 21
PL 23
P-Tank I P-Tank II 25
B-Tank I B-Tank II 27
Tank 29
BBS-M one leg BBS-F one leg 49
PBS-M PBS-F 51
WOM WOF 53
WOM-XL WOF-XL 55
CF 83
PCF I PCF II 85
BCF one leg I BCF one leg II 87

CAD Service

Downloads of data sheets and CAD files of all PilePro® corner and connector sheet pile sections are available at www.pilepro.com
PilePro® connectors are subject to technical modifications.

PilePro®

Overview

PilePro® connectors are produced with the highest quality control standards. Every product utilizes advanced computer-aided manufacturing technologies which are then measured again by hand prior to shipment. This process guarantees that all dimensions are within precision tolerances to perfectly match the appropriate sheet piling section. PilePro® engineered profiles make it possible to replace traditionally fabricated connectors with a one-piece, seamless steel profile.

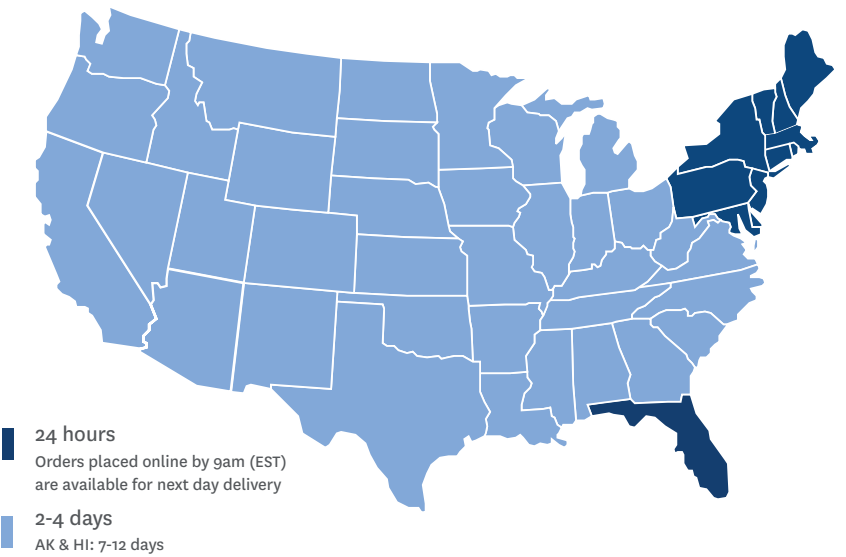
These connectors are often modular and come to the contractor or end user as “ready to install” components. The stock is ready in our main markets, PilePro® also offers custom made-to-order connectors for infitine kinds of engineering solutions.

Announcing 24-Hour Delivery

PilePro knows immediate access to materials is critical to keep projects on time and budget. We now offer 24-hour Delivery, on in-stock Z sheet pile corner connectors, to your project job site or across most of the US. Or if 24-hour delivery is not available in your area, try Quick Delivery—order any quantity of in-stock connectors, and they’ll arrive to your job site within 2-4 days. Express Delivery is also available in the Northeast, we send our own truck and guarantee the shipment to arrive as promised or your product is free. There may be an additional charge for this service.

Ready to Ship

Most PilePro® connector solutions are in stock and available for immediate delivery to your project, typical arrival within the continental United States is between 2-4 days, *some restrictions apply*.



Joker® connector in action at the World Trade Center reconstruction in New York City.



Truly a universal connector, ANY-Z is ideal for contractors who work with all types of sheet pile, including: AZ/ Hoesch, PZ and PZC, and cold formed. ANY-Z offers most 2 way corner connections needed and creates endless corner, junction and transition pile configurations between different types of sheet pile.

Frequently Asked Questions:

Is there an additional cost to 24-hour turnaround delivery? *None to a contractor or end user.*

Can you order online and/or over the phone for 24-hour service? *Online orders are processed quickly and efficiently; if you need to speak to a PilePro® connector expert about a next day delivery call (866) 666-7453.*

Is there a cut-off time for next day delivery? *Yes, next day orders should be placed by gam Eastern Standard Time.*

PilePro® Attributes

PilePro® connectors have effectively made fabricating corners and other archaic conection processes in steel piling construction relics of the past. For modern foundation and port construction projects, PilePro® connectors offer design eningeers, contractors and project owners a cost-effective, readily available engineered solution that increases efficiency, ease of installation, and increases the strength of their retaining system.

DURABLE - PilePro® connectors are interlocked and attached to the sheet piling, thus, single unit integrity of the steel wall unit is always maintained. PilePro® corner connectors are stronger and more durable than other alternatives.

FLEXIBLE - Our patented precise engineering and superior design means PilePro® connectors have greater flexibility within the interlock, typically a 20° to 30° of swing compared to the 2° to 5° of swing found in most sheet pile interlocks.

COST EFFECTIVE - Our connectors provide superior cornering and connections solutions on a Customary Quick Delivery (CQD) basis through a proven and efficient logistics network. This process guarantees that products may be delivered directly to the job site, avoiding storage fees and costly days of delay. In stock, modular corners and connectors allow distributors and contractors to significantly lower their inventory.

FAST - PilePro® connectors are easily and efficiently transported with minimal risk of damage. Contrast that with fabricated corners that cost more, weigh more and are prone to handling damage. Our proprietary connectors enable the user to immediately build sheet wall configurations without the wait of the traditional fabrication process. PilePro® connectors are also easier to drive in and extract, making a significant impact in reducing construction time.

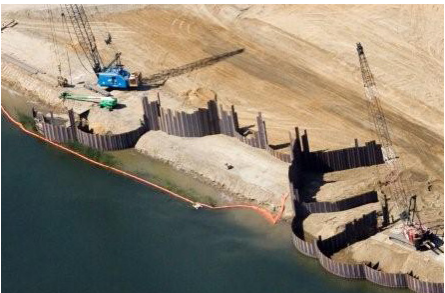
Application Examples



Joker



O-Pile



SWC 90 & SWC 120



CF Tee

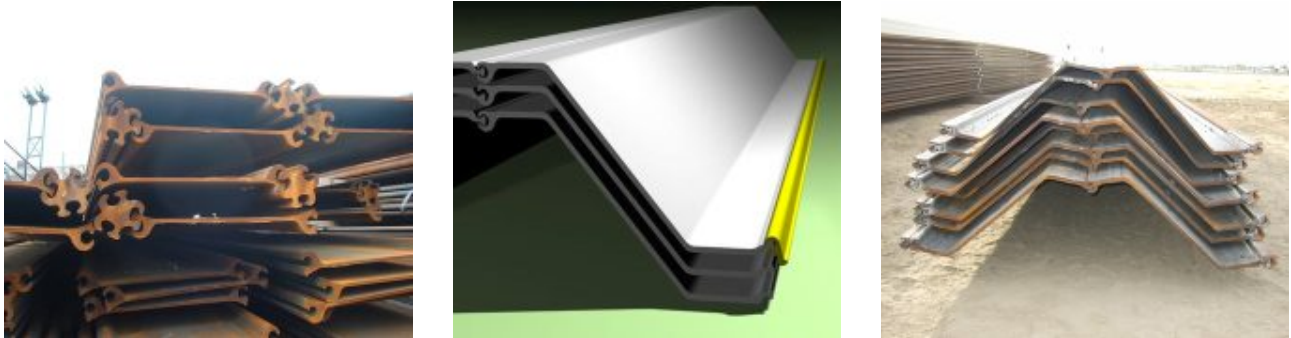


V 20



PZ 90



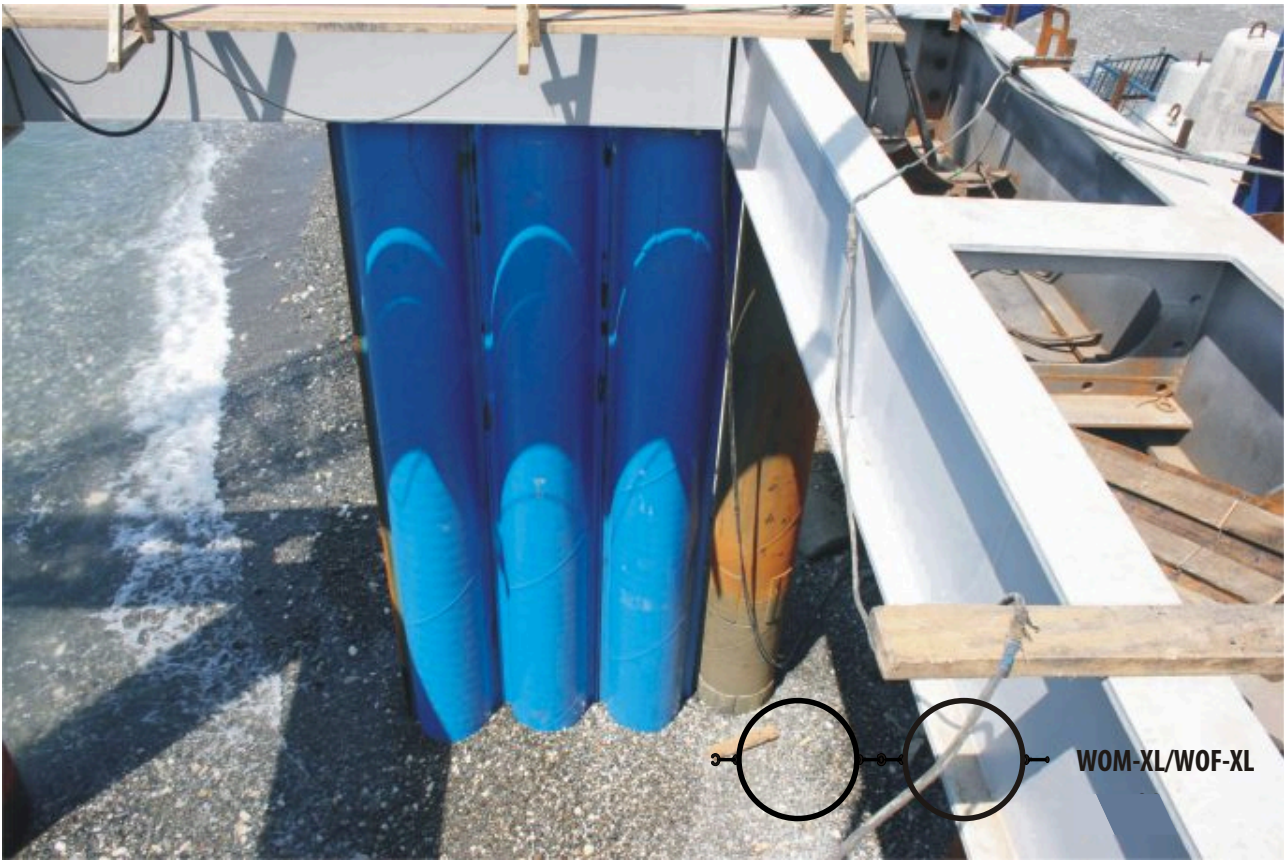


Please note:

1. The possibility of adjusting the profiles in the area of the interlock can vary due to size and rolling tolerances found in sheet pile interlocks
2. All angles specified are approximations and may vary
3. PilePro® connectors are protected by patents
4. PilePro® connectors are subject to technical modifications
5. Typical delivery terms and conditions for PilePro® connectors are in accordance to ASTM or EN 10248
6. Installation guidelines refer to both the steel sheet pile producers' welding configurations and the German EAU's. Further instructions are required only if the welding must be strengthened for anchor forces, shear forces, difficult driving conditions or other reasons.

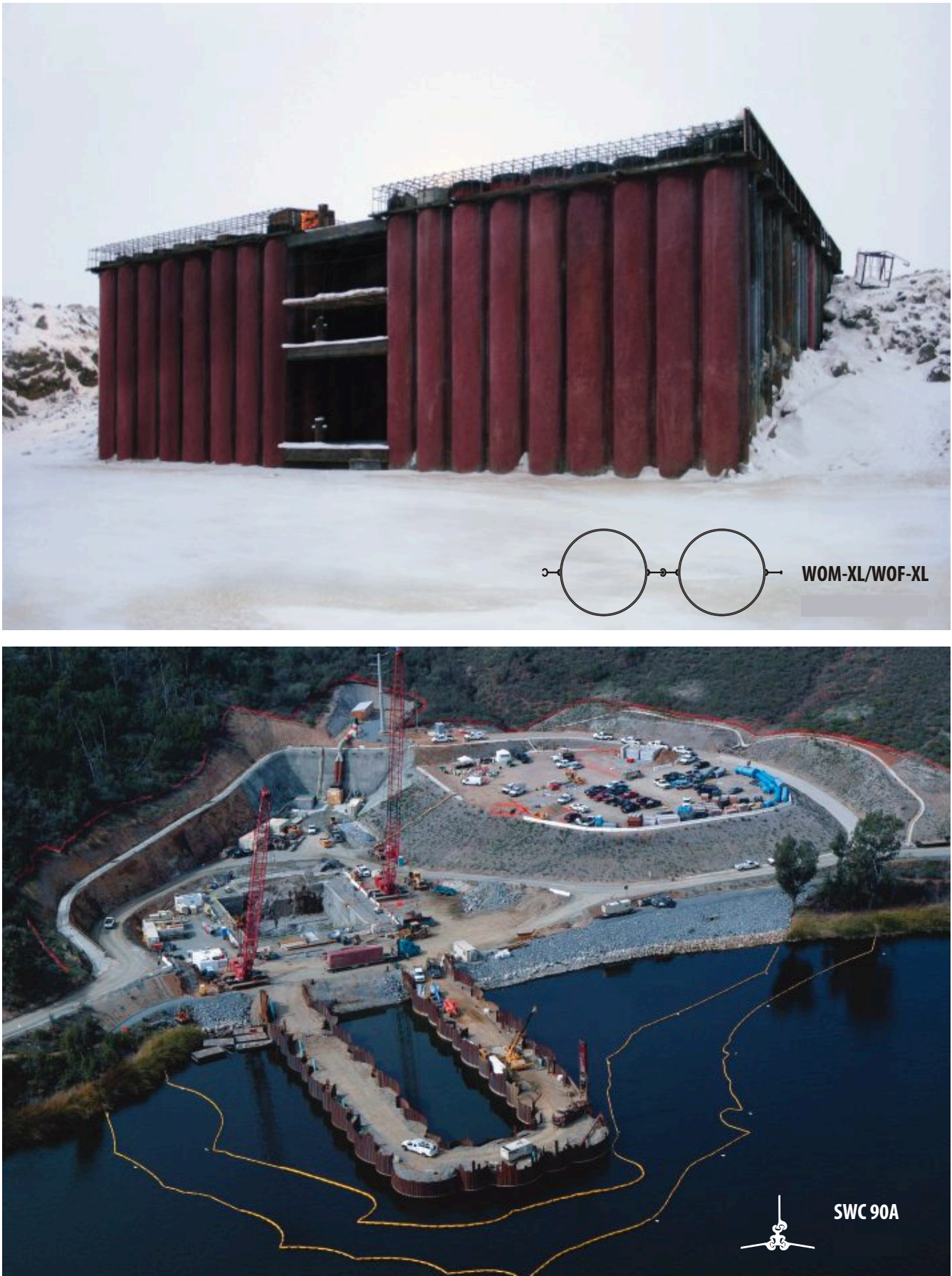


VTS



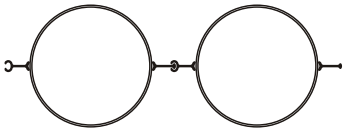


SWC 120



WOM-XL/WOF-XL

SWC 90A



WOM-XL/WOF-XL



Joker



PZ 90



Larssen

-  Overview
For Larssen,
U, AZ, Hoesch with Larssen
interlock
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V 20

For 90° Corners (+/- 60°) with Larssen U/Z/AZ sheet piles

Installation

1. Please review the proper interlocking examples that are listed.
2. Thread the connector into the interlock while the sheet pile is out of the ground.
3. Adjust the connector to the appropriate position.
4. Tack or spot-weld the connector in place. Typically, a ~250mm (~10") weld attaching the connector to the sheet pile to the top is sufficient.
5. Drive/extract the sheet pile (with the connector attached) as you would normally.

Steel grade:	S355GP, S430GP
	ASTM A572 Gr. 50/60
	ASTM A690 MARINER™ Steel
Weight:	~8.85 lb/ft



V 20

Raccord variable de 30° à 150°

Pour Larssen U, AZ, Hoesch avec serrure Larssen

Domaines d'emploi

1. Raccordement de deux palplanches avec deux plages de pivotement
2. Aptitude au fonçage circulaire avec rideaux de palplanches doubles (déviation de palplanches de 30° à 150°)

A l'aide de doubles palplanches, il est possible de former un « S » avec tous les raccords.

Caractéristiques	
Nuances d'acier:	S355GP, S430GP
	ASTM A572 Gr. 50/60
	ASTM A690 MARINER™ Steel
Poids:	~13,2 kg/m



V 20

Variable Eckverbindung ~ 30° bis ~ 150°

Für Larssen U, AZ, Hoesch mit Larssen-Schloss

Einsatzgebiet

1. Erstellen von Eckverbindungen mit zwei Schwenkbereichen
2. Geeignet für Kreisrammungen mit Doppelbohlen (Auslenkung der Bohlen ~ 30° bis ~ 150°)

Alle Eckverbindungen können mit Doppelbohlen in S-Form erstellt werden.



Eigenschaften	
Stahlgüten:	S355GP, S430GP
	ASTM A572 Gr. 50/60
	ASTM A690 MARINER™ Steel
Gewicht:	~13,2 kg/m



V 20

Connessione per angolo variabile da ~ 30° a ~ 150°

Per Larssen U, AZ, Hoesch con gancio Larssen

Campo di applicazione

1. Realizzazione di connessioni ad angolo con due range di orientamento
2. Adatta per infissioni circolari con palancole doppie (deviazione delle palancole da ~ 30° a ~ 150°)

Tutte le connessioni ad angolo possono essere realizzate con palancole doppie, purchè a forma di S.

Caratteristiche	
Qualità dell'acciaio:	S355GP, S430GP
	ASTM A572 Gr. 50/60
	ASTM A690 MARINER™ Steel
Peso:	~13,2 kg/m



V 20

Unión angular variable de ~ 30° a ~ 150°

Para Larssen U, AZ, Hoesch con cerramiento Larssen

Ámbito de aplicaciones

1. Formación de uniones angulares con dos áreas de giro
2. Adecuada para hincado circular con pilotes dobles (movimiento de adaptación de los pilotes entre ~ 30° y ~ 150°)

Todas las uniones angulares pueden formarse con pilotes dobles en forma de S.

Propiedades	
Calidades de acero:	S355GP, S430GP
	ASTM A572 Gr. 50/60
	ASTM A690 MARINER™ Steel
Peso:	~13,2 kg/m



V 20

Вариабельный угловой соединительный элемент от ~ 30° до ~ 150°

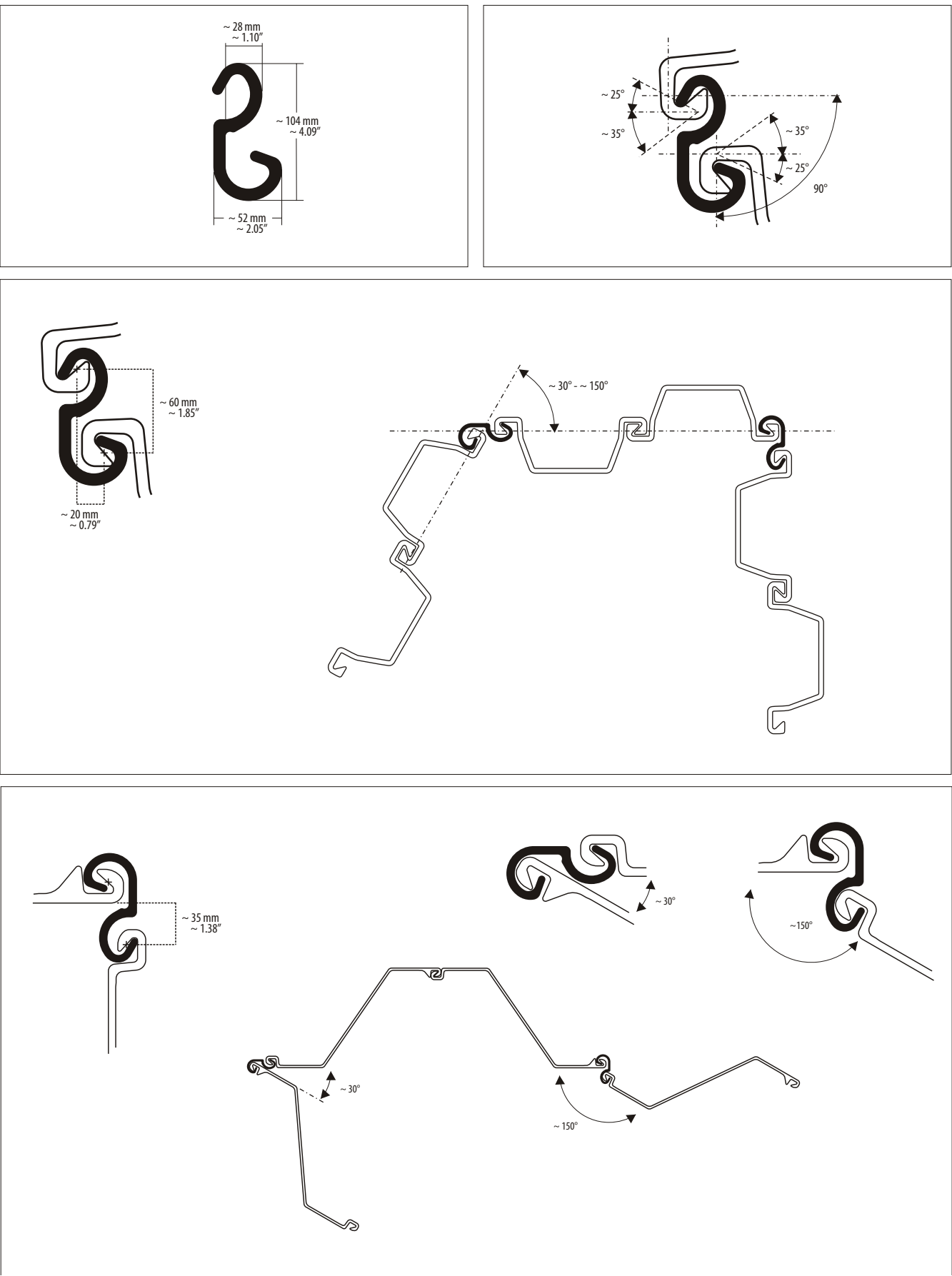
Для Larssen U, AZ, Hoesch с замком Larssen

Область применения

1. Изготовление угловых соединительных элементов с двумя углами поворота
2. Может быть использовано при круговой забивке спаренных свай (поворот сваи от ~ 30° до ~ 150°)

Все угловые соединительные элементы могут быть изготовлены из спаренных свай S-образной формы.

Параметры	
Качество стали:	S355GP, S430GP
	ASTM A572 Gr. 50/60
	ASTM A690 MARINER™ Steel
Вес:	~13,2 кг/м





Omega

For Omega corners (~70° to ~190°) with Larssen U/Z/AZ sheet piles

Installation

1. Please review the proper interlocking examples that are listed.
2. Thread the connector into the interlock while the sheet pile is out of the ground.
3. Adjust the connector to the appropriate position.
4. Tack or spot-weld the connector in place. Typically, a ~250mm (~10") weld attaching the connector to the sheet pile to the top is sufficient.
5. Drive/extract the sheet pile (with the connector attached) as you would normally.

Properties

Steelgrade:	S355GP, S430GP
	ASTM A572 Gr. 50/60
	ASTM A690 MARINER™ Steel
Weight:	~8.11 lb/ft



Omega

Raccord Omega, rideau à redans U
Pour Larssen U, AZ, Hoesch avec serrure Larssen

Domaines d'emploi

1. Raccordement pour une plage de pivotement comprise entre ~ 70° et ~ 190°
2. Profilé intermédiaire pour fonçage circulaire avec palplanche simple
3. Raccord à souder à extrémité double
4. Pour le rideau à redans U
5. Fermeture de cloisons de palplanches jointives

Le raccord Omega 12 se distingue par ses possibilités de réglage particulièrement importantes dans la zone de la serrure.

Caractéristiques

Nuances d'acier:	S355GP, S430GP
	ASTM A572 Gr. 50/60
	ASTM A690 MARINER™ Steel
Poids:	~12,1 kg/m



Omega

Omega-Eckverbindungen, Jagged U-Walls
Für Larssen U, AZ, Hoesch mit Larssen-Schloss

Einsatzgebiet

1. Erstellung von Eckverbindungen für einen Schwenkbereich von ~ 70° bis ~ 190°
2. Zwischenprofil für Kreisrammungen mit Einzelbohlen
3. Anschweißprofil mit wahlweise doppeltem Abgang
4. Geeignet für Jagged-U-Walls
5. Geeignet zum Schließen von aufeinander zulaufenden Spundwänden

Das Profil Omega 12 zeichnet sich durch besonders großzügige Verstellmöglichkeiten im Schlossbereich aus.



Eigenschaften

Stahlgüte:	S355GP, S430GP
	ASTM A572 Gr. 50/60
	ASTM A690 MARINER™ Steel
Gewicht:	~12,1 kg/m



Omega

Connessioni per angolo Omega, profilo a U composto
Per Larssen U, AZ, Hoesch con gancio Larssen

Campo di applicazione

1. Realizzazione di angoli nel range da ~ 70° a ~ 190°
2. Gancio intermedio per infissioni circolari con palancole singole
3. Profilo da saldare, a scelta con doppia derivazione
4. Adatto per pareti angolari composte con profili a U
5. Adatto per congiungere tratti di palancole provenienti da direzioni opposte

Particolarità del profilo Omega 12 è l' ampia possibilità di regolazione nella zona di giunzione.

Caratteristiche

Qualità dell'acciaio:	S355GP, S430GP
	ASTM A572 Gr. 50/60
	ASTM A690 MARINER™ Steel
Peso:	~12,1 kg/m



Omega

Uniones angulares Omega, perfiles en U dentados
Para Larssen U, AZ, Hoesch con cerramiento Larssen

Ámbito de aplicaciones

1. Formación de uniones angulares para un área de giro de entre ~ 70° y ~ 190°
2. Perfil intermedio para hincado circular con pilote individual
3. Perfil de soldadura con salida doble opcional
4. Adecuado para perfiles en U dentados - Jagged U-Walls
5. Adecuado para cerrar tablestacas que confluyen

El perfil Omega 12 se caracteriza por presentar amplias posibilidades de ajuste en el área de cerramiento.

Propiedades

Calidad de acero:	S355GP, S430GP
	ASTM A572 Gr. 50/60
	ASTM A690 MARINER™ Steel
Peso:	~12,1 kg/m



Omega

Омега-угловые соединительные элементы, зубчатые U-образные перегородки
Для Larssen U, AZ, Hoesch с замком Larssen

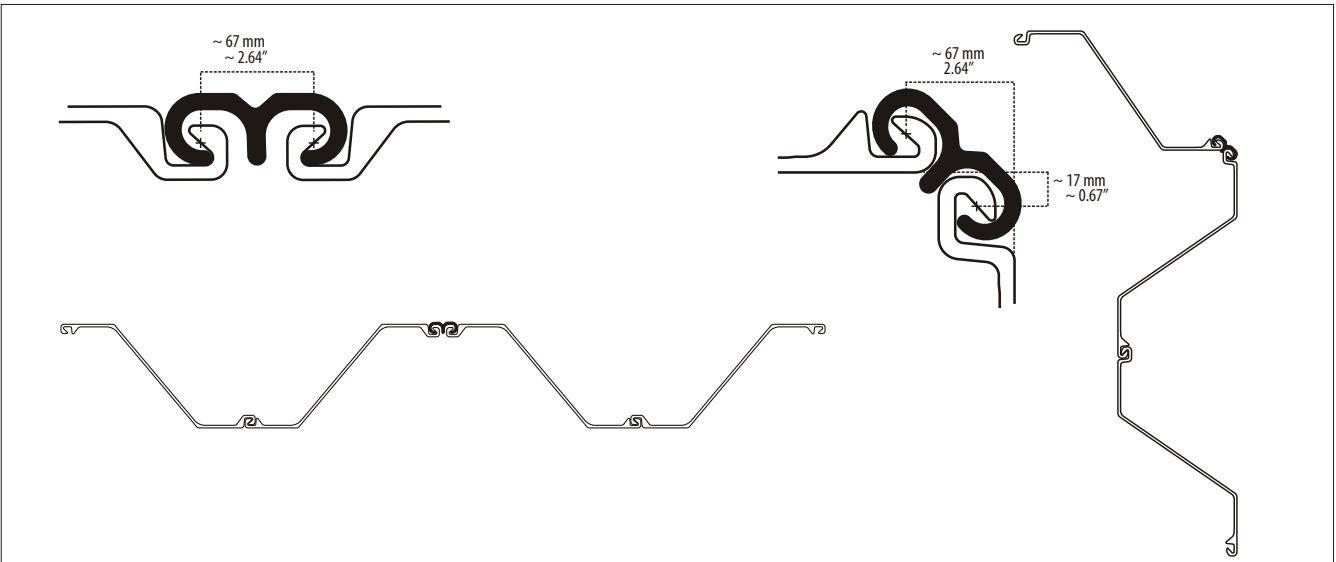
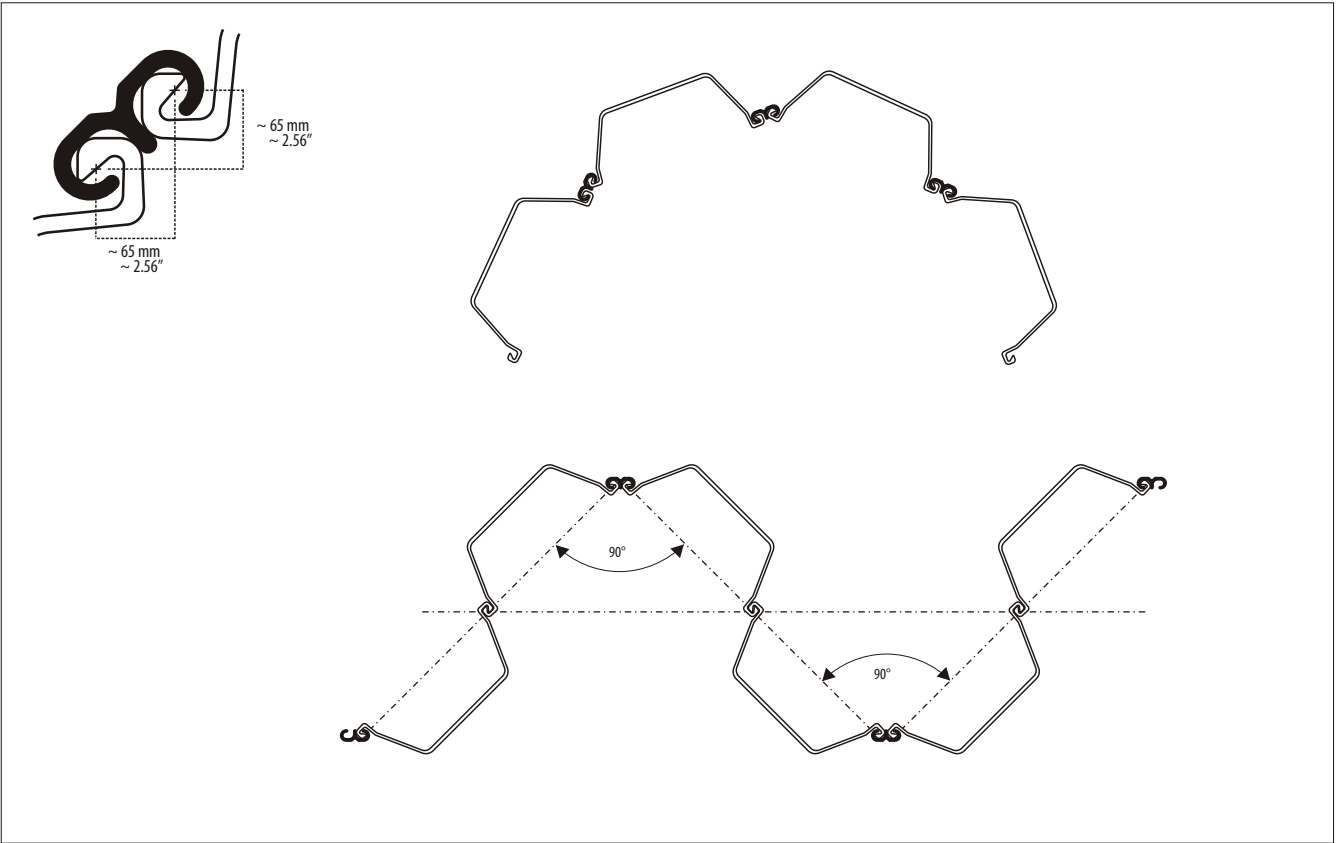
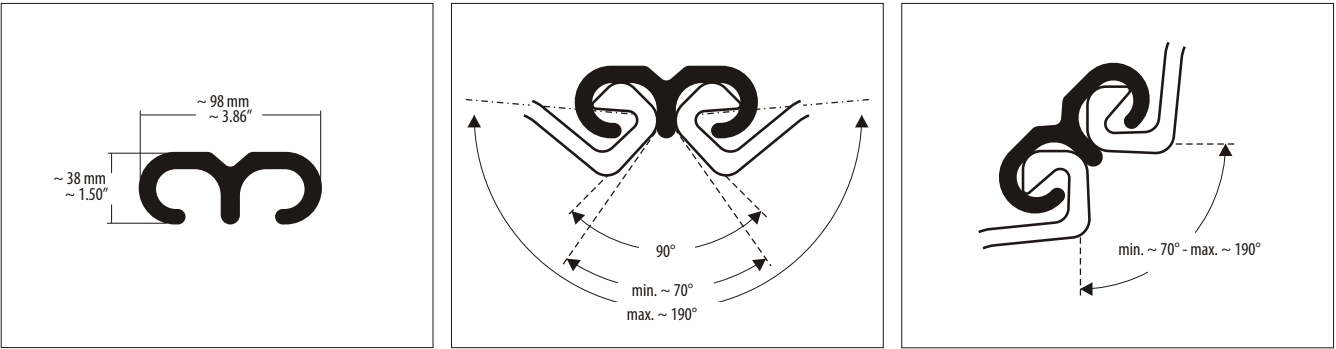
Область применения

1. Изготовление угловых соединительных элементов для угла поворота от ~ 70° до ~ 190°
2. Промежуточный профильный элемент при круговой забивки одиночных свай
3. Привариваемый профильный элемент с двойным отводом на выбор
4. Может быть использовано для зубчатой U-образной стенки

Может быть использовано для соединения сходящихся друг с другом шпунтовых стенок.

Параметры

Качество стали:	S355GP, S430GP
	ASTM A572 Gr. 50/60
	ASTM A690 MARINER™ Steel
Вес:	~12,1 кг/м





Omega Tee

For **Omega corners** (~70° to ~190°),
T-corners, 90° corners
with Larssen U/Z/AZ sheet piles

Installation

1. Please review the proper interlocking examples that are listed.
2. Thread the connector into the interlock while the sheet pile is out of the ground.
3. Adjust the connector to the appropriate position.
4. Tack or spot-weld the connector in place. Typically, a ~250mm (~10") weld attaching the connector to the sheet pile to the top is sufficient.
5. Drive/extract the sheet pile (with the connector attached) as you would normally. When working with double piles, a single pile should be inserted between the double piles on one side of the swivel range.

Properties

Steelgrade:	S355GP, S430GP
	ASTM A572 Gr. 50/60
	ASTM A690 MARINER™ Steel
Weight:	~11.87 lb / ft



Omega Tee

Raccord en T, raccord d'angle (90°), raccord Omega, approprié au fonçage individuel
Pour Larssen U, AZ, Hoesch avec serrure Larssen

Domaines d'emploi

1. Raccordement de trois rideaux de palplanches sans soudure (même bâtiment à refends)
2. Comme raccord d'angle comparable à V 20 (plage de pivotement ~ 45°)
3. Utilisation comme raccord Omega
4. Aptitude au fonçage circulaire avec palplanche simple

Pour utiliser des palplanches doubles, il faut insérer une palplanche simple d'un côté des zones de pivotement.

Caractéristiques

Nuances d'acier:	S355GP, S430GP
	ASTM A572 Gr. 50/60
	ASTM A690 MARINER™ Steel
Poids:	~17,7 kg/m



Omega Tee

T-Verbindung, 90° Eckverbindung, Omega-Eckverbindung, für Einzelrammung geeignet
Für Larssen U, AZ, Hoesch mit Larssen-Schloss

Einsatzgebiet

1. Erstellen und verbinden von drei Spundwänden ohne Schweißarbeit (auch Schottbauweise)
2. Als Eckverbindung ähnlich V 20 (Schwenkbereich ~ 45°)
3. Einsatz als Omega-Eckverbindung
4. Für Kreisrammungen mit Einzelbohlen

Beim Arbeiten mit Doppelbohlen ist auf einer Seite der Schwenkbereiche eine Einzelbohle zwischenschalten.



Eigenschaften

Stahlgüte:	S355GP, S430GP
	ASTM A572 Gr. 50/60
	ASTM A690 MARINER™ Steel
Gewicht:	~17,7 kg/m



Omega Tee

Connessione a T, connessione per angolo a 90° connessione per angolo Omega, adatta per infissione di elementi singoli
Per Larssen U, AZ, Hoesch con gancio Larssen

Campo di applicazione

1. Connessione di tre palancole senza operazioni di saldatura
2. angolare simile al profilo V 20
3. connessione per angolo Omega 12 con un angolo di giro da circa 70° a 190°
4. Per infissioni circolari con palancole singole

Lavorando con palancole doppie deve essere inserita una palancola singola su uno dei due lati.

Caratteristiche

Qualità dell'acciaio:	S355GP, S430GP
	ASTM A572 Gr. 50/60
	ASTM A690 MARINER™ Steel
Peso:	~17,7 kg/m



Omega Tee

Unión en T, unión angular de 90°, unión angular Omega, adecuada para hincado individual
Para Larssen U, AZ, Hoesch con cerramiento Larssen

Ámbito de aplicaciones

1. Formación y unión de tres tablestacas sin trabajo de soldadura (también en estructura de mamparos)
2. Como unión angular parecida a V 20 (área de giro ~ 45°)
3. Uso como unión angular Omega
4. Para hincado circular con pilote individual

Si se trabaja con pilotes dobles se deberá intercalar un pilote individual en un lado de las áreas de giro.

