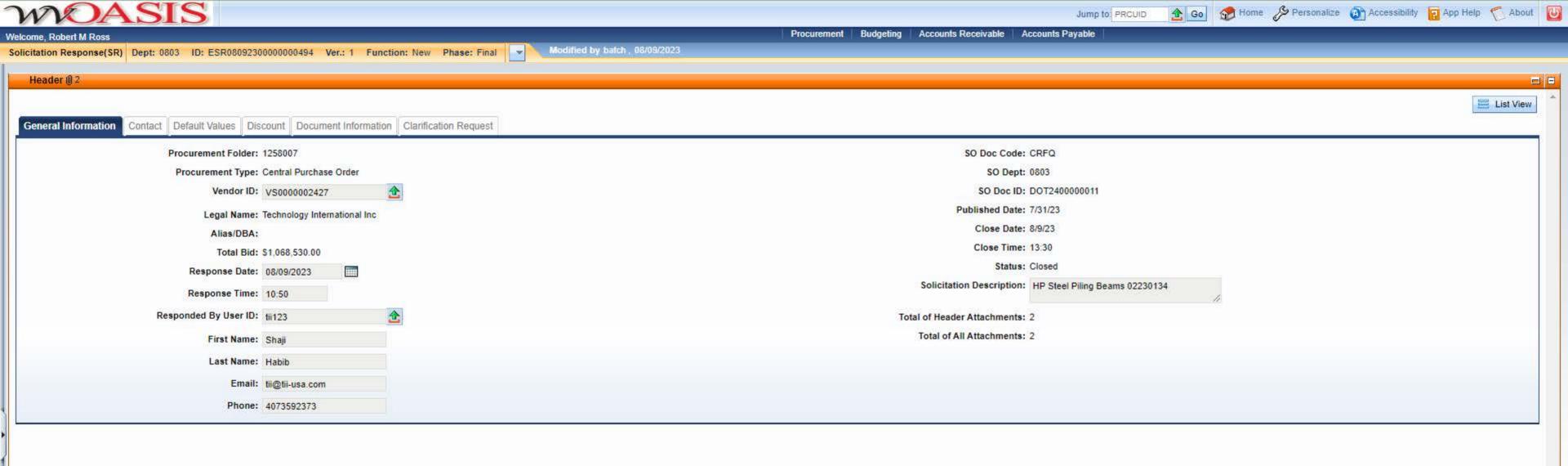
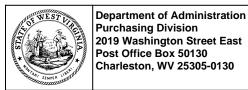


2019 Washington Street, East Charleston, WV 25305 Telephone: 304-558-2306 General Fax: 304-558-6026

Bid Fax: 304-558-3970

The following documentation is an electronically-submitted vendor response to an advertised solicitation from the *West Virginia Purchasing Bulletin* within the Vendor Self-Service portal at *wvOASIS.gov*. As part of the State of West Virginia's procurement process, and to maintain the transparency of the bid-opening process, this documentation submitted online is publicly posted by the West Virginia Purchasing Division at *WVPurchasing.gov* with any other vendor responses to this solicitation submitted to the Purchasing Division in hard copy format.





## State of West Virginia Solicitation Response

Proc Folder: 1258007

Solicitation Description: HP Steel Piling Beams 02230134

**Proc Type:** Central Purchase Order

 Solicitation Closes
 Solicitation Response
 Version

 2023-08-09 13:30
 SR 0803 ESR08092300000000494
 1

**VENDOR** 

VS0000002427

Technology International Inc

Solicitation Number: CRFQ 0803 DOT2400000011

**Total Bid:** 1068530 **Response Date:** 2023-08-09 **Response Time:** 10:50:51

Comments:

FOR INFORMATION CONTACT THE BUYER

John W Estep 304-558-2566 john.w.estep@wv.gov

Vendor Signature X

FEIN#

DATE

All offers subject to all terms and conditions contained in this solicitation

 Date Printed:
 Aug 9, 2023
 Page: 1
 FORM ID: WV-PRC-SR-001 2020/05

Line	Comm Ln Desc	Qty	Unit Issue	Unit Price	Ln Total Or Contract Amount
1	12"x53#x40' H Pile Beams	636000.00	) LB	0.800000	508800.00

Comm Code	Manufacturer	Specification	Model #	
30101700				

### **Commodity Line Comments:**

### **Extended Description:**

12"x53#x40' H Pile Beams

Line	Comm Ln Desc	Qty	Unit Issue	Unit Price	Ln Total Or Contract Amount
2	12"x53#x35' H Pile Beams	371000.00	LB	0.790000	293090.00

Comm Code	Manufacturer	Specification	Model #
30101700			

### **Commodity Line Comments:**

### **Extended Description:**

12"x53#x35' H Pile Beams

Line	Comm Ln Desc	Qty	Unit Issue	Unit Price	Ln Total Or Contract Amount
3	12"x53#x30' H Pile Beams	318000.00	) LB	0.800000	254400.00

Comm Code	Manufacturer	Specification	Model #	
30101700				

### **Commodity Line Comments:**

### **Extended Description:**

12"x53#x30' H Pile Beams

Line	Comm Ln Desc	Qty	Unit Issue	Unit Price	Ln Total Or Contract Amount
4	8Wx18#x40' Wide Flange Beams	14400.00	0 LB	0.850000	12240.00

Comm Code	Manufacturer	Specification	Model #	
30101700				

### **Commodity Line Comments:**

### **Extended Description:**

8Wx18#x40' Wide Flange Beams

Date Printed: Aug 9, 2023 Page: 2 FORM ID: WV-PRC-SR-001 2020/05



Department of Administration Purchasing Division 2019 Washington Street East Post Office Box 50130 Charleston, WV 25305-0130

# State of West Virginia Centralized Request for Quote Miscellaneous

Proc Folder: 1258007 Reason for Modification:

**Doc Description:** HP Steel Piling Beams 02230134

**Proc Type:** Central Purchase Order

 Date Issued
 Solicitation Closes
 Solicitation No
 Version

 2023-07-31
 2023-08-09
 13:30
 CRFQ
 0803
 DOT2400000011
 1

**BID RECEIVING LOCATION** 

**BID CLERK** 

DEPARTMENT OF ADMINISTRATION

PURCHASING DIVISION 2019 WASHINGTON ST E

CHARLESTON WV 25305

US

**VENDOR** 

**Vendor Customer Code:** 

Vendor Name: Technology International, Inc.

Address: 1331 South International Parkway,

Street: Suite 2251,

City: Lake Mary

State: Florida Country: USA Zip: 32746

Principal Contact: SHAJI HABIB

Vendor Contact Phone: 407-359-2373 Extension:

FOR INFORMATION CONTACT THE BUYER

John W Estep 304-558-2566

john.w.estep@wv.gov

Vendor Rifat Habib

Signature X FEIN# 650342335 DATE 08/09/2023

All offers subject to all terms and conditions contained in this solicitation

Date Printed: Jul 31, 2023 Page: 1 FORM ID: WV-PRC-CRFQ-002 2020/05

### **ADDITIONAL INFORMATION**

### REQUEST FOR QUOTATION:

The West Virginia Purchasing Division is soliciting bids on behalf of West Virginia Division of Highways to establish a contract for the onetime purchase of Structural Steel H Piles for WVDOH District 2. Per the Bid Requirements, Specifications, Terms and Conditions attached to this solicitation.

INVOICE TO		SHIP TO	
DIVISION OF HIGHWAYS		DIVISION OF HIGHWAYS	
DISTRICT TWO		DISTRICT TWO - STORAGE LOT	
801 MADISON AVE		6200 RT 60 EAST	
HUNTINGTON	WV	BARBOURSVILLE	WV
US		US	

Line	Comm Ln Desc	Qty	Unit Issue	Unit Price	Total Price
1	12"x53#x40' H Pile Beams	636000.00000	LB	.80	508,800.00

Comm Code	Manufacturer	Specification	Model #
30101700			

### **Extended Description:**

12"x53#x40' H Pile Beams

INVOICE TO		SHIP TO	
DIVISION OF HIGHWAYS		DIVISION OF HIGHWAYS	
DISTRICT TWO		DISTRICT TWO - STORAGE LOT	
801 MADISON AVE		6200 RT 60 EAST	
HUNTINGTON	WV	BARBOURSVILLE	WV
US		US	

Line	Comm Ln Desc	Qty	Unit Issue	Unit Price	Total Price
2	12"x53#x35' H Pile Beams	371000.00000	LB	.79	293,090.00

Comm Code	Manufacturer	Specification	Model #	
30101700				

### **Extended Description:**

12"x53#x35' H Pile Beams

<sup>\*\*\*</sup>Please see our Equipment Proposal TII/WV/0823/30454 attached.

INVOICE TO		SHIP TO	
DIVISION OF HIGHWAYS		DIVISION OF HIGHWAYS	
DISTRICT TWO		DISTRICT TWO - STORAGE LOT	
801 MADISON AVE		6200 RT 60 EAST	
HUNTINGTON	WV	BARBOURSVILLE	WV
US		US	

Line	Comm Ln Desc	Qty	Unit Issue	Unit Price	Total Price
3	12"x53#x30' H Pile Beams	318000.00000	LB	.80	254,400.00

Comm Code	Manufacturer	Specification	Model #	
30101700				

### **Extended Description:**

12"x53#x30' H Pile Beams

INVOICE TO		SHIP TO	
DIVISION OF HIGHWAYS		DIVISION OF HIGHWAYS	
DISTRICT TWO		DISTRICT TWO - STORAGE LOT	
801 MADISON AVE		6200 RT 60 EAST	
HUNTINGTON	WV	BARBOURSVILLE	WV
US		US	

Line	Comm Ln Desc	Qty	Unit Issue	<b>Unit Price</b>	Total Price
4	8Wx18#x40' Wide Flange Beams	14400.00000	LB	.85	12,240.00

Comm Code	Manufacturer	Specification	Model #	
30101700				

### **Extended Description:**

8Wx18#x40' Wide Flange Beams

### SCHEDULE OF EVENTS

<u>Line</u>	<u>Event</u>	<b>Event Date</b>
1	Tech Questions due by 10:00am	2023-08-04

\*\*\*Please see our Equipment Proposal TII/WV/0823/30454 attached.