Propiedades

Calidad de acero:	S355GP, S430GP
	ASTM A572 Gr. 50/60
	ASTM A690 MARINER™ Steel
Peso:	~17,7 kg/m



Omega Tee

T-образное соединение, 90° угловой соединительный элемент, Омега-угловой соединительный элемент, пригодно для забивки
Для Larssen U, AZ, Hoesch с замком Larssen

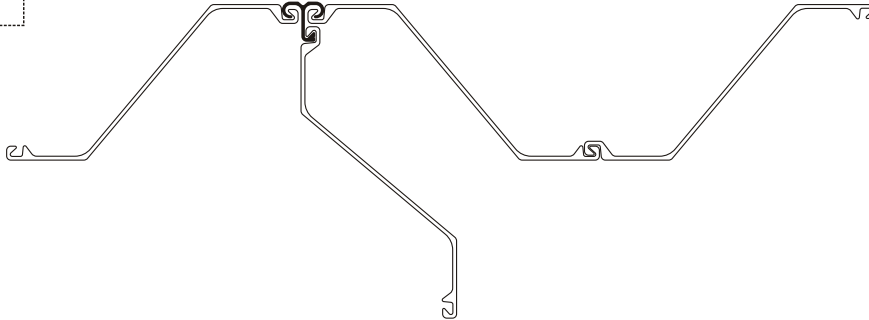
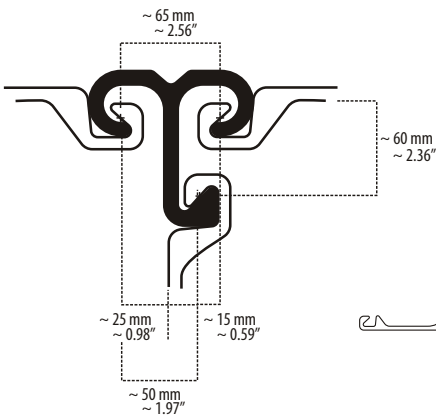
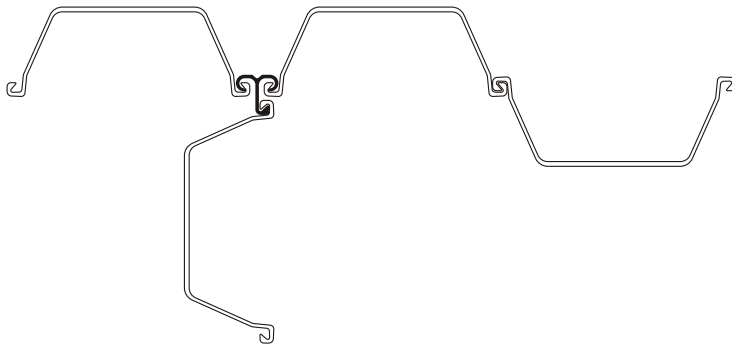
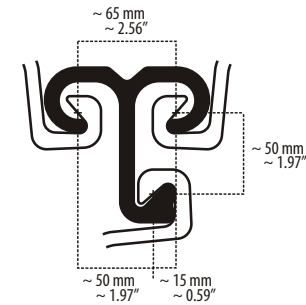
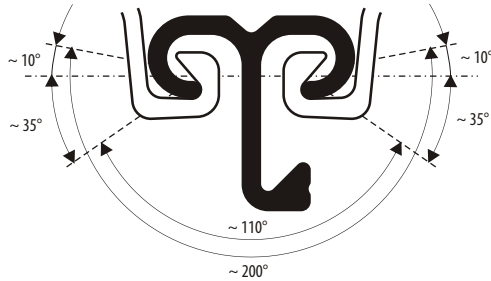
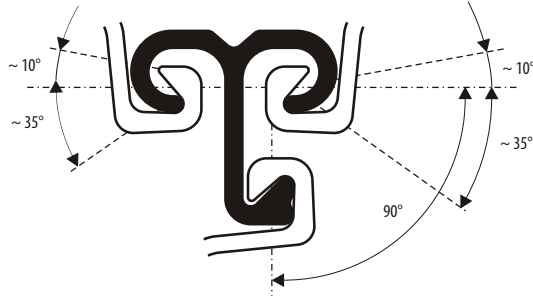
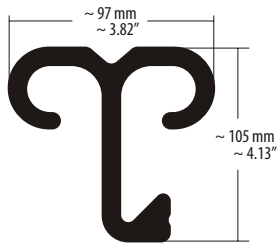
Область применения

1. Изготовление и соединение трёх шпунтовых стенок без сварочных работ (также для строительства с переборками)
2. Как угловой соединительный элемент подобно V 20 (угол поворота ~ 45°)
3. Использование в качестве Омега-углового соединительного элемента
4. При круговой забивке одиночных свай

При работах с двойными сваями на одной стороне области поворота необходимо использование одиночной промежуточной сваи.

Параметры

Качество стали:	S355GP, S430GP
	ASTM A572 Gr. 50/60
	ASTM A690 MARINER™ Steel
Вес:	~17,7 кг/м



VTS

For T-corners, 90° corners with Larssen U/Z/AZ sheet piles

Installation

- Please review the proper interlocking examples that are listed.
- Thread the connector into the interlock while the sheet pile is out of the ground.
- Adjust the connector to the appropriate position.
- Tack or spot-weld the connector in place. Typically, a ~250mm (~10") weld attaching the connector to the sheet pile to the top is sufficient.
- Drive/extract the sheet pile (with the connector attached) as you would normally.

Properties

Steelgrade:	S355GP, S430GP
	ASTM A572 Gr. 50/60
	ASTM A690 MARINER™ Steel
Weight:	~12.34 lb / ft

VTS

Raccord en T, raccord d'angle (90°), raccord Omega, approprié au fonçage individuel

Pour Larssen U, AZ, Hoesch avec serrure Larssen

Domaines d'emploi

- Raccordement de trois rideaux de palplanches sans soudure (même bâtiment à refends)
- Comme raccord comparable à V 20 (plage de pivotement ~ 45°)
- Changements de direction dans un rideau continu (~ 55°)
- Aptitude au fonçage circulaire avec rideaux de palplanches simples et doubles

Touts les rideaux de palplanches partant du raccord peuvent être réalisés en palplanches doubles (forme en S).

Caractéristiques

Nuances d'acier:	S355GP, S430GP
	ASTM A572 Gr. 50/60
	ASTM A690 MARINER™ Steel
Poids:	~18,4 kg/m

VTS

T-Verbindung, 90° Eckverbindung, Kreisrammung, geeignet für Einzelrammung

Für Larssen U, AZ, Hoesch mit Larssen-Schloss

Einsatzgebiet

- Erstellen und verbinden von drei Spundwänden ohne Schweißarbeit (auch Schottbauweise)
- Als Eckverbindung ähnlich V 20 (Schwenkbereich ~ 45°)
- Richtungsänderungen in einer fortlaufenden Wand (~ 55°)
- Kreisrammung mit Einzel- und Doppelbohlen

Alle von dem Profil ausgehenden Spundwände können in Doppelbohlen (S-Form) hergestellt werden.

U

Eigenschaften

Stahlgüte:	S355GP, S430GP
	ASTM A572 Gr. 50/60
	ASTM A690 MARINER™ Steel
Gewicht:	~18,4 kg/m

VTS

Connessione a T, Connessione per angolo a 90°, Infissione circolare, adatta per infissione di elementi singoli

Per Larssen U, AZ, Hoesch con gancio Larssen

Campo di applicazione

- Connessione di tre palancole senza saldatura (anche struttura a paratie)
- Angolare, simile a V 20 (range ~ 45°)
- Cambi di direzione in un palancolato continuo (~ 55°)
- Infissione circolare con palancole singole e doppie

A questo profilo si possono agganciare palancole doppie a forma S.

Caratteristiche

Qualità dell'acciaio:	S355GP, S430GP
	ASTM A572 Gr. 50/60
	ASTM A690 MARINER™ Steel
Peso:	~18,4 kg/m

VTS

Unión en T, unión angular de 90°, hincado circular, adecuada para hincado individual

Para Larssen U, AZ, Hoesch con cerramiento Larssen

Ámbito de aplicaciones

- Formación y unión de tres tablestacas sin trabajo de soldadura (también en estructura de mamparos)
- Como unión angular parecida a V 20 (área de giro ~ 45°)
- Modificaciones de dirección en una pantalla continua (~ 55°)
- Hincado circular con pilotes simples y dobles

Todas las tablestacas que salen del perfil pueden fabricarse en pilotes dobles (forma S)

Propiedades

Calidad de acero:	S355GP, S430GP
	ASTM A572 Gr. 50/60
	ASTM A690 MARINER™ Steel
Peso:	~18,4 kg/m

VTS

Т-образное соединение, 90° угловой соединительный элемент, круговая окантовка, пригодно для забивки

Для Larssen U, AZ, Hoesch с замком Larssen

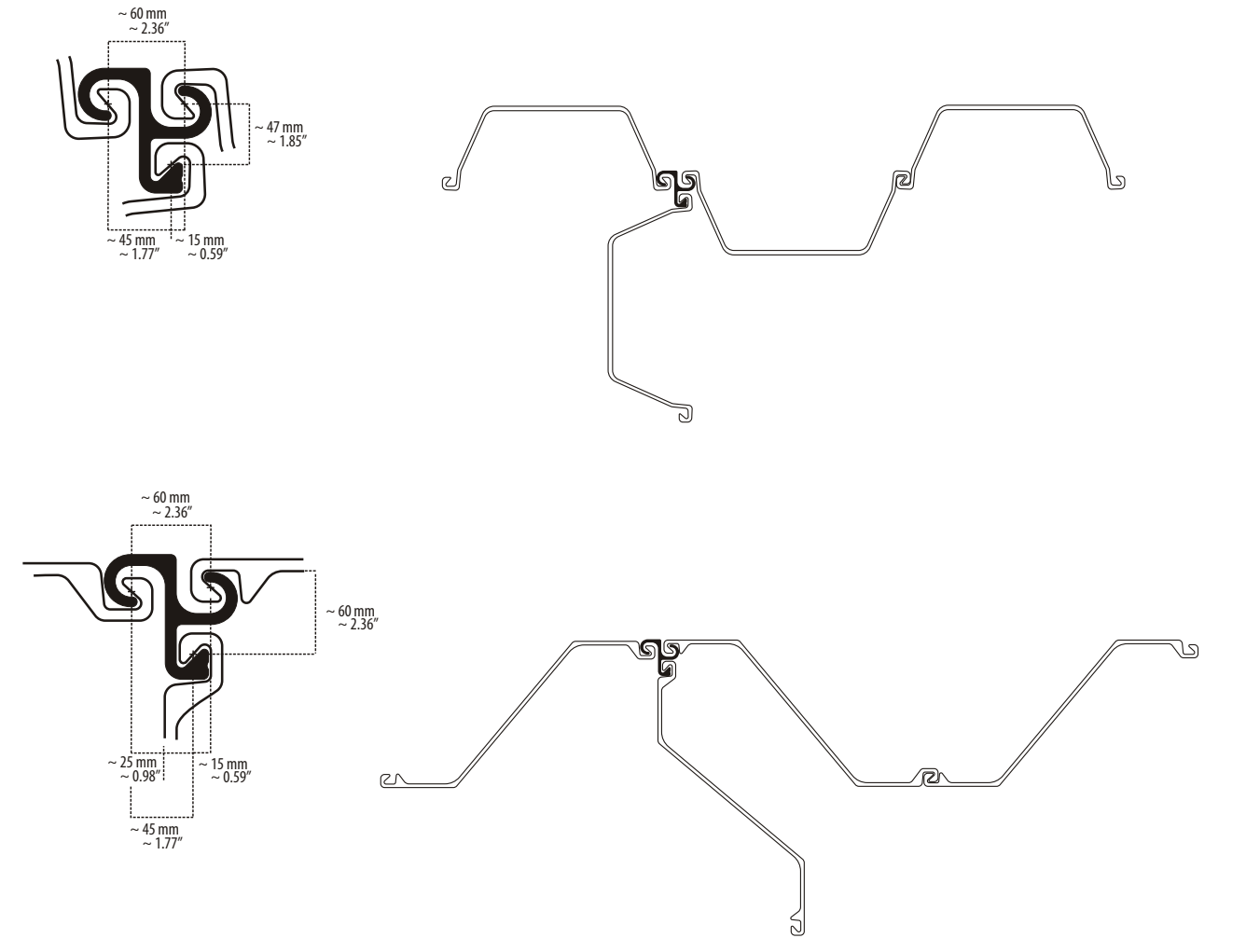
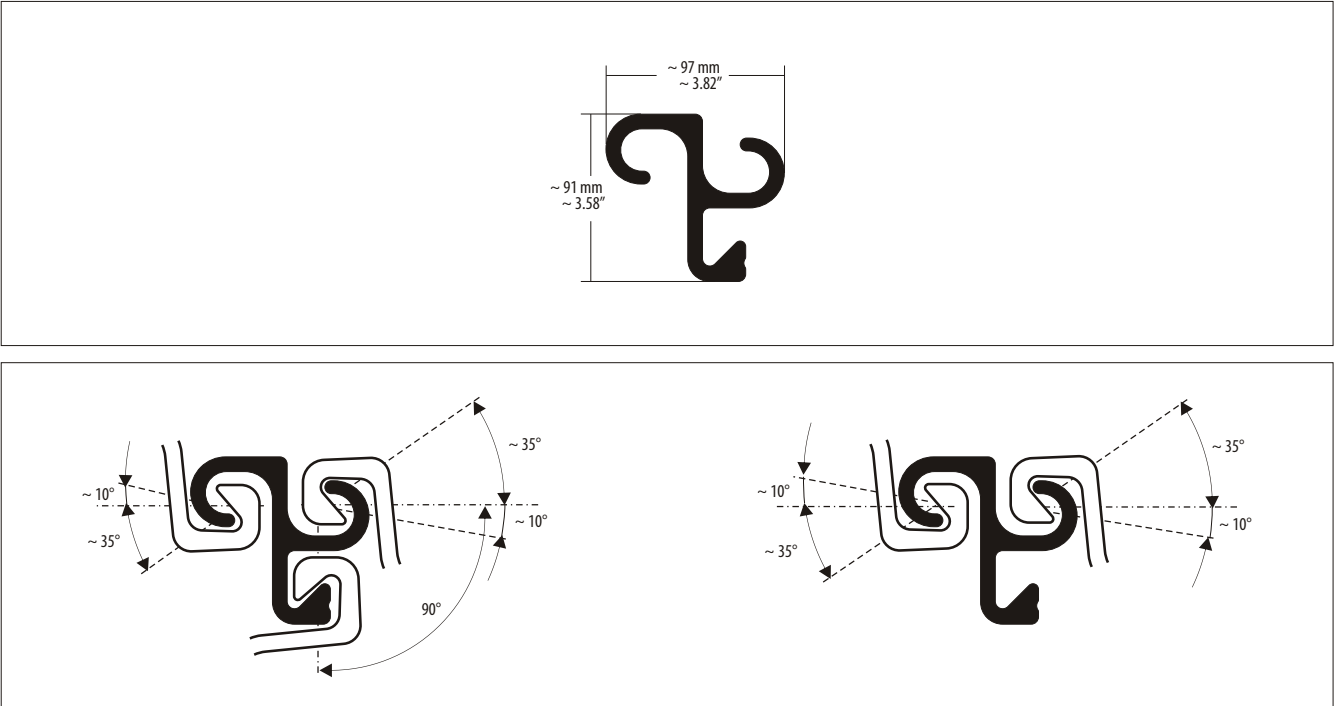
Область применения

- Изготовление и соединение трёх шпунтовых стенок без сварочных работ (также для строительства с переборками)
- Как угловой соединительный элемент подобно V 20 (угол поворота ~ 45°)
- Изменение направления стены (~ 55°)
- Круговая забивка одиночных и спаренных свай

Все отходящие от профиля шпунтовые стенки могут быть исполнены из спаренных свай (S-образной формы).

Параметры

Качество стали:	S355GP, S430GP
	ASTM A572 Gr. 50/60
	ASTM A690 MARINER™ Steel
Вес:	~18,4 кг/м





V 22

For combined walls (pipes)
with Larssen U/Z/AZ sheet piles

Installation

1. The pipes are delivered with the connectors already attached.
2. First, install the king piles (pipes) as you would in any combined sheet pile wall application.
3. Grasp the sheet piling and thread between the already installed pipe piles.
4. Increase flexibility in the middle interlocks of the sheet piles, combined with the swing of the connectors, to enable easier threading of the intermediate sheet piling.
5. All welding seams are a minimum ~6mm (~0.25").
6. Both sides have a continuous minimum tip and toe welding of ~500mm (~20").
7. Both sides are tack welded in the free length between tip and toe welding with 200mm/m (8"/yd). The distance from seam to seam is ~800mm (~31.5") or less.
8. In salt water, the water side is continuously welded on the whole pile length. Follow the instructions above for the reverse side of the pile, if it is not in contact with salt water.

Properties

Steelgrade:	S355GP, S430GP
	ASTM A572 Gr. 50/60
	ASTM A690 MARINER™ Steel
Weight:	~5.64 lb / ft



V 22

Raccord variable à souder
Pour Larssen U, AZ, Hoesch avec serrure Larssen

Domaines d'emploi

1. Raccordement et changement de direction avec une plage de pivotement de ~ 65° à l'aide de l'angle à souder
2. Approprié au fonçage circulaire
3. Rideaux de palplanches mixtes:
Tube + Larssen (profilé en U et en Z)

Caractéristiques

Nuances d'acier:	S355GP, S430GP
	ASTM A572 Gr. 50/60
	ASTM A690 MARINER™ Steel
Poids:	~8,4 kg/m



V 22

Vario-Anschweißprofil
Für Larssen U, AZ, Hoesch mit Larssen-Schloss

Einsatzgebiet

1. Erstellen von Eckverbindungen und Abzweigungen mit Schwenkbereich ~ 65° mittels Anschweißseck
2. Geeignet für Kreisrammungen
3. Erstellen von Kombi-Spundwänden:
Rohr + Larssen (U- und Z-Profil)



Eigenschaften

Stahlgüte:	S355GP, S430GP
	ASTM A572 Gr. 50/60
	ASTM A690 MARINER™ Steel
Gewicht:	~8,4 kg/m



V 22

Profilo Vario de saldare
Per Larssen U, AZ, Hoesch con gancio Larssen

Campo di applicazione

1. Realizzazione di angoli e diramazioni con range di ~ 65°
2. Adatto per infissioni circolari
3. Realizzazione di palancolati combinati:
tubo + Larssen (profili a U e a Z)

Caratteristiche

Qualità dell'acciaio:	S355GP, S430GP
	ASTM A572 Gr. 50/60
	ASTM A690 MARINER™ Steel
Peso:	~8,4 kg/m



V 22

Perfil de soldadura Vario
Para Larssen U, AZ, Hoesch con cerramiento Larssen

Ámbito de aplicaciones

1. Formación de uniones angulares y bifurcaciones con área de giro ~ 65° por medio de codo soldado
2. Adecuada para hincado circular
3. Formación de tablestacas combinadas:
Tubo + Larssen (perfiles en U y Z)

Propiedades

Calidad de acero:	S355GP, S430GP
	ASTM A572 Gr. 50/60
	ASTM A690 MARINER™ Steel
Peso:	~8,4 kg/m



V 22

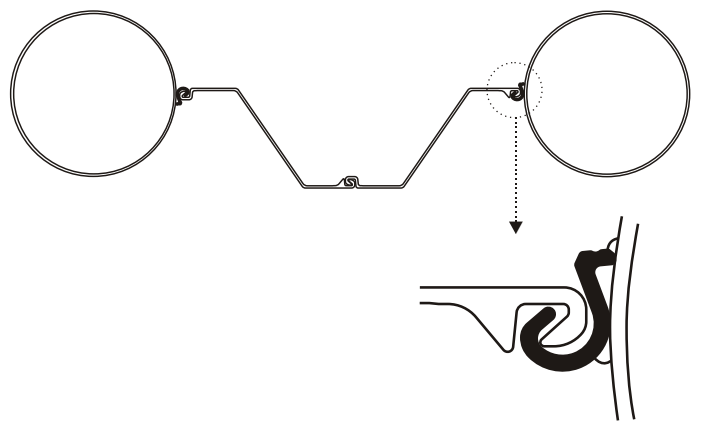
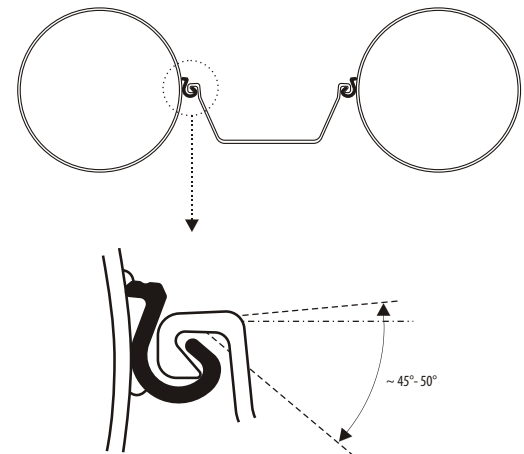
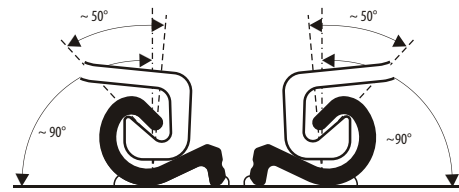
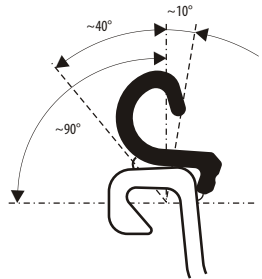
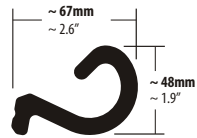
Вариабельный привариваемый профильный элемент
Для Larssen U, AZ, Hoesch с замком Larssen

Область применения

1. Изготовление угловых соединительных элементов и ответвлений с углом поворота ~ 65° при помощи приварного уголка
2. Может быть использован для круговой забивки
Изготовление комбинированных шпунтовых стенок: труба + Ларссен (U-образный и Z-образный профильные элементы)

Параметры

Качество стали:	S355GP, S430GP
	ASTM A572 Gr. 50/60
	ASTM A690 MARINER™ Steel
Вес:	~8,4 кг/м





PL

For combined walls (Peiner-type beams)
with Larssen U sheet piles

Installation

1. Install the Peiner Beams first.
2. Lay the sheet piling horizontally and thread the connector into the interlock of the sheet piling, adjusting the connector to the appropriate position (please review the proper interlocking examples). This can be done at the mill, at a distributor's yard, or on the job site (go here: www.pilepro.com/thread).
3. Tack or spot-weld the connector in place. Typically, a ~250mm (~10") weld attaching the connector to the sheet pile to the top is sufficient.
4. Grasp the sheet pile (with connectors already attached) and thread between the already installed Peiner type beams.
5. Lower/drive the sheet piling to the level of the Peiner type beam.

Properties

Steelgrade:	S355GP, S430GP
	ASTM A572 Gr. 50/60
	ASTM A690 MARINER™ Steel
Weight:	~11.67 lb / ft



PL

Raccord pour rideaux mixtes
Pour profiles U Larssen

Domaines d'emploi

Pour des rideaux de palplanches mixtes avec des poutres de soutien et des rideaux de palplanches en U (Larssen)

Caractéristiques

Nuances d'acier:	S355GP, S430GP
	ASTM A572 Gr. 50/60
	ASTM A690 MARINER™ Steel
Poids:	~17,4 kg/m



PL

Kombiwandprofil
Für Larssen-U-Profile

Einsatzgebiet

Erstellen von gemischten Spundwänden mit Keulenträgern und Larssen-U-Spundbohlen



Eigenschaften

Stahlgüte:	S355GP, S430GP
	ASTM A572 Gr. 50/60
	ASTM A690 MARINER™ Steel
Gewicht:	~17,4 kg/m



PL

Profilo per parete combinata
Per Larssen profili a U

Campo di applicazione

Realizzazione di palancolati misti con travi a doppia T e palancole Larssen a U

Caratteristiche

Qualità dell'acciaio:	S355GP, S430GP
	ASTM A572 Gr. 50/60
	ASTM A690 MARINER™ Steel
Peso:	~17,4 kg/m



PL

Perfil de pantalla combinada
Para perfiles en U Larssen

Ámbito de aplicaciones

Formación de tablestacas combinadas con portamazas y tablestacas en U Larssen

Propiedades

Calidad de acero:	S355GP, S430GP
	ASTM A572 Gr. 50/60
	ASTM A690 MARINER™ Steel
Peso:	~17,4 kg/m



PL

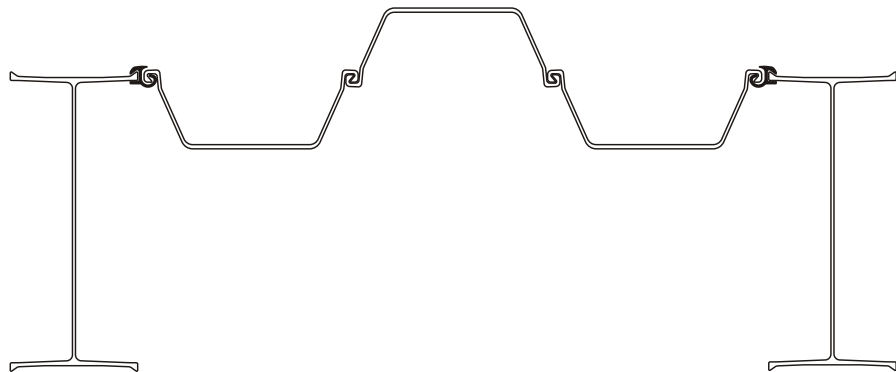
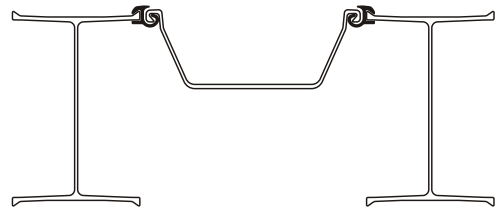
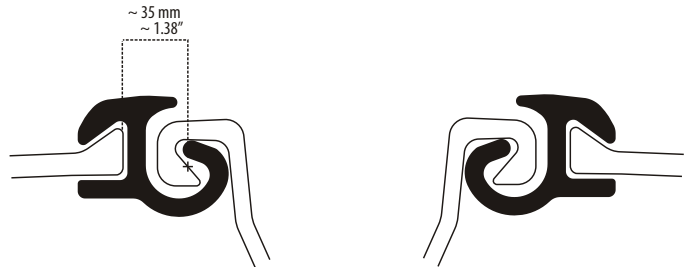
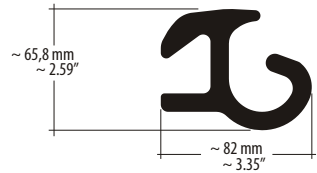
Комбинированный стеной профильный элемент
Для Larssen U

Область применения

Изготовление смешанных шпунтовых стенок с гребневыми опорами и U-образными сваями типа Larssen

Параметры

Качество стали:	S355GP, S430GP
	ASTM A572 Gr. 50/60
	ASTM A690 MARINER™ Steel
Вес:	~17,4 кг/м





P-Tank I, P-Tank II

For ultra-sturdy combined walls (Peiner-type beams) with Larssen Z/AZ sheet piles

- Installation**
1. Install the Peiner Beams first.
 2. Lay the sheet piling horizontally and thread the connector into the interlock of the sheet piling, adjusting the connector to the appropriate position (please review the proper interlocking examples). This can be done at the mill, at a distributor's yard, or on the job site (go here: www.pilepro.com/thread).
 3. Tack or spot-weld the connector in place. Typically, a ~250mm (~10") weld attaching the connector to the sheet pile to the top is sufficient.
 4. Grasp the sheet pile (with connectors already attached) and thread between the already installed Peiner type beams.
 5. Lower/drive the sheet piling to the level of the Peiner type beam.

Properties	
Steelgrade:	S355GP, S430GP
	ASTM A572 Gr. 50/60
	ASTM A690 MARINER™ Steel
Weight P-Tank I:	~17.10 lb / ft
Weight P-Tank II:	~17.43 lb / ft
Thickness:	0.47 in



P-Tank I, P-Tank II

Raccord pour rideaux mixtes extra-solides
Pour Larssen Z

Domaines d'emploi
Pour rideaux mixtes avec des poutres de soutien et des palplanches en Z de Larssen

Caractéristiques	
Nuances d'acier:	S355GP, S430GP
	ASTM A572 Gr. 50/60
	ASTM A690 MARINER™ Steel
Poids P-Tank I:	~25,5 kg/m
Poids P-Tank II:	~26,0 kg/m
Épaisseur de paroi:	12 mm



P-Tank I, P-Tank II

Extra stabile Kombiwandprofile
Für Larssen Z-Bohlen

Einsatzgebiet
Erstellen von Kombiwänden mit Keulenträgern und Larssen Z-Spundbohlen



Eigenschaften	
Stahlgüte:	S355GP, S430GP
	ASTM A572 Gr. 50/60
	ASTM A690 MARINER™ Steel
Gewicht P-Tank I:	~25,5 kg/m
Gewicht P-Tank II:	~26,0 kg/m
Wandstärke:	12 mm



P-Tank I, P-Tank II

Profili extra stabili per parete combinata
Per Larssen Z

Campo di applicazione
Realizzazione di pareti combinate con travi a doppia T e profili a Z Larssen

Caratteristiche	
Qualità dell'acciaio:	S355GP, S430GP
	ASTM A572 Gr. 50/60
	ASTM A690 MARINER™ Steel
Peso P-Tank I:	~25,5 kg/m
Peso P-Tank II:	~26,0 kg/m
Spessore:	12 mm



P-Tank I, P-Tank II

Perfiles de pantalla combinada con una mayor estabilidad
Para pilotes en Z Larssen

Ámbito de aplicaciones
Formación de pantallas combinadas con portamazas y tablestacas en Z Larssen

Propiedades	
Calidad de acero:	S355GP, S430GP
	ASTM A572 Gr. 50/60
	ASTM A690 MARINER™ Steel
Peso P-Tank I:	~25,5 kg/m
Peso P-Tank II:	~26,0 kg/m
Espesor de pantalla:	12 mm

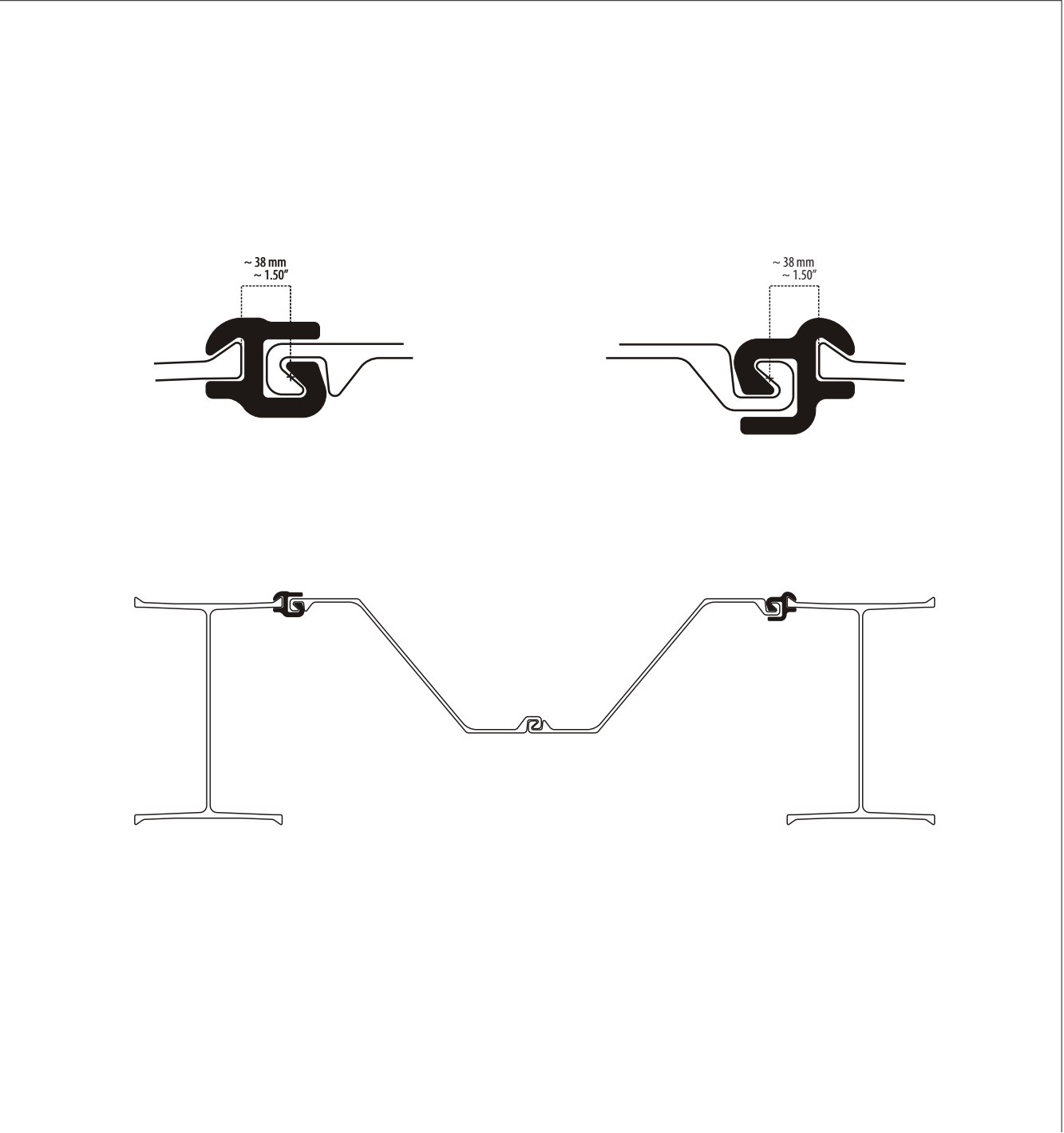
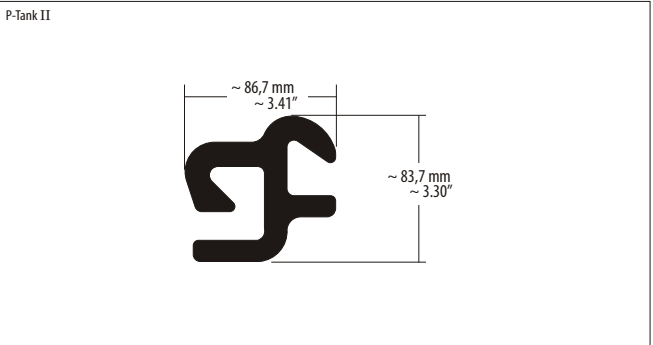
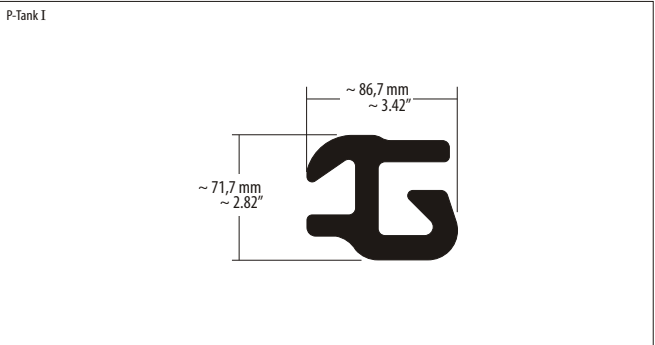


P-Tank I, P-Tank II

Комбинированный стеной профильный элемент
Для свай Larssen Z

Область применения
Изготовление комбинированных стенок с гребневыми опорами и Larssen-Z шпунтовыми сваями

Параметры	
Качество стали:	S355GP, S430GP
	ASTM A572 Gr. 50/60
	ASTM A690 MARINER™ Steel
Вес P-Tank I:	~25,5 кг/м
Вес P-Tank II:	~26,0 кг/м
Толщина стенки:	12 мм





B-Tank I, B-Tank II

For ultra-sturdy combined walls (wide flange beams) with Larssen Z/AZ sheet piles

Installation

1. The beams are delivered with the connectors already attached.
2. First, install the king piles (beams) as you would in any combined sheet pile wall application.
3. Grasp the sheet piling and thread between the already installed beams.
4. All welding seams are a minimum ~6mm (~0.25").
5. Both sides have a continuous minimum tip and toe welding of ~500mm (~20").
6. Both sides are tack welded in the free length between tip and toe welding with ~200mm/m (~8"/yd). The distance from seam to seam is ~800mm (~31.5") or less.
7. In salt water, the water side is continuously welded on the whole pile length. Follow the instructions above for the reverse side of the pile, if it is not in contact with salt water.

Properties

Steel grade:	S355GP, S430GP
	ASTM A572 Gr. 50/60
	ASTM A690 MARINER™ Steel
Weight B-Tank I :	~13.16 lb / ft
Weight B-Tank II :	~13.29 lb / ft
Thickness:	0.47 in



B-Tank I, B-Tank II

Raccord pour rideaux mixtes extra-solides
Pour Larssen Z

Domaines d'emploi

Réalisation de rideaux mixtes avec supports rideaux de palplanches en Z Larssen

Caractéristiques

Nuances d'acier:	S355GP, S430GP
	ASTM A572 Gr. 50/60
	ASTM A690 MARINER™ Steel
Poids B-Tank I :	~19,6 kg/m
Poids B-Tank II :	~19,8 kg/m
Épaisseur de paroi:	12 mm



B-Tank I, B-Tank II

Extra stabile Kombiwandprofile
Für Larssen Z-Bohlen

Einsatzgebiet

Erstellen von Kombiwänden mit Tägern und Larssen Z-Spundbohlen



Eigenschaften

Stahlgüte:	S355GP, S430GP
	ASTM A572 Gr. 50/60
	ASTM A690 MARINER™ Steel
Gew. B-Tank I :	~19,6 kg/m
Gew. B-Tank II :	~19,8 kg/m
Wandstärke:	12 mm



B-Tank I, B-Tank II

Profili extra stabili per parete combinata
Per Larssen Z

Campo di applicazione

Realizzazione di pareti combinate con travi e palancole a Z Larssen

Caratteristiche

Qualità dell'acciaio:	S355GP, S430GP
	ASTM A572 Gr. 50/60
	ASTM A690 MARINER™ Steel
Peso B-Tank I :	~19,6 kg/m
Peso B-Tank II one l.:	~19,8 kg/m
Spessore:	12 mm



B-Tank I, B-Tank II

Perfiles de pantalla combinada con una mayor estabilidad

Para pilotes en Z Larssen

Ámbito de aplicaciones

Formación de pantallas combinadas con portamazas y tablestacas en Z Larssen

Propiedades

Calidad de acero:	S355GP, S430GP
	ASTM A572 Gr. 50/60
	ASTM A690 MARINER™ Steel
Peso B-Tank I :	~19,6 kg/m
Peso B-Tank II :	~19,8 kg/m
Espesor de pantalla:	12 mm



B-Tank I, B-Tank II

Комбинированный стеной профильный элемент

Для свай Larssen Z

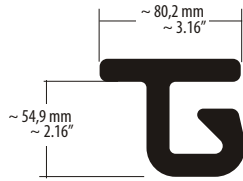
Область применения

Изготовление комбинированных стенок с несущими балками и шпунтовыми брусьями Larssen Z

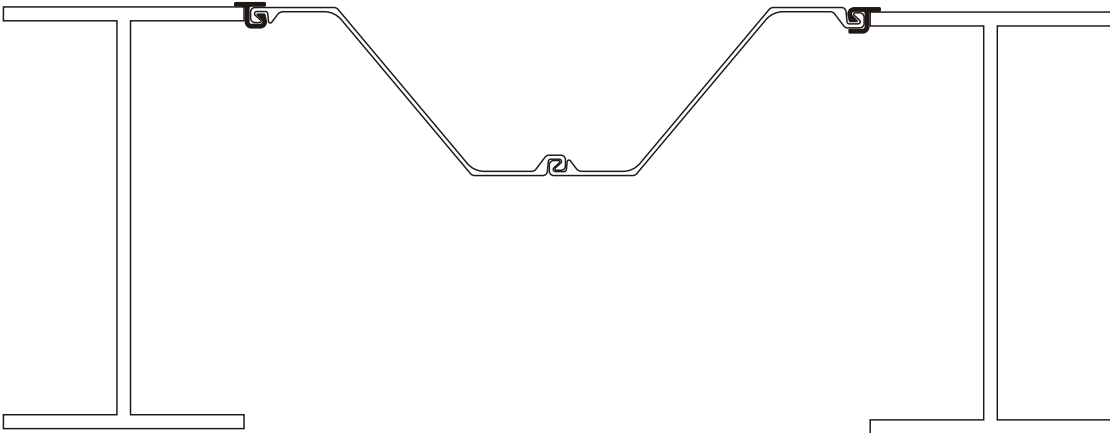
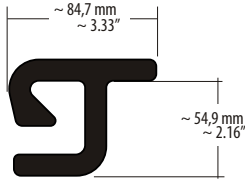
Параметры

Качество стали:	S355GP, S430GP
	ASTM A572 Gr. 50/60
	ASTM A690 MARINER™ Steel
Вес B-Tank I :	~19,6 кг/м
Вес B-Tank II :	~19,8кг/м
Толщина стенки:	12 мм

B-Tank I



B-Tank II





Tank

For ultra-sturdy combined walls (pipes)
with Larssen Z/AZ sheet piles

- Installation**
1. Please review the proper interlocking examples that are listed.
 2. Thread the connector into the interlock while the sheet pile is out of the ground.
 3. Adjust the connector to the appropriate position.
 4. Tack or spot-weld the connector in place. Typically, a ~250mm (~10”) weld attaching the connector to the sheet pile to the top is sufficient.
 5. Drive/extract the sheet pile (with the connector attached) as you would normally.

Properties	
Steelgrade:	S355GP, S430GP
	ASTM A572 Gr. 50/60
	ASTM A690 MARINER™ Steel
Weight:	~13.04 lb / ft
Thickness:	0.47 in



Tank

Profilé soudé extra-stable
Pour Larssen Z

- Domaine d'utilisation
1. Constitution de raccordements d'angles et de bifurcations
 2. Profilé soudé pour tubes dans le but de constituer des cloisons combinées

Caractéristiques	
Nuances d'acier:	S355GP, S430GP
	ASTM A572 Gr. 50/60
	ASTM A690 MARINER™ Steel
Poids:	~19,4 kg/m
Épaisseur de paroi:	12 mm



Tank

Extra stabiles Anschweißprofil
Für Larssen Z-Bohlen

- Einsatzgebiet**
1. Erstellen von Eckverbindungen und Abzweigungen
 2. Anschweißprofil für Rohre zum Erstellen von Kombiwänden



Eigenschaften	
Stahlgüte:	S355GP, S430GP
	ASTM A572 Gr. 50/60
	ASTM A690 MARINER™ Steel
Gewicht:	~19,4 kg/m
Wandstärke:	12 mm



Tank

Profilo da saldare extra stabile
Per Larssen Z

- Campo di applicazione
1. Realizzazione di angoli e diramazioni
 2. Profilo saldabile a tubi per la realizzazione di pareti combinate

Caratteristiche	
Qualità dell'acciaio:	S355GP, S430GP
	ASTM A572 Gr. 50/60
	ASTM A690 MARINER™ Steel
Peso:	~19,4 kg/m
Spessore:	12 mm



Tank

Perfil de soldadura con mayor estabilidad
Para pilotes en Z Larssen

- Ámbito de aplicaciones**
1. Formación de uniones angulares y bifurcaciones
 2. Perfil de soldadura para tubos para formar pantallas combinadas

Propiedades	
Calidad de acero:	S355GP, S430GP
	ASTM A572 Gr. 50/60
	ASTM A690 MARINER™ Steel
Peso:	~19,4 kg/m
Espesor de pantalla:	12 mm



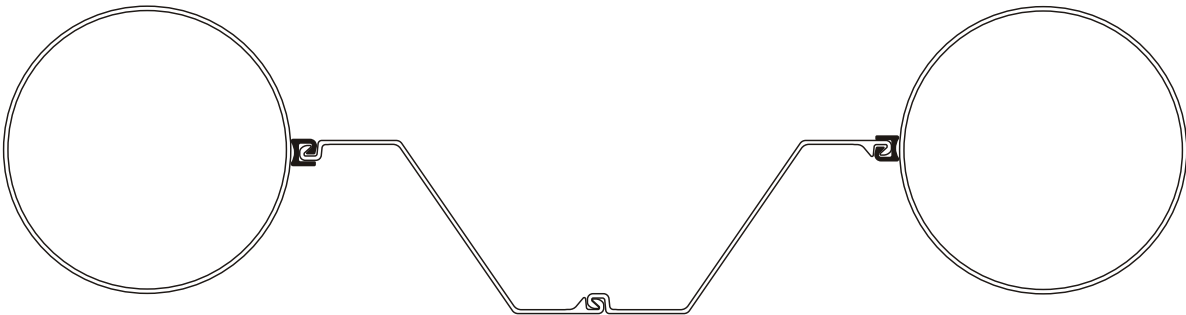
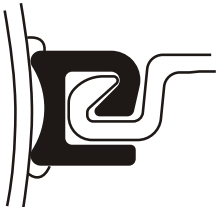
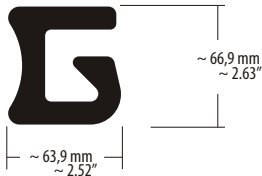
Tank

Очень прочная сварные соединения для Larssen Z
Для Larssen Z-бруса

- Область использования**
1. Изготовление угловых соединительных элементов и ответвлений
 2. Привариваемый профильный элемент трубы для изготовления комбинированных стенок

Параметры	
Качество стали:	S355GP, S430GP
	ASTM A572 Gr. 50/60
	ASTM A690 MARINER™ Steel
Вес:	~19,4 кг/м
Толщина стенки:	12 мм

Tank weld-on





LBM /LBF

For AZ/Larssen to PZ/PZC (ball & socket) transitions

Installation

1. Please review the proper interlocking examples that are listed.
2. Thread the connector into the interlock while the sheet pile is out of the ground.
3. Adjust the connector to the appropriate position.
4. Tack or spot-weld the connector in place. Typically, a ~250mm (~10”) weld attaching the connector to the sheet pile to the top is sufficient.
5. Drive/extract the sheet pile (with the connector attached) as you would normally.

Properties

Steelgrade:	S355GP, S430GP
	ASTM A572 Gr. 50/60
	ASTM A690 MARINER™ Steel
Weight LBM:	~7.71 lb / ft
Weight LBF:	~8.78 lb / ft



LBM / LBF

Raccord de transition

Pour Larssen U, AZ, Hoesch avec serrure Larssen

Domaines d'emploi

1. Pour raccorder des palplanches PZC (Ball + Socket) aux palplanches en U ou en Z type Larssen
2. Pour raccorder des palplanches en U ou Z Larssen aux palplanches PZC (Ball + Socket)

Caractéristiques

Nuances d'acier:	S355GP, S430GP
	ASTM A572 Gr. 50/60
	ASTM A690 MARINER™ Steel
Poids LBM:	~11,5 kg/m
Poids LBF:	~13,1 kg/m



LBM /LBF

Übergangsprofile

Für Larssen U, AZ, Hoesch mit Larssen-Schloss

Einsatzgebiet

1. Übergangsprofile von PZC-Bohlen (Ball + Socket) zu U- oder Larssen-Z-Bohlen
2. Übergangsprofile von U- oder Larssen-Z-Bohlen zu PZC-Bohlen (Ball + Socket)



Eigenschaften

Stahlgüte:	S355GP, S430GP
	ASTM A572 Gr. 50/60
	ASTM A690 MARINER™ Steel
Gewicht LBM:	~11,5 kg/m
Gewicht LBF:	~13,1 kg/m



LBM / LBF

Profilati di raccordo

Per Larssen U, AZ, Hoesch con gancio Larssen

Campo di applicazione

1. Profilati di raccordo da palancole PZC (Ball and Socket) a palancole a U o palancole a Z Larssen
2. Profilati di raccordo da palancole a U o palancole a Z Larssen a palancole PZC (Ball and Socket)

Caratteristiche

Qualità dell'acciaio:	S355GP, S430GP
	ASTM A572 Gr. 50/60
	ASTM A690 MARINER™ Steel
Peso LBM:	~11,5 kg/m
Peso LBF:	~13,1 kg/m



LBM /LBF

Perfiles de transición

Para Larssen U, AZ, Hoesch con cerramiento Larssen

Ámbito de aplicaciones

1. Perfiles de transición de pilotes PZC (Ball+ Socket) a pilotes en U y en Z Larssen
2. Perfiles de transición de pilotes en U o Z Larssen a pilotes PZC (Ball + Socket)

Propiedades

Calidad de acero:	S355GP, S430GP
	ASTM A572 Gr. 50/60
	ASTM A690 MARINER™ Steel
Peso LBM:	~11,5 kg/m
Peso LBF:	~13,1 kg/m



LBM / LBF

Переходные профильные элементы

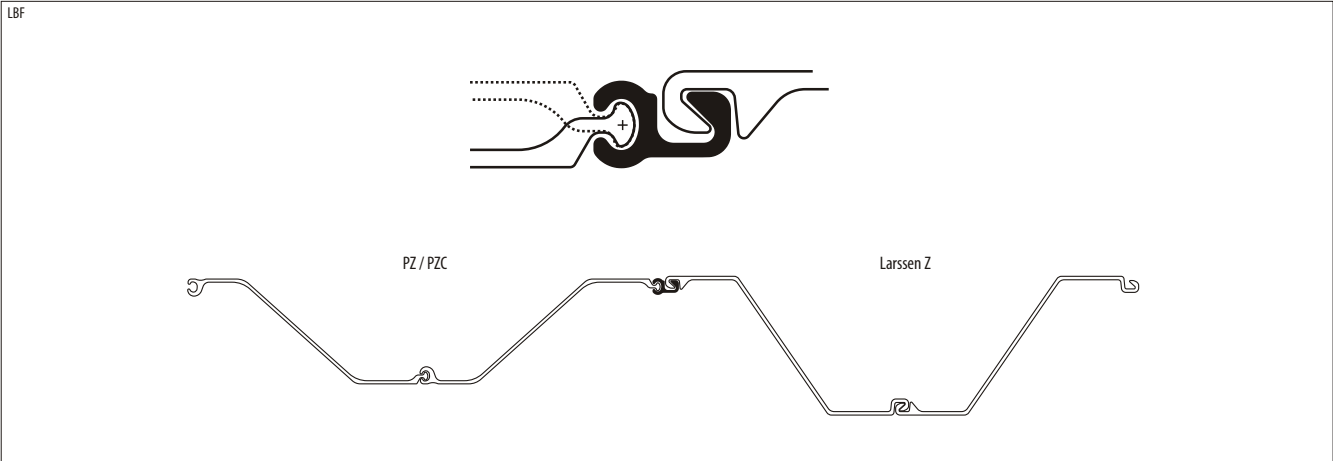
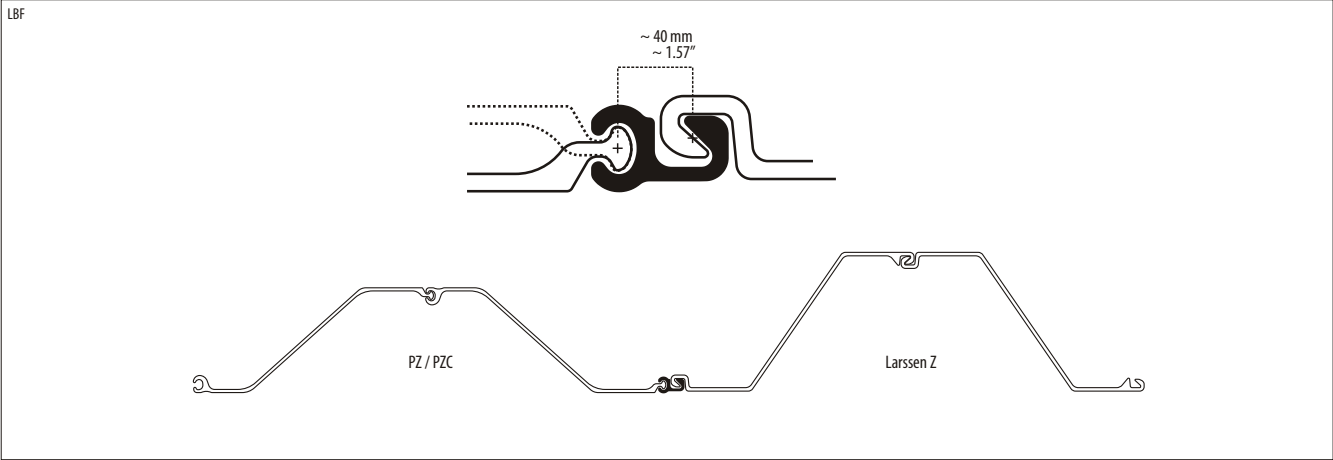
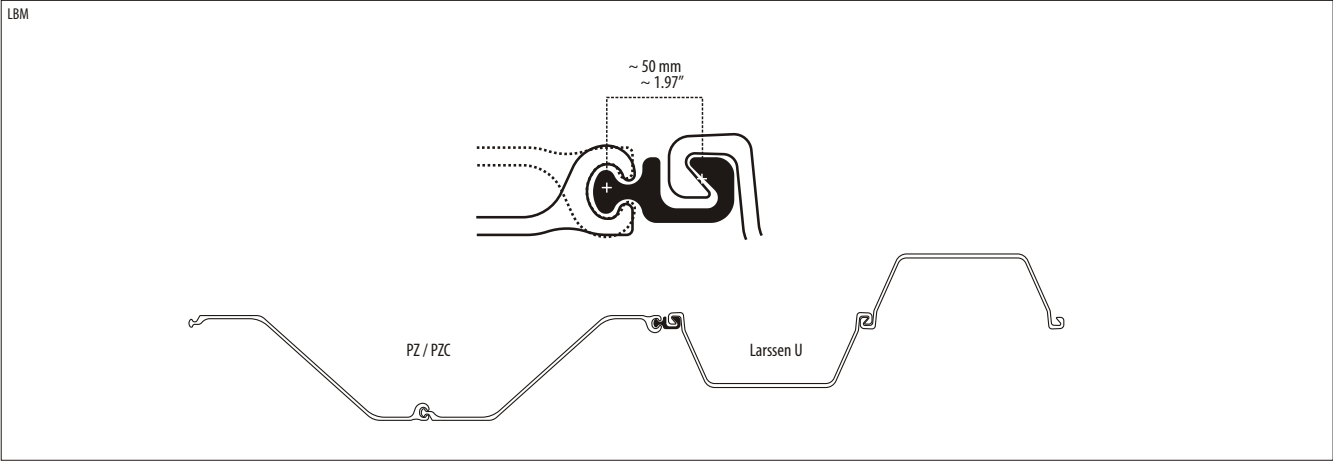
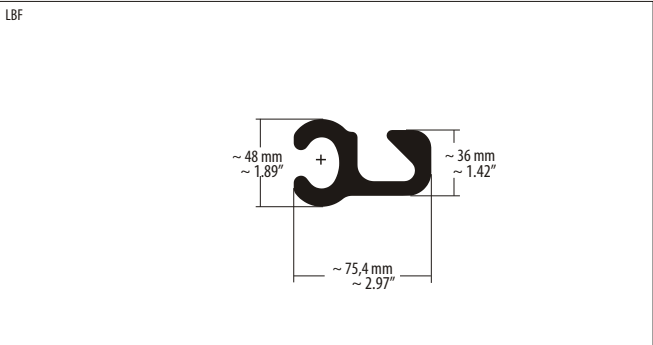
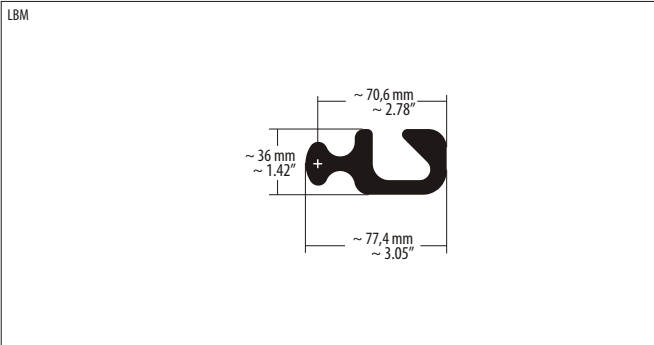
Для Larssen U, AZ, Hoesch с замком Larssen

Область применения

1. Профильные элементы перехода с PZC свай (шар + гнездо) на U-свай или Z-свай типа Larssen
2. Профильные элементы перехода с U-свай или Z-свай типа Larssen на P ZC-свай (шар + гнездо)

Параметры

Качество стали:	S355GP, S430GP
	ASTM A572 Gr. 50/60
	ASTM A690 MARINER™ Steel
Вес LBM:	~11,5 кг/м
Вес LBF:	~13,1 кг/м





	Overview Ball & Socket (For PZ and PZC)	Übersicht Ball & Socket (Für PZ und PZC)	Listado Ball & Socket (Para PZ y PZC)	Aperçu Ball & Socket (Pour PZ et PZC)	Indice maschio e femmina (Per PZ e PZC)	Содержание шар & гнездо (Для PZ и PZC)	
Corner & Junction Piles							
Colt 	For 45° corners (+/- 40°)	45° Eckverbindung	Unión angular de 45°	Raccord à 45°	Connessione per angolo a 45°	Угловой соединительный элемент 45°	35
PZ 90 	For 90° corners (+/- 40°)	90° Eckverbindung	Unión angular de 90°	Raccord à 90°	Connessione per angolo a 90°	Угловой соединительный элемент 90°	37
Cobra 	For 135° corners (+/- 40°)	135° Eckverbindung	Unión angular de 135°	Raccord à 135°	Connessione per angolo a 135°	Угловой соединительный элемент 135°	39
PZ Tee 	For T-corners (+/- 40°), 90° corners (+/- 40°)	T-Verbindung 90° Eckverbindung	Unión en T Unión angular de 90°	Raccord en T, raccord d'angle (90°)	Connessione a T Connessione per angolo a 90°	T-образное соединение угловой соединительный элемент 90°	41
PZT-S (CBF) 	For T-corners (+/- 40°), 90° corners (+/- 40°)	T-Verbindung 90° Eckverbindung	Unión en T Unión angular de 90°	Raccord en T, raccord d'angle (90°)	Connessione a T Connessione per angolo a 90°	T-образное соединение угловой соединительный элемент 90°	43
Joker 	For T-corners (+/- 40°), 90° corners (+/- 40°)	T-Verbindung 90° Eckverbindung	Unión en T Unión angular de 90°	Raccord en T, raccord d'angle (90°)	Connessione a T Connessione per angolo a 90°	T-образное соединение угловой соединительный элемент 90°	45
Bullhead 	For T-corners (+/- 40°), 90° corners (+/- 40°)	T-Verbindung 90° Eckverbindung	Unión en T Unión angular de 90°	Raccord en T, raccord d'angle (90°)	Connessione a T Connessione per angolo a 90°	T-образное соединение угловой соединительный элемент 90°	47
Combined Sheet Piles							
BBS-M one leg BBS-F one leg 	For combined walls with wide flange beams	Kombiwandprofile zum Verbinden von Trägern mit PZ/PZC-Profilen	Perfiles de pantalla combinada para unir vigas con perfiles PZ/PZC	Raccord pour rideaux mixtes (pour raccorder des poutres de soutien aux palplanches PZ/PZC)	Profilo parete combinata per collegare travi con profili PZ/PZC	Комбинированный стеной профильный элемент для соединения опор с PZ/PZC-образными профильными элементами	49
PBS-M PBS-F 	For combined walls with Peiner-type beams	Kombiwandprofile zum Verbinden von Keulenträgern mit PZ/PZC-Profilen	Perfiles de pantalla combinada para unir portamazas con perfiles PZ/PZC	Raccord pour rideaux mixtes (pour raccorder des poutres de soutien aux palplanches PZ/PZC)	Profilo parete combinata per collegare travi a doppia T con profili PZ/PZC	Комбинированный стеной профильный элемент для соединения гребней опор с PZ/PZC-образными профильными элементами	51
WOM WOF 	For combined walls with pipes	Anschweißprofile zum Verbinden von Rohren mit PZ/PZC-Profilen sowie zum Erstellen von Ecken und Abzweigungen	Perfiles de soldadura para unir tubos con perfiles PZ/PZC, así como para formar esquinas y bifurcaciones	Raccord à souder (pour raccorder des tubes aux palplanches PZ/PZC et pour réaliser des angles ou un changement de direction)	Profili saldati per collegare tubi con profili PZ/PZC e per creare angoli e diramazioni	Привариваемый профильный элемент для соединения труб с PZ/PZC-образными профильными элементами, а также для изготовления углов и ответвлений	53
WOM-XL WOF-XL 	For combined walls with pipes, pipe sheet pile walls	Anschweißprofile zum Verbinden von Rohren mit PZ/PZC-Profilen sowie zum Erstellen von Ecken und Abzweigungen	Perfiles de soldadura para unir tubos con perfiles PZ/PZC, así como para formar esquinas y bifurcaciones	Raccord à souder (pour raccorder des tubes aux palplanches PZ/PZC et pour réaliser des angles ou un changement de direction)	Profili saldati per collegare tubi con profili PZ/PZC e per creare angoli e diramazioni	Привариваемый профильный элемент для соединения труб с PZ/PZC-образными профильными элементами, а также для изготовления углов и ответвлений	55
Transition Piles							
LBM LBF 	For PZ/PZC to AZ/Larssen transitions	Übergangsprofile	Perfiles de transición	Raccord de transition	Profili di raccordo	Переходные профильные элементы	57



Colt

For 45° Corners (+/- 40°) with PZ/PZC (ball & socket) sheet piles

Installation

1. Please review the proper interlocking examples that are listed.
2. Thread the connector into the interlock while the sheet pile is out of the ground.
3. Adjust the connector to the appropriate position.
4. Tack or spot-weld the connector in place. Typically, a ~250mm (~10") weld attaching the connector to the sheet pile to the top is sufficient.
5. Drive/extract the sheet pile (with the connector attached) as you would normally.

Properties

Steel grade:	S355GP, S430GP
	ASTM A572 Gr. 50/60
	ASTM A690 MARINER™ Steel
Weight:	~ 6.84 lb / ft



Colt

Raccord à 45°
Pour PZ- et PZC (Ball + Socket)

Domaines d'emploi

Domaines d'emploi
Raccords à 45°

Caractéristiques

Nuances d'acier:	S355GP, S430GP
	ASTM A572 Gr. 50/60
	ASTM A690 MARINER™ Steel
Poids:	~10,2 kg/m



Colt

45° Eckverbindung
Für PZ und PZC (Ball and Socket)

Einsatzgebiet

45° Eckverbindungen



Eigenschaften

Stahlgüten:	S355GP, S430GP
	ASTM A572 Gr. 50/60
	ASTM A690 MARINER™ Steel
Gewicht:	~10,2 kg/m



Colt

Connessione per angolo a 45 °
Per PZ e PZC (maschio e femmina)

Campo di applicazione

Connessioni per angolo a 45°

Caratteristiche

Qualità dell'acciaio:	S355GP, S430GP
	ASTM A572 Gr. 50/60
	ASTM A690 MARINER™ Steel
Peso:	~10,2 kg/m



Colt

Unión angular de 45°
Para PZ y PZC (Ball and Socket)

Ámbito de aplicaciones

Uniones angulares de 45°

Propiedades

Calidades de acero:	S355GP, S430GP
	ASTM A572 Gr. 50/60
	ASTM A690 MARINER™ Steel
Peso:	~10,2 kg/m



Colt

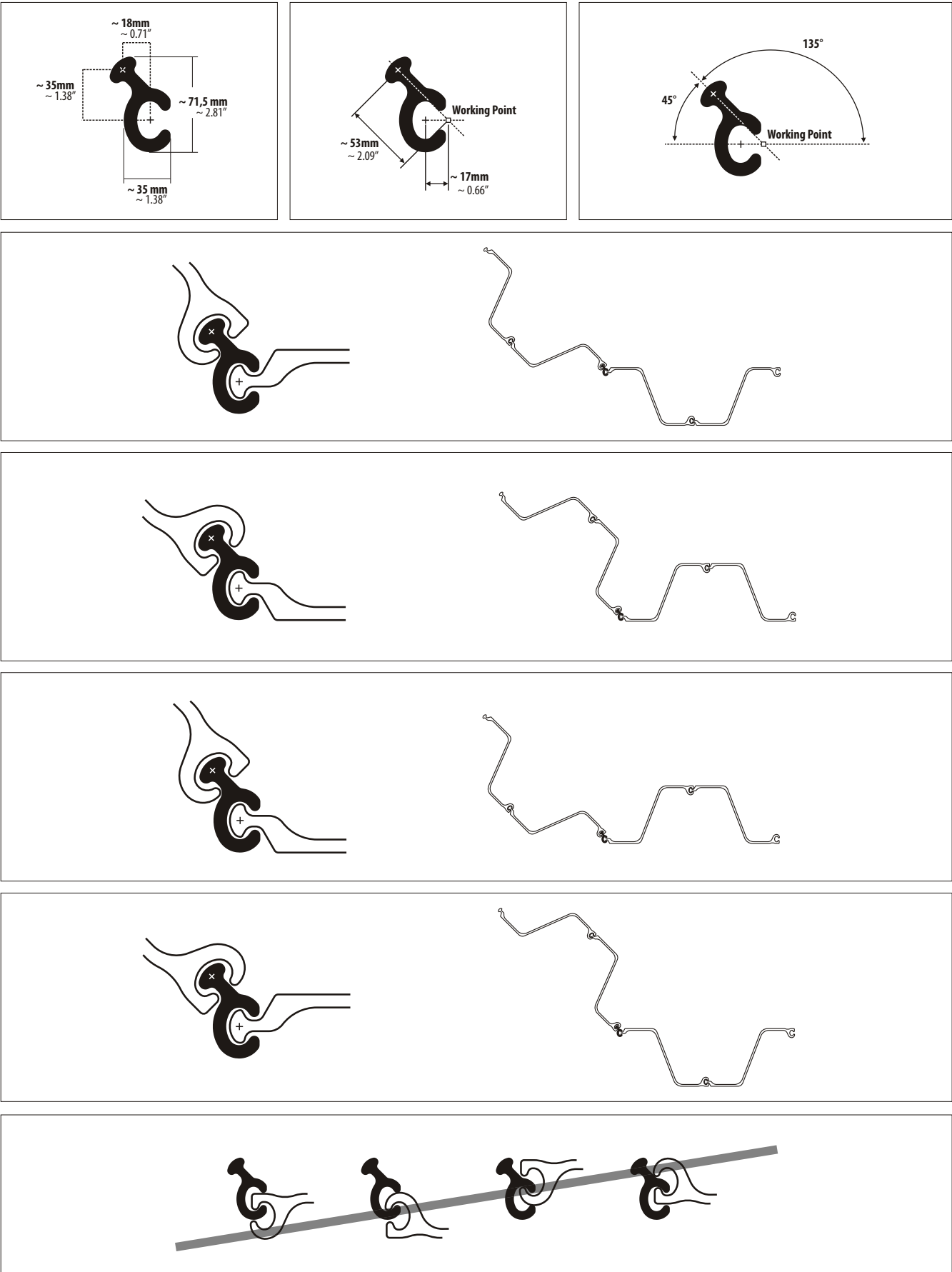
Угловой соединительный элемент 45°
Для PZ и PZC (шар и гнездо)

Область применения

Угловые соединительные элементы 45°

Параметры

Качество стали:	S355GP, S430GP
	ASTM A572 Gr. 50/60
	ASTM A690 MARINER™ Steel
Вес:	~10,2 кг/м





PZ 90

For 90° Corners (+/- 40°) with PZ/PZC (ball & socket) sheet piles

Installation

1. Please review the proper interlocking examples that are listed.
2. Thread the connector into the interlock while the sheet pile is out of the ground.
3. Adjust the connector to the appropriate position.
4. Tack or spot-weld the connector in place. Typically, a ~250mm (~10") weld attaching the connector to the sheet pile to the top is sufficient.
5. Drive/extract the sheet pile (with the connector attached) as you would normally.

Properties

Steel grade:	S355GP, S430GP
	ASTM A572 Gr. 50/60
	ASTM A690 MARINER™ Steel
Weight:	~ 7.21 / ~ 7.51 lb / ft



PZ 90

Raccord d'angle (90°)
Pour PZ- et PZC (Ball + Socket)

Domaines d'emploi

Raccordement permettant un angle de 90°
(variation possible de +/- 20°)

Caractéristiques

Nuances d'acier:	S355GP, S430GP
	ASTM A572 Gr. 50/60
	ASTM A690 MARINER™ Steel
Poids:	~10,9 / ~11,2 kg/m



PZ 90

90° Eckverbindung
Für PZ und PZC (Ball and Socket)

Einsatzgebiet

90° Eckverbindungen



Eigenschaften

Stahlgüten:	S355GP, S430GP
	ASTM A572 Gr. 50/60
	ASTM A690 MARINER™ Steel
Gewicht:	~10,9 / ~11,2 kg/m



PZ 90

Connessione per angolo a 90°
Per PZ e PZC (maschio e femmina)

Campo di applicazione

Connessioni per angolo a 90°

Caratteristiche

Qualità dell'acciaio:	S355GP, S430GP
	ASTM A572 Gr. 50/60
	ASTM A690 MARINER™ Steel
Peso:	~10,9 / ~11,2 kg/m



PZ 90

Unión angular de 90°
Para PZ y PZC (Ball and Socket)

Ámbito de aplicaciones

Uniones angulares de 90°

Propiedades

Calidades de acero:	S355GP, S430GP
	ASTM A572 Gr. 50/60
	ASTM A690 MARINER™ Steel
Peso:	~10,9 / ~11,2 kg/m



PZ 90

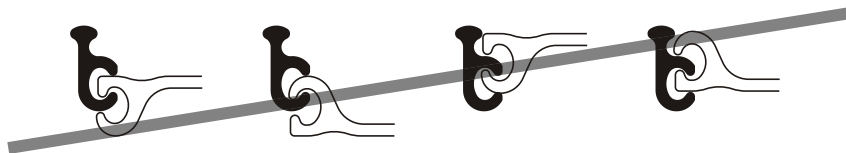
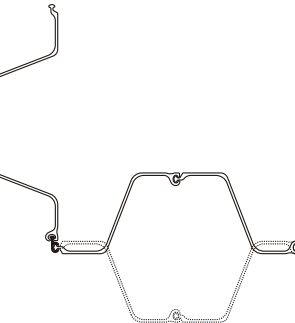
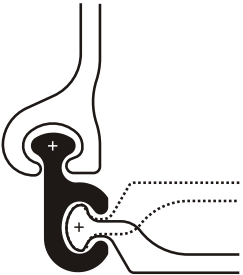
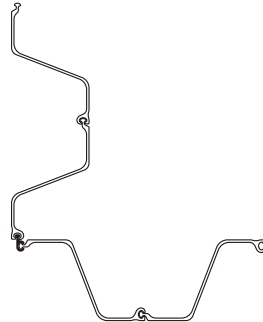
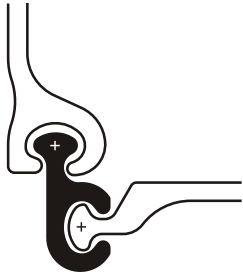
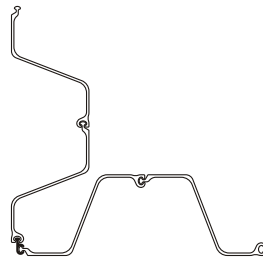
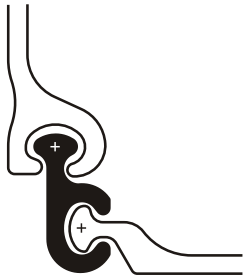
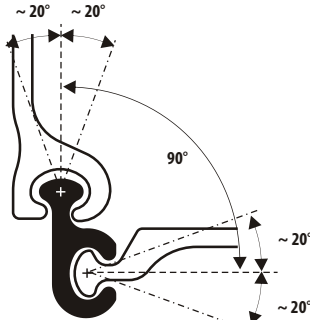
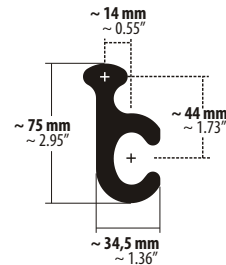
90° угловой соединительный элемент
Для PZ и PZC (шар и гнездо)

Область применения

Уловые соединительные элементы 90°

Параметры

Качество стали:	S355GP, S430GP
	ASTM A572 Gr. 50/60
	ASTM A690 MARINER™ Steel
Вес:	~10,9 / ~11,2 кг/м





Cobra

For 135° Corners (+/- 40°) with PZ/PZC (ball & socket) sheet piles

Installation

- 1. Please review the proper interlocking examples that are listed.
- 2. Thread the connector into the interlock while the sheet pile is out of the ground.
- 3. Adjust the connector to the appropriate position.
- 4. Tack or spot-weld the connector in place. Typically, a ~250mm (~10”) weld attaching the connector to the sheet pile to the top is sufficient.
- 5. Drive/extract the sheet pile (with the connector attached) as you would normally.

Properties

Steel grade:	S355GP, S430GP
	ASTM A572 Gr. 50/60
	ASTM A690 MARINER™ Steel
Weight:	~7.44 lb / ft



Cobra

Raccord à 135°
Pour PZ- et PZC (Ball + Socket)

Domaines d'emploi

Raccordement permettant un angle de 135°
(variation possible de +/- 20°)

Caractéristiques

Nuances d'acier:	S355GP, S430GP
	ASTM A572 Gr. 50/60
	ASTM A690 MARINER™ Steel
Poids:	~11,1 kg/m



Cobra

135° Eckverbindung
Für PZ und PZC (Ball and Socket)

Einsatzgebiet

135° Eckverbindungen



Eigenschaften

Stahlgüten:	S355GP, S430GP
	ASTM A572 Gr. 50/60
	ASTM A690 MARINER™ Steel
Gewicht:	~11,1 kg/m



Cobra

Connessione per angolo a 135°
Per PZ e PZC (maschio e femmina)

Campo di applicazione

Connessioni per angolo a 135°

Caratteristiche

Qualità dell'acciaio:	S355GP, S430GP
	ASTM A572 Gr. 50/60
	ASTM A690 MARINER™ Steel
Peso:	~11,1 kg/m



Cobra

Unión angular de 135°
Para PZ y PZC (Ball and Socket)

Ámbito de aplicaciones

Uniones angulares de 135°

Propiedades

Calidades de acero:	S355GP, S430GP
	ASTM A572 Gr. 50/60
	ASTM A690 MARINER™ Steel
Peso:	~11,1 kg/m



Cobra

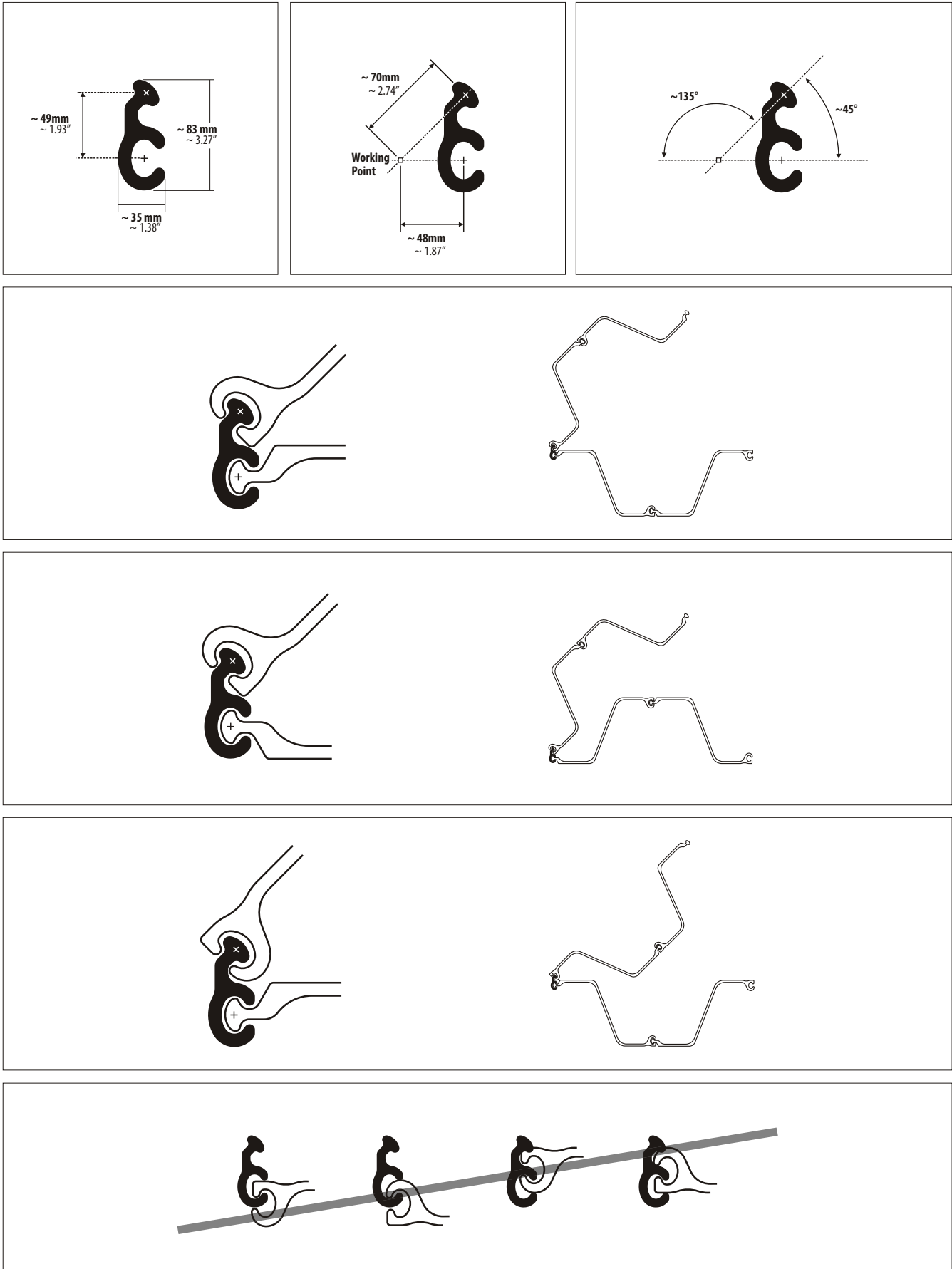
135° угловой соединительный элемент
Для PZ и PZC (шар и гнездо)

Область применения

Угловые соединительные элементы 135°

Параметры

Качество стали:	S355GP, S430GP
	ASTM A572 Gr. 50/60
	ASTM A690 MARINER™ Steel
Вес:	~11,1 кг/м





PZT-S (CBF)

For T-corners,
90° corners (+/- 40°)
with PZ/PZC (ball & socket) sheet piles

- Installation**
1. Please review the proper interlocking examples that are listed.
 2. Thread the connector into the interlock while the sheet pile is out of the ground.
 3. Adjust the connector to the appropriate position.
 4. Tack or spot-weld the connector in place. Typically, a ~250mm (~10”) weld attaching the connector to the sheet pile to the top is sufficient.
 5. Drive/extract the sheet pile (with the connector attached) as you would normally.

Properties	
Steel grade:	S355GP, S430GP
	ASTM A572 Gr. 50/60
	ASTM A690 MARINER™ Steel
Weight:	~ 9.66 lb / ft



PZT-S (CBF)

Raccord en T,
raccord d'angle (90°)
Pour PZ et PZC (Ball + Socket)

Domaines d'emploi
Raccordement de trois palplanches

Caractéristiques	
Nuances d'acier:	S355GP, S430GP
	ASTM A572 Gr. 50/60
	ASTM A690 MARINER™ Steel
Poids:	~14,4 kg/m



PZT-S (CBF)

T-Verbindung,
90° Eckverbindung
Für PZ und PZC (Ball and Socket)

Einsatzgebiet
Verbinden von drei Spundwänden



Eigenschaften	
Stahlgüten:	S355GP, S430GP
	ASTM A572 Gr. 50/60
	ASTM A690 MARINER™ Steel
Gewicht:	~14,4 kg/m



PZT-S (CBF)

Connessione a T,
connessione per angolo a 90°
Per PZ e PZC (maschio e femmina)

Campo di applicazione
Connessione di tre palancole

Caratteristiche	
Qualità dell'acciaio:	S355GP, S430GP
	ASTM A572 Gr. 50/60
	ASTM A690 MARINER™ Steel
Peso:	~14,4 kg/m



PZT-S (CBF)

Unión en T,
unión angular de 90°
Para PZ y PZC (Ball and Socket)

Ámbito de aplicaciones
Unión de tres tablestacas

Propiedades	
Calidades de acero:	S355GP, S430GP
	ASTM A572 Gr. 50/60
	ASTM A690 MARINER™ Steel
Peso:	~14,4 kg/m

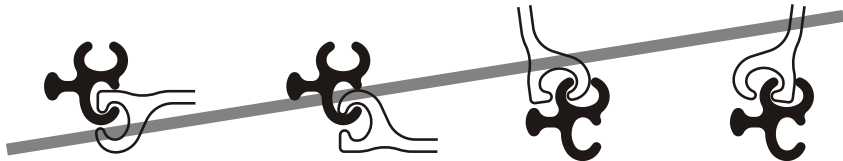
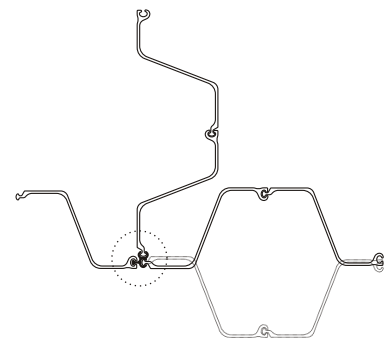
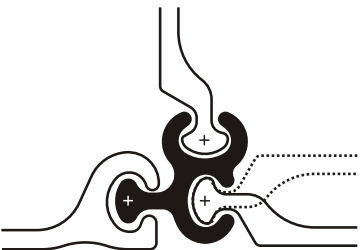
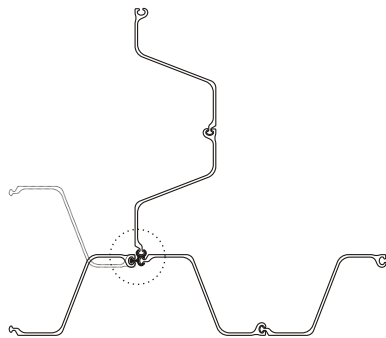
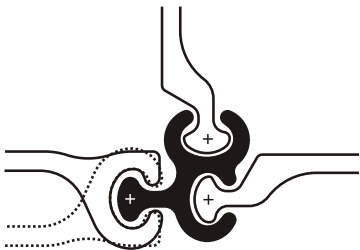
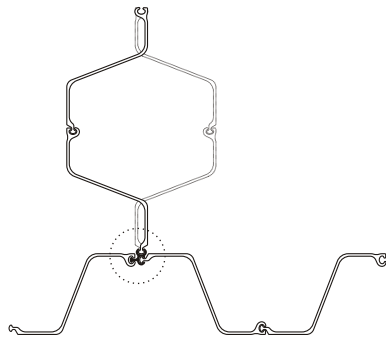
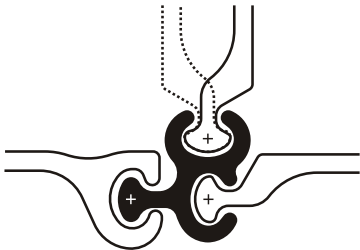
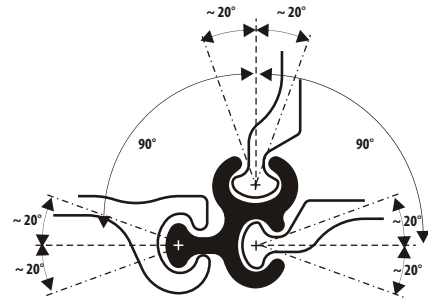
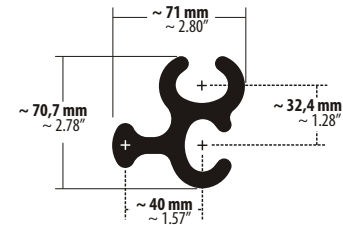


PZT-S (CBF)

T-образное соединение,
угловой соединительный элемент 90°
Для PZ и PZC (шар и гнездо)

Область применения
Соединение трех шпунтовых стенок

Параметры	
Качество стали:	S355GP, S430GP
	ASTM A572 Gr. 50/60
	ASTM A690 MARINER™ Steel
Вес:	~14,4 кг/м





Joker

For T-corners,
90° corners (+/- 40°)
with PZ/PZC (ball & socket) sheet piles

- Installation
1. Please review the proper interlocking examples that are listed.
 2. Thread the connector into the interlock while the sheet pile is out of the ground.
 3. Adjust the connector to the appropriate position.
 4. Tack or spot-weld the connector in place. Typically, a ~250mm (~10”) weld attaching the connector to the sheet pile to the top is sufficient.
 5. Drive/extract the sheet pile (with the connector attached) as you would normally.