	Document Phase	Document Description	Page 4
DOT240000011	Final	HP Steel Piling Beams 02230134	

### ADDITIONAL TERMS AND CONDITIONS

See attached document(s) for additional Terms and Conditions

### GENERAL TERMS AND CONDITIONS:

- 1. CONTRACTUAL AGREEMENT: Issuance of an Award Document signed by the Purchasing Division Director, or his designee, and approved as to form by the Attorney General's office constitutes acceptance by the State of this Contract made by and between the State of West Virginia and the Vendor. Vendor's signature on its bid, or on the Contract if the Contract is not the result of a bid solicitation, signifies Vendor's agreement to be bound by and accept the terms and conditions contained in this Contract.
- 2. **DEFINITIONS:** As used in this Solicitation/Contract, the following terms shall have the meanings attributed to them below. Additional definitions may be found in the specifications included with this Solicitation/Contract.
- **2.1. "Agency"** or "**Agencies"** means the agency, board, commission, or other entity of the State of West Virginia that is identified on the first page of the Solicitation or any other public entity seeking to procure goods or services under this Contract.
- 2.2. "Bid" or "Proposal" means the vendors submitted response to this solicitation.
- 2.3. "Contract" means the binding agreement that is entered into between the State and the Vendor to provide the goods or services requested in the Solicitation.
- **2.4.** "Director" means the Director of the West Virginia Department of Administration, Purchasing Division.
- 2.5. "Purchasing Division" means the West Virginia Department of Administration, Purchasing Division.
- 2.6. "Award Document" means the document signed by the Agency and the Purchasing Division, and approved as to form by the Attorney General, that identifies the Vendor as the contract holder.
- **2.7. "Solicitation"** means the official notice of an opportunity to supply the State with goods or services that is published by the Purchasing Division.
- 2.8. "State" means the State of West Virginia and/or any of its agencies, commissions, boards, etc. as context requires.
- **2.9. "Vendor"** or **"Vendors"** means any entity submitting a bid in response to the Solicitation, the entity that has been selected as the lowest responsible bidder, or the entity that has been awarded the Contract as context requires.

Fixed Period Contract with Renewals: This Contract becomes e receipt of the notice to proceed and part of the Contract more fully de specifications must be completed within days. Use work covered by the preceding sentence, the vendor agrees that:	scribed in the attached
the contract will continue for years;	
year periods or shorter periods provided that they do not exceed months contained in all available renewals. Automatic renewal prohibited. Renewals must be approved by the Vendor, Agency, and Attorney General's Office (Attorney General approval is as	the total number of of this Contract is Purchasing Division
✓ One-Time Purchase: The term of this Contract shall run from the Document until all of the goods contracted for have been delivered, I Contract extend for more than one fiscal year.	
Construction/Project Oversight: This Contract becomes effective date listed on the first page of this Contract, identified as the State of cover page containing the signatures of the Purchasing Division, Encumbrance clerk (or another page), and continues until the vendor is providing oversight is complete.	West Virginia contract Attorney General, and identified as
Other: Contract Term specified in	
4. AUTHORITY TO PROCEED: Vendor is authorized to begin perform the date of encumbrance listed on the front page of the Award Document un "Fixed Period Contract" or "Fixed Period Contract with Renewals" has been above. If either "Fixed Period Contract" or "Fixed Period Contract with Rechecked, Vendor must not begin work until it receives a separate notice to proceed will then be incorporated into the Contract via change official date that work commenced.	nless either the box for n checked in Section 3 newals" has been proceed from the State.
<b>5. QUANTITIES:</b> The quantities required under this Contract shall be with the category that has been identified as applicable to this Contract.	
Open End Contract: Quantities listed in this Solicitation/Award I approximations only, based on estimates supplied by the Agency. It is that the Contract shall cover the quantities actually ordered for deliver Contract, whether more or less than the quantities shown.	understood and agreed
Service: The scope of the service to be provided will be more clear specifications included herewith.	rly defined in the
Combined Service and Goods: The scope of the service and delive provided will be more clearly defined in the specifications included here.	

One-Time Purchase: This Contract is for the purchase of a set quantity of goods that are identified in the specifications included herewith. Once those items have been delivered, no additional goods may be procured under this Contract without an appropriate change order approved by the Vendor, Agency, Purchasing Division, and Attorney General's office.
Construction: This Contract is for construction activity more fully defined in the specifications.
6. EMERGENCY PURCHASES: The Purchasing Division Director may authorize the Agency to purchase goods or services in the open market that Vendor would otherwise provide under this Contract if those goods or services are for immediate or expedited delivery in an emergency. Emergencies shall include, but are not limited to, delays in transportation or an unanticipated increase in the volume of work. An emergency purchase in the open market, approved by the Purchasing Division Director, shall not constitute of breach of this Contract and shall not entitle the Vendor to any form of compensation or damages. This provision does not excuse the State from fulfilling its obligations under a One-Time Purchase contract.
7. REQUIRED DOCUMENTS: All of the items checked in this section must be provided to the Purchasing Division by the Vendor as specified:
LICENSE(S) / CERTIFICATIONS / PERMITS: In addition to anything required under the Section of the General Terms and Conditions entitled Licensing, the apparent successful Vendor shall furnish proof of the following licenses, certifications, and/or permits upon request and in a form acceptable to the State. The request may be prior to or after contract award at the State's sole discretion.
The apparent successful Vendor shall also furnish proof of any additional licenses or certifications contained in the specifications regardless of whether or not that requirement is

listed above.

8. INSURANCE: The apparent successful Vendor shall furnish proof of the insurance identified by a checkmark below prior to Contract award. The insurance coverages identified below must be maintained throughout the life of this contract. Thirty (30) days prior to the expiration of the insurance policies, Vendor shall provide the Agency with proof that the insurance mandated herein has been continued. Vendor must also provide Agency with immediate notice of any changes in its insurance policies, including but not limited to, policy cancelation, policy reduction, or change in insurers. The apparent successful Vendor shall also furnish proof of any additional insurance requirements contained in the specifications prior to Contract award regardless of whether that insurance requirement is listed in this section.

Vendor must maintain:	
✓ Commercial General Liability Insurance in at least an amount of: \$1,000,000.00 per occurrence.	,
Automobile Liability Insurance in at least an amount of: \$1,000,000.00 per occurrence.	
Professional/Malpractice/Errors and Omission Insurance in at least an amount of:  per occurrence. Notwithstanding the forgoing, Vendor's are not received to list the State as an additional insured for this type of policy.	quired
Commercial Crime and Third Party Fidelity Insurance in an amount of: per occurrence.	
Cyber Liability Insurance in an amount of: per occurrence.	
☐ Builders Risk Insurance in an amount equal to 100% of the amount of the Contract.	
Pollution Insurance in an amount of: per occurrence.	
Aircraft Liability in an amount of: per occurrence.	

- 9. WORKERS' COMPENSATION INSURANCE: Vendor shall comply with laws relating to workers compensation, shall maintain workers' compensation insurance when required, and shall furnish proof of workers' compensation insurance upon request.
- 10. VENUE: All legal actions for damages brought by Vendor against the State shall be brought in the West Virginia Claims Commission. Other causes of action must be brought in the West Virginia court authorized by statute to exercise jurisdiction over it.

11. LIQUIDATED DAMAGES: This clause shall in no way be considered exclusive and shall not limit the State or Agency's right to pursue any other available remedy. Vendor shall pay

liquidated damages in the	e amount specified below or as described in	n the specifications:
<b></b>	for	·
Liquidated Dam	nages Contained in the Specifications.	
☑ Liquidated Dan	nages Are Not Included in this Contract.	

- 12. ACCEPTANCE: Vendor's signature on its bid, or on the certification and signature page, constitutes an offer to the State that cannot be unilaterally withdrawn, signifies that the product or service proposed by vendor meets the mandatory requirements contained in the Solicitation for that product or service, unless otherwise indicated, and signifies acceptance of the terms and conditions contained in the Solicitation unless otherwise indicated.
- 13. PRICING: The pricing set forth herein is firm for the life of the Contract, unless specified elsewhere within this Solicitation/Contract by the State. A Vendor's inclusion of price adjustment provisions in its bid, without an express authorization from the State in the Solicitation to do so, may result in bid disqualification. Notwithstanding the foregoing, Vendor must extend any publicly advertised sale price to the State and invoice at the lower of the contract price or the publicly advertised sale price.
- 14. PAYMENT IN ARREARS: Payments for goods/services will be made in arrears only upon receipt of a proper invoice, detailing the goods/services provided or receipt of the goods/services, whichever is later. Notwithstanding the foregoing, payments for software maintenance, licenses, or subscriptions may be paid annually in advance.
- 15. PAYMENT METHODS: Vendor must accept payment by electronic funds transfer and P-Card. (The State of West Virginia's Purchasing Card program, administered under contract by a banking institution, processes payment for goods and services through state designated credit cards.)
- 16. TAXES: The Vendor shall pay any applicable sales, use, personal property or any other taxes arising out of this Contract and the transactions contemplated thereby. The State of West Virginia is exempt from federal and state taxes and will not pay or reimburse such taxes.

- 17. ADDITIONAL FEES: Vendor is not permitted to charge additional fees or assess additional charges that were not either expressly provided for in the solicitation published by the State of West Virginia, included in the Contract, or included in the unit price or lump sum bid amount that Vendor is required by the solicitation to provide. Including such fees or charges as notes to the solicitation may result in rejection of vendor's bid. Requesting such fees or charges be paid after the contract has been awarded may result in cancellation of the contract.
- 18. FUNDING: This Contract shall continue for the term stated herein, contingent upon funds being appropriated by the Legislature or otherwise being made available. In the event funds are not appropriated or otherwise made available, this Contract becomes void and of no effect beginning on July 1 of the fiscal year for which funding has not been appropriated or otherwise made available. If that occurs, the State may notify the Vendor that an alternative source of funding has been obtained and thereby avoid the automatic termination. Non-appropriation or non-funding shall not be considered an event of default.
- 19. CANCELLATION: The Purchasing Division Director reserves the right to cancel this Contract immediately upon written notice to the vendor if the materials or workmanship supplied do not conform to the specifications contained in the Contract. The Purchasing Division Director may also cancel any purchase or Contract upon 30 days written notice to the Vendor in accordance with West Virginia Code of State Rules § 148-1-5.2.b.
- **20. TIME:** Time is of the essence regarding all matters of time and performance in this Contract.
- 21. APPLICABLE LAW: This Contract is governed by and interpreted under West Virginia law without giving effect to its choice of law principles. Any information provided in specification manuals, or any other source, verbal or written, which contradicts or violates the West Virginia Constitution, West Virginia Code, or West Virginia Code of State Rules is void and of no effect.
- **22. COMPLIANCE WITH LAWS:** Vendor shall comply with all applicable federal, state, and local laws, regulations and ordinances. By submitting a bid, Vendor acknowledges that it has reviewed, understands, and will comply with all applicable laws, regulations, and ordinances.
  - SUBCONTRACTOR COMPLIANCE: Vendor shall notify all subcontractors providing commodities or services related to this Contract that as subcontractors, they too are required to comply with all applicable laws, regulations, and ordinances. Notification under this provision must occur prior to the performance of any work under the contract by the subcontractor.
- 23. ARBITRATION: Any references made to arbitration contained in this Contract, Vendor's bid, or in any American Institute of Architects documents pertaining to this Contract are hereby deleted, void, and of no effect.

- 24. MODIFICATIONS: This writing is the parties' final expression of intent.