Properties	
Steel grade:	S355GP, S430GP
	ASTM A572 Gr. 50/60
	ASTM A690 MARINER™ Steel
Weight:	~10.86 lb / ft



Joker

Raccord en T,
raccord d'angle (90°)
Pour PZ et PZC (Ball + Socket)

Domaines d'emploi
Raccordement de trois palplanches

Caractéristiques	
Nuances d'acier:	S355GP, S430GP
	ASTM A572 Gr. 50/60
	ASTM A690 MARINER™ Steel
Poids:	~16,2 kg/m



Joker

T-Verbindung,
90° Eckverbindung
Für PZ und PZC (Ball and Socket)

Einsatzgebiet
Verbinden von drei Spundwänden



Eigenschaften	
Stahlgüten:	S355GP, S430GP
	ASTM A572 Gr. 50/60
	ASTM A690 MARINER™ Steel
Gewicht:	~16,2 kg/m



Joker

Connessione a T,
connessione per angolo a 90°
Per PZ e PZC (maschio e femmina)

Campo di applicazione
Connessione di tre palancole

Caratteristiche	
Qualità dell'acciaio:	S355GP, S430GP
	ASTM A572 Gr. 50/60
	ASTM A690 MARINER™ Steel
Peso:	~16,2 kg/m



Joker

Unión en T,
unión angular de 90°
Para PZ y PZC (Ball and Socket)

Ámbito de aplicaciones
Unión de tres tablestacas

Propiedades	
Calidades de acero:	S355GP, S430GP
	ASTM A572 Gr. 50/60
	ASTM A690 MARINER™ Steel
Peso:	~16,2 kg/m

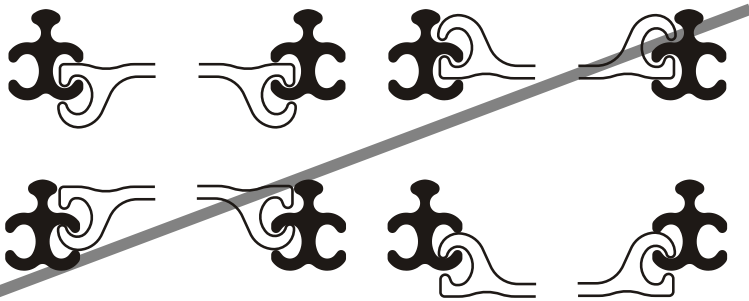
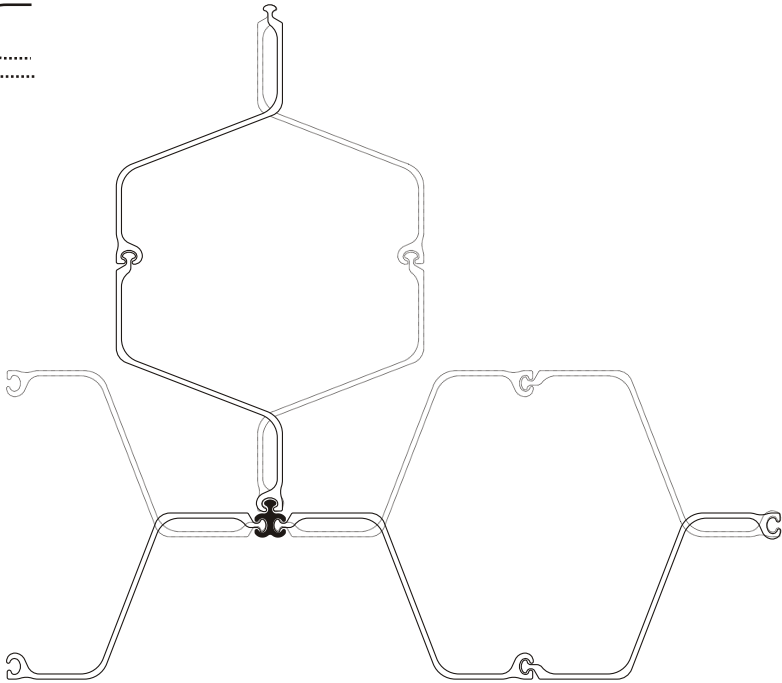
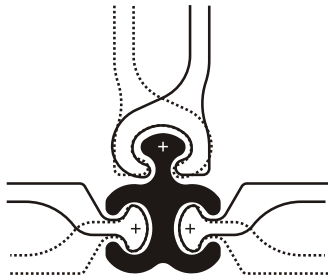
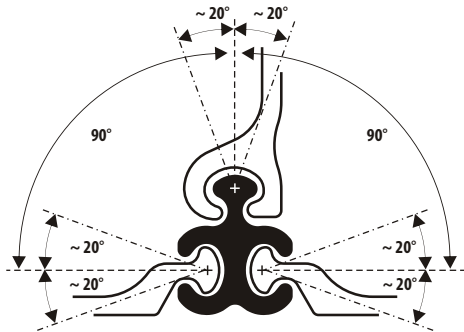
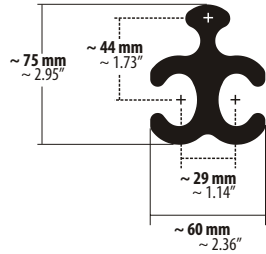


Джокер

Т-образное соединение,
угловой соединительный элемент 90°
Для PZ и PZC (шар и гнездо)

Область применения
Соединение трех шпунтовых стенок

Параметры	
Качество стали:	S355GP, S430GP
	ASTM A572 Gr. 50/60
	ASTM A690 MARINER™ Steel
Вес:	~16,2 кг/м





Bullhead

For T-corners,
90° corners (+/- 40°)
with PZ/PZC (ball & socket) sheet piles

- Installation**
1. Please review the proper interlocking examples that are listed.
 2. Thread the connector into the interlock while the sheet pile is out of the ground.
 3. Adjust the connector to the appropriate position.
 4. Tack or spot-weld the connector in place. Typically, a ~250mm (~10") weld attaching the connector to the sheet pile to the top is sufficient.
 5. Drive/extract the sheet pile (with the connector attached) as you would normally.

Properties	
Steel grade:	S355GP, S430GP
	ASTM A572 Gr. 50/60
	ASTM A690 MARINER™ Steel
Weight:	~9.72 lb / ft



Bullhead

Raccord en T,
raccord d'angle (90°)
Pour PZ et PZC (Ball + Socket)

Domaines d'emploi
Raccordement de trois palplanches

Caractéristiques	
Nuances d'acier:	S355GP, S430GP
	ASTM A572 Gr. 50/60
	ASTM A690 MARINER™ Steel
Poids:	~14,5 kg/m



Bullhead

T-Verbindung,
90° Eckverbindung
Für PZ und PZC (Ball and Socket)

Einsatzgebiet
Verbinden von drei Spundwänden



Eigenschaften	
Stahlgüten:	S355GP, S430GP
	ASTM A572 Gr. 50/60
	ASTM A690 MARINER™ Steel
Gewicht:	~14,5 kg/m



Bullhead

Connessione a T,
connessione per angolo a 90°
Per PZ e PZC (maschio e femmina)

Campo di applicazione
Connessione di tre palancole

Caratteristiche	
Qualità dell'acciaio:	S355GP, S430GP
	ASTM A572 Gr. 50/60
	ASTM A690 MARINER™ Steel
Peso:	~14,5 kg/m



Bullhead

Unión en T,
unión angular de 90°
Para PZ y PZC (Ball and Socket)

Ámbito de aplicaciones
Unión de tres tablestacas

Propiedades	
Calidades de acero:	S355GP, S430GP
	ASTM A572 Gr. 50/60
	ASTM A690 MARINER™ Steel
Peso:	~14,5 kg/m

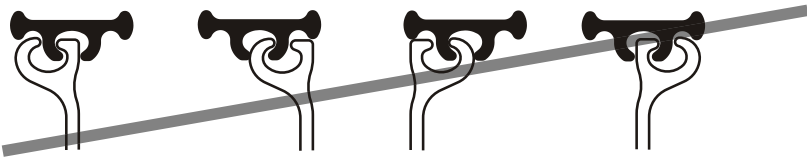
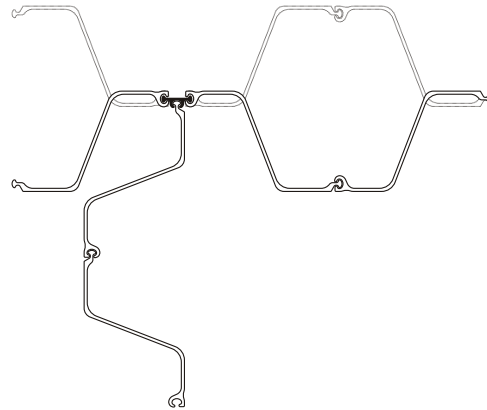
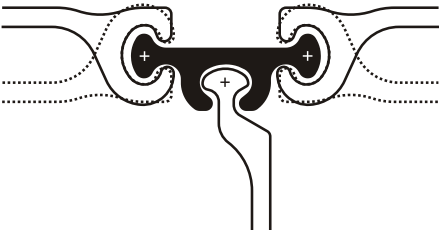
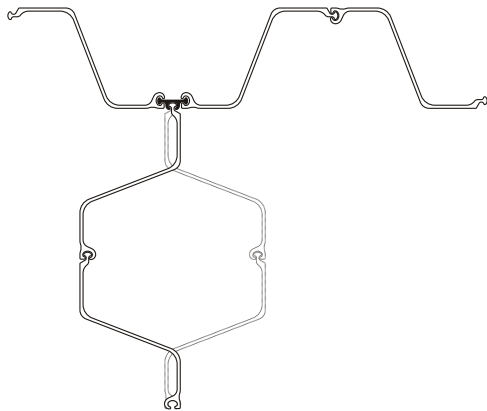
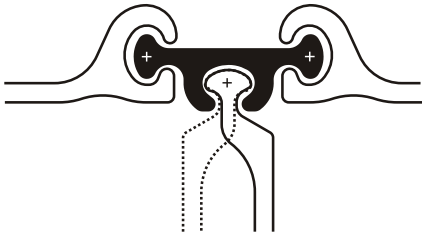
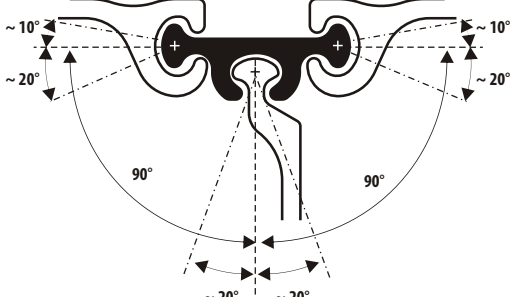
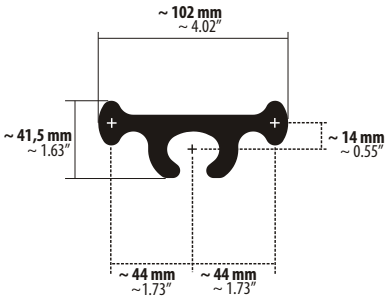


Тычок, поставленный на ребро

Т-образное соединение,
угловой соединительный элемент 90°
Для PZ и PZC (шар и гнездо)

Область применения
Соединение трех шпунтовых стенок

Параметры	
Качество стали:	S355GP, S430GP
	ASTM A572 Gr. 50/60
	ASTM A690 MARINER™ Steel
Вес:	~14,5 кг/м





BBS-M / BBS-F one leg

For combined walls (wide flange beams) with PZ/PZC (ball & socket) sheet piles

Installation

1. The beams are delivered with the connectors already attached.
2. First, install the king piles (beams) as you would in any combined sheet pile wall application.
3. Grasp the sheet piling and thread between the already installed beams.
4. All welding seams are a minimum ~6mm (~0.25").
5. Both sides have a continuous minimum tip and toe welding of ~500mm (~20").
6. Both sides are tack welded in the free length between tip and toe welding with ~200mm/m (~8"/yd). The distance from seam to seam is ~800mm (~31.5") or less.
7. In salt water, the water side is continuously welded on the whole pile length. Follow the instructions above for the reverse side of the pile, if it is not in contact with salt water.

Properties

Steel grade:	S355GP, S430GP
	ASTM A572 Gr. 50/60
	ASTM A690 MARINER™ Steel
Weight BBS-M one leg:	~ 6.50 lb / ft
Weight BBS-F one leg:	~ 7.58 lb / ft



BBS-M / BBS-F one leg

Raccord pour rideaux mixtes Pour PZ et PZC (Ball + Socket)

Domaines d'emploi

Rideaux mixtes avec des poutres de soutien et des profilés PZ/PZC

Caractéristiques

Nuances d'acier:	S355GP, S430GP
	ASTM A572 Gr. 50/60
	ASTM A690 MARINER™ Steel
Poids BBS-M one leg:	~ 9,7 kg/m
Poids BBS-F one leg:	~11,3 kg/m



BBS-M / BBS-F one leg

Kombiwandprofile

Für PZ und PZC (Ball and Socket)

Einsatzgebiet

Erstellen von Kombiwänden mit Trägern und PZ/PZC-Profilen



Eigenschaften

Stahlgüten:	S355GP, S430GP
	ASTM A572 Gr. 50/60
	ASTM A690 MARINER™ Steel
Gewicht BBS-M one leg:	~ 9,7 kg/m
Gewicht BBS-F one leg:	~11,3 kg/m



BBS-M / BBS-F one leg

Profilato parete combinata

Per PZ e PZC (maschio e femmina)

Campo di applicazione

Realizzazione di pareti combinate con travi e profili PZ/PZC

Caratteristiche

Qualità dell'acciaio:	S355GP, S430GP
	ASTM A572 Gr. 50/60
	ASTM A690 MARINER™ Steel
Peso BBS-M one leg:	~ 9,7 kg/m
Peso BBS-F one leg:	~11,3 kg/m



BBS-M / BBS-F one leg

Perfiles de pantalla combinada

Para PZ y PZC (Ball and Socket)

Ámbito de aplicaciones

Formación de pantallas combinadas con vigas y perfiles PZ/PZC

Propiedades

Calidades de acero:	S355GP, S430GP
	ASTM A572 Gr. 50/60
	ASTM A690 MARINER™ Steel
Peso BBS-M one leg:	~ 9,7 kg/m
Peso BBS-F one leg:	~11,3 kg/m



BBS-M / BBS-F one leg

Комбинированный стеной профильный элемент

Для PZ и PZC (шар и гнездо)

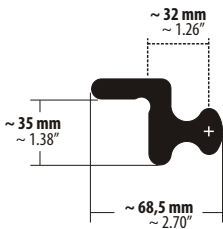
Область применения

Изготовление комбинированных стенок с опорами и PZ/PZC образными профильными элементами

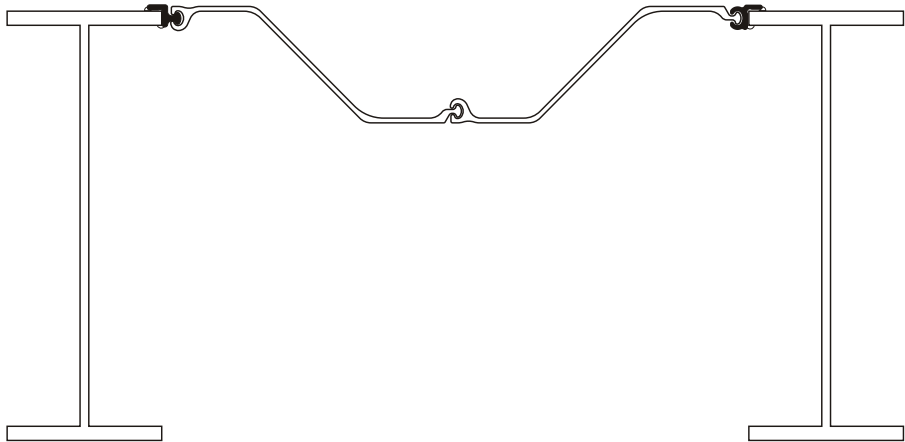
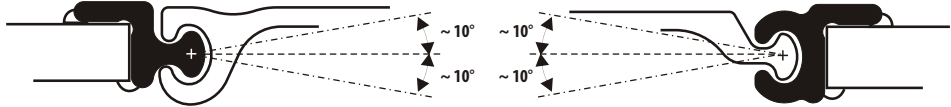
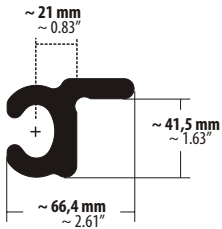
Параметры

Качество стали:	S355GP, S430GP
	ASTM A572 Gr. 50/60
	ASTM A690 MARINER™ Steel
Вес BBS-M one leg:	~ 9,7 кг/м
Вес BBS-F one leg:	~11,3 кг/м

BBS-M one leg



BBS-F one leg





PBS-M / PBS-F

For combined walls (Peiner-type beams) with PZ/PZC (ball & socket) sheet piles

Installation

1. Install the Peiner Beams first.
2. Lay the sheet piling horizontally and thread the connector into the interlock of the sheet piling, adjusting the connector to the appropriate position (please review the proper interlocking examples). This can be done at the mill, at a distributor's yard, or on the job site (go here: www.pilepro.com/thread).
3. Tack or spot-weld the connector in place. Typically, a ~250mm (~10") weld attaching the connector to the sheet pile to the top is sufficient.
4. Grasp the sheet pile (with connectors already attached) and thread between the already installed Peiner type beams.
5. Lower/drive the sheet piling to the level of the Peiner type beam.

Properties

Steel grade:	S355GP, S430GP
	ASTM A572 Gr. 50/60
	ASTM A690 MARINER™ Steel
Weight PBS-M:	~ 9 lb / ft
Weight PBS-F:	~10.66 lb / ft



PBS-M / PBS-F

Raccord pour rideaux mixtes Pour PZ et PZC (Ball + Socket)

Domaines d'emploi

Rideaux mixtes avec des poutres de soutien et des profilés PZ/PZC

Caractéristiques

Nuances d'acier:	S355GP, S430GP
	ASTM A572 Gr. 50/60
	ASTM A690 MARINER™ Steel
Poids PBS-M:	~13,4 kg/m
Poids PBS-F:	~15,9 kg/m



PBS-M / PBS-F

Kombiwandprofile Für PZ und PZC (Ball and Socket)

Einsatzgebiet

Erstellen von Kombiwänden mit Keulenträgern und PZ/PZC-Profilen



Eigenschaften

Stahlgüten:	S355GP, S430GP
	ASTM A572 Gr. 50/60
	ASTM A690 MARINER™ Steel
Gewicht PBS-M:	~13,4 kg/m
Gewicht PBS-F:	~15,9 kg/m



PBS-M / PBS-F

Profilo parete combinata Per PZ e PZC (maschio e femmina)

Campo di applicazione

Realizzazione di pareti combinate con travi a doppia T e profili PZ/PZC

Caratteristiche

Qualità dell'acciaio:	S355GP, S430GP
	ASTM A572 Gr. 50/60
	ASTM A690 MARINER™ Steel
Peso PBS-M:	~13,4 kg/m
Peso PBS-F:	~15,9 kg/m



PBS-M / PBS-F

Perfiles de pantalla combinada Para PZ y PZC (Ball and Socket)

Ámbito de aplicaciones

Formación de pantallas combinadas con portamazas y perfiles PZ/PZC

Propiedades

Calidades de acero:	S355GP, S430GP
	ASTM A572 Gr. 50/60
	ASTM A690 MARINER™ Steel
Peso PBS-M:	~13,4 kg/m
Peso PBS-F:	~15,9 kg/m



PBS-M / PBS-F

Комбинированный стеной профильный элемент Для PZ и PZC (шар и гнездо)

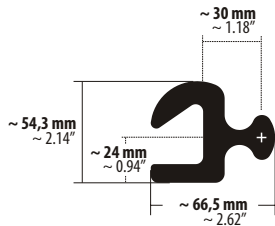
Область применения

Изготовление комбинированных стенок из опор с гребнями и PZ/PZC образными профильными элементами

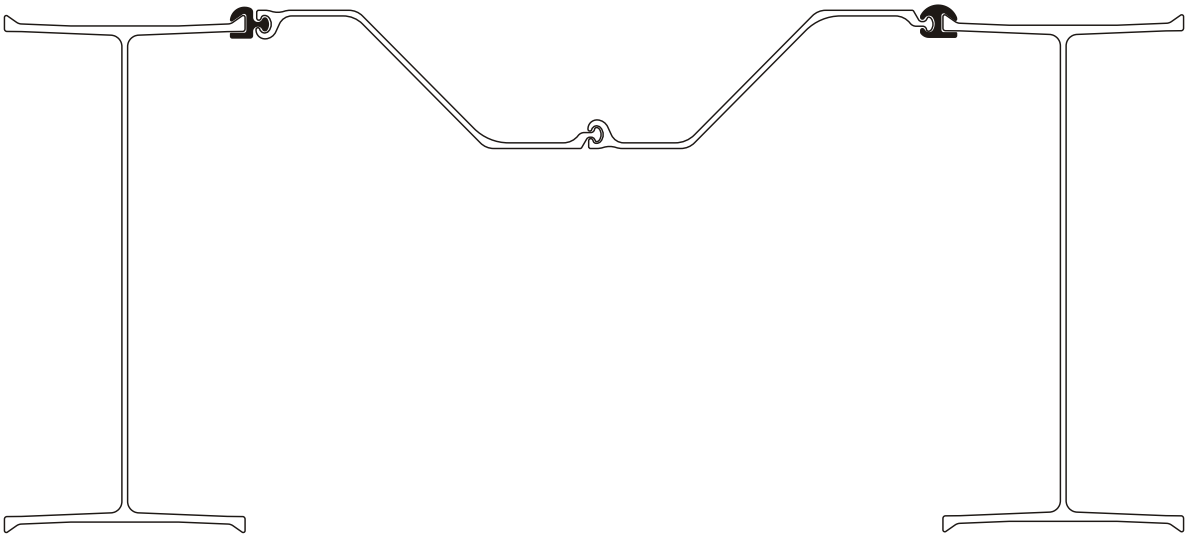
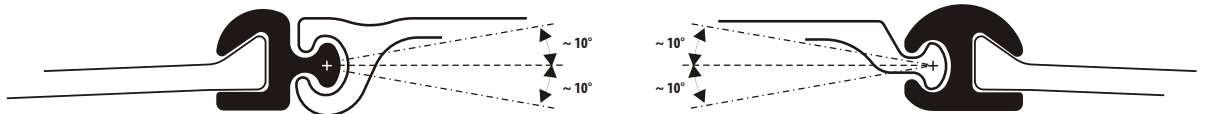
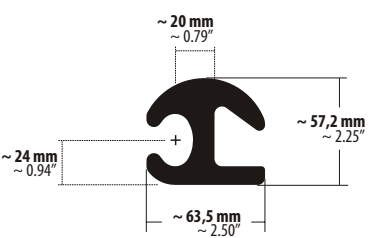
Параметры

Качество стали:	S355GP, S430GP
	ASTM A572 Gr. 50/60
	ASTM A690 MARINER™ Steel
Вес PBS-M:	~13,4 кг/м
Вес PBS-F:	~15,9 кг/м

PBS-M



PBS-F





WOM / WOF

For combined walls (pipes) with PZ/PZC (ball & socket) sheet piles

Installation

1. The pipes are delivered with the connectors already attached.
2. First, install the king piles (pipes) as you would in any combined sheet pile wall application.
3. Grasp the sheet piling and thread between the already installed pipe piles.
4. Increase flexibility in the middle interlocks of the sheet piles, combined with the swing of the connectors, to enable easier threading of the intermediate sheet piling.
5. All welding seams are a minimum ~6mm (~0.25").
6. Both sides have a continuous minimum tip and toe welding of ~500mm (~20").
7. Both sides are tack welded in the free length between tip and toe welding with 200mm/m (8"/yd). The distance from seam to seam is ~800mm (~31.5") or less.
8. In salt water, the water side is continuously welded on the whole pile length. Follow the instructions above for the reverse side of the pile, if it is not in contact with salt water.

Properties

Steel grade:	S355GP, S430GP
	ASTM A572 Gr. 50/60
	ASTM A690 MARINER™ Steel
Weight WOM:	~4.4 lb / ft
Weight WOF:	~5.6 lb / ft

Products are available in 12mm thickness upon request. (WOM-12mm: ~4.9lb/ft, WOF-12mm: ~7.2lb/ft)



WOM / WOF

Raccord à souder

Pour PZ et PZC (Ball + Socket)

Domaines d'emploi

1. Rideaux mixtes avec des tubes et des profilés PZ/PZC

Caractéristiques

Nuances d'acier:	S355GP, S430GP
	ASTM A572 Gr. 50/60
	ASTM A690 MARINER™ Steel
Poids WOM:	~ 6,6 kg/m
Poids WOF:	~ 8,3 kg/m



WOM / WOF

Anschweißprofile

Für PZ und PZC (Ball and Socket)

Einsatzgebiet

1. Erstellen von Kombiwänden mit Rohren und PZ/PZC-Profilen



Eigenschaften

Stahlgüten:	S355GP, S430GP
	ASTM A572 Gr. 50/60
	ASTM A690 MARINER™ Steel
Gewicht WOM:	~ 6,6 kg/m
Gewicht WOF:	~ 8,3 kg/m



WOM / WOF

Profilì saldati

Per PZ e PZC (maschio e femmina)

Campo di applicazione

1. Realizzazione di pareti combinate con tubi e profili PZ/PZC

Caratteristiche

Qualità dell'acciaio:	S355GP, S430GP
	ASTM A572 Gr. 50/60
	ASTM A690 MARINER™ Steel
Peso WOM:	~ 6,6 kg/m
Peso WOF:	~ 8,3 kg/m



WOM / WOF

Perfiles de soldadura

Para PZ y PZC (Ball and Socket)

Ámbito de aplicaciones

1. Formación de pantallas combinadas con tubos y perfiles PZ/PZC

Propiedades

Calidades de acero:	S355GP, S430GP
	ASTM A572 Gr. 50/60
	ASTM A690 MARINER™ Steel
Peso WOM:	~ 6,6 kg/m
Peso WOF:	~ 8,3 kg/m



WOM / WOF

Привариваемый профильный элемент

Для PZ и PZC (шар и гнездо)

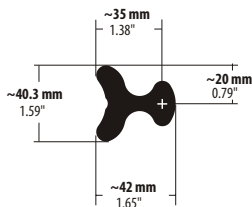
Область применения

1. Изготовление комбинированных стенок с трубами и PZ/PZC образными профильными элементами

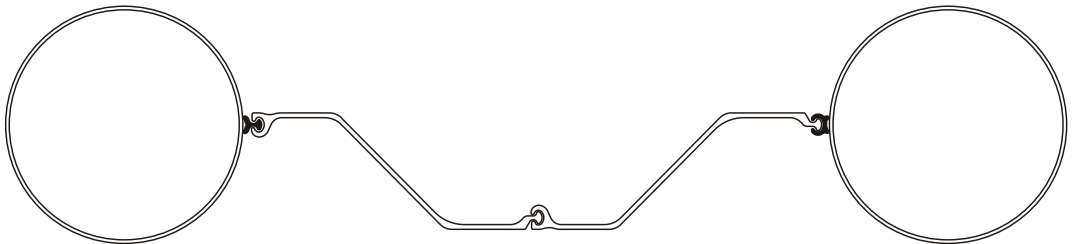
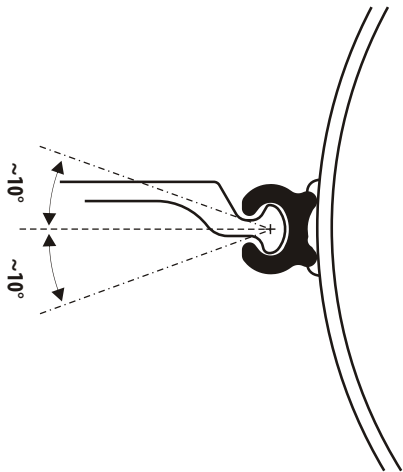
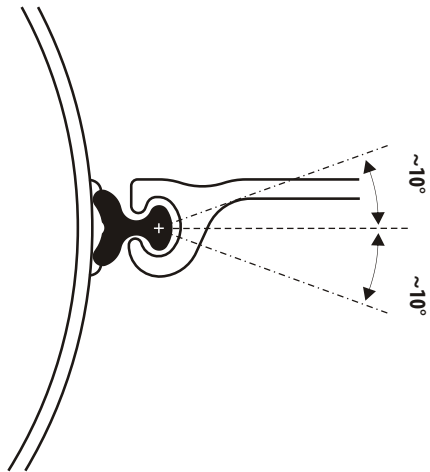
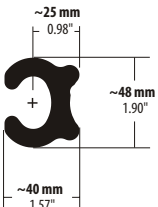
Параметры

Качество стали:	S355GP, S430GP
	ASTM A572 Gr. 50/60
	ASTM A690 MARINER™ Steel
Вес WOM:	~ 6,6 кг/м
Вес WOF:	~ 8,3 кг/м

WOM



WOF





WOM-XL, WOF-XL

For combined walls (pipes) with PZ/PZC (ball & socket) sheet piles,
pipe sheet pile walls

Installation

- 1. The pipes are delivered with the connectors already attached.
- 2. First, install the king piles (pipes) as you would in any combined sheet pile wall application.
- 3. Grasp the sheet piling and thread between the already installed pipe piles.
- 4. Increase flexibility in the middle interlocks of the sheet piles, combined with the swing of the connectors, to enable easier threading of the intermediate sheet piling.
- 5. All welding seams are a minimum ~6mm (~0.25").
- 6. Both sides have a continuous minimum tip and toe welding of ~500mm (~20").
- 7. Both sides are tack welded in the free length between tip and toe welding with 200mm/m (8"/yd). The distance from seam to seam is ~800mm (~31.5") or less.
- 8. In salt water, the water side is continuously welded on the whole pile length. Follow the instructions above for the reverse side of the pile, if it is not in contact with salt water.

Properties

Steel grade:	S355GP, S430GP
	ASTM A572 Gr. 50/60
	ASTM A690 MARINER™ Steel
Weight WOM-XL:	~ 8.27 lb/ft
Weight WOF-XL:	~11.98 lb/ft
Thickness:	0.47 in or more



WOM-XL, WOF-XL

Raccord à souder

Pour PZ et PZC (Ball + Socket)

Domaines d'emploi

- 1. Fabrication de cloisons de palplanches en tubes
- 2. Fabrication de cloisons de palplanches diverses avec tubes + profilés PZ/PZC

Caractéristiques

Nuances d'acier:	S355GP, S430GP
	ASTM A572 Gr. 50/60
	ASTM A690 MARINER™ Steel
Poids WOM-XL:	~12,31 kg/m
Poids WOF-XL:	~17,83 kg/m
Épaisseur de paroi:	12 mm ou plus



WOM-XL, WOF-XL

Anschweißprofile

Für PZ und PZC (Ball and Socket)

Einsatzgebiet

- 1. Erstellen von Rohrspundwänden
- 2. Erstellen von gemischten Spundwänden mit Rohren + PZ/PZC-Profilen



Eigenschaften

Stahlgüten:	S355GP, S430GP
	ASTM A572 Gr. 50/60
	ASTM A690 MARINER™ Steel
Gew. WOM-XL:	~12,31 kg/m
Gew. WOF-XL:	~17,83 kg/m
Wandstärke:	12 mm oder mehr



WOM-XL, WOF-XL

Profili saldati

Per PZ e PZC (maschio e femmina)

Campo di applicazione

- 1. Realizzazione di palancolati con tubi
- 2. Realizzazione di palancolati combinati: con tubi + profili PZ/PZC

Caratteristiche

Qualità dell'acciaio:	S355GP, S430GP
	ASTM A572 Gr. 50/60
	ASTM A690 MARINER™ Steel
Peso WOM-XL:	~12,31 kg/m
Peso WOF-XL:	~17,83 kg/m
Spessore:	12 mm o più



WOM-XL, WOF-XL

Perfiles de soldadura

Para PZ y PZC (Ball and Socket)

Ámbito de aplicaciones

- 1. Formación de tablestacas de tubo
- 2. Formación de tablestacas combinadas con tubos + perfiles PZ/PZC

Propiedades

Calidades de acero:	S355GP, S430GP
	ASTM A572 Gr. 50/60
	ASTM A690 MARINER™ Steel
Peso WOM-XL:	~12,31 kg/m
Peso WOF-XL:	~17,83 kg/m
Espesor de pantalla:	12 mm o más



WOM-XL, WOF-XL

Привариваемые профильные элементы

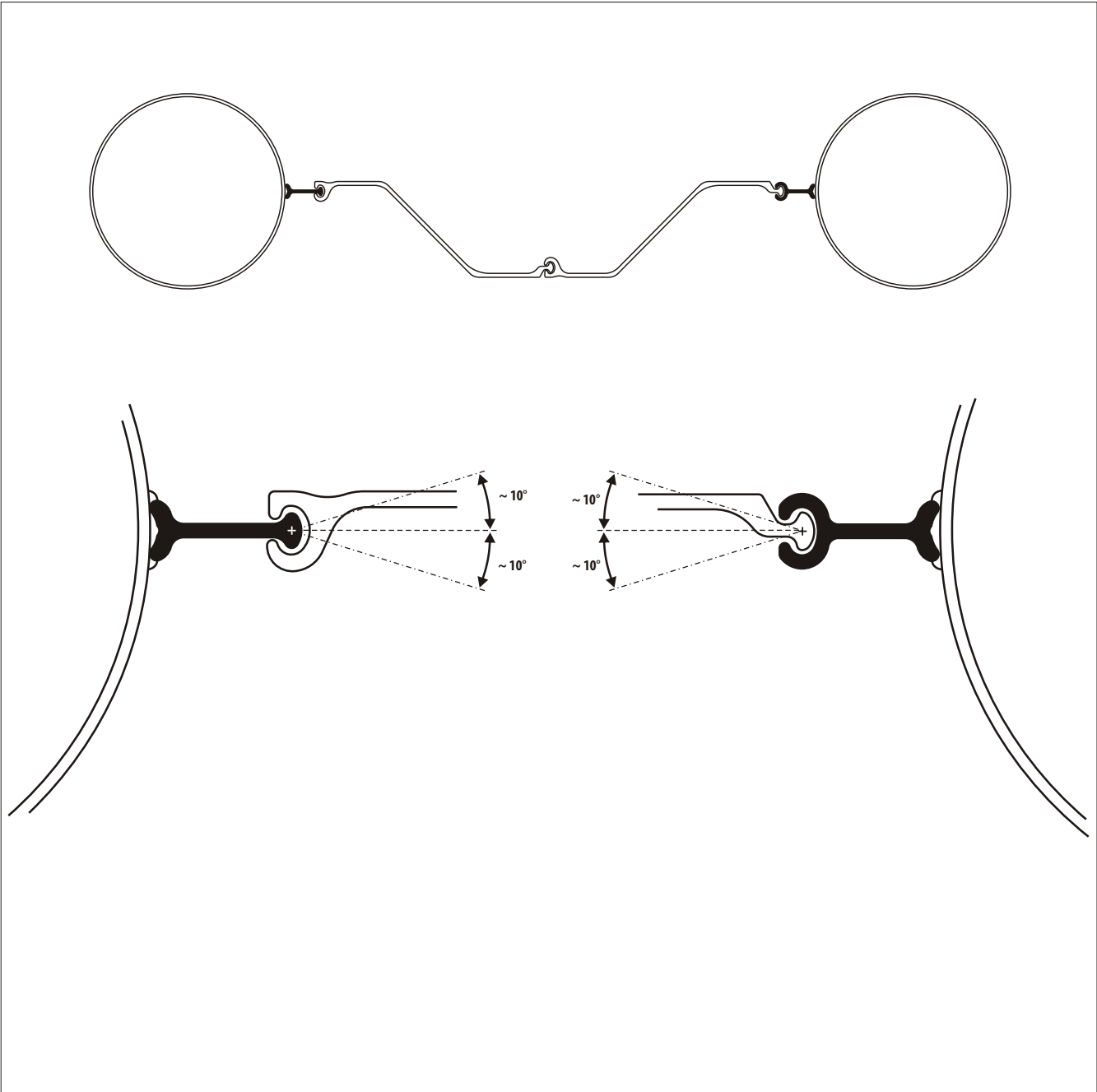
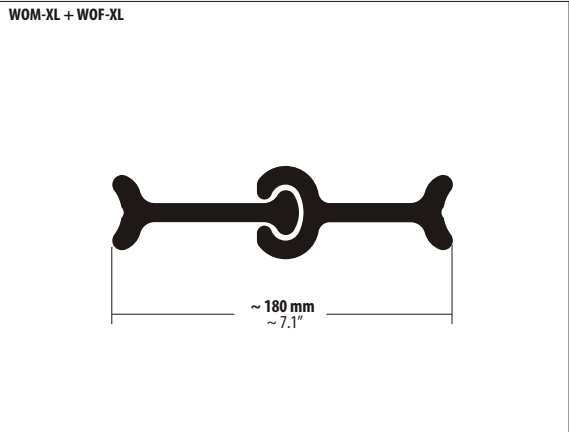
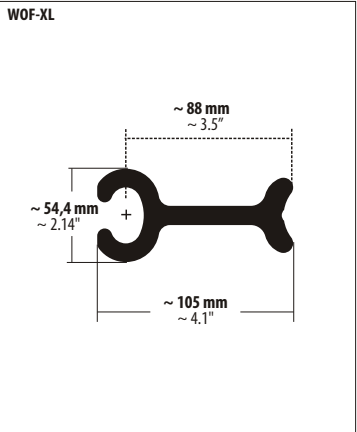
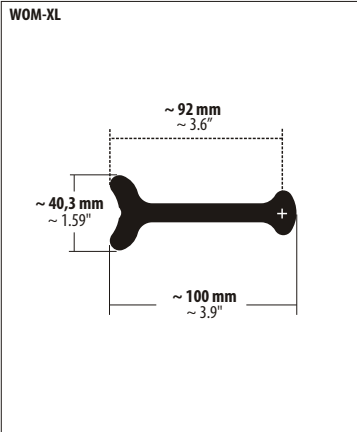
Для PZ и PZC (шар и гнездо)

Область применения

- 1. Изготовление трубчатых шпунтовых стенок
- 2. Изготовление смешанных шпунтовых стенок с трубами + профильными элементами PZ/PZC

Параметры

Качество стали:	S355GP, S430GP
	ASTM A572 Gr. 50/60
	ASTM A690 MARINER™ Steel
Вес WOM-XL:	~12,31 кг/м
Вес WOF-XL:	~17,83 кг/м
Толщина стенки:	12 мм или больше





LBM, LBF

For PZ/PZC (ball and socket) to Larssen transitions

Installation

1. Please review the proper interlocking examples that are listed.
2. Thread the connector into the interlock while the sheet pile is out of the ground.
3. Adjust the connector to the appropriate position.
4. Tack or spot-weld the connector in place. Typically, a ~250mm (~10”) weld attaching the connector to the sheet pile to the top is sufficient.
5. Drive/extract the sheet pile (with the connector attached) as you would normally.

Properties

Steel grade:	S355GP, S430GP
	ASTM A572 Gr. 50/60
	ASTM A690 MARINER™ Steel
Weight LBM:	~7.71 lb / ft
Weight LBF:	~8.78 lb / ft



LBM, LBF

Raccord de transition

Pour PZ et PZC (Ball + Socket)

Domaines d'emploi

Pour raccorder des palplanches en U ou Z Larssen aux palplanches PZC (Ball + Socket)

Caractéristiques

Nuances d'acier:	S355GP, S430GP
	ASTM A572 Gr. 50/60
	ASTM A690 MARINER™ Steel
Poids LBM:	~11,5 kg/m
Poids LBF:	~13,1 kg/m



LBM, LBF

Übergangsprofile

Für PZ und PZC (Ball and Socket)

Einsatzgebiet

1. Übergangsprofile von U- oder Larssen-Z-Bohlen zu PZC-Bohlen (Ball + Socket)
2. Übergangsprofile von PZC-Bohlen (Ball + Socket) zu U- oder Larssen-Z-Bohlen



Eigenschaften

Stahlgüten:	S355GP, S430GP
	ASTM A572 Gr. 50/60
	ASTM A690 MARINER™ Steel
Gewicht LBM:	~11,5 kg/m
Gewicht LBF:	~13,1 kg/m



LBM, LBF

Profili di raccordo

Per PZ e PZC (maschio e femmina)

Campo di applicazione

1. Profili di raccordo da palancole a U o palancole a Z Larssen a palancole PZC (Ball and Socket)
2. Profili di raccordo da palancole PZC (Ball and Socket) a palancole a U o palancole a Z Larssen

Caratteristiche

Qualità dell'acciaio:	S355GP, S430GP
	ASTM A572 Gr. 50/60
	ASTM A690 MARINER™ Steel
Peso LBM:	~11,5 kg/m
Peso LBF:	~13,1 kg/m



LBM, LBF

Perfiles de transición

Para PZ y PZC (Ball and Socket)

Ámbito de aplicaciones

1. Perfiles de transición de pilotes en U o ZLarssen a pilotes PZC (Ball + Socket)
2. Perfiles de transición de pilotes PZC (Ball + Socket) a pilotes en U o Z Larssen

Propiedades

Calidades de acero:	S355GP, S430GP
	ASTM A572 Gr. 50/60
	ASTM A690 MARINER™ Steel
Peso LBM:	~11,5 kg/m
Peso LBF:	~13,1 kg/m



LBM, LBF

Переходные профильные элементы

Для PZ и PZC (шар и гнездо)

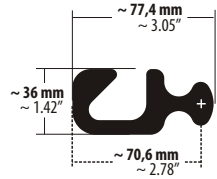
Область применения

1. Переходные профильные элементы с U или Z свай Larssen к PZC сваям (шар + гнездо)
2. Переходные профильные элементы с PZC-свай (шар + гнездо) к U или Z сваям Larssen

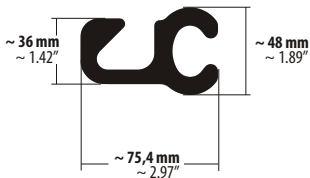
Параметры

Качество стали:	S355GP, S430GP
	ASTM A572 Gr. 50/60
	ASTM A690 MARINER™ Steel
Вес LBM:	~11,5 кг/м
Вес LBF:	~13,1 кг/м

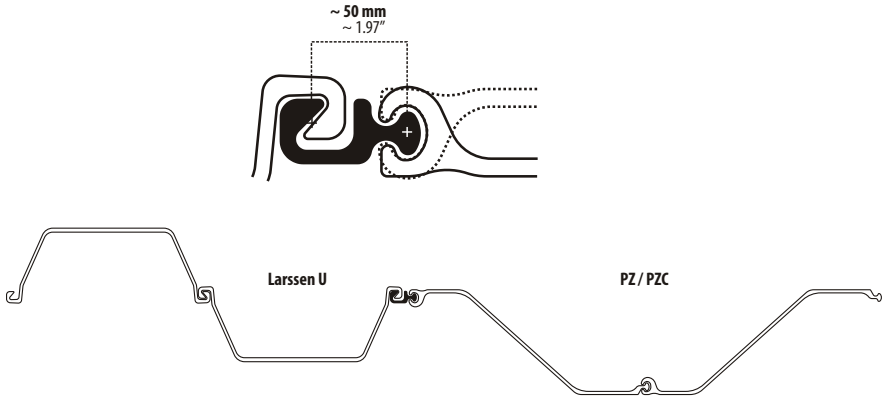
LBM



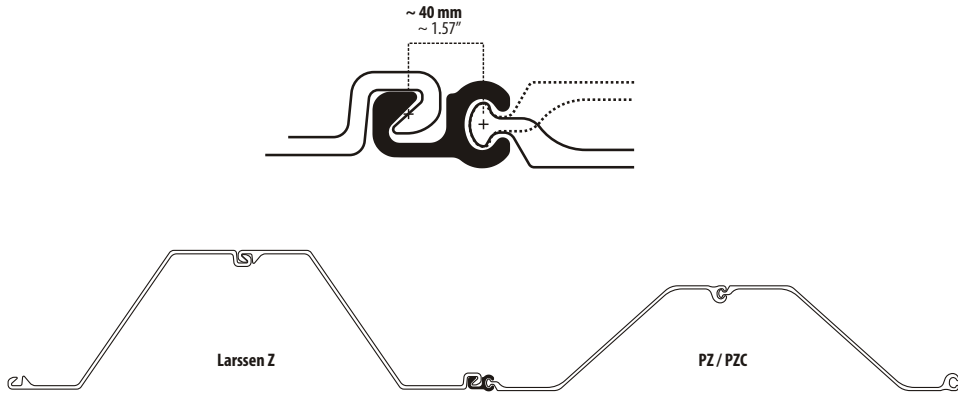
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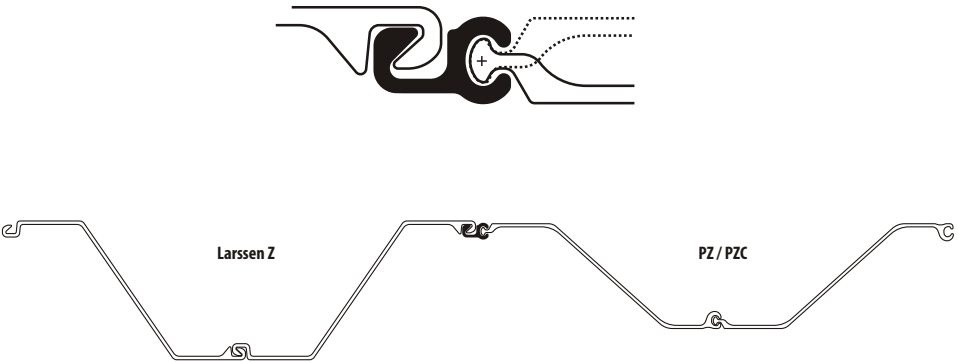
LBM



LBF



LBF





Flat Sheets

  **Overview**
For Flat Sheets
(Gerdau PS, Union,
YSP Nippon)

 **Übersicht**
Für Flachprofile
(Gerdau PS, Union,
YSP Nippon)

  **Listado**
Para perfiles planos
(Gerdau PS, Union,
YSP Nippon)

 **Aperçu**
Pour profilés plats
(Gerdau PS, Union,
YSP Nippon)

 **Indice**
Per profili piatti
(Gerdau PS, Union,
YSP Nippon)

 **Содержание**
Для плоских
профильных элементов
(GerdauPS, Union, YSP
Nippon)

Corners and Junction Piles						
SWC 30 A 	For 30° Y-corners in circular cells	30° Abzweigprofil	Perfil bifurcado de 30°	Raccord en Y 30°	Profilo per diramazione a 30°	Отводной профильный элемент 30°
SWC 30 B 	For 30° Y-corners in circular cells	30° Abzweigprofil	Perfil bifurcado de 30°	Raccord en Y 30°	Profilo per diramazione a 30°	Отводной профильный элемент 30°
SWC 60 A 	For 60° Y-corners in circular cells	60° Abzweigprofil	Perfil bifurcado de 60°	Raccord en Y 60°	Profilo per diramazione a 60°	Отводной профильный элемент 60°
SWC 60 B 	For 60° Y-corners in circular cells	60° Abzweigprofil	Perfil bifurcado de 60°	Raccord en Y 60°	Profilo per diramazione a 60°	Отводной профильный элемент 60°
SWC 90 A 	For 90° T-corners in circular cells	T-Verbindung, 90° Abzweigprofil	Unión en T, perfil bifurcado de 90°	Raccord en T (raccord en Y 90°)	Collegamento a T, Profilo per diramazione a 90°	T-образное соединение, ответвительный профильный элемент 90°
SWC 90 B 	For 90° T-corners in circular cells	T-Verbindung, 90° Abzweigprofil	Unión en T, perfil bifurcado de 90°	Raccord en T (raccord en Y 90°)	Connessione a T, Profilo per diramazione a 90°	T-образное соединение, ответвительный профильный элемент 90°
SWC 120 	For 120° Y-corners in circular cells	120° Abzweigprofil	Perfil bifurcado de 120°	Raccord en Y 120°	Profilo per diramazione a 120°	ответвительный профильный элемент 120°
SWC 	For weld-on connections	Anschweißprofil	Perfil de soldadura	Raccord à souder	Profilo da saldare	Привариваемый профильный элемент



SWC 30 A

For 30° Y-corners in circular cells with flat sheet piles

Installation

- 1. Please review the proper interlocking examples that are listed.
- 2. Thread the connector into the interlock while the sheet pile is out of the ground.
- 3. Adjust the connector to the appropriate position.
- 4. Tack or spot-weld the connector in place. Typically, a ~250mm (~10") weld attaching the connector to the sheet pile to the top is sufficient.
- 5. Drive/extract the sheet pile (with the connector attached) as you would normally.

Properties

Steel grade:	S355GP, S430GP
	ASTM A572 Gr. 50/60
	ASTM A690 MARINER™ Steel
Weight:	~ 37.89 lb / ft



SWC 30 A

Raccord en Y 30°

Pour profilés plats (Gerdau PS, Union, YSP Nippon)

Domaines d'emploi

Raccordement de trois palplanches permettant un angle de 30° entre deux des profilés

Caractéristiques

Nuances d'acier:	S355GP, S430GP
	ASTM A572 Gr. 50/60
	ASTM A690 MARINER™ Steel
Poids:	~ 56,5 kg/m



SWC 30 A

30° Abzweigprofil für Kreiszellen

Für Flachprofile (Gerdau PS, Union, YSP Nippon)

Einsatzgebiet

Erstellen von 30°-Abzweigungen



Eigenschaften

Stahlgüten:	S355GP, S430GP
	ASTM A572 Gr. 50/60
	ASTM A690 MARINER™ Steel
Gewicht:	~ 56,5 kg/m



SWC 30 A

Profilo per diramazione a 30° per celle circolari

Per profili piatti (Gerdau PS, Union, YSP Nippon)

Campo di applicazione

Realizzazione di diramazioni a 30°

Caratteristiche

Qualità dell'acciaio:	S355GP, S430GP
	ASTM A572 Gr. 50/60
	ASTM A690 MARINER™ Steel
Peso:	~ 56,5 kg/m



SWC 30 A

Perfil bifurcado de 30° para celdas circulares

Para perfiles planos (Gerdau PS, Union, YSP Nippon)

Ámbito de aplicaciones

Formación de bifurcaciones de 30°

Propiedades

Calidades de acero:	S355GP, S430GP
	ASTM A572 Gr. 50/60
	ASTM A690 MARINER™ Steel
Peso:	~ 56,5 kg/m



SWC 30 A

30° ответвительный профильный элемент для круглых ячеек

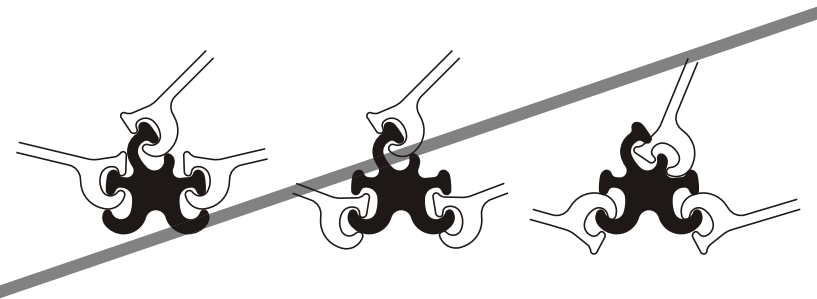
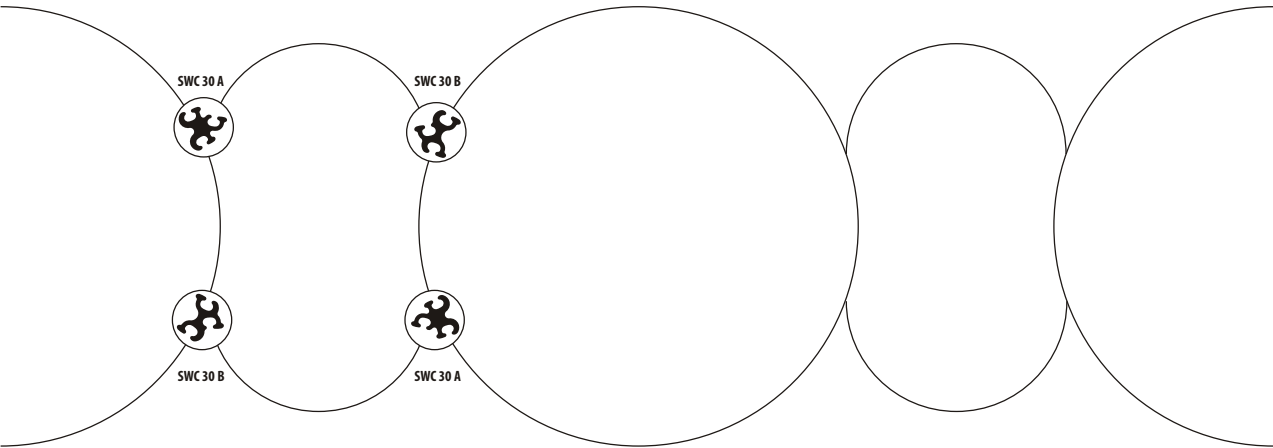
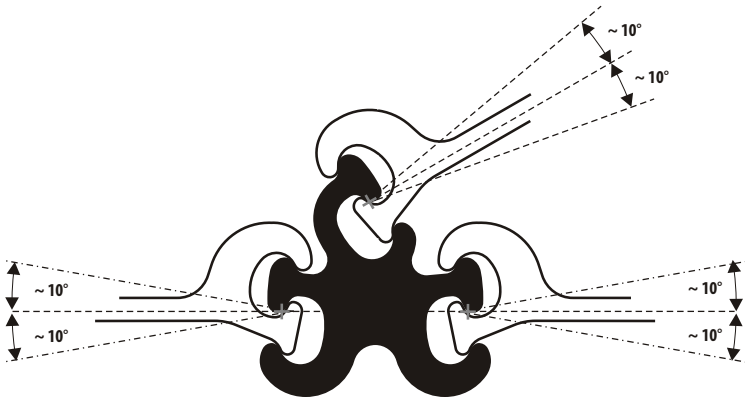
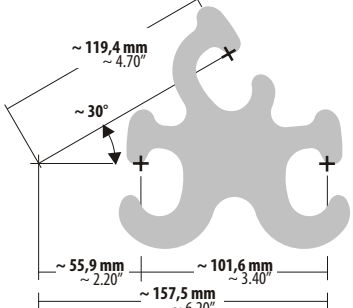
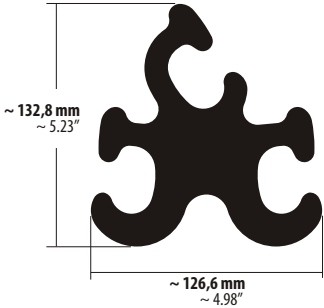
Для плоских профильных элементов (Gerdau PS, Union, YSP Nippon)

Область применения

Изготовление 30°-ответвлений

Параметры

Качество стали:	S355GP, S430GP
	ASTM A572 Gr. 50/60
	ASTM A690 MARINER™ Steel
Вес:	~ 56,5 кг/м





SWC 30 B

For 30° Y-corners in circular cells with flat sheet piles

Installation

- 1. Please review the proper interlocking examples that are listed.
- 2. Thread the connector into the interlock while the sheet pile is out of the ground.
- 3. Adjust the connector to the appropriate position.
- 4. Tack or spot-weld the connector in place. Typically, a ~250mm (~10") weld attaching the connector to the sheet pile to the top is sufficient.
- 5. Drive/extract the sheet pile (with the connector attached) as you would normally.

Properties

Steel grade:	S355GP, S430GP
	ASTM A572 Gr. 50/60
	ASTM A690 MARINER™ Steel
Weight:	~ 28.83 lb / ft



SWC 30 B

Raccord en Y 30°

Pour profilés plats (Gerdau PS, Union, YSP Nippon)

Domaines d'emploi

Raccordement de trois palplanches permettant un angle de 30° entre deux des profilés

Caractéristiques

Nuances d'acier:	S355GP, S430GP
	ASTM A572 Gr. 50/60
	ASTM A690 MARINER™ Steel
Poids:	~ 43,0 kg/m



SWC 30 B

30° Abzweigprofil für Kreiszellen

Für Flachprofile (Gerdau PS, Union, YSP Nippon)

Einsatzgebiet

Erstellen von 30°-Abzweigungen



Eigenschaften

Stahlgüten:	S355GP, S430GP
	ASTM A572 Gr. 50/60
	ASTM A690 MARINER™ Steel
Gewicht:	~ 43,0 kg/m



SWC 30 B

Profilo per diramazione a 30° per celle circolari

Per profili piatti (Gerdau PS, Union, YSP Nippon)

Campo di applicazione

Realizzazione di diramazioni a 30°

Caratteristiche

Qualità dell'acciaio:	S355GP, S430GP
	ASTM A572 Gr. 50/60
	ASTM A690 MARINER™ Steel
Peso:	~ 43,0 kg/m



SWC 30 B

Perfil bifurcado de 30° para celdas circulares

Para perfiles planos (Gerdau PS, Union, YSP Nippon)

Ámbito de aplicaciones

Formación de bifurcaciones de 30°

Propiedades

Calidades de acero:	S355GP, S430GP
	ASTM A572 Gr. 50/60
	ASTM A690 MARINER™ Steel
Peso:	~ 43,0 kg/m



SWC 30 B

30° ответвительный профильный элемент для круглых ячеек

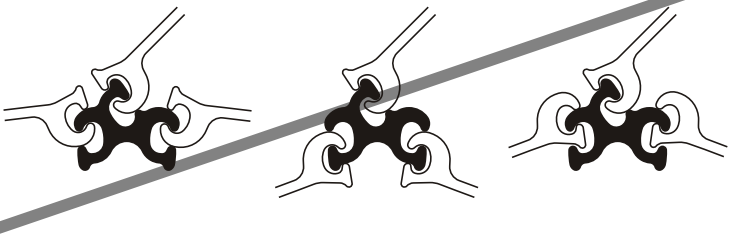
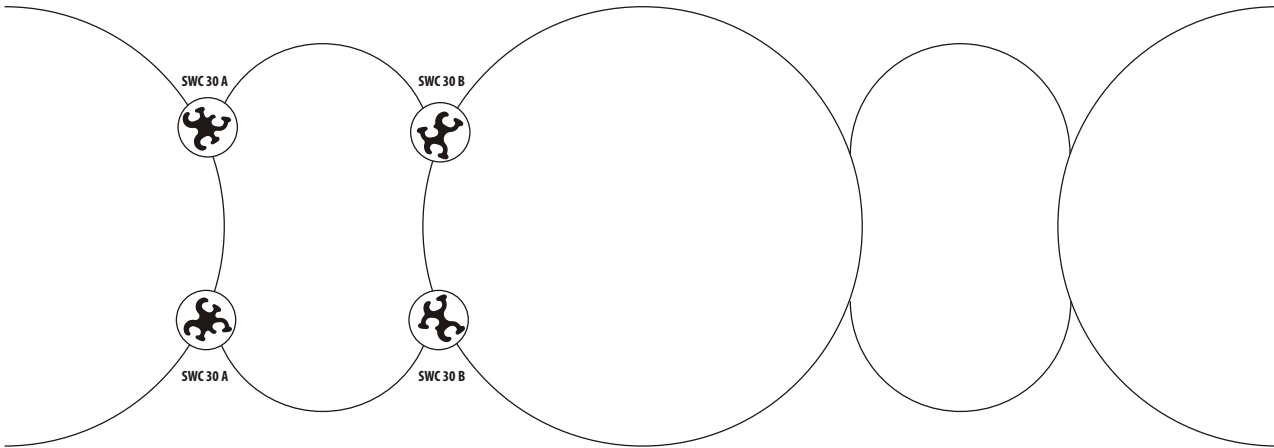
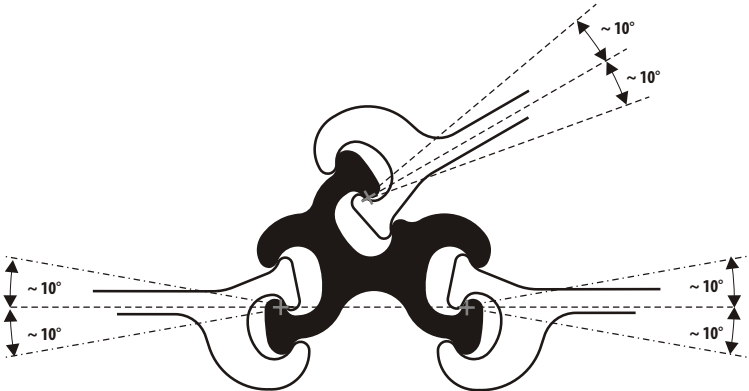
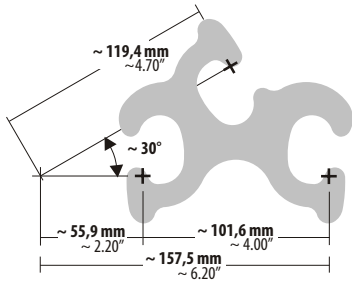
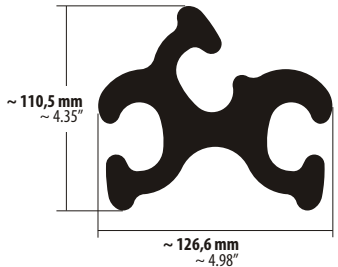
Для плоских профильных элементов (Gerdau PS, Union, YSP Nippon)

Область применения

Изготовление 30°-ответвлений

Параметры

Качество стали:	S355GP, S430GP
	ASTM A572 Gr. 50/60
	ASTM A690 MARINER™ Steel
Вес:	~ 43,0 кг/м





SWC 60 A

For 60° Y-corners in circular cells with flat sheet piles

Installation

- 1. Please review the proper interlocking examples that are listed.
- 2. Thread the connector into the interlock while the sheet pile is out of the ground.
- 3. Adjust the connector to the appropriate position.
- 4. Tack or spot-weld the connector in place. Typically, a ~250mm (~10") weld attaching the connector to the sheet pile to the top is sufficient.
- 5. Drive/extract the sheet pile (with the connector attached) as you would normally.

Properties

Steel grade:	S355GP, S430GP
	ASTM A572 Gr. 50/60
	ASTM A690 MARINER™ Steel
Weight:	~ 41.11 lb / ft



SWC 60 A

Raccord en Y 60°

Pour profilés plats (Gerdau PS, Union, YSP Nippon)

Domaines d'emploi

Raccordement de trois palplanches permettant un angle de 60° entre deux des profilés

Caractéristiques

Nuances d'acier:	S355GP, S430GP
	ASTM A572 Gr. 50/60
	ASTM A690 MARINER™ Steel
Poids:	~ 61,3 kg/m



SWC 60 A

60° Abzweigprofil für Kreiszellen

Für Flachprofile (Gerdau PS, Union, YSP Nippon)

Einsatzgebiet

Erstellen von 60°-Abzweigungen



Eigenschaften

Stahlgüten:	S355GP, S430GP
	ASTM A572 Gr. 50/60
	ASTM A690 MARINER™ Steel
Gewicht:	~ 61,3 kg/m



SWC 60 A

Profilo per diramazione a 60° per celle circolari

Per profili piatti (Gerdau PS, Union, YSP Nippon)

Campo di applicazione

Realizzazione di diramazioni a 60°

Caratteristiche

Qualità dell'acciaio:	S355GP, S430GP
	ASTM A572 Gr. 50/60
	ASTM A690 MARINER™ Steel
Peso:	~ 61,3 kg/m



SWC 60 A

Perfil bifurcado de 60° para celdas circulares

Para perfiles planos (Gerdau PS, Union, YSP Nippon)

Ámbito de aplicaciones

Formación de bifurcaciones de 60°

Propiedades

Calidades de acero:	S355GP, S430GP
	ASTM A572 Gr. 50/60
	ASTM A690 MARINER™ Steel
Peso:	~ 61,3 kg/m



SWC 60 A

60° ответвительный профильный элемент для круглых ячеек

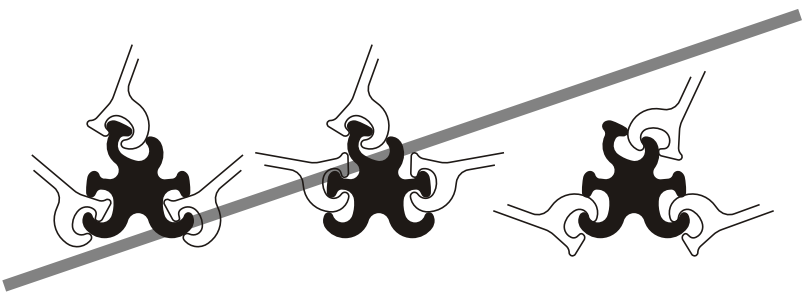
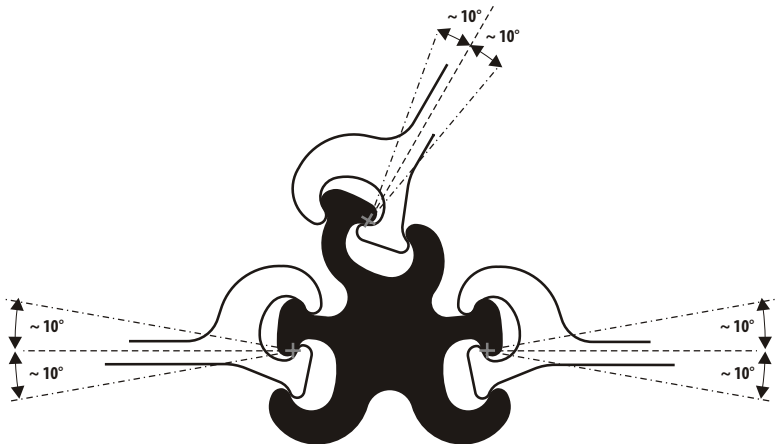
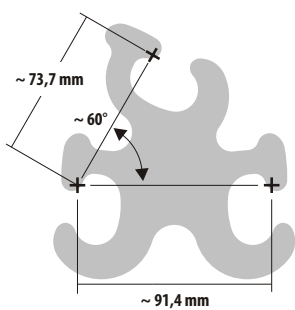
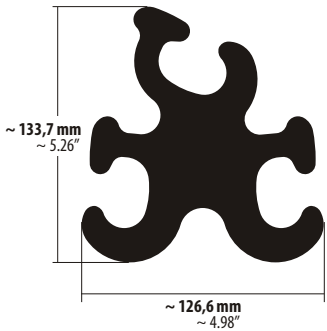
Для плоских профильных элементов (Gerdau PS, Union, YSP Nippon)

Область применения

Изготовление 60°-ответвлений

Параметры

Качество стали:	S355GP, S430GP
	ASTM A572 Gr. 50/60
	ASTM A690 MARINER™ Steel
Вес:	~ 61,3 кг/м





SWC 60 B

For 60° Y-corners in circular cells with flat sheet piles

Installation

- 1. Please review the proper interlocking examples that are listed.
- 2. Thread the connector into the interlock while the sheet pile is out of the ground.
- 3. Adjust the connector to the appropriate position.
- 4. Tack or spot-weld the connector in place. Typically, a ~250mm (~10") weld attaching the connector to the sheet pile to the top is sufficient.
- 5. Drive/extract the sheet pile (with the connector attached) as you would normally.

Properties

Steel grade:	S355GP, S430GP
	ASTM A572 Gr. 50/60
	ASTM A690 MARINER™ Steel
Weight:	~ 33.46 lb / ft



SWC 60 B

Raccord en Y 60°

Pour profilés plats (Gerdau PS, Union, YSP Nippon)

Domaines d'emploi

Raccordement de trois palplanches permettant un angle de 60° entre deux des profilés

Caractéristiques

Nuances d'acier:	S355GP, S430GP
	ASTM A572 Gr. 50/60
	ASTM A690 MARINER™ Steel
Poids:	~ 49,9 kg/m



SWC 60 B

60° Abzweigprofil für Kreiszellen

Für Flachprofile (Gerdau PS, Union, YSP Nippon)

Einsatzgebiet

Erstellen von 60°-Abzweigungen



Eigenschaften

Stahlgüten:	S355GP, S430GP
	ASTM A572 Gr. 50/60
	ASTM A690 MARINER™ Steel
Gewicht:	~ 49,9 kg/m



SWC 60 B

Profilo per diramazione a 60° per celle circolari

Per profili piatti (Gerdau PS, Union, YSP Nippon)

Campo di applicazione

Realizzazione di diramazioni a 60°

Caratteristiche

Qualità dell'acciaio:	S355GP, S430GP
	ASTM A572 Gr. 50/60
	ASTM A690 MARINER™ Steel
Peso:	~ 49,9 kg/m



SWC 60 B

Perfil bifurcado de 60° para celdas circulares

Para perfiles planos (Gerdau PS, Union, YSP Nippon)

Ámbito de aplicaciones

Formación de bifurcaciones de 60°

Propiedades

Calidades de acero:	S355GP, S430GP
	ASTM A572 Gr. 50/60
	ASTM A690 MARINER™ Steel
Peso:	~ 49,9 kg/m



SWC 60 B

60° ответвительный профильный элемент для круглых ячеек

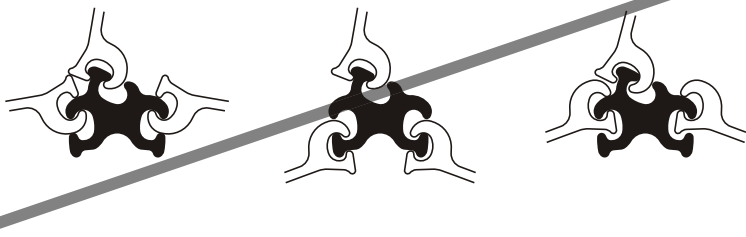
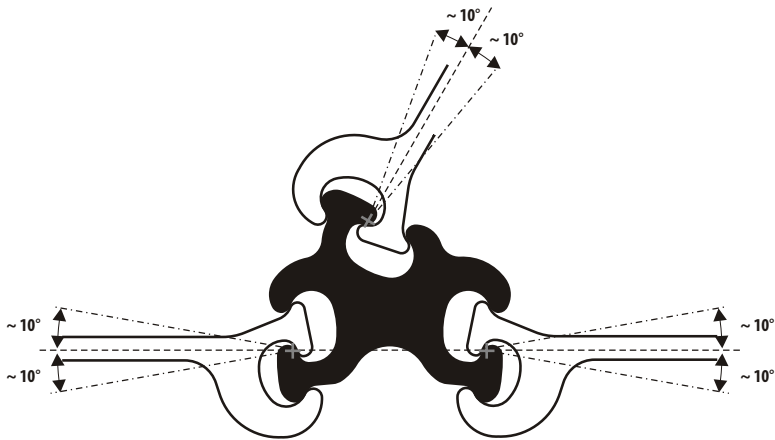
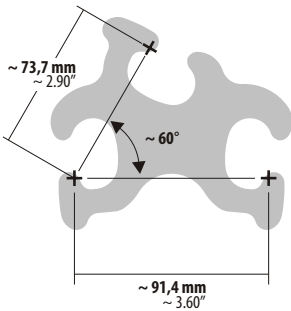
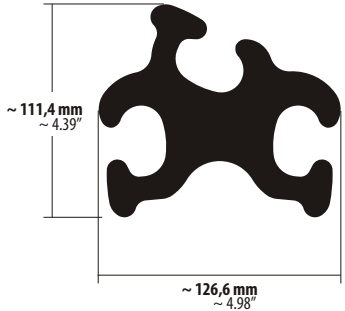
Для плоских профильных элементов (Gerdau PS, Union, YSP Nippon)

Область применения

Изготовление 60°-ответвлений

Параметры

Качество стали:	S355GP, S430GP
	ASTM A572 Gr. 50/60
	ASTM A690 MARINER™ Steel
Вес:	~ 49,9 кг/м





SWC 90 A

For 90° T-corners in circular cells with flat sheet piles

Installation

- 1. Please review the proper interlocking examples that are listed.
- 2. Thread the connector into the interlock while the sheet pile is out of the ground.
- 3. Adjust the connector to the appropriate position.
- 4. Tack or spot-weld the connector in place. Typically, a ~250mm (~10") weld attaching the connector to the sheet pile to the top is sufficient.
- 5. Drive/extract the sheet pile (with the connector attached) as you would normally.

Properties

Steel grade:	S355GP, S430GP
	ASTM A572 Gr. 50/60
	ASTM A690 MARINER™ Steel
Weight:	~ 35.82 lb / ft



SWC 90 A

Raccord en T 90°

Pour profilés plats (Gerdau PS, Union, YSP Nippon)

Domaines d'emploi

Raccordement de trois palplanches permettant un angle de 90° entre deux des profilés

Caractéristiques

Nuances d'acier:	S355GP, S430GP
	ASTM A572 Gr. 50/60
	ASTM A690 MARINER™ Steel
Poids:	~ 53,3 kg/m



SWC 90 A

T-Verbindung
90° Abzweigprofil

Für Flachprofile (Gerdau PS, Union, YSP Nippon)

Einsatzgebiet

Erstellen von 90°-Abzweigungen



Eigenschaften

Stahlgüten:	S355GP, S430GP
	ASTM A572 Gr. 50/60
	ASTM A690 MARINER™ Steel
Gewicht:	~ 53,3 kg/m



SWC 90 A

Connessione a T

Profilo per diramezione a 90°

Per profili piatti (Gerdau PS, Union, YSP Nippon)

Campo di applicazione

Realizzazione di diramazioni a 90°

Caratteristiche

Qualità dell'acciaio:	S355GP, S430GP
	ASTM A572 Gr. 50/60
	ASTM A690 MARINER™ Steel
Peso:	~ 53,3 kg/m



SWC 90 A

Unión en T

Perfil bifurcado de 90°

Para perfiles planos (Gerdau PS, Union, YSP Nippon)

Ámbito de aplicaciones

Formación de bifurcaciones de 90°

Propiedades

Calidades de acero:	S355GP, S430GP
	ASTM A572 Gr. 50/60
	ASTM A690 MARINER™ Steel
Peso:	~ 53,3 kg/m



SWC 90 A

T-образное соединение

90° ответвительный профильный элемент

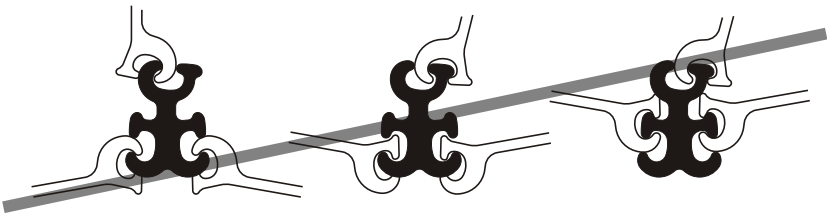
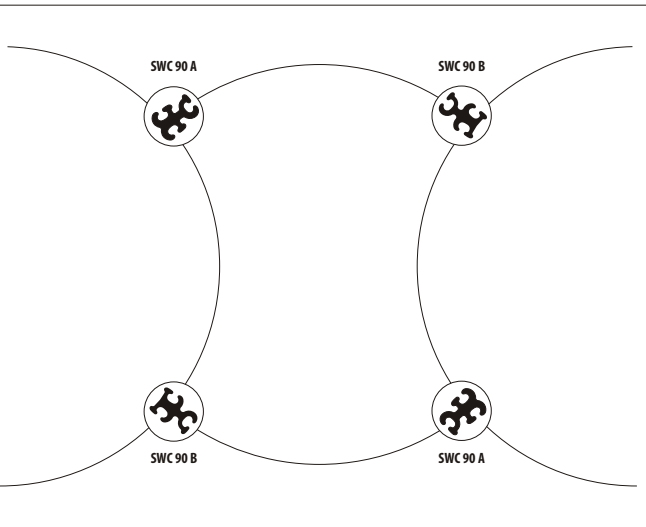
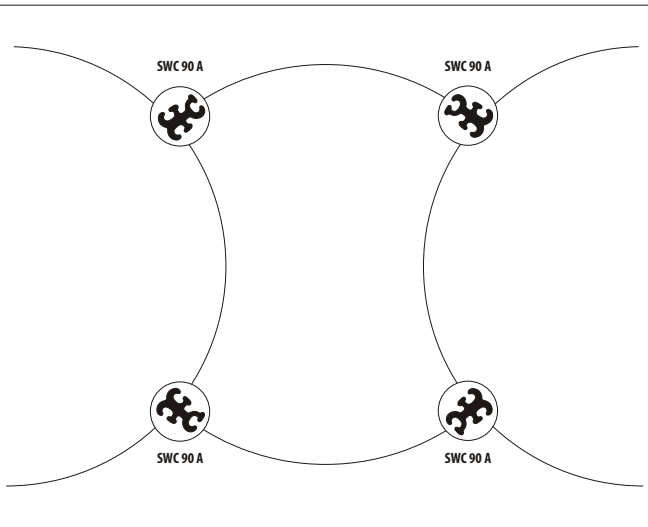
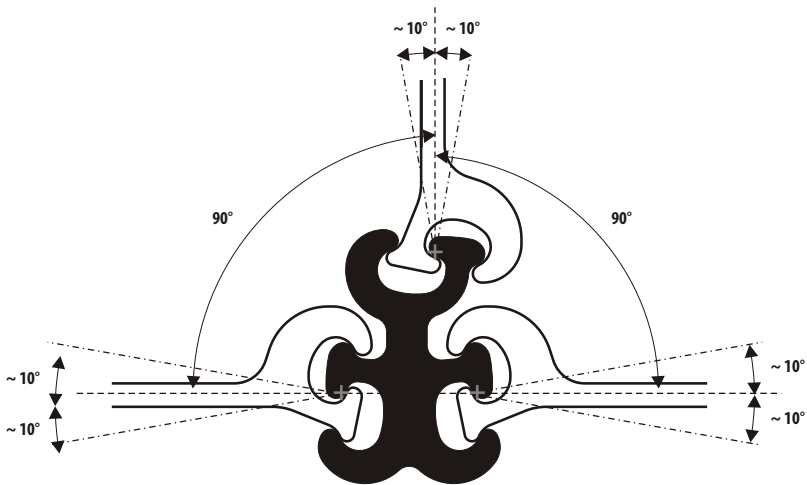
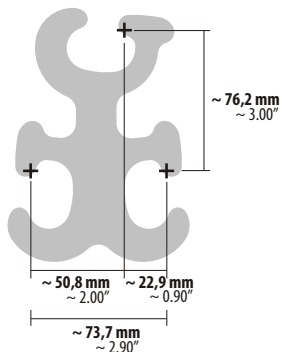
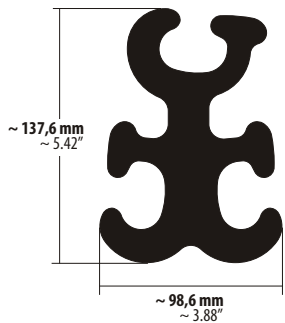
Для плоских профильных элементов
(Gerdau PS, Union, YSP Nippon)

Область применения

Изготовление 90°-ответвлений

Параметры

Качество стали:	S355GP, S430GP
	ASTM A572 Gr. 50/60
	ASTM A690 MARINER™ Steel
Вес:	~ 53,3 кг/м





SWC 90 B

For 90° T-corners in circular cells with flat sheet piles

Installation

- 1. Please review the proper interlocking examples that are listed.
- 2. Thread the connector into the interlock while the sheet pile is out of the ground.
- 3. Adjust the connector to the appropriate position.
- 4. Tack or spot-weld the connector in place. Typically, a ~250mm (~10") weld attaching the connector to the sheet pile to the top is sufficient.
- 5. Drive/extract the sheet pile (with the connector attached) as you would normally.