  Notwithstanding anything contained in this Contract to the contrary no modification of this Contract shall be binding without mutual written consent of the Agency, and the Vendor, with approval of the Purchasing Division and the Attorney General's office (Attorney General approval is as to form only). Any change to existing contracts that adds work or changes contract cost, and were not included in the original contract, must be approved by the Purchasing Division and the Attorney General's Office (as to form) prior to the implementation of the change or commencement of work affected by the change.
- 25. WAIVER: The failure of either party to insist upon a strict performance of any of the terms or provision of this Contract, or to exercise any option, right, or remedy herein contained, shall not be construed as a waiver or a relinquishment for the future of such term, provision, option, right, or remedy, but the same shall continue in full force and effect. Any waiver must be expressly stated in writing and signed by the waiving party.
- 26. SUBSEQUENT FORMS: The terms and conditions contained in this Contract shall supersede any and all subsequent terms and conditions which may appear on any form documents submitted by Vendor to the Agency or Purchasing Division such as price lists, order forms, invoices, sales agreements, or maintenance agreements, and includes internet websites or other electronic documents. Acceptance or use of Vendor's forms does not constitute acceptance of the terms and conditions contained thereon.
- 27. ASSIGNMENT: Neither this Contract nor any monies due, or to become due hereunder, may be assigned by the Vendor without the express written consent of the Agency, the Purchasing Division, the Attorney General's office (as to form only), and any other government agency or office that may be required to approve such assignments.
- 28. WARRANTY: The Vendor expressly warrants that the goods and/or services covered by this Contract will: (a) conform to the specifications, drawings, samples, or other description furnished or specified by the Agency; (b) be merchantable and fit for the purpose intended; and (c) be free from defect in material and workmanship.
- 29. STATE EMPLOYEES: State employees are not permitted to utilize this Contract for personal use and the Vendor is prohibited from permitting or facilitating the same.
- 30. PRIVACY, SECURITY, AND CONFIDENTIALITY: The Vendor agrees that it will not disclose to anyone, directly or indirectly, any such personally identifiable information or other confidential information gained from the Agency, unless the individual who is the subject of the information consents to the disclosure in writing or the disclosure is made pursuant to the Agency's policies, procedures, and rules. Vendor further agrees to comply with the Confidentiality Policies and Information Security Accountability Requirements, set forth in <a href="http://www.state.wv.us/admin/purchase/privacy/default.html">http://www.state.wv.us/admin/purchase/privacy/default.html</a>.

31. YOUR SUBMISSION IS A PUBLIC DOCUMENT: Vendor's entire response to the Solicitation and the resulting Contract are public documents. As public documents, they will be disclosed to the public following the bid/proposal opening or award of the contract, as required by the competitive bidding laws of West Virginia Code §§ 5A-3-1 et seq., 5-22-1 et seq., and 5G-1-1 et seq. and the Freedom of Information Act West Virginia Code §§ 29B-1-1 et seq.

DO NOT SUBMIT MATERIAL YOU CONSIDER TO BE CONFIDENTIAL, A TRADE SECRET, OR OTHERWISE NOT SUBJECT TO PUBLIC DISCLOSURE.

Submission of any bid, proposal, or other document to the Purchasing Division constitutes your explicit consent to the subsequent public disclosure of the bid, proposal, or document. The Purchasing Division will disclose any document labeled "confidential," "proprietary," "trade secret," "private," or labeled with any other claim against public disclosure of the documents, to include any "trade secrets" as defined by West Virginia Code § 47-22-1 et seq. All submissions are subject to public disclosure without notice.

32. LICENSING: In accordance with West Virginia Code of State Rules § 148-1-6.1.e, Vendor must be licensed and in good standing in accordance with any and all state and local laws and requirements by any state or local agency of West Virginia, including, but not limited to, the West Virginia Secretary of State's Office, the West Virginia Tax Department, West Virginia Insurance Commission, or any other state agency or political subdivision. Obligations related to political subdivisions may include, but are not limited to, business licensing, business and occupation taxes, inspection compliance, permitting, etc. Upon request, the Vendor must provide all necessary releases to obtain information to enable the Purchasing Division Director or the Agency to verify that the Vendor is licensed and in good standing with the above entities.

SUBCONTRACTOR COMPLIANCE: Vendor shall notify all subcontractors providing commodities or services related to this Contract that as subcontractors, they too are required to be licensed, in good standing, and up-to-date on all state and local obligations as described in this section. Obligations related to political subdivisions may include, but are not limited to, business licensing, business and occupation taxes, inspection compliance, permitting, etc. Notification under this provision must occur prior to the performance of any work under the contract by the subcontractor.

- 33. ANTITRUST: In submitting a bid to, signing a contract with, or accepting a Award Document from any agency of the State of West Virginia, the Vendor agrees to convey, sell, assign, or transfer to the State of West Virginia all rights, title, and interest in and to all causes of action it may now or hereafter acquire under the antitrust laws of the United States and the State of West Virginia for price fixing and/or unreasonable restraints of trade relating to the particular commodities or services purchased or acquired by the State of West Virginia. Such assignment shall be made and become effective at the time the purchasing agency tenders the initial payment to Vendor.
- **34. VENDOR NON-CONFLICT:** Neither Vendor nor its representatives are permitted to have any interest, nor shall they acquire any interest, direct or indirect, which would compromise the performance of its services hereunder. Any such interests shall be promptly presented in detail to the Agency.

Revised 11/1/2022

35. VENDOR RELATIONSHIP: The relationship of the Vendor to the State shall be that of an independent contractor and no principal-agent relationship or employer-employee relationship is contemplated or created by this Contract. The Vendor as an independent contractor is solely liable for the acts and omissions of its employees and agents. Vendor shall be responsible for selecting, supervising, and compensating any and all individuals employed pursuant to the terms of this Solicitation and resulting contract. Neither the Vendor, nor any employees or subcontractors of the Vendor, shall be deemed to be employees of the State for any purpose whatsoever. Vendor shall be exclusively responsible for payment of employees and contractors for all wages and salaries, taxes, withholding payments, penalties, fees, fringe benefits, professional liability insurance premiums, contributions to insurance and pension, or other deferred compensation plans, including but not limited to, Workers' Compensation and Social Security obligations, licensing fees, etc. and the filing of all necessary documents, forms, and returns pertinent to all of the foregoing.

Vendor shall hold harmless the State, and shall provide the State and Agency with a defense against any and all claims including, but not limited to, the foregoing payments, withholdings, contributions, taxes, Social Security taxes, and employer income tax returns.

- 36. INDEMNIFICATION: The Vendor agrees to indemnify, defend, and hold harmless the State and the Agency, their officers, and employees from and against: (1) Any claims or losses for services rendered by any subcontractor, person, or firm performing or supplying services, materials, or supplies in connection with the performance of the Contract; (2) Any claims or losses resulting to any person or entity injured or damaged by the Vendor, its officers, employees, or subcontractors by the publication, translation, reproduction, delivery, performance, use, or disposition of any data used under the Contract in a manner not authorized by the Contract, or by Federal or State statutes or regulations; and (3) Any failure of the Vendor, its officers, employees, or subcontractors to observe State and Federal laws including, but not limited to, labor and wage and hour laws.
- 37. NO DEBT CERTIFICATION: In accordance with West Virginia Code §§ 5A-3-10a and 5-22-1(i), the State is prohibited from awarding a contract to any bidder that owes a debt to the State or a political subdivision of the State. By submitting a bid, or entering into a contract with the State, Vendor is affirming that (1) for construction contracts, the Vendor is not in default on any monetary obligation owed to the state or a political subdivision of the state, and (2) for all other contracts, neither the Vendor nor any related party owe a debt as defined above, and neither the Vendor nor any related party are in employer default as defined in the statute cited above unless the debt or employer default is permitted under the statute.
- 38. CONFLICT OF INTEREST: Vendor, its officers or members or employees, shall not presently have or acquire an interest, direct or indirect, which would conflict with or compromise the performance of its obligations hereunder. Vendor shall periodically inquire of its officers, members and employees to ensure that a conflict of interest does not arise. Any conflict of interest discovered shall be promptly presented in detail to the Agency.

following reports identified by a checked box below:

☑ Such reports as the Agency and/or the Purchasing Division may request. Requested reports may include, but are not limited to, quantities purchased, agencies utilizing the contract, total contract expenditures by agency, etc.

☐ Quarterly reports detailing the total quantity of purchases in units and dollars, along with a listing of purchases by agency. Quarterly reports should be delivered to the Purchasing Division via email at <a href="mailto:purchasing.division@wv.gov">purchasing.division@wv.gov</a>.

39. REPORTS: Vendor shall provide the Agency and/or the Purchasing Division with the

- **40. BACKGROUND CHECK:** In accordance with W. Va. Code § 15-2D-3, the State reserves the right to prohibit a service provider's employees from accessing sensitive or critical information or to be present at the Capitol complex based upon results addressed from a criminal background check. Service providers should contact the West Virginia Division of Protective Services by phone at (304) 558-9911 for more information.
- 41. PREFERENCE FOR USE OF DOMESTIC STEEL PRODUCTS: Except when authorized by the Director of the Purchasing Division pursuant to W. Va. Code § 5A-3-56, no contractor may use or supply steel products for a State Contract Project other than those steel products made in the United States. A contractor who uses steel products in violation of this section may be subject to civil penalties pursuant to W. Va. Code § 5A-3-56. As used in this section:
  - a. "State Contract Project" means any erection or construction of, or any addition to, alteration of or other improvement to any building or structure, including, but not limited to, roads or highways, or the installation of any heating or cooling or ventilating plants or other equipment, or the supply of and materials for such projects, pursuant to a contract with the State of West Virginia for which bids were solicited on or after June 6, 2001.
  - b. "Steel Products" means products rolled, formed, shaped, drawn, extruded, forged, cast, fabricated or otherwise similarly processed, or processed by a combination of two or more or such operations, from steel made by the open heath, basic oxygen, electric furnace, Bessemer or other steel making process.
  - c. The Purchasing Division Director may, in writing, authorize the use of foreign steel products if:
    - 1. The cost for each contract item used does not exceed one tenth of one percent (.1%) of the total contract cost or two thousand five hundred dollars (\$2,500.00), whichever is greater. For the purposes of this section, the cost is the value of the steel product as delivered to the project; or
    - 2. The Director of the Purchasing Division determines that specified steel materials are not produced in the United States in sufficient quantity or otherwise are not reasonably available to meet contract requirements.

42. PREFERENCE FOR USE OF DOMESTIC ALUMINUM, GLASS, AND STEEL: In Accordance with W. Va. Code § 5-19-1 et seq., and W. Va. CSR § 148-10-1 et seq., for every contract or subcontract, subject to the limitations contained herein, for the construction, reconstruction, alteration, repair, improvement or maintenance of public works or for the purchase of any item of machinery or equipment to be used at sites of public works, only domestic aluminum, glass or steel products shall be supplied unless the spending officer determines, in writing, after the receipt of offers or bids, (1) that the cost of domestic aluminum, glass or steel products is unreasonable or inconsistent with the public interest of the State of West Virginia, (2) that domestic aluminum, glass or steel products are not produced in sufficient quantities to meet the contract requirements, or (3) the available domestic aluminum, glass, or steel do not meet the contract specifications. This provision only applies to public works contracts awarded in an amount more than fifty thousand dollars (\$50,000) or public works contracts that require more than ten thousand pounds of steel products.