Properties

Steel grade:	S355GP, S430GP
	ASTM A572 Gr. 50/60
	ASTM A690 MARINER™ Steel
Weight:	~ 35.82 lb/ ft



SWC 90 B

Raccord en T 90°

Pour profilés plats (Gerdau PS, Union, YSP Nippon)

Domaines d'emploi

Raccordement de trois palplanches permettant un angle de 90° entre deux des profilés

Caractéristiques

Nuances d'acier:	S355GP, S430GP
	ASTM A572 Gr. 50/60
	ASTM A690 MARINER™ Steel
Poids:	~ 53,3 kg/m



SWC 90 B

T-Verbindung
90° Abzweigprofil

Für Flachprofile (Gerdau PS, Union, YSP Nippon)

Einsatzgebiet

Erstellen von 90°-Abzweigungen



Eigenschaften

Stahlgüten:	S355GP, S430GP
	ASTM A572 Gr. 50/60
	ASTM A690 MARINER™ Steel
Gewicht:	~ 53,3 kg/m



SWC 90 B

Connessione a T

Profilo per diramezione a 90°

Per profili piatti (Gerdau PS, Union, YSP Nippon)

Campo di applicazione

Realizzazione di diramazioni a 90°

Caratteristiche

Qualità dell'acciaio:	S355GP, S430GP
	ASTM A572 Gr. 50/60
	ASTM A690 MARINER™ Steel
Peso:	~ 53,3 kg/m



SWC 90 B

Unión en T

Perfil bifurcado de 90°

Para perfiles planos (Gerdau PS, Union, YSP Nippon)

Ámbito de aplicaciones

Formación de bifurcaciones de 90°

Propiedades

Calidades de acero:	S355GP, S430GP
	ASTM A572 Gr. 50/60
	ASTM A690 MARINER™ Steel
Peso:	~ 53,3 kg/m



SWC 90 B

T-образное соединение

90° ответвительный профильный элемент

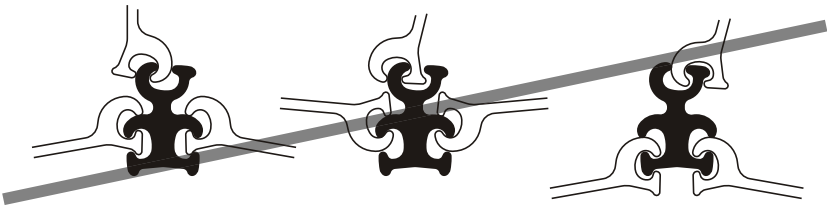
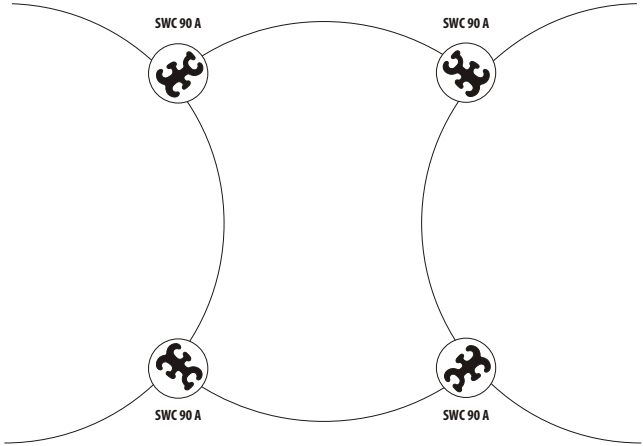
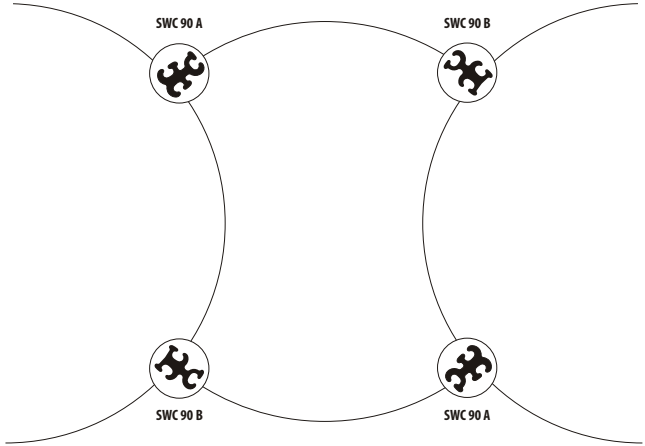
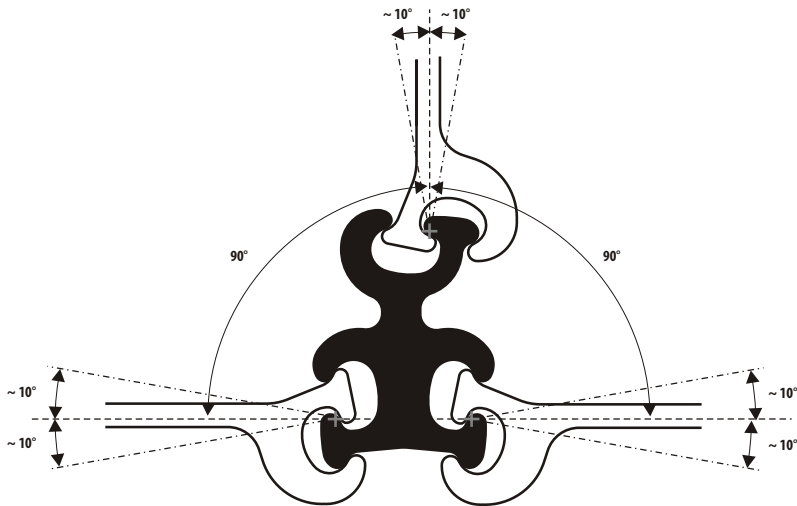
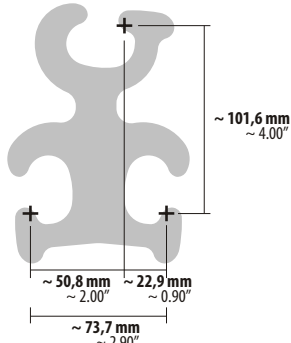
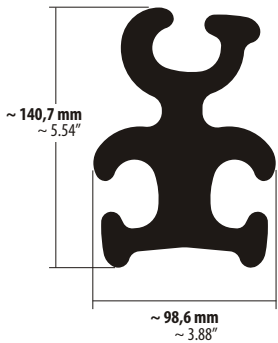
Для плоских профильных элементов
(Gerdau PS, Union, YSP Nippon)

Область применения

Изготовление 90°-ответвлений

Параметры

Качество стали:	S355GP, S430GP
	ASTM A572 Gr. 50/60
	ASTM A690 MARINER™ Steel
Вес:	~ 53,3 кг/м





SWC 120

For 120° Y-corners in circular cells with flat sheet piles

Installation

- 1. Please review the proper interlocking examples that are listed.
- 2. Thread the connector into the interlock while the sheet pile is out of the ground.
- 3. Adjust the connector to the appropriate position.
- 4. Tack or spot-weld the connector in place. Typically, a ~250mm (~10") weld attaching the connector to the sheet pile to the top is sufficient.
- 5. Drive/extract the sheet pile (with the connector attached) as you would normally.

Properties

Steel grade:	S355GP, S430GP
	ASTM A572 Gr. 50/60
	ASTM A690 MARINER™ Steel
Weight:	~ 38.29 lb / ft



SWC 120

Raccord en Y 120°
Pour profilés plats PS (Gerdau PS, Union, YSP Nippon)

Domaines d'emploi

Raccordement de trois palplanches permettant un angle de 120° entre deux des profilés

Caractéristiques

Nuances d'acier:	S355GP, S430GP
	ASTM A572 Gr. 50/60
	ASTM A690 MARINER™ Steel
Poids:	~ 57,1 kg/m



SWC 120

120° Abzweigprofil
Für Flachprofile (Gerdau PS, Union, YSP Nippon)

Einsatzgebiet

Erstellen von 120°-Abzweigungen



Eigenschaften

Stahlgüten:	S355GP, S430GP
	ASTM A572 Gr. 50/60
	ASTM A690 MARINER™ Steel
Gewicht:	~ 57,1 kg/m



SWC 120

Profilo per diramezione a 120°
Per profili piatti (Gerdau PS, Union, YSP Nippon)

Campo di applicazione

Realizzazione di diramazioni a 120°

Caratteristiche

Qualità dell'acciaio:	S355GP, S430GP
	ASTM A572 Gr. 50/60
	ASTM A690 MARINER™ Steel
Peso:	~ 57,1 kg/m



SWC 120

Perfil bifurcado de 120°
Para perfiles planos (Gerdau PS, Union, YSP Nippon)

Ámbito de aplicaciones

Formación de bifurcaciones de 120°

Propiedades

Calidades de acero:	S355GP, S430GP
	ASTM A572 Gr. 50/60
	ASTM A690 MARINER™ Steel
Peso:	~ 57,1 kg/m



SWC 120

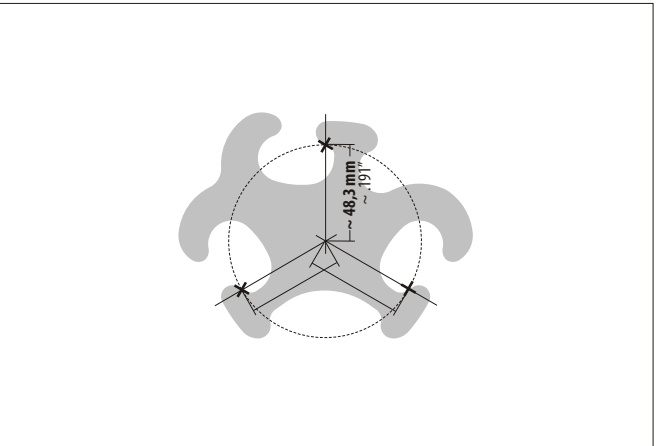
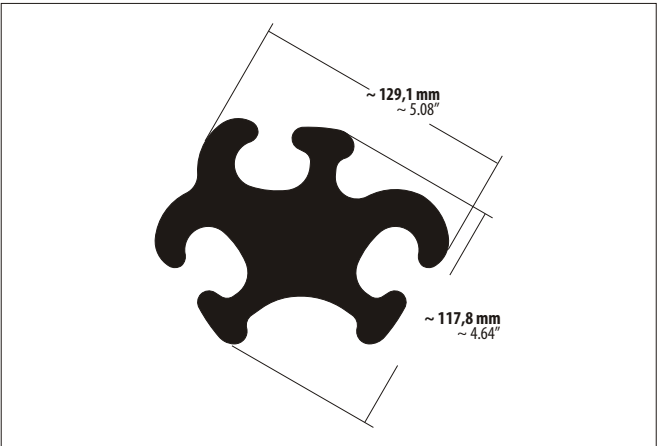
120° ответвительный профильный элемент
Для плоских профильных элементов
(Gerdau PS, Union, YSP Nippon)

Область применения

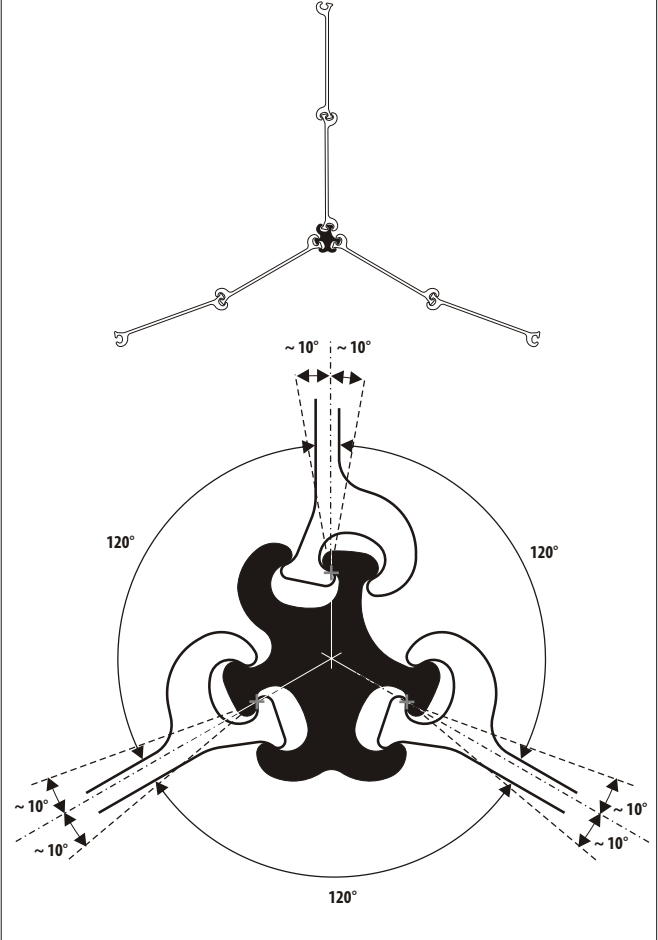
Изготовление 120°-ответвлений

Параметры

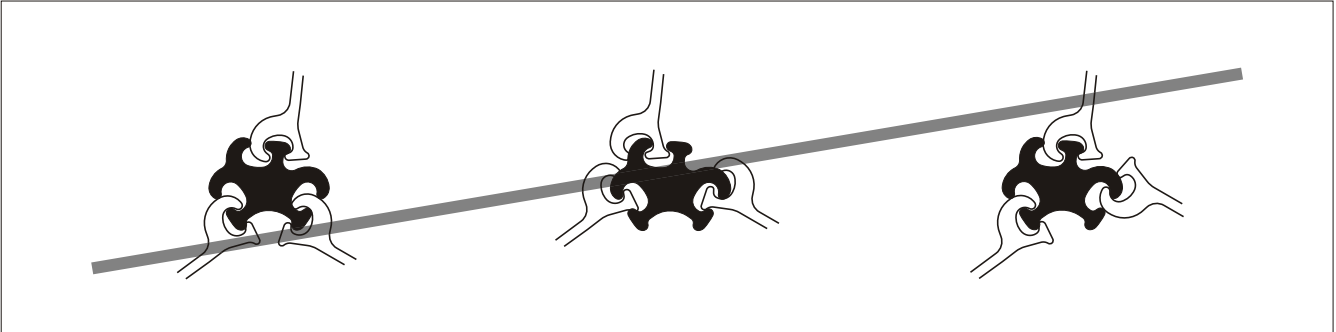
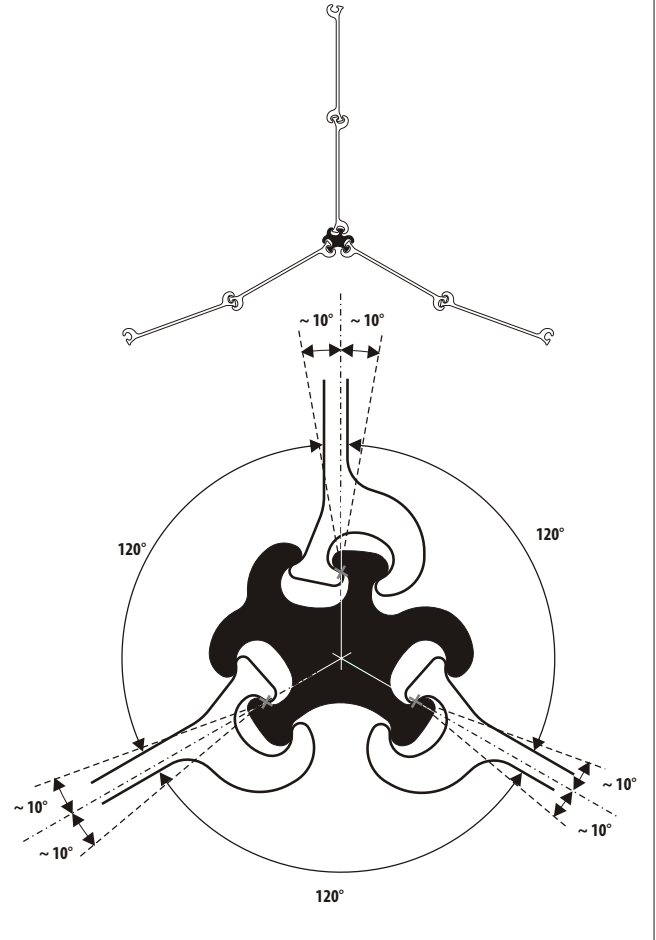
Качество стали:	S355GP, S430GP
	ASTM A572 Gr. 50/60
	ASTM A690 MARINER™ Steel
Вес:	~ 57,1 кг/м



Orientation A



Orientation B





SWC

For weld-on connections with flat sheet piles

Installation

- 1. Please review the proper interlocking examples that are listed.
- 2. Thread the connector into the interlock while the sheet pile is out of the ground.
- 3. Adjust the connector to the appropriate position.
- 4. Tack or spot-weld the connector in place. Typically, a ~250mm (~10") weld attaching the connector to the sheet pile to the top is sufficient.
- 5. Drive/extract the sheet pile (with the connector attached) as you would normally.

Properties

Steel grade:	S355GP, S430GP
	ASTM A572 Gr. 50/60
	ASTM A690 MARINER™ Steel
Weight:	~ 12.34 lb / ft



SWC

Raccord à souder

Pour profilés plats (Gerdau PS, Union, YSP Nippon)

Domaines d'emploi

- 1. Raccord à souder pour ancrage arrière
- 2. Rideaux mixtes avec des profilés plats
- 3. Fabrication de départs/branchements

Caractéristiques

Nuances d'acier:	S355GP, S430GP
	ASTM A572 Gr. 50/60
	ASTM A690 MARINER™ Steel
Poids:	~ 18,4 kg/m



SWC

Anschweißprofil

Für Flachprofile (Gerdau PS, Union, YSP Nippon)

Einsatzgebiet

- 1. Anschweißprofil zur Rückverankerung
- 2. Erstellen von Kombiwänden mit Flachprofilen
- 3. Erstellen von Abzweigungen



Eigenschaften

Stahlgüten:	S355GP, S430GP
	ASTM A572 Gr. 50/60
	ASTM A690 MARINER™ Steel
Gewicht:	~ 18,4 kg/m



SWC

Perfil de soldadura

Para perfiles planos (Gerdau PS, Union, YSP Nippon)

Ámbito de aplicaciones

- 1. Perfil de soldadura para reanclar
- 2. Formación de pantallas combinadas con perfiles planos
- 3. Formación de bifurcaciones

Propiedades

Calidades de acero:	S355GP, S430GP
	ASTM A572 Gr. 50/60
	ASTM A690 MARINER™ Steel
Peso:	~ 18,4 kg/m



SWC

Привариваемый профильный элемент

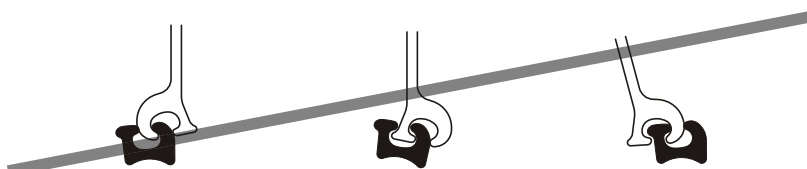
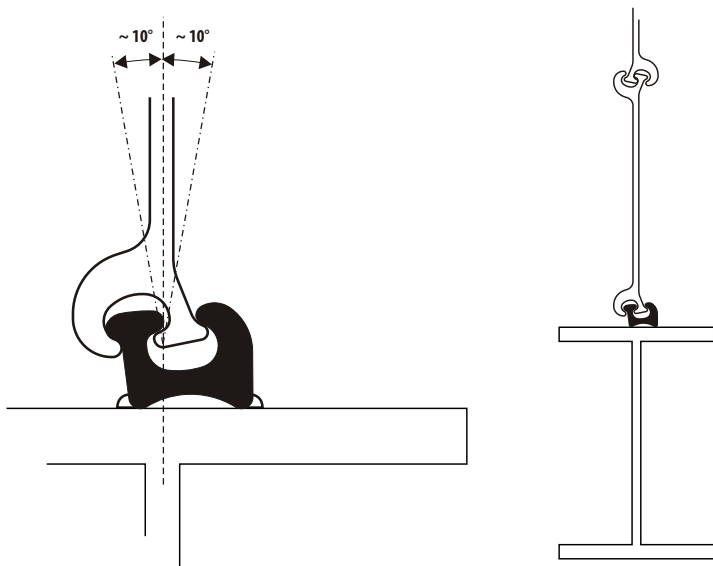
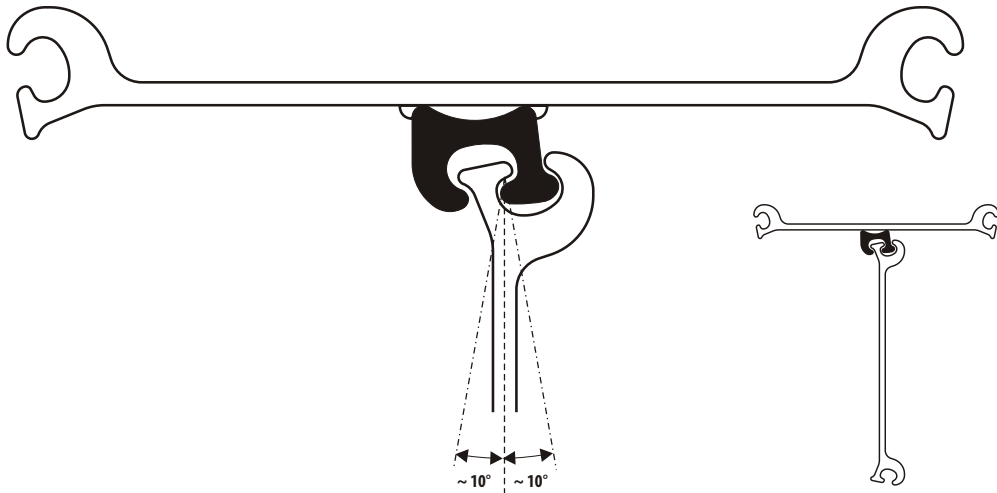
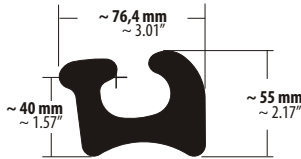
Для плоских профильных элементов (Gerdau PS, Union, YSP Nippon)

Область применения

- 1. Привариваемый профильный элемент для крепления сзади
- 2. Изготовление комбинированных стенок с плоскими профильными элементами
- 3. Изготовление отводов

Параметры

Качество стали:	S355GP, S430GP
	ASTM A572 Gr. 50/60
	ASTM A690 MARINER™ Steel
Вес:	~ 18,4 кг/м





  Overview	 Übersicht	  Listado	 Aperçu	 Indice	 Содержание
For Cold Formed	Für Leichtprofile	Para perfiles ligeros	Pour profilés légers	Per profili leggeri	Для легких профильных элементов

Corner & Junction Piles						
CFC 90 	For 90° Corners	90° Eckverbindung	Unión angular de 90°	Raccord d'angle 90°	Connessione per angolo a 90°	Угловой соединительный элемент 90°
CF Tee 	For T-corners, 90° corners	T-Verbindung, 90° Eckverbindung	Unión en T, unión angular de 90°	Raccord en T, raccord d'angle 90°	Connessione a T, connessione per angolo a 90°	T-образное соединение угловой соединительный элемент 90°

Combined Sheet Piles						
CF 	For combined walls with pipes	Anschweißprofil zum Verbinden von Rohren mit Leichtprofilen, Erstellen von Ecken und Abzweigungen	Perfiles de soldadura para unir tubos con perfiles ligeros, así como para formar esquinas y bifurcaciones	Raccord à souder pour relier les tuyaux aux profilés légers, fabrication d'angles et de départs	Profili saldati per collegare tubi con profili leggeri e per creare angoli e diramazioni	Привариваемый профильный элемент для соединения труб с легкими профильными элементами, изготовление углов и ответвлений
PCF I PCF II 	For combined walls with Peiner-type beams	Kombiwandprofile zum Verbinden von Keulenträgern mit Leichtprofilen	Perfiles de pantalla combinada para unir portamazas con perfiles ligeros	Raccords pour rideaux mixtes pour relier les poutres de soutien aux profilés légers	Profilo parete combinata per collegare travi a doppia T con profili leggeri	Комбинированные профильные элементы стен для соединения опор с гребнем с легкими профильными элементами
BCF one leg I BCF one leg II 	For combined walls with wide flange beams	Kombiwandprofile zum Verbinden von Trägern mit Leichtprofilen	Perfiles de pantalla combinada para unir vigas con perfiles ligeros	Raccords pour rideaux mixtes pour relier les poutres de soutien aux profilés légers	Profilo parete combinata per collegare travi con profili leggeri	Комбинированные профильные элементы стен для соединения опор с легкими профильными элементами

Transition Piles						
V 20  	For ~90° corners, Larssen UZ/Z/AZ to cold formed sheet piles	~ 90° Eckverbindung AZ + CZ/SKZ	~ 90° Unión angular AZ + CZ/SKZ	Raccord de ~ 90° AZ + CZ/SKZ	Connessione per angolo da ~90° AZ + CZ/SKZ	~ 90° Corner AZ + CZ/SKZ

**Please note:**

Our profiles are designed to be compatible with the great majority of cold-formed piles available globally. However they may not be compatible with every pile: in some cases, we have “large” and “small” versions for maximum compatibility (please see pilepro.com for details).

**Bitte beachten Sie:**

Leichtprofile gibt es als U- und Z-Bohlen in verschiedenen Wandstärken und Schlossausführungen. Unsere Profile sind so gestaltet, dass sie mit einem Großteil der weltweit verfügbaren Bohlen kompatibel sind, jedoch nicht mit allen.

**Tener en cuenta lo siguiente:**

Los perfiles ligeros están disponibles en pilotes en U y en Z en distintos espesores de pantalla y modelos de cerramiento. Nuestros perfiles están creados de tal forma que son compatibles con la mayoría de pilotes disponibles en todo el mundo, aunque no con todos.

**Veillez noter:**

Il existe des palplanches en forme de madrier en U et en Z, en plusieurs épaisseurs de parois et avec différents logements pour serrure. Nos profilés sont faits de telle sorte que la plus grande partie est compatible dans le monde entier avec les madriers existants, mais pas avec tous cependant.

**Attenzione:**

I profili leggeri sono disponibili come palancole a U e Z in spessori diversi e con versioni differenti del gancio. La forma dei nostri profili è tale da essere compatibile con la maggior parte delle palancole sul mercato, tuttavia non con tutte.

**Примите к сведению:**

Имеются легкие профильные элементы в виде U-свай и Z-свай с различной толщиной стенок и разными конструкциями замка. Наши профильные элементы сконструированы таким образом, что они совместимы с большей частью имеющихся во всем мире свай, но не со всеми. Для того чтобы установить точность посадки мы просим Вас прислать нам части замка и САД-файл Вашей свай.

CFC 90

For 90° corners with cold formed sheet piles
(as interlocks vary, specific swivel range is not stated, but some swivel should be expected)

- Installation**
1. Please review the proper interlocking examples that are listed.
 2. Thread the connector into the interlock while the sheet pile is out of the ground.
 3. Adjust the connector to the appropriate position.
 4. Tack or spot-weld the connector in place. Typically, a ~250mm (~10”) weld attaching the connector to the sheet pile to the top is sufficient.
 5. Drive/extract the sheet pile (with the connector attached) as you would normally.

Properties	
Steel grade:	S355GP, S430GP
	ASTM A572 Gr. 50/60
	ASTM A690 MARINER™ Steel
Weight:	~ 12.0 lb/ft

CFC 90

Raccords d'angles à 90°
Pour profilés légers

Domaines d'emploi
Fabrication de raccords d'angles à 90°

Caractéristiques	
Nuances d'acier:	S355GP, S430GP
	ASTM A572 Gr. 50/60
	ASTM A690 MARINER™ Steel
Poids:	~ 17,9 kg/m

CFC 90

90° Eckverbindung
Für Leichtprofile

Einsatzgebiet
Erstellen von 90°-Eckverbindungen



Eigenschaften	
Stahlgüten:	S355GP, S430GP
	ASTM A572 Gr. 50/60
	ASTM A690 MARINER™ Steel
Gewicht:	~ 17,9 kg/m

CFC 90

Connessione per angolo a 90°
Per profili leggeri

Campo di applicazione
Realizzazione di angoli a 90°

Caratteristiche	
Qualità dell'acciaio:	S355GP, S430GP
	ASTM A572 Gr. 50/60
	ASTM A690 MARINER™ Steel
Peso:	~ 17,9 kg/m

CFC 90

Unión angular de 90°
Para perfiles ligeros

Ámbito de aplicaciones
Formación de uniones angulares de 90°

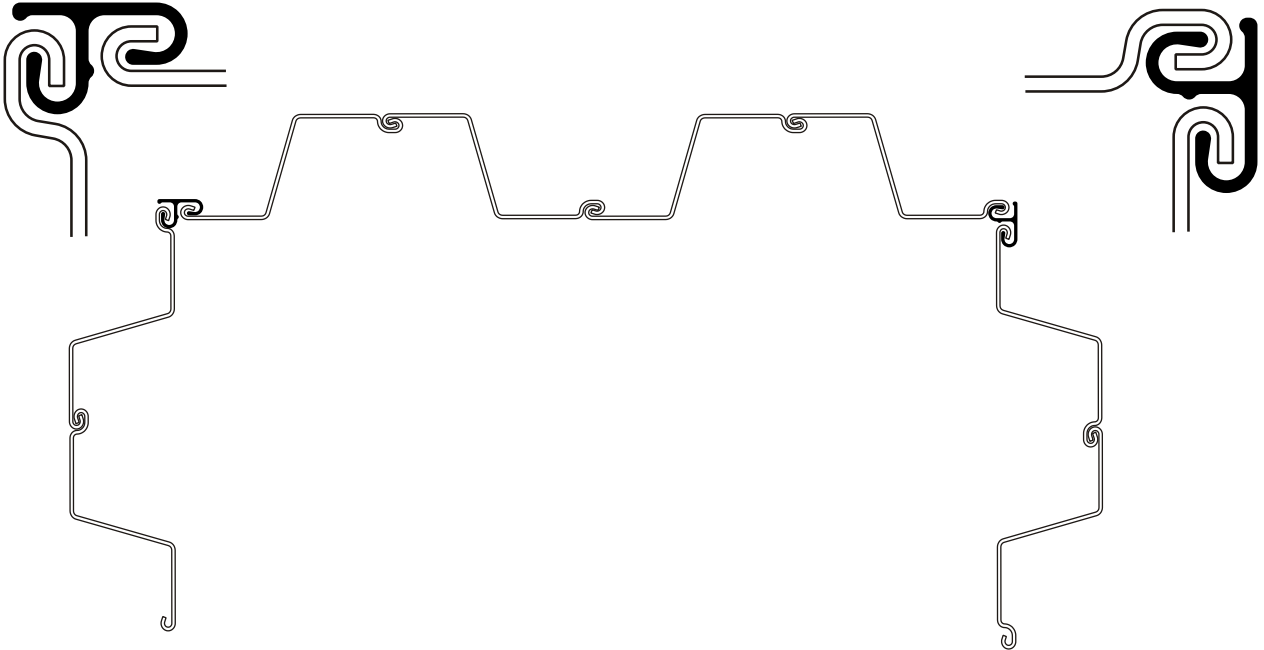
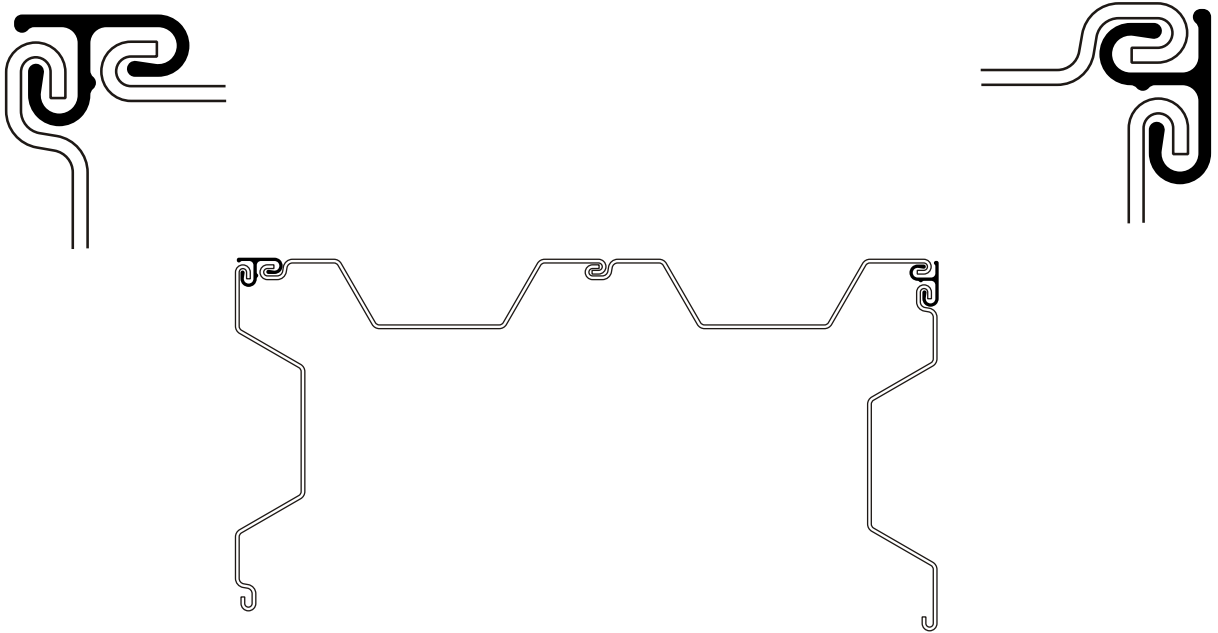
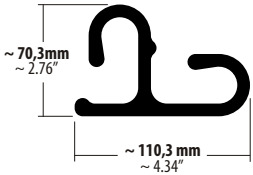
Propiedades	
Calidades de acero:	S355GP, S430GP
	ASTM A572 Gr. 50/60
	ASTM A690 MARINER™ Steel
Peso:	~ 17,9 kg/m

CFC 90

Угловое соединение 90°
Для легких профильных элементов

Область применения
Изготовление 90°- угловых соединений

Параметры	
Качество стали:	S355GP, S430GP
	ASTM A572 Gr. 50/60
	ASTM A690 MARINER™ Steel
Вес:	~ 17,9 kg/m





CF Tee

For T-corners, 90° corners with cold formed sheet piles (as interlocks vary, specific swivel range is not stated, but some swivel should be expected)

Installation

1. Please review the proper interlocking examples that are listed.
2. Thread the connector into the interlock while the sheet pile is out of the ground.
3. Adjust the connector to the appropriate position.
4. Tack or spot-weld the connector in place. Typically, a ~250mm (~10”) weld attaching the connector to the sheet pile to the top is sufficient.
5. Drive/extract the sheet pile (with the connector attached) as you would normally.

Properties

Steel grade:	S355GP, S430GP
	ASTM A572 Gr. 50/60
	ASTM A690 MARINER™ Steel
Weight:	~ 17.07 lb/ft



CF Tee

Raccord en T, raccords d'angles à 90°
Pour profilés légers

Domaines d'emploi

1. Raccord de 3 rideaux de palplanches sans soudure
2. Fabrication de raccords d'angles à 90°

Caractéristiques

Nuances d'acier:	S355GP, S430GP
	ASTM A572 Gr. 50/60
	ASTM A690 MARINER™ Steel
Poids:	~ 25,4 kg/m



CF Tee

T-Verbindung, 90° Eckverbindung
Für Leichtprofile

Einsatzgebiet

1. Verbinden von 3 Spundwänden ohne Schweißarbeiten
2. Erstellen von 90° Eckverbindungen



Eigenschaften

Stahlgüten:	S355GP, S430GP
	ASTM A572 Gr. 50/60
	ASTM A690 MARINER™ Steel
Gewicht:	~ 25,4 kg/m



CF Tee

Unión en T, unión angular de 90°
Para perfiles ligeros

Ámbito de aplicaciones

1. Unión de 3 tablestacas sin realizar trabajos de soldadura
2. Formación de uniones angulares de 90°

Propiedades

Calidades de acero:	S355GP, S430GP
	ASTM A572 Gr. 50/60
	ASTM A690 MARINER™ Steel
Peso:	~ 25,4 kg/m



CF Tee

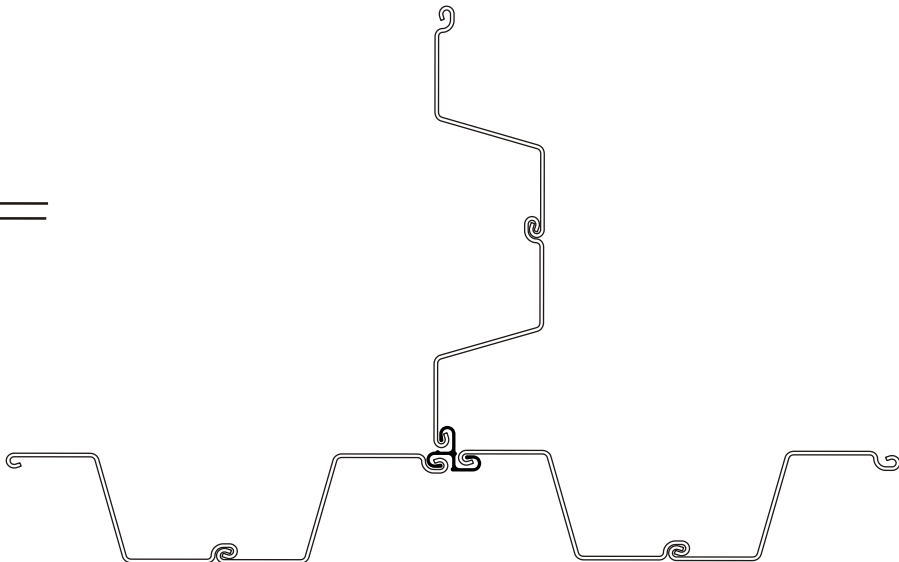
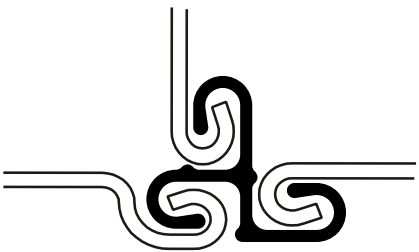
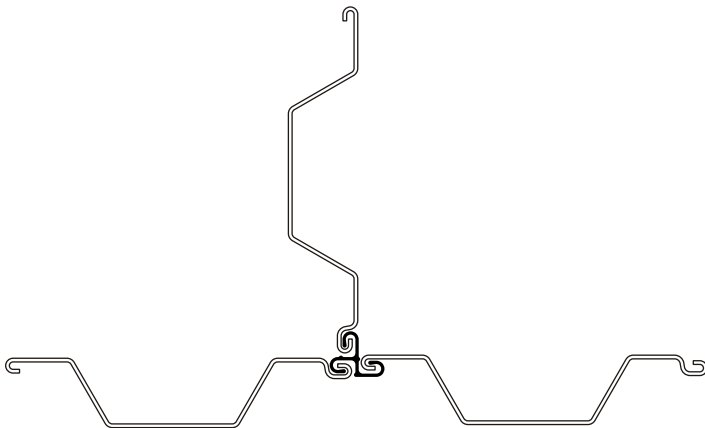
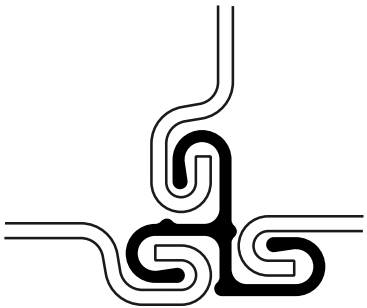
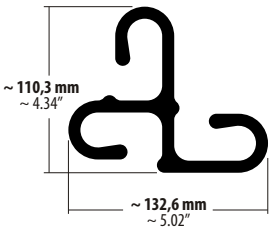
Т-образное соединение, Угловое соединение 90°
Для легких профильных элементов

Область применения

1. Соединение 3 шпунтовых стенок без сварочных работ
2. Изготовление 90°-угловых соединений

Параметры

Качество стали:	S355GP, S430GP
	ASTM A572 Gr. 50/60
	ASTM A690 MARINER™ Steel
Вес:	~ 25,4 kg/m





CF

For combined walls with pipes and cold formed sheet piles

Installation

1. The pipes are delivered with the connectors already attached.
2. First, install the king piles (pipes) as you would in any combined sheet pile wall application.
3. Grasp the sheet piling and thread between the already installed pipe piles.
4. Increase flexibility in the middle interlocks of the sheet piles, combined with the swing of the connectors, to enable easier threading of the intermediate sheet piling.
5. All welding seams are a minimum ~6mm (~0.25").
6. Both sides have a continuous minimum tip and toe welding of ~500mm (~20").
7. Both sides are tack welded in the free length between tip and toe welding with 200mm/m (8"/yd). The distance from seam to seam is ~800mm (~31.5") or less.
8. In salt water, the water side is continuously welded on the whole pile length. Follow the instructions above for the reverse side of the pile, if it is not in contact with salt water.