The cost of domestic aluminum, glass, or steel products may be unreasonable if the cost is more than twenty percent (20%) of the bid or offered price for foreign made aluminum, glass, or steel products. If the domestic aluminum, glass or steel products to be supplied or produced in a "substantial labor surplus area", as defined by the United States Department of Labor, the cost of domestic aluminum, glass, or steel products may be unreasonable if the cost is more than thirty percent (30%) of the bid or offered price for foreign made aluminum, glass, or steel products. This preference shall be applied to an item of machinery or equipment, as indicated above, when the item is a single unit of equipment or machinery manufactured primarily of aluminum, glass or steel, is part of a public works contract and has the sole purpose or of being a permanent part of a single public works project. This provision does not apply to equipment or machinery purchased by a spending unit for use by that spending unit and not as part of a single public works project.

All bids and offers including domestic aluminum, glass or steel products that exceed bid or offer prices including foreign aluminum, glass or steel products after application of the preferences provided in this provision may be reduced to a price equal to or lower than the lowest bid or offer price for foreign aluminum, glass or steel products plus the applicable preference. If the reduced bid or offer prices are made in writing and supersede the prior bid or offer prices, all bids or offers, including the reduced bid or offer prices, will be reevaluated in accordance with this rule.

43. INTERESTED PARTY SUPPLEMENTAL DISCLOSURE: W. Va. Code § 6D-1-2 requires that for contracts with an actual or estimated value of at least \$1 million, the Vendor must submit to the Agency a disclosure of interested parties prior to beginning work under this Contract. Additionally, the Vendor must submit a supplemental disclosure of interested parties reflecting any new or differing interested parties to the contract, which were not included in the original pre-work interested party disclosure, within 30 days following the completion or termination of the contract. A copy of that form is included with this solicitation or can be obtained from the WV Ethics Commission. This requirement does not apply to publicly traded companies listed on a national or international stock exchange. A more detailed definition of interested parties can be obtained from the form referenced above.

- **44. PROHIBITION AGAINST USED OR REFURBISHED:** Unless expressly permitted in the solicitation published by the State, Vendor must provide new, unused commodities, and is prohibited from supplying used or refurbished commodities, in fulfilling its responsibilities under this Contract.
- **45. VOID CONTRACT CLAUSES:** This Contract is subject to the provisions of West Virginia Code § 5A-3-62, which automatically voids certain contract clauses that violate State law.
- **46. ISRAEL BOYCOTT:** Bidder understands and agrees that, pursuant to W. Va. Code § 5A-3-63, it is prohibited from engaging in a boycott of Israel during the term of this contract.

**DESIGNATED CONTACT:** Vendor appoints the individual identified in this Section as the Contract Administrator and the initial point of contact for matters relating to this Contract.

(Printed Name and Title)	SHAJI HABIB SALES MANAGER
(Address) 1331 South Interr	national Parkway, Suite 2251, Lake Mary, Florida 32746
(Phone Number) / (Fax Nu	imber) 407-359-2373 / 407-359-2372
(Email address) tii@tii-usa.	com

**CERTIFICATION AND SIGNATURE:** By signing below, or submitting documentation through wvOASIS, I certify that: I have reviewed this Solicitation/Contract in its entirety; that I understand the requirements, terms and conditions, and other information contained herein; that this bid, offer or proposal constitutes an offer to the State that cannot be unilaterally withdrawn; that the product or service proposed meets the mandatory requirements contained in the Solicitation/Contract for that product or service, unless otherwise stated herein; that the Vendor accepts the terms and conditions contained in the Solicitation, unless otherwise stated herein; that I am submitting this bid, offer or proposal for review and consideration; that this bid or offer was made without prior understanding, agreement, or connection with any entity submitting a bid or offer for the same material, supplies, equipment or services; that this bid or offer is in all respects fair and without collusion or fraud; that this Contract is accepted or entered into without any prior understanding, agreement, or connection to any other entity that could be considered a violation of law; that I am authorized by the Vendor to execute and submit this bid, offer, or proposal, or any documents related thereto on Vendor's behalf: that I am authorized to bind the vendor in a contractual relationship; and that to the best of my knowledge, the vendor has properly registered with any State agency that may require registration.

By signing below, I further certify that I understand this Contract is subject to the provisions of West Virginia Code § 5A-3-62, which automatically voids certain contract clauses that violate State law; and that pursuant to W. Va. Code 5A-3-63, the entity entering into this contract is prohibited from engaging in a boycott against Israel.

Technology International, Inc.	
(Company) Rifat Habib	
(Signature of Authorized Representative)	
RIFAT HABIB BUSINESS DEVELOPMENT EXECUTIVE	_
(Printed Name and Title of Authorized Representative) (Date)	_
407-359-2373 / 407-359-2372	
(Phone Number) (Fax Number)	
tii@tii-usa.com	
(Email Address)	

### **EXHIBIT A-Pricing Page** District Two-HP Steel Piling 02230134 Unit of **Item Unit Cost** Quantity Description Total Number Measure 50,880.00 \$0.00 636,000 LBS 12" HP Steel Piling Beams, 40' (12"x53#x40') 1 .80 293,090.00 \$0.00 2 371,000 LBS 12" HP Steel Piling Beams, 35' (12"x53#x35') .79 254,400.00 \$0.00 3 318,000 LBS 12"HP Steel Piling Beams, 30' (12"x53#x30') .80 12,240.00 \$0.00 14400 LBS 8Wx40' Wide Flange Beams (8Wx18#x40') .85 **Grand Total** \$0.00 610,610.00

<sup>\*\*\*</sup>Please see our Equipment Proposal TII/WV/0823/30454 attached.





1331 South International Pkwy, Suite 2251 Lake Mary, FL 32746

Tel: (407) 359-2373
Fax: (407) 359-2372
E-mail: tii@tii-usa.com
Website: www.tii-usa.com

## **Equipment Proposal**

**Description:** HP Steel Piling Beams 02230134

**Solicitation #**: CRFQ 0803 DOT2400000011

**Agency:** State of West Virginia

TII Ref: TII/WV/0823/30454

**Date:** 08/09/2023

In response to your quote request for HP Steel Piling Beams 02230134, Technology International, Inc. is pleased to submit the following for consideration:

ITEM NO.	QTY	DESCRIPTION/ MODEL NO.	UNIT PRICE	EXTD. PRICE
1	636000	HP 12X53 Steel Piling Beams; ASTM A572 GR 5 Quantity: 30 pcs Length Range: 40.0 ft Average Length: 40.0 ft Total Length / Wall Length: 1200.0 lf Unit Weight: 53.00 lbs Total Weight: 31.80 tons	\$.80	508,880.00
2	371000	HP 12X53 Steel Piling Beams; ASTM A572 GR 50 Quantity: 200 pcs Length Range: 35.0 ft Average Length: 35.0 ft Total Length / Wall Length: 7000.0 lf Unit Weight: 53.00 lbs Total Weight: 185.5 tons	\$.79	293,090.00
3	318000	HP 12X53 Steel Piling Beams; ASTM A572 GR 50 Quantity: 200 pcs Length Range: 30.0 ft Average Length: 30.0 lf Total Length / Wall Length: 6000.0 lf Unit Weight: 53.0 lbs Total Weight: 159.00 tons	\$.80	254,400.00

4	14400	W8X18 Steel Beam; ASTM A992 GR 50 Quantity: 20 pcs Length Range: 40.0 ft Average Length: 40.0 ft Total Length / Wall Length: 800.0 lf Unit Weight: 18.0 lbs Total Weight: 7.20 tons	\$.85	12,240.00							
	See attached data sheets										
	<u>Total\$1,068,530.00</u>										

Warranty: Manufacturer's standard warranty applies.

### **Delivery:**

- Estimated delivery is <u>40-52 Weeks</u> after receipt of order and approved submittal.
- Please note, due to COVID-19 there may be unanticipated disruptions and delays in the supply chains globally, for parts, components, equipment and internal manufacturing services such as engineering, production allocation, and logistics. This may result in manufacturing & delivery delays out of our control. We will do our best to communicate all such impacts and reduce the effects of any such delays.
- All delivery dates quoted are subject to manufacturer's confirmation at time of order.
- Submittal data will be provided for approval after receipt of order (if applicable)
- Customer to provide equipment and personnel to unload
- TII will provide MSO at time of payment confirmation. Customer is responsible for all titling and registration of trailer (If Applicable)

Freight: Included to Barboursville, WV 25504.

Payment Terms: NET 30

Prompt Payment discount: 1/4 % 10 days

Quote Validity: 90 days.

### \*\*\* Notes:

• Quoted price is not available on a line item basis. This is an offer for a lump sum contract.

### Technology International, Inc. Corporate data:

We are a small business and our Tax Payer Identification Number (TIN): 650342335. The price quoted does not include any sales, excise or similar taxes.

We trust that this proposal will meet your requirements and we look forward to hearing from you.

If you have any questions or need more information, please contact us by phone at 407-359-2373, fax at 407-359-2372 or email us at tii@tii-usa.com

Respectfully submitted,

Rifat Habib

Business Development Exec. Technology International, Inc.



# **PILING PRODUCTS**









This is also shown in the mission statement of Meever USA: delivering advice and high-quality steel products to support construction and engineering companies, governments and contractors in order to enable them to successfully implement groundwork, road constructions, railways and civil engineering projects.

With our highly qualified employees we can provide you with fast and dependable support for all your questions and orders.

Meever USA delivers all its steel from stock or production with a very short lead time. We can fulfill your delivery requests because of our various stock locations across the US. We also have a large stock of used steel in which we can provide you directly.

In conjunction with several welding and construction engineering specialists, we can deliver special structures and construction such as guard walls, box sections and 'combi piles' for combined sheet piling walls. At your request we can also apply coating to the sections you require to delay the corrosion process and/or for aesthetic reasons.

Our continuous focus on our customers has made Meever USA a major international steel supplier. This customer focus is demonstrated in various ways:

- Questions and orders are handled quickly and efficiently.
- We look at issues form our costumers' perspectives to find optimum solutions.
- Flexibility in all aspects of our service provision.
- Fabricating options to deliver custom designs.
- Flexible delivery times.

Furthermore, we have established an excellent reputation for delivering high-quality new and used steel.

"New and used materials for	MEEVER USA
sale or rent, and buy back options!"	

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The data and commentary contained within this steel sheet piling document is for general information purposes only. It is provided without warranty of any kind. Meever USA shall not be held responsible for any errors, omissions or misuse of any of the enclosed information and hereby disclaims any and all liability resulting from the ability or inability to use the information contained within.