Properties

Steel grade:	S355GP, S430GP
	ASTM A572 Gr. 50/60
	ASTM A690 MARINER™ Steel
Weight:	~ 7.46 lb/ft



CF

Anschweißprofil
Für Leichtprofile

Einsatzgebiet
Erstellen von Ecken, Abzweigungen und Kombiwänden (Rohre + Leichtprofile)

Eigenschaften

Stahlgüten:	S355GP, S430GP
	ASTM A572 Gr. 50/60
	ASTM A690 MARINER™ Steel
Gewicht:	~11,1 kg/m





CF

Perfil de soldadura
Para perfiles ligeros

Ámbito de aplicaciones
Formación de esquinas, bifurcaciones y pantallas combinadas (Tubos + perfiles ligeros)

Propiedades

Calidades de acero:	S355GP, S430GP
	ASTM A572 Gr. 50/60
	ASTM A690 MARINER™ Steel
Peso:	~ 11,1 kg/m



CF

Raccord à souder
Pour profilés légers

Domaines d'emploi
Fabrication d'angles, de départs/branchements et de rideaux mixtes (tubes + profilés légers)

Caractéristiques

Nuances d'acier:	S355GP, S430GP
	ASTM A572 Gr. 50/60
	ASTM A690 MARINER™ Steel
Poids:	~ 11,1 kg/m



CF

Profilo da saldare
Per profili leggeri

Campo di applicazione
Realizzazione di angoli, diramazione e pareti combinate (tubi + profili leggeri)

Caratteristiche

Qualità dell'acciaio:	S355GP, S430GP
	ASTM A572 Gr. 50/60
	ASTM A690 MARINER™ Steel
Peso:	~ 11,1 kg/m



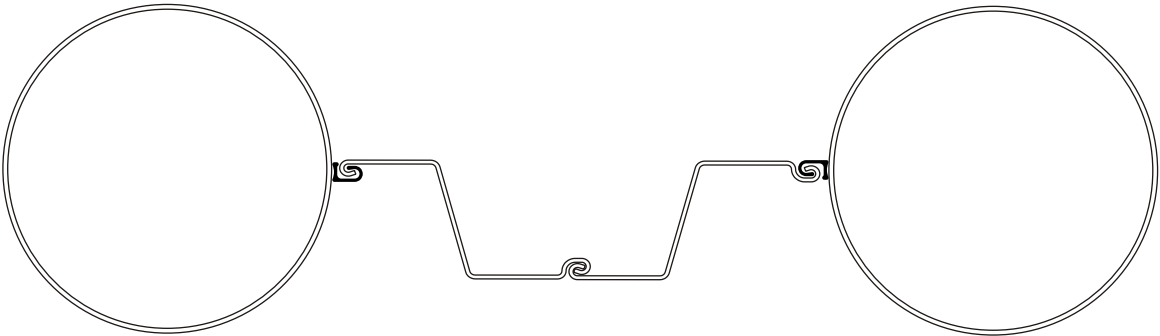
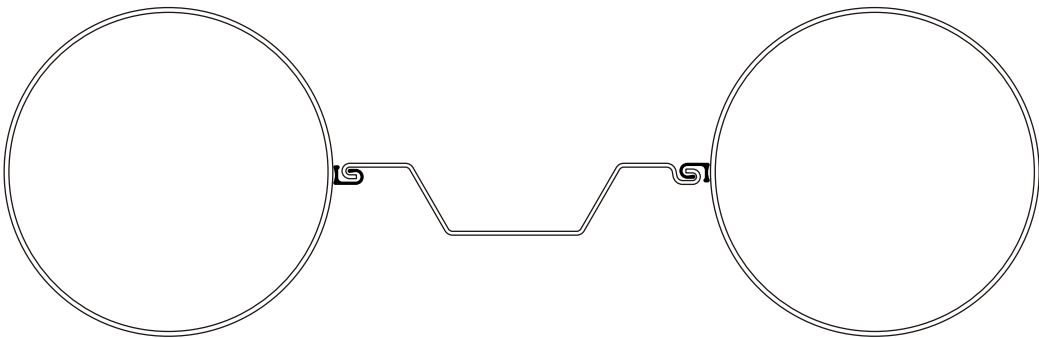
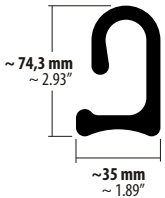
CF

Привариваемый профильный элемент
Для легких профильных элементов

Область применения
Изготовление углов, ответвлений и комбинированных стенок (трубы + легкие профильные элементы)

Параметры

Качество стали:	S355GP, S430GP
	ASTM A572 Gr. 50/60
	ASTM A690 MARINER™ Steel
Вес:	~ 11,1 kg/m





PCF I, PCF II

For combined walls with Peiner-type beams and cold formed sheet piles

Installation

1. Install the Peiner Beams first.
2. Lay the sheet piling horizontally and thread the connector into the interlock of the sheet piling, adjusting the connector to the appropriate position (please review the proper interlocking examples).This can be done at the mill, at a distributor's yard, or on the job site (go here: www.pilepro.com/thread).
3. Tack or spot-weld the connector in place. Typically, a ~250mm (~10") weld attaching the connector to the sheet pile to the top is sufficient.
4. Grasp the sheet pile (with connectors already attached) and thread between the already installed Peiner type beams.
5. Lower/drive the sheet piling to the level of the Peiner type beam.

Properties

Steel grade:	S355GP, S430GP
	ASTM A572 Gr. 50/60
	ASTM A690 MARINER™ Steel
Weight PCF I:	~ 10.15 lb/ft
Weight PCF II:	~ 10.15 lb/ft



PCF I, PCF II

Raccords de rideaux mixtes
Pour profilés légers

Domaines d'emploi

Fabrication de rideaux mixtes avec poutres de soutien et profilés légers

Caractéristiques

Nuances d'acier:	S355GP, S430GP
	ASTM A572 Gr. 50/60
	ASTM A690 MARINER™ Steel
Poids PCF I:	~ 15,1 kg/m
Poids PCF II:	~ 15,1 kg/m



PCF I, PCF II

Kombiwandprofile
Für Leichtprofile

Einsatzgebiet

Erstellen von Kombiwänden mit Keulenträgern und Leichtprofilen



Eigenschaften

Stahlgüten:	S355GP, S430GP
	ASTM A572 Gr. 50/60
	ASTM A690 MARINER™ Steel
Gewicht PCF I:	~ 15,1 kg/m
Gewicht PCF II:	~ 15,1 kg/m



PCF I, PCF II

Profili per pareti combinate
Per profili leggeri

Campo di applicazione

Realizzazione di pareti combinate con travi a T e profili leggeri

Caratteristiche

Qualità dell'acciaio:	S355GP, S430GP
	ASTM A572 Gr. 50/60
	ASTM A690 MARINER™ Steel
Peso PCF I:	~ 15,1 kg/m
Peso PCF II:	~ 15,1 kg/m



PCF I, PCF II

Perfiles de pantalla combinada
Para perfiles ligeros

Ámbito de aplicaciones

Formación de pantallas combinadas con portamazas y perfiles ligeros

Propiedades

Calidades de acero:	S355GP, S430GP
	ASTM A572 Gr. 50/60
	ASTM A690 MARINER™ Steel
Peso PCF I:	~ 15,1 kg/m
Peso PCF II:	~ 15,1 kg/m



PCF I, PCF II

Комбинированные профильные элементы
Для лешких профильных элементов

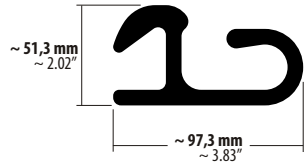
Область применения

Изготовление комбинированных стенок с опорами с гребнем и гекими профильными элементами

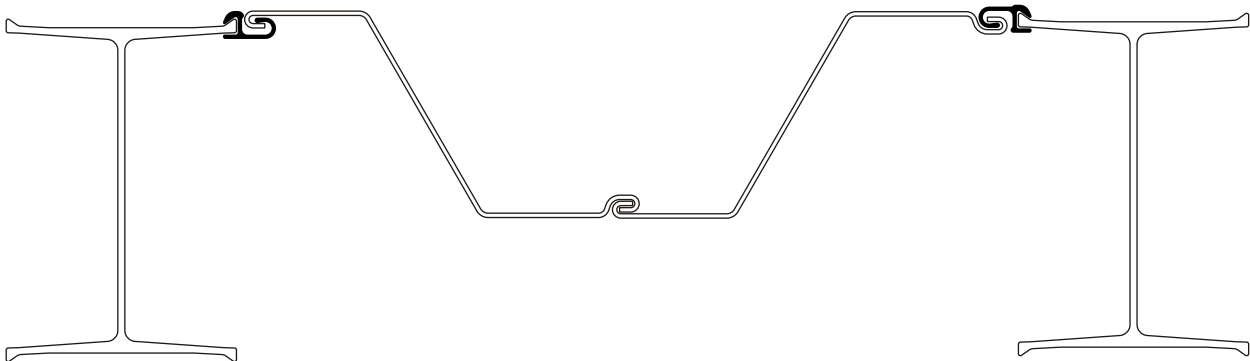
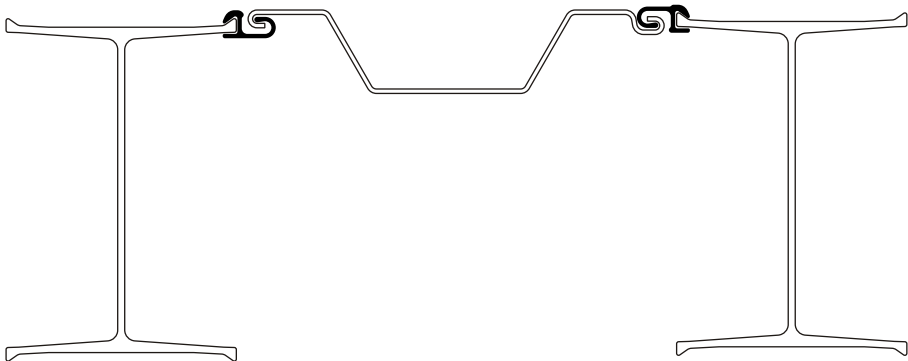
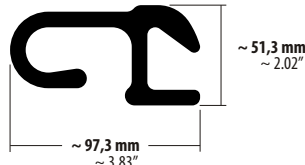
Параметры

Качество стали:	S355GP, S430GP
	ASTM A572 Gr. 50/60
	ASTM A690 MARINER™ Steel
Вес PCF I:	~ 15,1 kg/m
Вес PCF II:	~ 15,1 kg/m

PCF I



PCF II





BCF one leg I, BCF one leg II

For combined walls with wide flange beams and cold formed sheet piles

Installation

1. The beams are delivered with the connectors already attached.
2. First, install the king piles (beams) as you would in any combined sheet pile wall application.
3. Grasp the sheet piling and thread between the already installed beams.
4. All welding seams are a minimum ~6mm (~0.25").
5. Both sides have a continuous minimum tip and toe welding of ~500mm (~20").
6. Both sides are tack welded in the free length between tip and toe welding with ~200mm/m (~8"/yd). The distance from seam to seam is ~800mm (~31.5") or less.
7. In salt water, the water side is continuously welded on the whole pile length. Follow the instructions above for the reverse side of the pile, if it is not in contact with salt water.

Properties

Steel grade:	S355GP, S430GP
	ASTM A572 Gr. 50/60
	ASTM A690 MARINER™ Steel
Weight BCF one leg I:	~ 10.35 lb/ft
Weight BCF one leg II:	~ 10.35 lb/ft



BCF one leg I, BCF one leg II

Raccords de rideaux mixtes
Pour profilés légers

Domaines d'emploi

Fabrication de rideaux mixtes avec poutres de soutien et profilés légers

Caractéristiques

Nuances d'acier:	S355GP, S430GP
	ASTM A572 Gr. 50/60
	ASTM A690 MARINER™ Steel
Poids one leg I:	~ 15,4 kg/m
Poids one leg II:	~ 15,4 kg/m



BCF one leg I, BCF one leg II

Kombiwandprofile

Für Leichtprofile

Einsatzgebiet

Erstellen von Kombiwänden mit Trägern und Leichtprofilen



Eigenschaften

Stahlgüten:	S355GP, S430GP
	ASTM A572 Gr. 50/60
	ASTM A690 MARINER™ Steel
Gewicht BCF one leg I:	~ 15,4 kg/m
Gewicht BCF one leg II:	~ 15,4 kg/m



BCF one leg I, BCF one leg II

Profili per pareti combinate

Per profili leggeri

Campo di applicazione

Realizzazione di pareti combinate con travi a T e profili leggeri

Caratteristiche

Qualità dell'acciaio:	S355GP, S430GP
	ASTM A572 Gr. 50/60
	ASTM A690 MARINER™ Steel
Peso BCF one leg I:	~ 15,4 kg/m
Peso BCF one leg II:	~ 15,4 kg/m



BCF one leg I, BCF one leg II

Perfiles de pantalla combinada

Para perfiles ligeros

Ámbito de aplicaciones

Formación de pantallas combinadas con portamazas y perfiles ligeros

Propiedades

Calidades de acero:	S355GP, S430GP
	ASTM A572 Gr. 50/60
	ASTM A690 MARINER™ Steel
Peso BCF one leg I:	~ 15,4 kg/m
Peso BCF one leg II:	~ 15,4 kg/m



BCF one leg I, BCF one leg II

Комбинированные профильные элементы

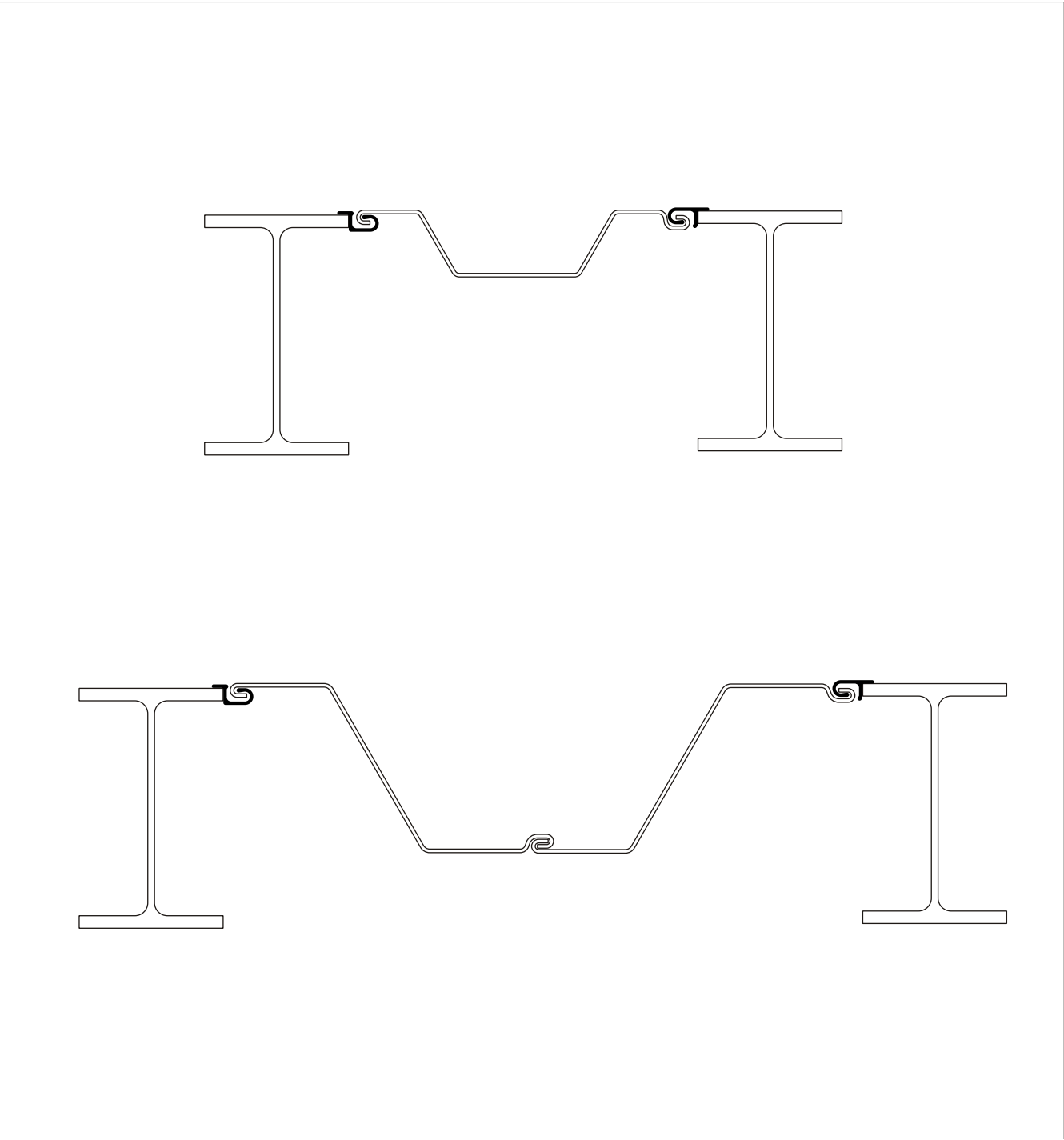
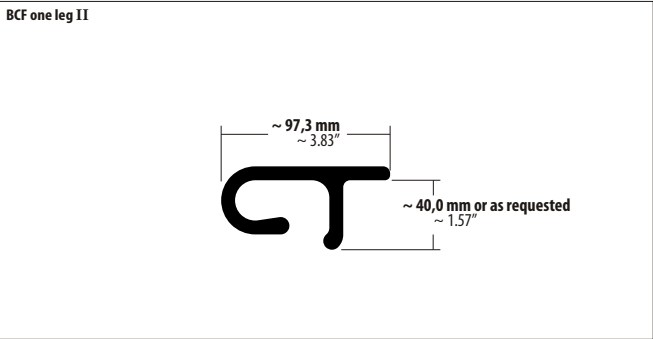
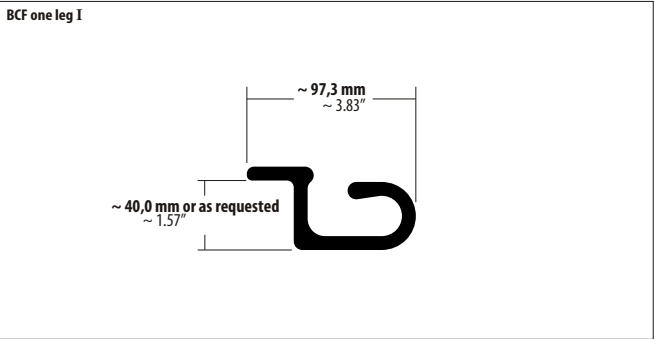
Для легких профильных элементов

Область применения

Изготовление комбинированных стенок с опорами с гребнем и легкими профильными элементами

Параметры

Качество стали:	S355GP, S430GP
	ASTM A572 Gr. 50/60
	ASTM A690 MARINER™ Steel
Вес BCF one leg I:	~ 15,4 kg/m
Вес BCF one leg II:	~ 15,4 kg/m





V 20

For ~90° corners with cold formed sheet piles, **cold-formed sheet piles to Larssen U/Z/AZ** (as interlocks vary, specific swivel range is not stated, but some swivel should be expected)

Installation

1. Please review the proper interlocking examples that are listed.
2. Thread the connector into the interlock while the sheet pile is out of the ground.
3. Adjust the connector to the appropriate position.
4. Tack or spot-weld the connector in place. Typically, a ~250mm (~10") weld attaching the connector to the sheet pile to the top is sufficient.
5. Drive/extract the sheet pile (with the connector attached) as you would normally.

Properties

Steel grade:	S355GP, S430GP
	ASTM A572 Gr. 50/60
	ASTM A690 MARINER™ Steel
Weight:	~8.85 lb/ft



V 20

Caractéristiques

Nuances d'acier:	S355GP, S430GP
	ASTM A572 Gr. 50/60
	ASTM A690 MARINER™ Steel
Poids:	~13,2 kg/m



V 20

Anwendungen:

1. 90° Eckverbindung (durch die verschiedenen Kombinationen variieren die Schwenkbereiche in Abhängigkeit von der Schlossausbildung, vgl. V20 Larssen)
2. Übergangsprofil zwischen Leichtprofilen und AZ wie auch Larssen U- bzw. Z- Bohlen



Eigenschaften

Stahlgüten:	S355GP, S430GP
	ASTM A572 Gr. 50/60
	ASTM A690 MARINER™ Steel
Gewicht:	~13,2 kg/m



V 20

Caratteristiche

Qualità dell'acciaio:	S355GP, S430GP
	ASTM A572 Gr. 50/60
	ASTM A690 MARINER™ Steel
Peso:	~13,2 kg/m



V 20

Propiedades

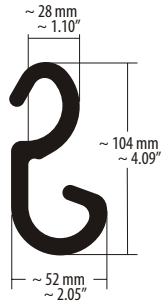
Calidades de acero:	S355GP, S430GP
	ASTM A572 Gr. 50/60
	ASTM A690 MARINER™ Steel
Peso:	~13,2 kg/m



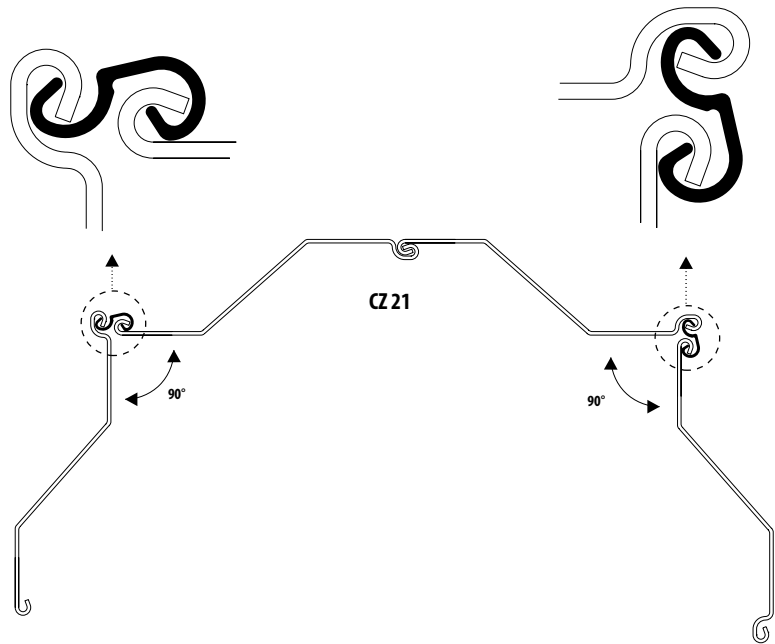
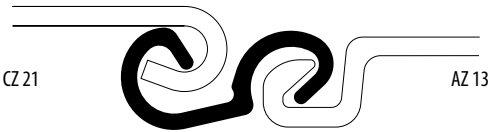
V 20

Параметры

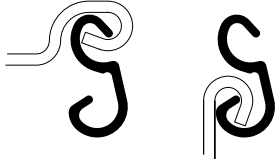
Качество стали:	S355GP, S430GP
	ASTM A572 Gr. 50/60
	ASTM A690 MARINER™ Steel
Вес:	~13,2 кг/м



CZ / SKZ to AZ transition straight-thru connection:

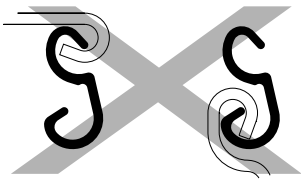


Proper interlocks:



(big-hook to small-hook)

Improper interlocks:



(big-hook to big-hook or
small-hook to small-hook)

WOM-XL, WOF-XL

For pipe sheet pile walls

Installation

1. The pipes are delivered with the connectors already attached.
2. First, install the king piles (pipes) as you would in any combined sheet pile wall application.
3. Grasp the sheet piling and thread between the already installed pipe piles.
4. Increase flexibility in the middle interlocks of the sheet piles, combined with the swing of the connectors, to enable easier threading of the intermediate sheet piling.
5. All welding seams are a minimum ~6mm (~0.25").
6. Both sides have a continuous minimum tip and toe welding of ~500mm (~20").
7. Both sides are tack welded in the free length between tip and toe welding with 200mm/m (8"/yd). The distance from seam to seam is ~800mm (~31.5") or less.
8. In salt water, the water side is continuously welded on the whole pile length. Follow the instructions above for the reverse side of the pile, if it is not in contact with salt water.

Properties

Steel grade:	S355GP, S430GP
	ASTM A572 Gr. 50/60
	ASTM A690 MARINER™ Steel
Weight WOM-XL:	~ 8.27 lb/ft
Weight WOF-XL:	~11.98 lb/ft
Thickness:	0.47 in or more

WOM-XL, WOF-XL

Raccord à souder

Jonction de tubes

Domaines d'emploi

1. Fabrication de cloison de palplanches en tubes
2. Fabrication de palplanches mélangées avec tubes + profilés PZ/PZC

Caractéristiques

Nuances d'acier:	S355GP, S430GP
	ASTM A572 Gr. 50/60
	ASTM A690 MARINER™ Steel
Poids WOM-XL:	~12,31 kg/m
Poids WOF-XL:	~17,83 kg/m
Epaisseur de paroi:	12 mm ou plus

WOM-XL, WOF-XL

Anschweißprofile

Rohrverbindungen

Einsatzgebiet

1. Erstellen von Rohrspundwänden
2. Erstellen von gemischten Spundwänden mit Rohren + PZ/PZC-Profilen



Eigenschaften

Stahlgüten:	S355GP, S430GP
	ASTM A572 Gr. 50/60
	ASTM A690 MARINER™ Steel
Gew. WOM-XL:	~12,31 kg/m
Gew. WOF-XL:	~17,83 kg/m
Wandstärke:	12 mm oder mehr

WOM-XL, WOF-XL

Profili saldati

Collegamenti con tubi

Campo di applicazione

1. Realizzazione di palancoati con tubi
2. Realizzazione di pareti combinate con tubi + profili PZ/PZC

Caratteristiche

Qualità dell'acciaio:	S355GP, S430GP
	ASTM A572 Gr. 50/60
	ASTM A690 MARINER™ Steel
Peso WOM-XL:	~12,31 kg/m
Peso WOF-XL:	~17,83 kg/m
Spessore:	12 mm o più

WOM-XL, WOF-XL

Perfiles de soldadura

Conexiones de tubo

Ámbito de aplicaciones

1. Formación de tablestacas de tubo
2. Formación de tablestacas combinadas con tubos + perfiles PZ/PZC

Propiedades

Calidades de acero:	S355GP, S430GP
	ASTM A572 Gr. 50/60
	ASTM A690 MARINER™ Steel
Peso WOM-XL:	~12,31 kg/m
Peso WOF-XL:	~17,83 kg/m
Espesor de pantalla:	12 mm o más

WOM-XL, WOF-XL

Привариваемые профильные элементы

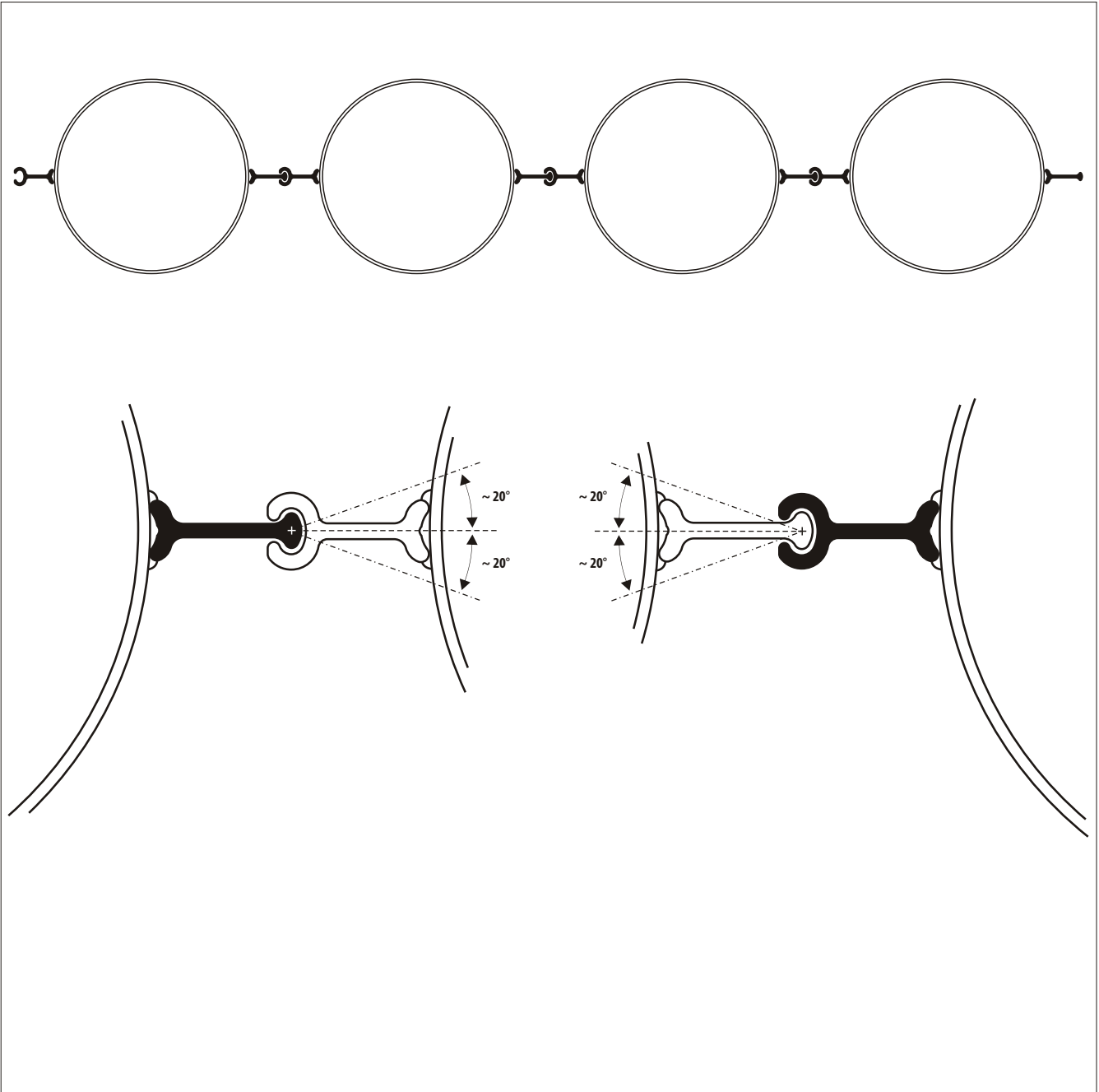
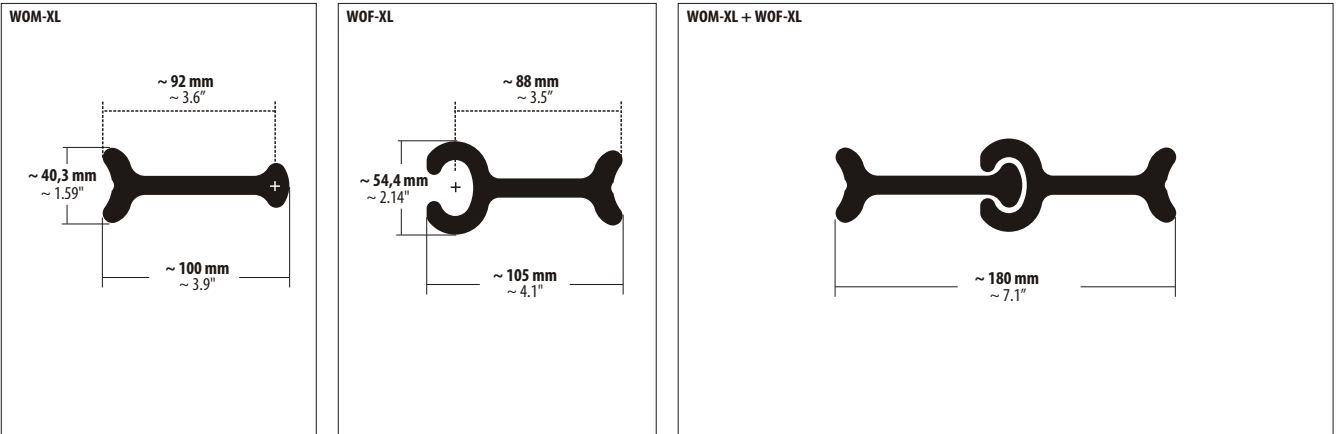
Соединения труб

Область применения

1. Изготовление трубчатых шпунтовых стенок
2. Изготoвление смешанных шпунтовых стенок с трубами + PZ/PZC-профильные элементы

Параметры

Качество стали:	S355GP, S430GP
	ASTM A572 Gr. 50/60
	ASTM A690 MARINER™ Steel
Вес WOM-XL:	~12,31 кг/м
Вес WOF-XL:	~17,83 кг/м
Толщина стенки:	12 мм Или больше





The perfect sealing for sheet pile walls



Die perfekte Dichtung für Spundwände



El sellado perfecto para tablestacas



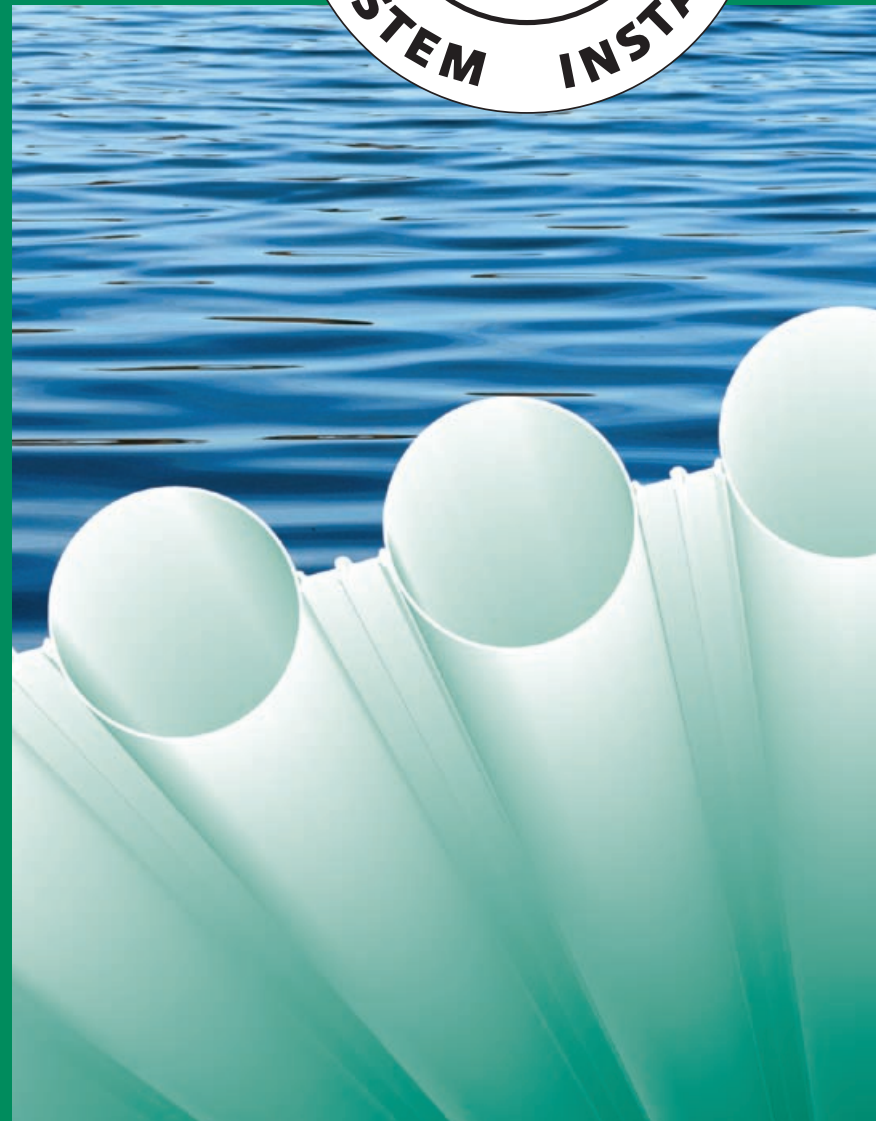
Le joint parfait pour les rideaux de palplanches



Il sigillante perfetto per palancolati



Превосходный уплотнитель для шпунтовых стенок



WADIT®

DON'T ACCEPT IMITATIONS

All official WADIT® jobs come with a WADIT® system Certification guarantee. Look for this seal of authenticity.

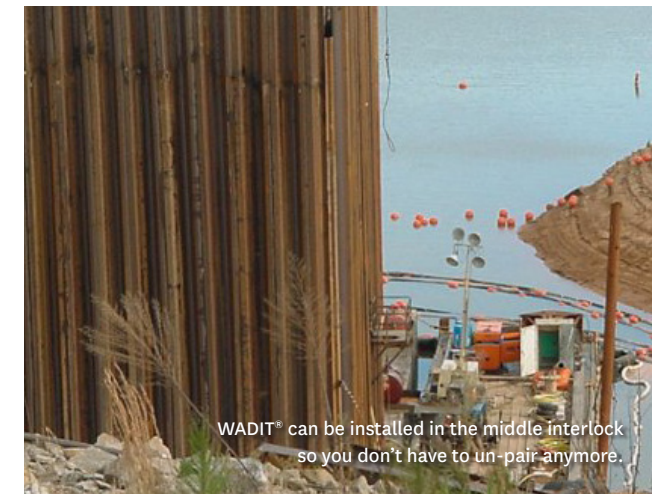


WADIT® = Water Tight Corrosion Inhibitor

WADIT® is a purpose-built and globally proven sheet piling interlock sealant and corrosion inhibitor. The creators of WADIT® know first-hand the installation and long-term challenges faced when sealing all types of hot rolled or cold formed sheet piling interlocks.

With an unmatched success rate in real-world applications, WADIT® provides both water-stopping and corrosion protection. The application of WADIT® in the WOF chamber minimizes corrosion by sealing the interlock. WADIT® also acts as a pile lubricant by reducing friction and preventing interlocks from “heating up”; this allows for the contractor to choose to drive socket first, if needed.

For any application where water leakage presents a problem, from dewatering cofferdams to barrier and cutoff walls for site remediation, WADIT® is the smart sheet pile sealant of choice.



WADIT® can be installed in the middle interlock so you don't have to un-pair anymore.

Benefits

TESTED AND CERTIFIED

WADIT® fortifies your project. This real-world and lab-tested sealant keeps water out and protects against hazardous substances. Comprehensive third party test data clearly states that the permeability of a sheet pile lock with WADIT® is zero because there is NO water flow through the sheet pile lock at five bars (-70 psi) of differential water pressure. Please refer to the University of Dortmund Water-Tightness Study under the Technical Documents on wadit.com.

HIGHLY DURABLE

WADIT® performs in every environment, from the tropics to the arctic, where high pressure sealing is required with extreme temperature ranges. The longevity of your sheet pile project is guaranteed with this durable sealant.

EXTREMELY FLEXIBLE

WADIT® has exceptional memory rebound properties. Conventional materials may harden like glass in temperatures of just 50°F (10°C). WADIT®, on the other hand, remains extremely flexible even in groundwater.

NON-PROPRIETARY

Made by and for sheet pile professionals, WADIT® can be installed in any interlock system or used with U-, Z-, or O-type of walls or combined SSP.

ENVIRONMENTALLY FRIENDLY

WADIT® is non-toxic and made from sustainable, natural raw materials. Internationally lab-tested and certified, WADIT® is safe and can be used without any restriction in sheet pile wall interlocks for ground and surface water use.

IMPERVIOUS TO WEATHER

No matter the climate, WADIT can be applied, transported and stored in any weather condition, ensuring a fast and problem-free sealant application.

PROFESSIONALLY INSTALLED

Certified technicians professionally install the WADIT® Sealant System to ensure the perfect seal every time. You can be confident that the quality of your project will never be compromised.

wadit.com

2020

 The perfect sealing for sheet pile walls	 Die perfekte Dichtung für Spundwände	 El sellado perfecto para tablestacas
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WADIT® - The ingenious sealant for sheet pile wall constructions
A global success for more than 10 years

WADIT® is a steel sheet pile interlock sealant based on sustainable natural raw materials which provides a reliable water seal for sheet pile walls. Its load capacity is huge, but WADIT® still has extremely green credentials. It is a sealant which can be applied when hot and has been used successfully throughout the world for more than 10 years. WADIT® has proved to be stable and produces outstanding results even in extreme climatic conditions such as in the tropics or the Arctic.

Common WADIT® applications

For all sheet pile walls:

- Temporary sheet pile wall constructions
- Permanent sheet pile wall constructions
- Casting of the sheet pile wall interlock
- Sheet pile wall constructions in soil containing ground water and a small fine particle fraction (gravel-type soil) and in soils with the consistency of clay
- Reduction of interlock friction

For challenging applications:

- Trenches in soil types with a high ground water level
- Dam renovation work
- Sealing of river banks
- Delimitation of underground water courses in water protection zones
- Sealing work on concrete and steel components

WADIT® - Das geniale Dichtungsmittel für Spundwandkonstruktionen
Weltweit im Einsatz seit über 10 Jahren

WADIT® ist ein Dichtungsmittel auf Basis nachwachsender Rohstoffe, das Spundwände zuverlässig abdichtet. Seine Belastungsfähigkeit ist enorm hoch und dennoch ist WADIT® äußerst umweltfreundlich. Das heiß vergießbare Dichtungsmittel wird seit über 10 Jahren auf der ganzen Welt eingesetzt. Selbst unter extremsten Klimabedingungen wie in den Tropen oder der Arktis zeigt sich WADIT® stabil und überzeugt mit hervorragenden Ergebnissen.