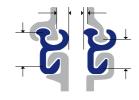






Section	Wy	ly	Width	Height	Thick	cness .	Weight		Coatin	g Area*
	in³/ft	in⁴/ft	inch	inch	flange <b>inch</b>	web inch	single <b>lbs/ft</b>	wall lbs/ft²	single ft²/ft	wall ft²/ft²
	cm³/m	cm⁴/m	mm	mm	mm	mm	kg/m	kg/m²	m²/m	m²/m²
PZC 12	22.3	139.7	27.88	12.52	0.335	0.335	46.6	20.0	5.60	12.20
PZC 12	1.200	19.080	706	318	8.5	8.5	69.1	97.6	1.71	3.72
PZC 13	24.2	152.0	27.88	12.56	0.375	0.375	50.4	21.7	5.60	12.20
PZC 13	1.300	20.760	708	319	9.5	9.5	75.1	106.0	1.71	3.72
D7C 14	26.0	164.3	27.88	12.60	0.420	0.420	55.0	23.7	5.60	12.20
PZC 14	1.400	22.440	708	320	10.7	10.7	81.8	115.5	1.71	3.72
PZC 17	31.0	236.1	25.00	15.21	0.335	0.335	46.4	22.3	5.60	12.20
P2C 17	1.670	32.235	635	386	8.5	8.5	69.1	108.8	1.71	3.72
PZC 18	33.5	255.5	25.00	15.25	0.375	0.375	50.4	24.2	5.60	12.20
FZC 16	1.800	34.890	635	387	9.5	9.5	75.1	118.2	1.71	3.72
PZC 19	36.1	276.6	25.00	15.30	0.420	0.420	55.0	26.4	5.60	12.20
12017	1.945	37.780	635	388	10.7	10.7	81.8	128.8	1.71	3.72
PZC 25	45.7	404.1	27.88	17.66	0.485	0.560	69.4	29.9	6.15	13.30
12025	2.455	55.190	708	449	12.3	14.2	103.3	145.9	1.87	4.06
PZC 26	48.4	428.1	27.88	17.70	0.525	0.600	73.9	31.8	6.15	13.30
12020	2.600	58.460	708	450	13.3	15.2	110.0	155.4	1.87	4.06
PZC 28	51.3	455.1	27.88	17.75	0.570	0.645	79.0	34.0	6.15	13.30
12020	2.755	62.150	708	451	14.5	16.4	117.7	166.1	1.87	4.06
PZC 37	68.5	719.6	22.50	21.02	0.488	0.563	69.6	37.1	6.15	13.30
	3.680	98.270	572	534	12.4	14.3	103.6	181.2	1.87	4.06
PZC 39	72.3	762.1	22.50	21.05	0.525	0.600	74.0	39.5	6.15	13.30
	3.889	104.100	572	535	13.3	15.2	110.2	192.8	1.87	4.06
PZC 41	76.1	803.6	22.50	21.09	0.560	0.636	78.4	41.8	6.15	13.30
120 41	4.090	109.700	572	536	14.2	16.2	116.6	204.1	1.87	4.06

Section	Wy	ly	Width	Height	Thickness Weight		ight	Coating Area*		
					flange	web	single	wall	single	wall
	in³/ft	in⁴/ft	inch	inch	inch	inch	lbs/ft	lbs/ft <sup>2</sup>	ft²/ft	ft²/ft²
	cm³/m	cm⁴/m	mm	mm	mm	mm	kg/m	kg/m²	m²/m	m²/m²
D7 22	18.1	84.38	22.00	9.00	0.375	0.375	40.3	22.0	4.48	2.44
PZ 22	973	11.500	1.118	229	9.5	9.5	60.0	107.4	1.37	2.44
PZ 27	30.2	184.5	18.00	12.00	0.375	0.375	40.5	27.0	4.48	2.98
PZ 27	1.620	25.200	457	305	9.5	9.5	60.3	131.8	1.37	2.98
D7 25	48.5	361.22	22.64	14.90	0.600	0.500	66.0	35.0	5.37	2.84
PZ 35	2.608	49.300	575	378	15.2	12.7	98.2	170.9	1.64	2.84
D7 40	60.7	490.85	19.69	16.10	0.600	0.500	65.6	40.0	5.37	3.28
PZ 40	3.263	67.000	500	409	15.2	12.7	97.6	195.3	1.64	3.28