Für alle Spundwände:

- Temporäre Spundwandkonstruktionen
- Verbleibende Spundwandkonstruktionen
- Vergießen des Spundwandfrädelschlusses. Damit wird das Eindringen von Bodenbestandteilen und des damit verbundenen Festfressens der Bohle beim Rammen verhindert.
- Spundwandkonstruktionen in Böden mit Grundwasser und geringem Feinkornanteil (kiesige Böden) sowie bei ungeeigneter Körnungslinie
- Verringerung der Schlossreibungen

Für Einsatzgebiete mit höchsten Ansprüchen:

- Baugruben in Böden mit hohem Grundwasserspiegel
- Dammsanierungen
- Uferabdichtungen bei Flussläufen
- Abgrenzungen von unterirdischen Wassermassen in Wasserschutzgebieten
- Dichtungsmaßnahmen an Beton und Stahlteilen

WADIT® - El material de sellado ideal para construcciones de tablestacas
Usado en todo el mundo desde hace más de 10 años

WADIT® es un sellado compuesto por materias primas regenerativas que se utiliza para estanqueizar de forma fiable tablestacas. Su capacidad de resistencia es enorme, siendo WADIT® además extremadamente ecológico. El material de sellado fundible en caliente se viene empleando desde hace más de 10 años en todo el mundo. WADIT® demuestra su estabilidad y convence con resultados excelentes incluso bajo las condiciones climáticas más extremas, como en el Trópico o el Ártico.

Para todo tipo de tablestacas:

- Construcciones de tablestacas temporales
- Construcciones de tablestacas permanentes
- Colada del cerramiento de la junta de la tablestaca.
- De esta forma se evita la entrada de componentes del suelo, lo que provocaría un bloqueo de la pieza al hin car.
- Construcciones de tablestacas en suelos con agua sub terránea y escaso porcentaje de grano fino (suelos guijarrosos), así como en el caso de una curva granulométrica inadecuada
- Reducción de las fricciones del cerramiento

Para ámbitos de aplicación con máximas exigencias:

- Zanjas en suelos con alto nivel freático
- Saneamientos de diques
- Consolidación de orillas en cursos de río
- Contención de masas de agua subterráneas en reservas de agua potable
- Medidas de sellado en hormigón y piezas de acero

 Le joint parfait pour les rideaux de palplanches	 Il sigillante perfetto per palancolati	 Превосходный уплотнитель шпунтовых стенок
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WADIT® - Le produit d'étanchéité génial pour les structures en rideau de palplanches
Employé dans le monde entier depuis plus de 10 ans

WADIT® est un joint basé sur des matières premières renouvelables qui étanchéifie fiablement les rideaux de palplanches. Sa capacité de charge est très élevée, pourtant WADIT® est extrêmement écologique. Ce joint pouvant être coulé à chaud est employé dans le monde entier depuis plus de 10 ans. Même sous des conditions climatiques extrêmes, de type tropical ou arctique, WADIT® reste stable et convainc par ses résultats impeccables.

Pour tous les rideaux de palplanches :

- Structures en rideau de palplanches temporaires
- Structures en rideau de palplanches durables
- Scellement de la serrure de rideau de palplanches.
- Pour éviter la pénétration de particules du sol dans la serrure et en conséquence un grippage de la palplanche pendant le fonçage.
- Structures en rideau de palplanches dans des sols à nappe phréatique et à faible teneur en grains fins (sols graveleux). Egalement pour les cas de courbe granulométrique inadéquate
- Réduction des frictions de la serrure

Pour les domaines d'application les plus exigeants :

- Fondements dans des sols à nappe phréatique élevée
- Assainissements de digues
- Consolidations de rives dans le cours de fleuves
- Démarcations de masses d'eau souterraines en réserves d'eau potable
- Mesures d'étanchements du béton et de pièces en acier

WADIT® - Il sigillante geniale per le strutture in palancolati
Impiegato in tutto il mondo da oltre 10 anni

WADIT® è una massa sigillante a base di materie prime rigenerabili per una perfetta tenuta dei palancolati. WADIT® è un prodotto estremamente resistente e allo stesso tempo di basso impatto ambientale. Il sigillante colabile a caldo viene impiegato in tutto il mondo da oltre 10 anni. WADIT® si dimostra stabile e convince con risultati eccezionali anche in condizioni climatiche estreme sia tropicali che artiche.

Per tutti i palancolati

- Costruzione di palancolati temporanei
- Costruzione di palancolati permanenti
- Riempimento del gancio della palancola per impedire la risalita del terreno e il conseguente arresto della palancola durante l'infissione.
- Costruzione di palancolati in terreni con falde acquifere e bassa percentuale di struttura compatta (terreno ghiaioso) come anche in caso di curva granulometrica inappropriata
- Riduzione dell'attrito dei ganci

Per campi di applicazione dai requisiti estremi

- Scavi di fondazione in terreni con livello alto della falda acquifera
- Risanamento di dighe
- Impermeabilizzazione delle sponde lungo il corso di fiumi
- Isolamento di masse idriche del sottosuolo in zone di protezione delle acque
- Impermeabilizzazioni su calcestruzzo e elementi in acciaio

WADIT® - отличный уплотнитель для конструкций из шпунтовых стенок
Применяется во всем мире на протяжении более 10 лет

WADIT® - это изготавливаемый из возобновляемого сырья уплотнительный материал, надежно герметизирующий шпунтовые стенки. Он отличается чрезвычайно высокой допустимой нагрузкой и безвреден для окружающей среды. Этот заливаемый в горячем состоянии уплотнительный материал уже на протяжении более 10 лет широко применяется во всем мире. Даже в экстремальных климатических условиях, например, в тропиках или в Арктике, WADIT® сохраняет свои качества и вызывает восхищение превосходными результатами.

Для всех шпунтовых стенок:

- Временные конструкции из шпунтовых стенок.
- Постоянные конструкции из шпунтовых стенок.
- Заливка связывающего замка шпунтовой стенки.
- Позволяет предотвратить проникновение составляющих грунта и связанное с этим заклинивание сваи при забивке.
- Конструкции из шпунтовых стенок в почве с грунтовыми водами и низким содержанием мелких частиц (гравийный грунт), а также при неподходящем гранулометрическом составе.
- Уменьшение трения замка.

Для областей применения с высочайшими требованиями к прочности:

- Котлованы в почве с высоким уровнем грунтовых вод.
- Ремонт дамб.
- Уплотнение берегов рек.
- Ограничение подземных водных масс в зонах санитарной охраны источников водоснабжения.
- Уплотнение бетонных конструкций и стальных элементов.

 Unique physical and biological properties	 Einzigartige physikalische und biologische Eigenschaften	 Propiedades físicas y biológicas incomparables
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Highly environment-friendly even in catchment areas of drinking water collection systems

WADIT® is not harmful to the environment. Natural resources are given maximum protection in both its production and use. Official confirmation from the State Trade Supervision Department for Bavaria shows that WADIT® is extremely „green“ and even suitable for use in the catchment area of drinking water collection systems. WADIT® is made from sustainable natural raw materials and contains no components which are harmful to the environment. Its composition is protected by patents.

Report (safety declaration)

Examining authority:
State Trade Supervision Department for Bavaria (LGA)
Institute for Environmental Geology and Contaminated Sites
Tyllstr. 2, 90431 Nuremberg, Germany
Phone: 0049-911-65 55 699
www.LGA.de

Material: Wadit® sheet pile wall sealant
Date of testing: 1997, 1999, 2000

Results (extract)

“The reports from the LGA come to the conclusion that WADIT® sealing compound can be used as a sealing compound in sheet pile walls for ground and surface water without any restrictions at all. Therefore, if the product is used as intended there is no concern of harmful effects in the catchment area of drinking water collection systems.”

The complete test results and analysis are available from us at any time.

Sogar im Einzugsbereich von Trinkwassergewinnungsanlagen in höchstem Maße umweltverträglich

WADIT® ist umweltfreundlich. Sowohl bei der Herstellung als auch im Einsatz werden die natürlichen Ressourcen mit größtmöglicher Sorgfalt geschont. Offiziell vom LGA, Landesgewerbeanstalt Bayern bestätigt: WADIT® ist optimal umweltverträglich und kann sogar im Einzugsbereich von Trinkwassergewinnungsanlagen eingesetzt werden! WADIT® besteht aus natürlich nachwachsenden Rohstoffen und ist frei von umweltbeeinträchtigenden Inhaltsstoffen. Seine Zusammensetzung ist patentrechtlich geschützt.

Gutachten (Unbedenklichkeitserklärung)

Untersuchende Stelle:
Landesgewerbe Bayern (LGA)
Institut für Umweltgeologie und Altlasten
Tyllstr. 2, 90431 Nürnberg
Tel.: 0911 / 655-5699
www.LGA.de

Material: Wadit® Spundwanddichtungsmittel
Untersuchungsdatum: 1997, 1999, 2000

Ergebnis (Auszug)

“Die Gutachten der LGA kommen zu den Schluss, dass die Dichtmasse WADIT® als Dichtungsmasse in Spundwandschlössern, im Grund- und Oberflächenwasserbereich ohne Einschränkungen verwendet werden kann. Bei bestimmungsgemäßem Gebrauch besteht daher auch keine Besorgnis einer schädlichen Auswirkung beim Einsatz im Einzugsbereich von Trinkwassergewinnungsanlagen.”

Die detaillierte Untersuchungsanalyse kann jederzeit bei uns angefordert werden.

Extremadamente ecológico incluso en el área de alimentación de plantas de extracción de agua potable

WADIT® es ecológico. Los recursos naturales se tratan con el mayor cuidado posible tanto en la fabricación como en el uso. Confirmado oficialmente por la LGA (Administración estatal de industria de Baviera): ¡WADIT® es extremadamente ecológico y puede usarse incluso en el área de alimentación de plantas de extracción de agua potable! WADIT® se compone de materias primas que se regeneran de forma natural y no posee componentes nocivos para el medio ambiente. Su composición está protegida por patente.

Informe pericial (declaración de no objeción)

Oficina investigadora:
Landesgewerbe Bayern (LGA)
Institut für Umweltgeologie und Altlasten
(Instituto de medio ambiente y basureras abandonadas)
Tyllstr. 2, D 90431 Nuremberg
Tel.: 0049-911-65 55 699
www.LGA.de

Material: Material de sellado de tablestacas Wadit®
Fecha de investigación: 1997, 1999, 2000

Resultado (copia)

„Los informes periciales de la LGA llegan a la conclusión de que la masa de sellado WADIT® puede emplearse sin restricciones como masa obturadora en cerramientos de tablestacas, en la zona de aguas subterráneas y superficiales. Si se emplea de forma adecuada, no existe riesgo de que se produzcan efectos nocivos, incluso si se usa en la zona de recogida de aguas para el abastecimiento de agua potable.”

Podrá solicitarnos en cualquier momento el análisis de detallado de las pruebas.

 Des propriétés physiques et biologiques uniques en leur genre	 Eccezionali caratteristiche fisiche e biologiche	 Уникальные физические и биологические свойства
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Très écologique même dans les zones avoisinantes des installations de production de l'eau potable

WADIT® respecte l'environnement. Les ressources naturelles sont respectées avec le soin le plus grand possible aussi bien dans la production que dans son emploi. Confirmé par le LGA - Institut des activités industrielles de Bavière - : WADIT® est très respectueux de l'environnement. Il peut même être employé dans les zones avoisinantes des installations de production de l'eau potable ! WADIT® est composé de matières premières naturelles et renouvelables et est exempt de polluants. Sa composition est protégée par brevet.

Expertise (déclaration de neutralité)

Organisme d'inspection :
Chambre professionnelle de Bavière (LGA)
Institut für Umweltgeologie und Altlasten (Institut de géologie environnementale et de sites contaminés)
Tyllstr. 2, D 90431 Nuremberg, Allemagne
Tél.: 0049-911-65 55 699
www.LGA.de

Matériau : Etanchéité de serrures de rideaux de palplanches
®Wadit
Date d'inspection : 1997, 1999, 2000

Résultat (extrait)

« L'expertise menée par LGA conclut que la masse d'étanchéité WADIT® peut être utilisée sans restriction en tant que matériau d'étanchement dans les serrures de palplanches, dans les zones d'eau de ruissellement et de surface. C'est pourquoi, en cas d'utilisation conforme aux dispositions, il n'y a pas lieu de s'inquiéter quant à d'éventuels effets nuisibles dès lors qu'elle est employée à proximité d'installations de préparation de l'eau potable. »

Vous pouvez nous demander à tout moment l'analyse détaillée de l'inspection.

Estremamente ecocompatibile anche in bacini imbriferi di acque destinate alla potabilizzazione

WADIT® è ecologico. Le risorse naturali vengono tutelate con la massima attenzione, sia durante la produzione che nell'impiego. La LGA, Landesgewerbeanstalt Bayern, lo ha confermato ufficialmente: WADIT® è perfettamente ecocompatibile e può essere impiegato addirittura in bacini imbriferi di acque destinate alla potabilizzazione! WADIT® è composto di materie prime naturali e rigenerabili ed è privo di sostanze inquinanti. La sua composizione è protetta da brevetto.

Perizia (Dichiarazione di innocuità)

Istituto di ricerca:
Landesgewerbe Bayern (LGA)
Institut für Umweltgeologie und Altlasten
Tyllstr. 2, D 90431 Norimberga
Tel.: 0049-911-65 55 699
www.LGA.de

Materiale: sigillante per palancolati Wadit®
Data degli esami: 1997, 1999, 2000

Risultato (estratto)

“Le perizie della LGA giungono alla conclusione che la massa sigillante WADIT® può essere utilizzata senza limitazioni come sigillante in ganci di palancole, nelle falde acquifere di superficie e di sottosuolo. Con un uso proprio non sussiste quindi alcun timore di effetti dannosi legati all'impiego in bacini imbriferi di acque destinate alla potabilizzazione.”

La richiesta dell'esame analitico dettagliato può esserci inoltrata in qualunque momento.

Максимальная безопасность для окружающей среды даже при использовании в водосборной зоне установок для получения питьевой воды

WADIT® является экологичным материалом. Максимальная экономия природных ресурсов обеспечивается как при изготовлении, так и при использовании уплотнительного материала. Официально подтверждено LGA, Промышленным учреждением Баварии: WADIT® является в оптимальной степени экологичным и даже может использоваться в водосборной зоне установок для получения питьевой воды! WADIT® производится из возобновляемого естественным путем сырья и не содержит веществ, вредных для окружающей среды. Его состав охраняется патентным правом.

Экспертиза (заявление о безопасности изделия)

Испытательная организация:
Landesgewerbe Bayern (LGA)
(Промышленное учреждение Баварии)
Institut für Umweltgeologie und Altlasten
(Институт экологической геологии и экологических проблем)
Tyllstr. 2, D 90431 Nürnberg. Тел.: 0049-911-65 55 699
www.LGA.de

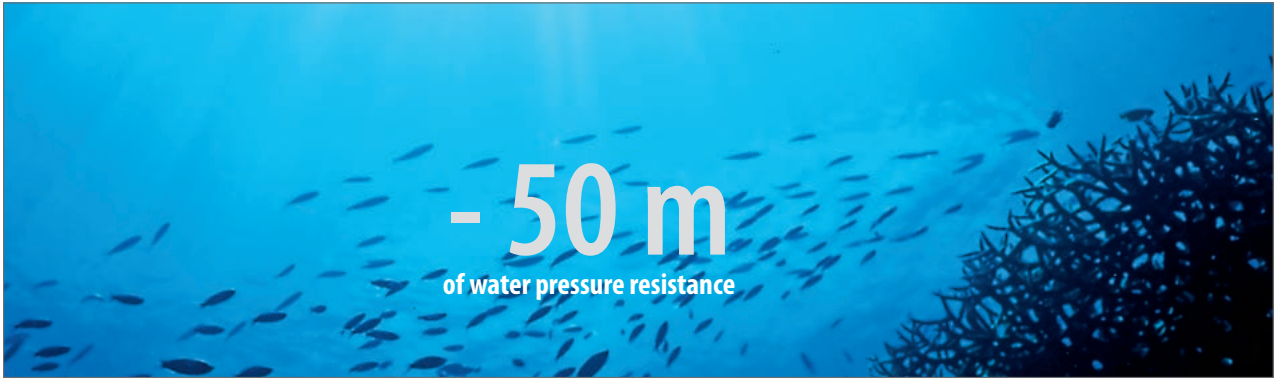
Материал: материал для уплотнения шпунтовых стенок Wadit®. Дата проведения исследований: 1997, 1999, 2000

Результат (выписка)

«Эксперты LGA пришли к заключению, что уплотнительная масса WADIT® как уплотнительная масса, применяемая в замках шпунтовых стенок, может без ограничений использоваться в зонах с грунтовыми и поверхностными водами. Поэтому при использовании по назначению не стоит опасаться вредного воздействия в том числе в случае применения в водосборной зоне установок для получения питьевой воды.»

Подробный анализ исследования можно запросить у нас в любое время.

		
Unique physical and biological properties	Einzigartige physikalische und biologische Eigenschaften	Propiedades físicas y biológicas incomparables



Safe and effective at water pressure levels up to 5 bar*
Stable and non-deforming in temperatures of up to 50°C (122°F)

WADIT® is extremely resistant to elements such as water and offers a unique durable bond. The sealant is absolutely resistant in the interlock chamber to extreme conditions such as high pressure from water, ice and soil as well as movements of the sheet pile wall or displacement of the piles during transport. The material remains stable and non-deforming in the interlock even in peak daytime temperatures of 50°C (122°F).

In laboratory tests

WADIT® underwent extreme tests and was subjected to a maximum water pressure of 5 bar (= 500 kPa or more than 130 feet of water pressure depth). It demonstrated no water permeability in various interlock forms during various test series. This confirms the experience gathered over the last ten years during which not a single case of leakage caused by material failure of WADIT® was reported. The test was halted when the water pressure reached 5 bar since this value represents almost twice the safety margin over maximum water pressure levels measured in the past. In the opinion of those involved in the tests, WADIT® would in fact have withstood an even higher water pressure.

Summary

WADIT® can be used both for high pressure sealing requirements and also large sheet pile lengths which in the past were the exclusive domain of extruded polyurethane seals.

* Tested and confirmed by the Technical University of Dortmund: "Maintains a sealing effect up to a water pressure of 5 bar (500 kPa)"

Sicher und dicht bis 5 bar Wasserdruck*
Stabil und formbeständig bis 50°C

WADIT® ist extrem widerstandsfähig und überzeugt mit seiner einzigartigen Dauerhaftung. Das Dichtungsmittel zeigt sich in der Schlosskammer absolut resistent gegen extreme Bedingungen wie starkem Wasser-, Eis- und Erddruck sowie Bewegungen der Spundwand oder Verlagerung der Bohlen beim Transport. Selbst bei Tageshöchsttemperaturen von 50 °C bleibt das Material stabil und formbeständig im Schloss.

Im Laborversuch

wurde WADIT® extrem getestet und mit maximal 5 bar (=500 kPa) Wasserdruck belastet und zeigte in dieser Versuchsreihe keine Wasserdurchlässigkeit bei den verschiedenen Schlossformen. Damit wird die Erfahrung der vergangenen zehn Jahre bestätigt, in denen keine Undichtigkeit aufgrund von Materialversagen bekannt wurde. Der Versuch wurde beim Erreichen von 5 bar Wasserdruck abgebrochen, da mit diesen Werten schon eine etwa zweifache Sicherheit zu bisher bekannten maximalen Wasserdrücken bestätigt wurde. Nach Einschätzung der Anwesenden hätte WADIT® sogar noch einem höheren Wasserdruck standgehalten.

Fazit:

WADIT® kann sowohl bei hohen Dichtigkeitsanforderungen als auch mit größeren Spundbohlenlängen eingesetzt werden, die bislang in Anwendungen den extrudierten Polyurethandichtungen vorbehalten waren.

Unsere Empfehlung:

Um für die Baupraxis eine Abschätzung der Durchlässigkeit nach DIN EN 12063, Anhang E, durchführen zu können, raten wir rechnerisch dennoch eine geringe Durchlässigkeit mit $p \approx 20 \times 10^{-9}$ m/s (Kehrwert des Schlosssickerwiderstandes) zu berücksichtigen. Dieser Rechenwert soll eine Annäherung an geologische Bedingungen, arbeitstechnische Erfordernisse und andere Unwägbarkeiten darstellen. Er entspricht unter Umständen nicht den tatsächlichen Gegebenheiten. Weitere Hinweise zu diesem Thema: „Empfehlungen des Arbeitsausschusses Uferereinfassungen, Häfen und Wasserstraßen“, EAU 2004, E 117

* Geprüft und bestätigt von der Technischen Universität Dortmund: "Hält dicht bis 5 bar (500 kPa) Wasserüberdruck"

Seguro y estable hasta 5 bares de presión de agua*
Estable y resistente a la deformación hasta 50°C

WADIT® es extremadamente resistente y convence gracias a su inigualable adherencia permanente. El material de sellado demuestra una absoluta resistencia en la cámara de aislamiento incluso bajo condiciones extremas, como por ejemplo en caso de una fuerte presión de agua, hielo o tierra, movimientos de la tablestaca o el desplazamiento de los pilotes durante el transporte. El material permanece estable y resistente a la deformación en el cerramiento incluso a temperaturas máximas de 50°C.

WADIT® se sometió a pruebas extremas en el laboratorio, por ejemplo a una presión de agua máxima de 5 bares (=500 kPa), y no demostró en esta serie de ensayos ninguna permeabilidad en diferentes formas de cerramiento.

Ello no hace más que corroborar la experiencia de los últimos diez años, en los que no se ha presentado ningún caso conocido de fuga por fallos de material. El ensayo se interrumpió al alcanzarse los 5 bares de presión de agua, ya que estos valores conforman una doble seguridad con respecto a las presiones de agua máximas conocidas hasta la fecha. Las personas presentes estiman que WADIT® habría soportado incluso una presión de agua mayor.

Resumen:

WADIT® puede usarse tanto para altos requisitos de estanqueidad como con mayores largos de tablestacas, que hasta ahora estaban reservados a las aplicaciones para juntas de poliuretano extrudidas.

Nuestra recomendación:

Para poder evaluar la permeabilidad de cara a la práctica conforme a DIN EN 12063, anexo E, recomendamos sin embargo calcular una permeabilidad menor $p \approx 20 \times 10^{-9}$ m/s (valor inverso de la resistencia a la infiltración del cerramiento). Este valor de cálculo debe ajustarse de la forma más aproximada posible a condiciones geológicas, requisitos técnicos de trabajo y otras imponderabilidades. Bajo determinadas circunstancias, no corresponde a las condiciones reales. Otras observaciones sobre este tema: „Recomendaciones de la Comisión de Puertos y Vías Navegables“, EAU 2004, E 117

* Testado y certificado por la Universidad Técnica de Dortmund: „Mantiene la estanqueidad hasta 5 bares (500 kPa) de sobrepresión de agua“

		
Des propriétés physiques et biologiques uniques en leur genre	Eccezionali caratteristiche fisiche e biologiche	Уникальные физические и биологические свойства



Sûr et étanche jusqu'à 5 bars de pression de l'eau*
Robuste et indéformable jusqu'à 50°C

WADIT® est extrêmement résistant. Il convainc par son adhérence permanente unique en son genre. Le joint adhère toujours dans la serrure, même sous des conditions extrêmes, par exemple en cas de fortes pressions de l'eau, de la glace ou de la terre, de mouvements du rideau de palplanches ou des planches pendant le transport. Même à des températures extrêmes de jour de 50°C, WADIT reste stable et indéformable dans la serrure.

Testé en laboratoire :

WADIT® a été soumis à une pression de l'eau de maximum 5 bars (=500 kPa) et n'a montré aucune perméabilité dans cette série d'essais pour les différentes formes de serrures. Cela confirme l'expérience accumulée pendant les dix dernières années pendant lesquelles aucun défaut d'étanchéité pour manque de matériau n'a pu être décelé. L'essai a été interrompu une fois 5 bars de pression de l'eau atteints, étant donné que ces valeurs impliquent déjà une sécurité double aux pressions de l'eau connues jusqu'à présent. Les personnes présentes estiment que WADIT® pourrait même résister encore à une plus grande pression de l'eau.

Conclusion :

Il est possible d'employer WADIT® lorsque l'étanchéité exigée est élevée mais aussi pour les palplanches de grande taille, applications pour lesquelles on employait jusqu'ici des joints en polyuréthane.

Notre recommandation :

Afin de pouvoir réaliser une estimation de la perméabilité conformément à la norme DIN EN 12063, annexe E, pour la construction, nous vous conseillons de prendre toutefois en compte dans vos calculs une perméabilité minimale de $p \approx 20 \times 10^{-9}$ m/s (inverse de la résistance du joint à l'écoulement). Cette valeur de calcul est censée représenter une approche des conditions géologiques, des exigences du point de vue de la technique du travail ainsi que d'autres impondérables. Le cas échéant, elle ne correspond pas aux circonstances effectives du lieu. D'autres remarques à ce sujet : « Recommendations de la commission de travail sur les murs en aile, les ports et les voies fluviales », EAU 2004, E 117

* Contrôlé et confirmé par l'université technique de Dortmund : « Garde étanche jusqu'à 5 bars (500 kPa) de surpression de l'eau »

Sicuro e impermeabile fino ad una pressione dell'acqua di 5 bar*
Stabile e indeformabile fino a 50°C

WADIT® è estremamente resistente e convince per la sua aderenza permanente, unica nel suo genere. Il sigillante all'interno del gancio si mostra assolutamente resistente anche in condizioni estreme, come in caso di elevata pressione dovuta ad acqua, ghiaccio o terreno nonché movimenti del palancolato finito o spostamento delle palancole durante il trasporto. Anche con una temperatura di 50°C il materiale non fuoriesce dal gancio e non si deforma.

Prova di laboratorio

WADIT® è stato testato in laboratorio a condizioni estreme e sottoposto ad un carico massimo di 5 bar (=500 kPa) di pressione dell'acqua, ed in tutta la serie di prove con ganci di diverse forme non è stata riscontrata alcuna permeabilità. È così confermata l'esperienza degli ultimi dieci anni, durante i quali non si è verificata alcuna perdita dovuta a degrado del materiale. La prova è stata interrotta al raggiungimento di una pressione dell'acqua di 5 bar, perché con questi valori è già confermata una resistenza all'incirca doppia rispetto alle pressioni dell'acqua massime finora note. Secondo l'opinione dei presenti WADIT® avrebbe resistito anche ad una pressione dell'acqua superiore.

Conclusione:

WADIT® può essere impiegato sia nel caso di elevati requisiti di tenuta che con palancolate di grandi dimensioni, per i quali finora venivano utilizzati solamente sigillanti poliuretanici estrusi.

Consiglio:

Per realizzare nella prassi costruttiva una stima della permeabilità che rispetti DIN EN 12063, Allegato E, consigliamo di considerare nei calcoli una permeabilità inferiore di $p \approx 20 \times 10^{-9}$ m/s (valore reciproco della resistenza all'infiltrazione del gancio). Tale valore di calcolo rappresenta un'approssimazione alle condizioni geologiche, ai requisiti di tecnica costruttiva e ad altre imponderabilità. In determinate circostanze non corrisponde allo stato di fatto. Per ulteriori informazioni in relazione a questo tema si veda: „Empfehlungen des Arbeitsausschusses Uferereinfassungen, Häfen und Wasserstraßen“, EAU 2004, E 117

* Verificato e confermato dalla Technische Universität di Dortmund: „La tenuta viene mantenuta fino a 5 bar (500 kPa) di sovrappressione dell'acqua.“

Надежность и герметичность при давлении воды до 5 бар*
Стабильность и отсутствие деформации при температуре до 50 °С

Материал WADIT® отличается чрезвычайно высокой устойчивостью к внешним воздействиям и поражает своей уникальной сцепляемостью, сохраняемой в течение длительного времени. Этот уплотнительный материал, залитый замок, абсолютно стабилен в экстремальных условиях, например, при высоком давлении воды, льда и грунта, а также при движении шпунтовой стенки или перемещении свай во время транспортировки. Даже при максимальной дневной температуре 50 °С материал в замке сохраняет свою стабильность и форму.

Лабораторное испытание

В лаборатории материал WADIT® подвергся испытанию в экстремальных условиях при максимальном давлении воды 5 бар (= 500 кПа). В ходе ряда тестов не было выявлено водонепроницаемости материала при использовании в различных формах замков. Испытания подтвердили данные, накопленные за прошедшие 10 лет, согласно которым не было выявлено потери герметичности по причине повреждения материала. Испытания были прерваны после достижения давления 5 бар, так как уже это значение было в два раза больше известного максимального давления воды, оказываемого на подобные конструкции. По оценке экспертов, проводивших испытания, WADIT® смог бы выдержать и большее давление воды.

Вывод:

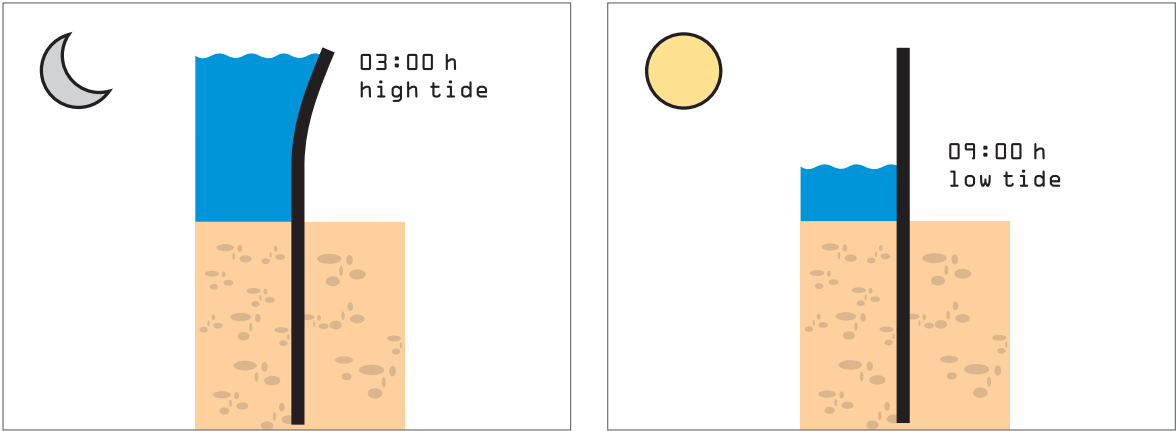
Материал WADIT® можно применять как при высоких требованиях к герметичности, так и при большой длине шпунтовых свай, для которых ранее использовались уплотнители из экструдированного полиуретана.

Наши рекомендации:

Для оценки проницаемости при строительстве согласно DIN EN 12063, Приложение E, мы рекомендуем использовать при расчетах небольшой показатель проницаемости $p \approx 20 \times 10^{-9}$ м/с (значение, обратное значению сопротивления замка просачиванию воды). Это расчетное значение должно помочь учесть геологические условия, требования техники выполнения работ и другие факторы. При определенных обстоятельствах это значение не соответствует фактическим условиям. Дополнительные указания по данной теме: «Рекомендации рабочего комитета по ограждению берегов, портов и водных путей», EAU 2004, E 117.

* Проверено и подтверждено Техническим университетом Дортмунда: «Сохраняет герметичность при избыточном давлении воды до 5 бар (500 кПа)».

	Unique physical and biological properties		Einzigartige physikalische und biologische Eigenschaften		Propiedades físicas y biológicas incomparables
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Flexibility with memory effect

For around 30 years it has been obvious that reversible bumpers on cars can absorb small deformations without suffering any damage because the material rebounds. WADIT® works on the same basis and thus offers unique elasticity. Thanks to this feature the sealant tolerates torsion and movements in the sheet pile wall interlock, maintains an absolute seal, and returns to its initial position in normal conditions.

Superb resistance

Conventional materials start to become brittle as ambient temperatures fall to 10°C or less, which often leads to problems when work is being carried out in ground water. When installing sheet pile walls, sealant material which fractures out of the interlock like glass may cause leaks. WADIT® solves this problem because it remains perfectly flexible even in ground water (which usually remains at a temperature of between 5°C to 7°C throughout the year), which means that it does not become brittle and continues to create a perfect seal.

Complete protection

Its durable bond means that Wadit® prevents corrosion in the interlock chambers of the sheet piles and can also be used with coatings.

Flexibilität mit Memory-Effekt

Bei reversiblen Stoßfängern an Autos ist seit etwa 30 Jahren sicht- und fühlbar, dass kleinere Verformungen beschädigungsfrei aufgenommen werden, weil sich das Material wieder zurückstellt. WADIT® funktioniert nach diesem Prinzip und bietet damit eine einzigartige Elastizität. Dank dieser Eigenschaft toleriert das Dichtungsmittel Verdrehungen und Bewegungen im Spundbohlenschloss, bleibt absolut dicht und kehrt unter normalen Bedingungen wieder in seine Ausgangsposition zurück.

Optimal beständig

Herkömmliche Materialien beginnen mit sinkender Umgebungstemperatur bereits ab 10°C zu verspröden, was häufig zu Problemen führt, wenn im Grundwasserbereich gearbeitet wird. Beim Einbringen der Spundwände kann aus dem Spundbohlenschloss wie Glas herausbrechendes Dichtungsmaterial zu Undichtigkeiten führen. WADIT® löst dieses Problem, weil es selbst im Grundwasserbereich (ganzjährig 5° bis 7° C) optimale Flexibilität bietet, damit nicht spröde wird und perfekt abdichtet.

Komplettschutz

Wadit® verhindert durch seine hohe Haftung Korrosion in den Schlosskammern der Spundbohlen und kann auch in Kombination mit Beschichtungen eingesetzt werden. Wir empfehlen, dass einzufädelnde Schloss die ersten 10 cm schräg anzuschleifen, um Materialaustritte zu minimieren.

Flexibilidad con efecto memoria

En el caso de parachoques reversibles en automóviles, queda patente desde hace 30 años que se absorben deformaciones pequeñas sin daños, ya que el material vuelve a su estado original. WADIT® funciona siguiendo este principio y ofrece así una elasticidad inigualable. Gracias a esta propiedad, el material de sellado tolera torsiones y movimientos en el cerramiento de la tablestaca, permanece absolutamente estanco y recupera su estado inicial bajo condiciones normales.

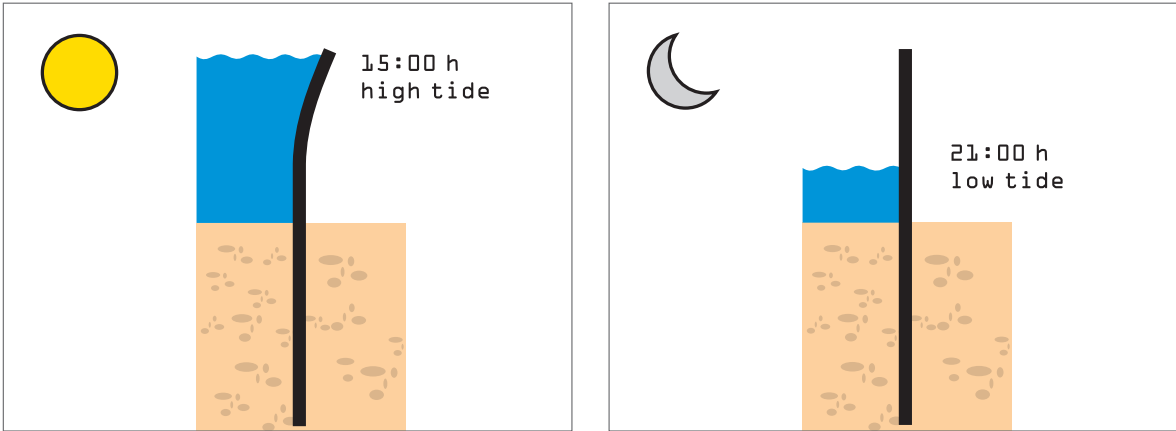
Óptima resistencia

Los materiales convencionales comienzan a volverse frágiles a una temperatura por debajo de los 10°C, lo que conlleva a menudo problemas si se trabaja en la zona de la capa freática. Al introducir las tablestacas, el material de sellado que se arranca desde el cerramiento, como el cristal, puede causar fugas. WADIT® soluciona este problema, ya que ofrece una flexibilidad óptima incluso en la zona de la capa freática (todo el año entre 5°C y 7°C), de modo que el material ni se vuelve frágil ni pierde estanqueidad.

Protección total

Gracias a su alta adherencia, Wadit® evita la corrosión en las cámaras de aislamiento de las tablestacas, pudiendo emplearse también en combinación con revestimientos. Recomendamos afilar los primeros 10 cm del cerramiento a introducir de forma que queden oblicuos para minimizar pérdidas de material.

	Des propriétés physiques et biologiques uniques en leur genre		Eccezionali caratteristiche fisiche e biologiche		Уникальные физические и биологические свойства
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La souplesse dotée de l'effet mémoire

Dans le cas de pare-chocs réversibles sur les voitures, depuis environ 30 ans, on peut voir et sentir que les petites déformations sont absorbées sans dommage étant donné que le matériau se remet en place. WADIT® fonctionne selon ce principe et offre de la sorte une élasticité unique en son genre. Grâce à cette qualité, ce joint tolère des torsions et des mouvements dans la serrure, il reste absolument étanche et retourne dans sa position d'origine dans des conditions normales.

Une résistance optimale

Les matériaux courants deviennent durs comme du verre à 10° C déjà, ce qui entraîne souvent des problèmes lorsque l'on travaille dans les zones des nappes phréatiques. L'enfoncement des rideaux de palplanches provoque des pertes du matériau d'étanchement de la serrure qui mènent à des défauts d'étanchéité. *WADIT offre au contraire une souplesse maximale, même dans la zone de la nappe phréatique (qui reste toute l'année entre 5° et 7° C), n'est donc pas fragilisé et continue à étancher impeccablement.

Protection complète

Grâce à sa grande adhérence, Wadit® évite la corrosion dans les serrures des palplanches et peut être employé également en combinaison avec des revêtements. Nous recommandons d'affûter les 10 premiers centimètres de la serrure devant être enfilée en biais, afin de minimiser l'échappement de matériau.

Flessibilità con effetto memoria

Già da 30 anni è evidente alla vista e al tatto che nei paraurti reversibili delle automobili le deformazioni di entità minore non causano danni, perché il materiale ritorna alla sua forma originaria. WADIT® funziona in base allo stesso principio, offrendo quindi un'eccezionale elasticità. Grazie a questa caratteristica, il sigillante sopporta torsioni e movimenti nei ganci delle palancole, rimane assolutamente a tenuta e, in condizioni normali, ritorna alla sua posizione iniziale.

Estremamente resistente

Quando la temperatura ambiente diminuisce, i materiali tradizionali iniziano a diventare fragili già a partire da 10°C, e ciò comporta spesso dei problemi se si opera a livello di falda acquifera. Sussiste infatti la possibilità che, al momento del posizionamento delle palancole, il materiale sigillante si sbricioli come vetro e causi quindi perdite. WADIT® risolve il problema, offrendo una flessibilità ottimale anche a livello di falda acquifera (tutto l'anno fra 5° e 7° C), perché non diventa fragile e impermeabilizza perfettamente.

Protezione totale

Grazie alla sua elevata aderenza, Wadit® impedisce la corrosione dei ganci dei palancolati e può essere impiegato anche in combinazione con rivestimenti. Consigliamo di smerigliare in modo obliquo i primi 10 cm del gancio che deve essere inserito per ridurre al minimo la fuoriuscita di materiale in eccesso.

Гибкость и эффект запоминания

Уже примерно на протяжении 30 лет используются автомобильные амортизаторы с обратимой деформацией, которые могут выдерживать без повреждения небольшие изменения формы, так как материал принимает первоначальную форму. Аналогичными свойствами обладает материал WADIT®. Таким образом, он отличается уникальной эластичностью. Это свойство позволяет данному уплотнительному материалу выдерживать деформацию при кручении и движении замка шпунтовых свай, оставаться абсолютно герметичным и при обычных условиях снова принимать свою первоначальную форму.

Оптимальная прочность

Обычные материалы при уменьшении температуры окружающей среды до 10 °С становятся хрупкими, что при выполнении работ в зоне грунтовых вод может вести к возникновению проблем. При установке шпунтовых стенок хрупкий уплотнительный материал высывается из замка шпунтовых свай, что может привести к потере герметичности. WADIT® позволяет решить эту проблему, так как этот материал даже в зоне грунтовых вод (круглый год 5 °С - 7 °С) сохраняет оптимальную гибкость, не становится хрупким и превосходно уплотняет стенки.

Полная защита

Благодаря своей высокой сцепляемости Wadit® препятствует возникновению коррозии в камерах замков шпунтовых свай и также может использоваться в комбинации с покрытиями. Мы рекомендуем отшлифовать первые 10 см замка под наклоном, чтобы свести к минимуму выход материала.

2020



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