	_	Section	Wy		Width		Thick		Wei		Coatin	g Area*
Cm*/m	Σi											
ESZ17-630    31.2   229.2   24.80   14.76   0.335   0.335   46.9   22.7   5.43   2.64     1.675   31.300   630   375   8.5   8.5   69.8   1110.8   1.66   2.64     2.64   2.64   2.64   2.64     2.65   2.64   2.64   2.64     2.65   2.64   2.64   2.64     2.65   2.64   2.64   2.64     2.65   2.64   2.64   2.64     2.65   2.64   2.64   2.64     2.65   2.64   2.64   2.64     2.65   2.64   2.64   2.64     2.65   2.64   2.64   2.64     2.65   2.64   2.64   2.64     2.65   2.64   2.64   2.64     2.65   2.64   2.64     2.65   2.64   2.64     2.65   2.64   2.64     2.65   2.65   2.64     2.66   2.64   2.64     2.67   2.65   2.65   2.64     2.67   2.65   2.65   2.65     2.68   2.64   2.65   2.64     2.67   2.65   2.65   2.65   2.65     2.67   2.65   2.65   2.65   2.65     2.67   2.65   2.65   2.65   2.65     2.67   2.75   2.75   2.75   2.75   2.75     2.68   2.65   2.65   2.65     2.69   2.62   2.62     2.60   2.62   2.62     2.61   2.65   2.65   2.65     2.61   2.65   2.65   2.65     2.62   2.65   2.65   2.65     2.65   2.65   2.65     2.65   2.65   2.65   2.65     2.65   2.65   2.65   2.65     2.65   2.65   2.65   2.65     2.65   2.65   2.65   2.65     2.65   2.65   2.65   2.65     2.65   2.65   2.65   2.65     2.65   2.65   2.65   2.65     2.65   2.65   2.65   2.65     2.65   2.65					inch	inch	inch	inch				ft²/ft²
ESZ17-630												
ESZ18-630    33.6   248.0   24.80   14.76   0.375   0.		EC717 620	31.2	229.2	24.80	14.76	0.335	0.335	46.9	22.7	5.43	2.64
ESZ18-630  1.805 33.860 630 375 9.5 9.5 76.0 120.7 1.66 2.64  ESZ19-630  36.1 266.6 24.80 14.76 0.413 0.413 55.2 26.7 5.43 2.64  1.940 36.410 630 375 10.5 10.5 82.2 130.5 1.66 2.64  ESZ20-630 37.3 276.3 24.80 14.84 0.433 0.433 57.4 27.8 5.43 2.66  ESZ17-700 32.3 266.3 27.56 16.54 0.335 0.335 49.7 21.7 6.02 2.62  ESZ18-700 1.805 37.890 700 420 8.5 8.5 74.0 105.7 1.84 2.62  ESZ18-700 1.805 37.890 700 420 9.0 9.0 77.4 110.6 1.84 2.62  ESZ19-700 34.9 288.7 27.56 16.57 0.375 0.375 54.3 23.6 6.02 2.62  ESZ19-700 36.1 299.2 27.56 16.57 0.394 0.394 56.5 24.6 6.02 2.62  ESZ20-700 37.4 310.3 27.56 16.61 0.413 0.413 58.8 25.6 6.02 2.62  ESZ20-700 37.4 310.3 27.56 18.07 0.472 0.354 60.1 26.2 6.61 2.88  ESZ24-700 48.4 438.0 27.56 18.11 0.512 0.394 65.0 28.3 6.61 2.88  ESZ28-700 51.4 466.8 27.56 18.11 0.512 0.394 65.0 28.3 6.61 2.88  ESZ28-700 68.6 688.4 27.56 20.04 0.551 0.433 69.8 30.4 6.61 2.88  ESZ37-700 68.6 688.4 27.56 20.08 0.571 0.472 80.8 35.2 6.90 3.02  ESZ38-700 70.7 70.9 3 27.56 20.08 0.571 0.472 80.8 35.2 6.90 3.02  ESZ38-700 70.7 70.9 3 27.56 20.08 0.571 0.472 80.8 35.2 6.90 3.02  ESZ39-700 70.7 70.9 3 27.56 20.08 0.571 0.472 80.8 35.2 6.90 3.02  ESZ39-700 70.7 70.9 3 27.56 20.08 0.571 0.472 80.8 35.2 6.90 3.02  ESZ39-700 70.7 70.9 3 27.56 20.08 0.571 0.492 83.5 36.3 6.90 3.02  ESZ39-700 70.7 70.9 3 27.56 20.08 0.571 0.492 83.5 36.3 6.90 3.02  ESZ39-700 70.7 70.9 3 27.56 20.08 0.571 0.492 83.5 36.3 6.90 3.02  ESZ39-700 70.7 70.9 3 27.56 20.08 0.571 0.492 83.5 36.3 6.90 3.02  ESZ39-700 70.7 70.9 3 27.56 20.08 0.591 0.492 83.5 36.3 6.90 3.02  ESZ39-700 70.7 70.9 3 27.56 20.08 0.591 0.492 83.5 36.3 6.90 3.02  ESZ39-700 70.7 70.9 3 27.56 20.08 0.591 0.492 83.5 36.3 6.90 3.02  ESZ39-700 70.7 75.3 27.56 20.12 0.610 0.512 86.2 37.5 6.90 3.02  ESZ39-700 74.7 751.3 27.56 20.12 0.610 0.512 86.2 37.5 6.90 3.02		E3Z17-030	1.675	31.300	630	375	8.5	8.5	69.8	110.8	1.66	2.64
1,805   33,800   630   375   9.5   9.5   76.0   120.7   1.66   2.64		ES718-630	33.6	248.0	24.80	14.76	0.375	0.375	51.1	24.7	5.43	2.64
ESZ19-630 1.940 36.410 630 37.5 10.5 10.5 10.5 82.2 130.5 1.66 2.64 2.64 2.005 37.3 276.3 24.80 14.84 0.433 0.433 57.4 27.8 5.43 2.64 2.005 37.730 630 377 11.0 11.0 85.4 135.6 16.6 2.64 2.64 2.62 2.05 32.3 266.3 27.56 16.54 0.335 0.335 49.7 21.7 6.02 2.62 2.62 2.62 2.62 2.62 2.62 2.62		L3Z10-030	1.805	33.860	630	375	9.5	9.5	76.0	120.7	1.66	2.64
ESZ20-630 37.3 24.80 14.84 0.433 0.433 57.4 27.8 5.43 2.64 2.60   ESZ17-700 32.3 26.6 3 27.56 16.54 0.335 0.335 49.7 21.7 6.02 2.62   ESZ17-700 1.735 36.360 700 420 8.5 8.5 74.0 105.7 1.84 2.62   ESZ18-700 33.6 277.5 27.56 16.54 0.354 0.354 52.0 22.7 6.02 2.62   ESZ18-700 1.805 37.890 700 420 9.0 9.0 77.4 110.6 18.4 2.62   ESZ19-700 34.9 288.7 27.56 16.57 0.375 0.375 54.3 23.6 6.02 2.62   ESZ19-700 36.1 299.2 27.56 16.57 0.379 9.5 9.5 80.8 115.4 1.84 2.62   ESZ20-700 37.4 310.3 27.56 16.61 0.413 0.413 58.8 25.6 6.02 2.62   ESZ20-700 37.4 310.3 27.56 16.61 0.413 0.413 58.8 25.6 6.02 2.62   ESZ24-700 45.3 409.1 27.56 18.07 0.472 0.354 60.1 26.2 6.61 2.88   ESZ24-700 45.3 409.1 27.56 18.11 0.512 0.394 65.0 28.3 6.61 2.88   ESZ24-700 45.3 409.1 27.56 18.11 0.512 0.394 65.0 28.3 6.61 2.88   ESZ26-700 51.4 46.8 27.56 18.11 0.512 0.394 65.0 28.3 6.61 2.88   ESZ26-700 51.4 46.8 27.56 18.11 0.512 0.394 65.0 28.3 6.61 2.88   ESZ28-700 51.4 46.8 27.56 18.15 0.551 0.433 69.8 30.4 6.61 2.88   ESZ28-700 66.6 667.3 27.56 18.15 0.551 0.433 69.8 30.4 6.61 2.88   ESZ28-700 66.6 667.3 27.56 20.04 0.551 0.433 69.8 30.4 6.61 2.88   ESZ36-700 3.580 91.130 700 509 14.0 11.0 10.9 148.4 2.02 2.88   ESZ36-700 66.6 688.4 27.56 20.08 0.571 0.472 80.8 35.2 6.90 3.02   ESZ38-700 3.890 94.000 700 510 14.5 12.0 120.2 171.8 2.11 3.02   ESZ38-700 3.890 99.20 700 510 15.0 12.5 12.4 17.7 2.11 15.1   ESZ38-700 70.7 709.3 27.56 20.08 0.571 0.472 80.8 35.2 6.90 3.02   ESZ38-700 70.7 709.3 27.56 20.08 0.571 0.472 80.8 35.2 6.90 3.02   ESZ38-700 70.7 709.3 27.56 20.08 0.571 0.472 80.8 35.2 6.90 3.02   ESZ38-700 70.7 709.3 27.56 20.08 0.591 0.492 83.5 36.3 6.90 3.02   ESZ38-700 70.7 709.3 27.56 20.12 0.610 0.512 86.2 37.5 6.90 3.02   ESZ38-700 70.7 709.3 27.56 20.12 0.610 0.512 86.2 37.5 6.90 3.02   ESZ39-700 70.7 709.3 27.56 20.12 0.610 0.512 86.2 37.5 6.90 3.02   ESZ39-700 70.7 70.7 70.9 3 27.56 20.12 0.610 0.512 86.2 37.5 6.90 3.02   ESZ39-700 70.7 70.7 70.9 3 27.56 20.12 0.610 0.513 88.8 38.7 6.90 3.02   ESZ39-700 74.7 751.3 27.56 20.12 0.610 0.531		EC710 620	36.1	266.6	24.80	14.76	0.413	0.413	55.2	26.7	5.43	2.64
ESZ20-630  2.005  37.730  630  377  11.0  11.0  85.4  135.6  1.66  2.64  ESZ17-700  32.3  266.3  27.56  16.54  0.335  0.335  49.7  21.7  6.02  2.62  ESZ18-700  33.6  ESZ18-700  33.6  277.5  27.56  16.54  0.354  0.354  0.354  0.354  52.0  22.7  6.02  2.62  ESZ18-700  34.9  28.7  27.56  16.57  0.375  0.375  0.375  54.3  23.6  6.02  2.62  ESZ20-700  1.875  39.420  700  421  9.5  9.5  80.8  115.4  120.2  1.84  2.62  ESZ24-700  45.3  40.3  42.1  10.0  10.0  84.1  120.2  1.84  2.62  ESZ24-700  45.3  49.7  40.8		E3Z19-030	1.940	36.410	630	375	10.5	10.5	82.2	130.5	1.66	2.64
ESZ17-700  2.005  37.730  630  377  11.0  11.0  85.4  135.6  1.666  2.64  ESZ17-700  1.735  36.360  700  420  8.5  8.5  74.0  105.7  1.84  2.62  ESZ18-700  1.805  37.890  700  420  9.0  9.0  77.4  110.6  1.84  2.62  ESZ19-700  34.9  28.7  27.56  16.57  0.375  0.375  0.375  54.3  23.6  6.02  2.62  ESZ20-700  1.875  39.420  700  421  9.5  9.5  9.5  80.8  115.4  1.84  2.62  ESZ20-700  1.940  40.860  700  421  10.0  10.0  84.1  120.2  1.84  2.62  ESZ20-700  37.4  310.3  27.56  16.61  0.413  0.413  58.8  25.6  6.02  2.62  10.5/10.5  10.6  10.6		EC720 620	37.3	276.3	24.80	14.84	0.433	0.433	57.4	27.8	5.43	2.64
ESZ18-700  1.735		L3Z20-030	2.005	37.730	630	377	11.0	11.0	85.4	135.6	1.66	2.64
ESZ18-700    1,735   36,360   700   420   8.5   8.5   74.0   105.7   1.84   2.62		EC717 700	32.3	266.3	27.56	16.54	0.335	0.335	49.7	21.7	6.02	2.62
ESZ18-700  1.805		E3Z17-700	1.735	36.360	700	420	8.5	8.5	74.0	105.7	1.84	2.62
ESZ19-700    1.805   37.890   700   420   9.0   9.0   77.4   110.6   1.84   2.62     2.817   27.56   16.57   0.375   0.375   54.3   23.6   6.02   2.62     1.875   39.420   700   421   9.5   9.5   80.8   115.4   1.84   2.62     ESZ20-700   36.1   299.2   27.56   16.57   0.394   0.394   56.5   24.6   6.02   2.62     1.940   40.860   700   421   10.0   10.0   84.1   120.2   1.84   2.62     ESZ20-700   37.4   310.3   27.56   16.61   0.413   0.413   58.8   25.6   6.02   2.62     10.5/10.5   2.010   42.380   700   422   10.5   10.5   87.5   125   1.84   2.62     ESZ24-700   45.3   409.1   27.56   18.07   0.472   0.354   60.1   26.2   6.61   2.88     ESZ26-700   48.4   438.0   27.56   18.11   0.512   0.394   65.0   28.3   6.61   2.88     ESZ26-700   48.4   438.0   27.56   18.11   0.512   0.394   65.0   28.3   6.61   2.88     ESZ28-700   51.4   466.8   27.56   18.15   0.551   0.433   69.8   30.4   6.61   2.88     ESZ36-700   66.6   667.3   27.56   20.04   0.551   0.453   78.1   34.0   6.90   3.02     ESZ37-700   68.6   688.4   27.56   20.08   0.571   0.472   80.8   35.2   6.90   3.02     ESZ38-700   3.690   94.000   700   510   14.5   12.0   120.2   171.8   2.11   3.02     ESZ38-700   70.7   709.3   27.56   20.08   0.591   0.492   83.5   36.3   6.90   3.02     ESZ38-700   70.7   709.3   27.56   20.08   0.591   0.492   83.5   36.3   6.90   3.02     ESZ39-700   70.7   709.3   27.56   20.12   0.610   0.512   86.2   37.5   6.90   3.02     ESZ39-700   70.6   730.2   27.56   20.12   0.610   0.512   86.2   37.5   6.90   3.02     ESZ40-700   74.7   751.3   27.56   20.12   0.630   0.531   88.8   38.7   6.90   3.02     ESZ40-700   74.7   751.3   27.56   20.12   0.630   0.531   88.8   38.7   6.90   3.02     ESZ40-700   74.7   751.3   27.56   20.12   0.630   0.531   88.8   38.7   6.90   3.02     ESZ40-700   74.7   751.3   27.56   20.12   0.630   0.531   88.8   38.7   6.90   3.02     ESZ40-700   74.7   751.3   27.56   20.12   0.630   0.531   88.8   38.7   6.90   3.02     ESZ40-700   74.7   751.3   27.56   20.12   0.630   0.531   88		EC710 700	33.6	277.5	27.56	16.54	0.354	0.354	52.0	22.7	6.02	2.62
ESZ19-700  1.875		E3Z10-700	1.805	37.890	700	420	9.0	9.0	77.4	110.6	1.84	2.62
ESZ20-700  1.875  39.420  700  421  9.5  9.5  80.8  115.4  1.84  2.62  ESZ20-700  36.1  299.2  27.56  16.57  0.394  0.394  56.5  24.6  6.02  2.62  ESZ20-700  37.4  310.3  27.56  16.61  0.413  0.413  58.8  25.6  6.02  2.62  10.5/10.5  2.010  42.380  700  422  10.5  10.5  10.5  87.5  125  1.84  2.62  ESZ24-700  45.3  409.1  27.56  18.07  0.472  0.354  60.1  26.2  6.61  2.88  ESZ24-700  48.4  438.0  27.56  18.11  0.512  0.394  65.0  28.3  6.61  2.88  ESZ26-700  48.4  46.8  27.56  18.15  0.551  0.433  69.8  30.4  6.61  2.88  ESZ28-700  51.4  466.8  27.56  18.15  0.551  0.433  69.8  30.4  6.61  2.88  ESZ26-700  66.6  667.3  27.56  20.04  0.551  0.453  78.1  34.0  6.90  3.02  ESZ37-700  68.6  68.4  27.56  20.08  0.571  0.472  80.8  35.2  6.90  3.02  ESZ38-700  70.7  709.3  27.56  20.08  0.591  0.492  83.5  36.3  6.90  3.02  ESZ38-700  70.7  709.3  27.56  20.12  0.610  0.512  86.2  37.5  6.90  3.02  ESZ39-700  72.6  730.2  27.56  20.12  0.630  0.531  88.8  38.7  6.90  3.02  ESZ39-700  74.7  751.3  27.56  20.12  0.630  0.531  88.8  38.7  6.90  3.02  ESZ40-700  74.7  751.3  27.56  20.12  0.630  0.531  88.8  38.7  6.90  3.02		FC710 700	34.9	288.7	27.56	16.57	0.375	0.375	54.3	23.6	6.02	2.62
ESZ20-700 1.940 40.860 700 421 10.0 10.0 84.1 120.2 1.84 2.62 ESZ20-700 37.4 310.3 27.56 16.61 0.413 0.413 58.8 25.6 6.02 2.62 10.5/10.5 2.010 42.380 700 422 10.5 10.5 87.5 125 1.84 2.62 ESZ24-700 45.3 409.1 27.56 18.07 0.472 0.354 60.1 26.2 6.61 2.88 ESZ26-700 48.4 438.0 27.56 18.11 0.512 0.394 65.0 28.3 6.61 2.88 ESZ26-700 51.4 466.8 27.56 18.15 0.551 0.433 69.8 30.4 6.61 2.88 ESZ28-700 2.765 63.750 700 461 14.0 11.0 103.9 148.4 2.02 2.88 ESZ36-700 3.580 91.130 700 509 14.0 11.5 116.2 166.1 2.11 3.02 ESZ37-700 68.6 688.4 27.56 20.08 0.591 0.472 80.8 35.2 6.90 3.02 ESZ38-700 51.4 ESZ38-700 3.690 94.000 700 510 14.5 12.0 12.0 12.2 171.8 2.11 3.02 ESZ38-700 3.800 96.860 700 510 15.0 12.5 12.4 12.0 12.0 12.1 1.51 ESZ39-700 3.905 99.720 700 511 15.5 13.0 128.2 183.1 2.11 3.02 ESZ39-700 74.7 751.3 27.56 20.12 0.630 0.531 88.8 38.7 6.90 3.02 ESZ39-700 74.7 751.3 27.56 20.12 0.630 0.531 88.8 38.7 6.90 3.02 ESZ39-700 74.7 751.3 27.56 20.12 0.630 0.531 88.8 38.7 6.90 3.02		E3Z19-700	1.875	39.420	700	421	9.5	9.5	80.8	115.4	1.84	2.62
ESZ20-700 37.4 310.3 27.56 16.61 0.413 0.413 58.8 25.6 6.02 2.62 10.5/10.5 2.010 42.380 700 422 10.5 10.5 87.5 125 1.84 2.62   ESZ24-700 45.3 409.1 27.56 18.07 0.472 0.354 60.1 26.2 6.61 2.88 2.435 55.870 700 459 12.0 9.0 89.5 127.9 2.02 2.88   ESZ26-700 48.4 438.0 27.56 18.11 0.512 0.394 65.0 28.3 6.61 2.88 2.600 59.810 700 460 13.0 10.0 96.7 138.1 2.02 1.44   ESZ28-700 51.4 466.8 27.56 18.15 0.551 0.433 69.8 30.4 6.61 2.88   ESZ28-700 66.6 667.3 27.56 20.04 0.551 0.453 78.1 34.0 6.90 3.02   ESZ36-700 3.580 91.130 700 509 14.0 11.5 116.2 166.1 2.11 3.02   ESZ37-700 68.6 688.4 27.56 20.08 0.571 0.472 80.8 35.2 6.90 3.02   ESZ38-700 70.7 709.3 27.56 20.08 0.591 0.492 83.5 36.3 6.90 3.02   ESZ38-700 70.6 730.2 27.56 20.12 0.610 0.512 86.2 37.5 6.90 3.02   ESZ39-700 72.6 730.2 27.56 20.12 0.610 0.512 86.2 37.5 6.90 3.02   ESZ39-700 74.7 751.3 27.56 20.12 0.630 0.531 88.8 38.7 6.90 3.02   ESZ39-700 74.7 751.3 27.56 20.12 0.630 0.531 88.8 38.7 6.90 3.02   ESZ39-700 74.7 751.3 27.56 20.12 0.630 0.531 88.8 38.7 6.90 3.02   ESZ39-700 74.7 751.3 27.56 20.12 0.630 0.531 88.8 38.7 6.90 3.02   ESZ40-700 74.7 751.3 27.56 20.12 0.630 0.531 88.8 38.7 6.90 3.02   ESZ40-700 74.7 751.3 27.56 20.12 0.630 0.531 88.8 38.7 6.90 3.02		EC720 700	36.1	299.2	27.56	16.57	0.394	0.394	56.5	24.6	6.02	2.62
10.5/10.5		E3ZZU-700	1.940	40.860	700	421	10.0	10.0	84.1	120.2	1.84	2.62
ESZ24-700 45.3 409.1 27.56 18.07 0.472 0.354 60.1 26.2 6.61 2.88 2.435 55.870 700 459 12.0 9.0 89.5 127.9 2.02 2.88 2.600 59.810 700 460 13.0 10.0 96.7 138.1 2.02 1.44 2.88 2.756 18.15 0.551 0.433 69.8 30.4 6.61 2.88 2.756 63.750 700 461 14.0 11.0 103.9 148.4 2.02 2.88 2.756 20.04 0.551 0.453 78.1 34.0 6.90 3.02 2.88 2.756 20.04 0.551 0.453 78.1 34.0 6.90 3.02 2.88 2.756 20.04 0.551 0.453 78.1 34.0 6.90 3.02 2.88 2.756 20.04 0.551 0.453 78.1 34.0 6.90 3.02 2.88 2.756 20.04 2.756 20.04 2.756 20.04 20.04 20.05 20.04 20.05 20		ESZ20-700	37.4	310.3	27.56	16.61	0.413	0.413	58.8	25.6	6.02	2.62
ESZ24-700 2.435 55.870 700 459 12.0 9.0 89.5 127.9 2.02 2.88  ESZ26-700 48.4 438.0 27.56 18.11 0.512 0.394 65.0 28.3 6.61 2.88  ESZ28-700 59.810 700 460 13.0 10.0 96.7 138.1 2.02 1.44  ESZ28-700 51.4 466.8 27.56 18.15 0.551 0.433 69.8 30.4 6.61 2.88  ESZ28-700 66.6 667.3 27.56 20.04 0.551 0.453 78.1 34.0 6.90 3.02  ESZ36-700 3.580 91.130 700 509 14.0 11.5 116.2 166.1 2.11 3.02  ESZ37-700 68.6 688.4 27.56 20.08 0.571 0.472 80.8 35.2 6.90 3.02  ESZ38-700 70.7 709.3 27.56 20.08 0.591 0.492 83.5 36.3 6.90 3.02  ESZ38-700 3.800 96.860 700 510 15.0 12.5 124.2 177.4 2.11 1.51  ESZ39-700 3.905 99.720 700 511 15.5 13.0 128.2 183.1 2.11 3.02  ESZ39-700 74.7 751.3 27.56 20.12 0.630 0.531 88.8 38.7 6.90 3.02		10.5/10.5	2.010	42.380	700	422	10.5	10.5	87.5	125	1.84	2.62
ESZ26-700 48.4 438.0 27.56 18.11 0.512 0.394 65.0 28.3 6.61 2.88 2.600 59.810 700 460 13.0 10.0 96.7 138.1 2.02 1.44 2.02 2.88 2.765 63.750 700 461 14.0 11.0 103.9 148.4 2.02 2.88 2.765 63.750 700 461 14.0 11.0 103.9 148.4 2.02 2.88 2.765 63.750 700 461 14.0 11.0 103.9 148.4 2.02 2.88 2.765 91.130 700 509 14.0 11.5 116.2 166.1 2.11 3.02 2.5237-700 68.6 688.4 27.56 20.08 0.571 0.472 80.8 35.2 6.90 3.02 2.5238-700 70.7 709.3 27.56 20.08 0.591 0.492 83.5 36.3 6.90 3.02 2.5238-700 3.800 96.860 700 510 14.5 12.0 120.2 171.8 2.11 3.02 2.5239-700 70.5 73.0.2 27.56 20.12 0.610 0.512 86.2 37.5 6.90 3.02 2.5239-700 72.6 730.2 27.56 20.12 0.610 0.512 86.2 37.5 6.90 3.02 2.5240-700 74.7 751.3 27.56 20.12 0.630 0.531 88.8 38.7 6.90 3.02 2.5240-700 74.7 751.3 27.56 20.12 0.630 0.531 88.8 38.7 6.90 3.02 2.5240-700 74.7 751.3 27.56 20.12 0.630 0.531 88.8 38.7 6.90 3.02		FC724 700	45.3	409.1	27.56	18.07	0.472	0.354	60.1	26.2	6.61	2.88
ESZ26-700 2.600 59.810 700 460 13.0 10.0 96.7 138.1 2.02 1.44  ESZ28-700 51.4 466.8 27.56 18.15 0.551 0.433 69.8 30.4 6.61 2.88  ESZ28-700 66.6 667.3 27.56 20.04 0.551 0.453 78.1 34.0 6.90 3.02  ESZ36-700 3.580 91.130 700 509 14.0 11.5 116.2 166.1 2.11 3.02  ESZ37-700 68.6 688.4 27.56 20.08 0.571 0.472 80.8 35.2 6.90 3.02  ESZ37-700 70.7 709.3 27.56 20.08 0.591 0.492 83.5 36.3 6.90 3.02  ESZ38-700 3.800 96.860 700 510 15.0 12.5 124.2 177.4 2.11 1.51  ESZ39-700 72.6 730.2 27.56 20.12 0.610 0.512 86.2 37.5 6.90 3.02  ESZ39-700 74.7 751.3 27.56 20.12 0.630 0.531 88.8 38.7 6.90 3.02		E3Z24-700	2.435	55.870	700	459	12.0	9.0	89.5	127.9	2.02	2.88
ESZ38-700  2.600  59.810  700  460  13.0  10.0  96.7  138.1  2.02  1.44  1.40  ESZ28-700  51.4  466.8  2.7.56  3.750  700  461  14.0  11.0  103.9  148.4  2.02  2.88  ESZ36-700  66.6  667.3  27.56  20.04  0.551  0.453  78.1  34.0  6.90  3.02  ESZ37-700  68.6  688.4  27.56  20.08  0.571  0.472  80.8  35.2  6.90  3.02  ESZ38-700  3.690  94.000  700  510  14.5  12.0  120.2  171.8  2.11  3.02  ESZ38-700  3.800  96.860  700  510  14.5  12.0  120.2  171.8  2.11  3.02  ESZ38-700  3.800  96.860  700  510  15.0  12.5  12.42  177.4  2.11  1.51  ESZ39-700  3.905  99.720  700  511  15.5  13.0  128.2  183.1  2.11  3.02  ESZ40-700  74.7  751.3  27.56  20.12  0.630  0.531  88.8  38.7  6.90  3.02		FC726 700	48.4	438.0	27.56	18.11	0.512	0.394	65.0	28.3	6.61	2.88
ESZ28-700  2.765 63.750 700 461 14.0 11.0 103.9 148.4 2.02 2.88  ESZ36-700 66.6 667.3 27.56 20.04 0.551 0.453 78.1 34.0 6.90 3.02 3.580 91.130 700 509 14.0 11.5 116.2 166.1 2.11 3.02 ESZ37-700 68.6 688.4 27.56 20.08 0.571 0.472 80.8 35.2 6.90 3.02 3.690 94.000 700 510 14.5 12.0 120.2 171.8 2.11 3.02 ESZ38-700 3.800 96.860 700 510 15.0 12.5 12.42 177.4 2.11 1.51 ESZ39-700 72.6 730.2 27.56 20.12 0.610 0.512 86.2 37.5 6.90 3.02 ESZ39-700 74.7 751.3 27.56 20.12 0.630 0.531 88.8 38.7 6.90 3.02		ESZ26-700	2.600	59.810	700	460	13.0	10.0	96.7	138.1	2.02	1.44
ESZ36-700 66.6 667.3 27.56 20.04 0.551 0.453 78.1 34.0 6.90 3.02 3.580 91.130 700 509 14.0 11.5 116.2 166.1 2.11 3.02 68.6 688.4 27.56 20.08 0.571 0.472 80.8 35.2 6.90 3.02 3.690 94.000 700 510 14.5 12.0 120.2 171.8 2.11 3.02 68.7 70.7 70.7 70.3 27.56 20.08 0.591 0.492 83.5 36.3 6.90 3.02 68.7 70.7 70.7 70.7 70.7 51.0 12.0 12.1 12.1 12.1 12.1 12.1 12.1 1		F6700 700	51.4	466.8	27.56	18.15	0.551	0.433	69.8	30.4	6.61	2.88
ESZ36-700 3.580 91.130 700 509 14.0 11.5 116.2 166.1 2.11 3.02 68.6 688.4 27.56 20.08 0.571 0.472 80.8 35.2 6.90 3.02 3.690 94.000 700 510 14.5 12.0 120.2 171.8 2.11 3.02 65.2 6.90 65.2 6.90 65.2 6.90 65.2 6.90 65.2 6.90 65.2 6.90 65.2 6.90 65.2 6.90 65.2 6.90 65.2 6.90 65.2 6.90 65.2 6.90		ESZ28-700	2.765	63.750	700	461	14.0	11.0	103.9	148.4	2.02	2.88
ESZ37-700 68.6 688.4 27.56 20.08 0.571 0.472 80.8 35.2 6.90 3.02 3.690 94.000 700 510 14.5 12.0 120.2 171.8 2.11 3.02 (ESZ38-700 3.800 96.860 700 510 15.0 12.5 124.2 177.4 2.11 1.51 (ESZ39-700 3.905 99.720 700 511 15.5 13.0 128.2 183.1 2.11 3.02 (ESZ40-700 74.7 751.3 27.56 20.12 0.630 0.531 88.8 38.7 6.90 3.02 (ESZ40-700 74.7 751.3 27.56 20.12 0.630 0.531 88.8 38.7 6.90 3.02		FC726 700	66.6	667.3	27.56	20.04	0.551	0.453	78.1	34.0	6.90	3.02
ESZ38-700 3.690 94.000 700 510 14.5 12.0 120.2 171.8 2.11 3.02 70.7 709.3 27.56 20.08 0.591 0.492 83.5 36.3 6.90 3.02 3.800 96.860 700 510 15.0 12.5 124.2 177.4 2.11 1.51 72.6 730.2 27.56 20.12 0.610 0.512 86.2 37.5 6.90 3.02 74.7 751.3 27.56 20.12 0.630 0.531 88.8 38.7 6.90 3.02 74.7 751.3 27.56 20.12 0.630 0.531 88.8 38.7 6.90 3.02		ESZ36-700	3.580	91.130	700	509	14.0	11.5	116.2	166.1	2.11	3.02
ESZ39-700 70.7 751.3 27.56 20.12 0.630 0.531 88.8 38.7 6.90 3.02 ESZ40-700 70.7 751.3 27.56 20.12 0.630 0.531 88.8 38.7 6.90 3.02		F6727 700	68.6	688.4	27.56	20.08	0.571	0.472	80.8	35.2	6.90	3.02
ESZ38-700 3.800 96.860 700 510 15.0 12.5 124.2 177.4 2.11 1.51  ESZ39-700 72.6 730.2 27.56 20.12 0.610 0.512 86.2 37.5 6.90 3.02  3.905 99.720 700 511 15.5 13.0 128.2 183.1 2.11 3.02  ESZ40-700 74.7 751.3 27.56 20.12 0.630 0.531 88.8 38.7 6.90 3.02		ESZ37-700	3.690	94.000	700	510	14.5	12.0	120.2	171.8	2.11	3.02
ESZ39-700 3.800 96.860 700 510 15.0 12.5 124.2 177.4 2.11 1.51 72.6 730.2 27.56 20.12 0.610 0.512 86.2 37.5 6.90 3.02 74.7 751.3 27.56 20.12 0.630 0.531 88.8 38.7 6.90 3.02		F6720 700	70.7	709.3	27.56	20.08	0.591	0.492	83.5	36.3	6.90	3.02
ESZ39-700 3.905 99.720 700 511 15.5 13.0 128.2 183.1 2.11 3.02 ESZ40-700 74.7 751.3 27.56 20.12 0.630 0.531 88.8 38.7 6.90 3.02		ESZ38-/00	3.800	96.860	700	510	15.0	12.5	124.2	177.4	2.11	1.51
3.905 99.720 700 511 15.5 13.0 128.2 183.1 2.11 3.02 E5Z40-700 74.7 751.3 27.56 20.12 0.630 0.531 88.8 38.7 6.90 3.02			72.6	730.2	27.56	20.12	0.610	0.512	86.2	37.5	6.90	3.02
ESZ40-700		ESZ39-700	3.905	99.720	700	511	15.5	13.0	128.2	183.1	2.11	3.02
<b>ESZ40-700</b> 4.015 102.590 700 511 16.0 13.5 132.2 188.8 2.11 3.02		FC740 700	74.7	751.3	27.56	20.12	0.630	0.531	88.8	38.7	6.90	3.02
		ESZ4U-/UU	4.015	102.590	700	511	16.0	13.5	132.2	188.8	2.11	3.02

We are the exclusive distributor

Manufactured in accordance with: Technical delivery conditions in accordance with EN 10248-1

Tolerances in accordance with EN 10248-2.

Steel Qualities: ASTM A328, A572 GR50, A572 GR60, A572 GR65, ASTM A690 with 3.1 certificate in accordance with EN 10204.

**Standard Availability:** Lengths up to 80 ft, longer lengths on request.





Sheet Pile Caps in any desired shape from our own production.

 $\mbox{*}$  Excluding the interlock interior – coating on both sides.

Do you want to save up to 40% on these profiles?

"Then look at the tailor-made suit in the sheet pile world on page 14."















Section	Wy	ly	Width	Height	Thickness		Weight		Coating Area*	
	in³/ft	in⁴/ft	inch	inch	flange <b>inch</b>	web inch	single lbs/ft	wall lbs/ft²	single ft²/ft	wall ft²/ft²
	cm³/m	cm⁴/m	mm	mm	mm	mm	kg/m	kg/m²	m²/m	m²/m²
N7 1 4	25.65	171.7	30.31	13.39	0.375	0.375	55	21.77	6.10	2.40
NZ 14	1379	23447	770	340	9.5	9.5	81.26	106.30	1.86	2.40
N7.10	35.08	283.1	27.56	16.14	0.375	0.375	55	24.05	6.18	2.70
NZ 19	1885	38659	700	410	9.5	9.5	81.85	117.40	1.88	2.70
N7 20	36.24	292.8	27.56	16.16	0.394	0.394	57	24.82	6.18	2.70
NZ 20	1948	39984	700	411	10	10	85.37	122.00	1.88	2.70
N7.21	38.69	313.4	27.56	16.20	0.433	0.433	61	26.56	6.18	2.70
NZ 21	2080	42797	700	412	11	11	90.78	129.70	1.88	2.70
NZ 22	41.47	336.9	27.56	16.25	0.480	0.480	67	29.20	6.18	2.70
INZ ZZ	2230	46006	700	413	12.20	12.20	99.71	142.44	1.88	2.70
NZ 26	48.50	419.9	27.56	17.32	0.500	0.500	71	30.99	6.49	2.82
INZ ZO	2608	57.340	700	440	12.7	12.7	105.66	151.30	1.98	2.82
NZ 28	52.62	457.4	27.56	17.38	0.560	0.560	78	33.96	6.49	2.82
INZ ZO	2829	62461	700	441	14.2	14.2	116.08	165.82	1.98	2.82
NZ 38	70.84	697.3	27.56	19.69	0.689	0.500	86	37.45	6.58	2.86
INZ 30	3809	95214	700	500	17.5	12.7	127.99	182.83	2.01	2.86
NZ 40	74.97	739.6	27.56	19.73	0.735	0.551	92	40.06	6.58	2.86
112 70	4031	100997	700	501	18.7	14.0	136.91	195.59	2.01	2.86
NZ 42	78.17	772.5	27.56	19.77	0.769	0.589	97	42.24	6.58	2.86
NZ 42	4203	105490	700	502	19.5	15.0	144.36	206.23	2.01	2.86

Section	Wy	ly	Width	Height	Thick	ness	We	ight	Coatin	g Area*
	in³/ft	in⁴/ft	inch	inch	flange <b>inch</b>	web inch	single lbs/ft	wall lbs/ft²	single ft²/ft	wall ft²/ft²
	cm³/m	cm⁴/m	mm	mm	mm	mm	kg/m	kg/m²	m²/m	m²/m²
17.10	33.5	250.4	24.80	14.96	0.375	0.375	50.01	24.19	5.64	2.70
AZ 18	1 800	34 200	630	380	9.5	9.5	74.4	118.0	1.72	2.70
47.10.10/10	34.8	260.3	24.80	15.00	0.394	0.394	52.27	25.29	5.64	2.70
AZ 18-10/10	1 870	35 540	630	381	10.0	10.0	77.8	123.0	1.72	2.70
AZ 26	48.4	406.5	24.80	16.81	0.512	0.480	65.73	31.80	5.90	2.82
	2 600	55 510	630	427	13.0	12.2	97.8	155.0	1.80	2.82
AZ 28-750	52.3	523.9	29.53	20.04	0.472	0.394	67.73	27.53	6.92	2.82
	2 810	71 540	750	509	12.0	10.0	100.8	134.0	2.12	2.82
AZ 30-750	55.9	561.5	29.53	20.08	0.512	0.433	73.08	29.70	6.94	2.82
	3 005	76 670	750	510	13.0	11.0	108.8	145.0	2.12	2.82
47.22.750	59.5	599.0	29.53	20.12	0.551	0.472	78.44	31.88	6.94	2.82
AZ 32-750	3 200	81 800	750	511	14.0	12.0	116.7	156.0	2.12	2.82
A 7 10 000	34.2	302.6	31.50	17.68	0.335	0.335	54.26	20.67	6.82	2.60
AZ 18-800	1 840	41 320	800	449	8.5	8.5	80.7	101.0	2.08	2.60
AZ 20-800	37.2	329.9	31.50	17.72	0.375	0.375	59.50	22.67	6.82	2.60
AZ 20-000	2 000	45 050	800	450	9.5	9.5	88.6	111.0	2.08	2.60
AZ 22-800	40.3	357.3	31.50	17.76	0.413	0.413	64.77	24.68	6.82	2.60
AZ 22-000	2 165	48 790	800	451	10.5	10.5	96.4	120.0	2.08	2.60
AZ 23-800	43.3	404.7	31.50	18.66	0.453	0.354	63.56	24.22	6.92	2.64
712 23 000	2 330	55 260	800	474	11.5	9.0	94.6	118.0	2.12	2.64
AZ 25-800	46.5	435.1	31.50	18.70	0.492	0.394	68.91	26.26	6.94	2.64
	2 500	59 410	800	475	12.5	10.0	102.6	128.0	2.12	2.64
AZ 27-800	49.7	465.5	31.50	18.74	0.531	0.433	74.26	28.29	6.94	2.64
AZ 27-800	2 670	63 570	800	476	13.5	11.0	110.5	138.0	2.12	2.64

Section	Wy	ly	Width	Height	Thick	cness	Wei	ight	Coatin	g Area*
					flange	web	single	wall	single	wall
	in³/ft	in⁴/ft	inch	inch	inch	inch	lbs/ft	lbs/ft <sup>2</sup>	ft²/ft	ft²/ft²
	cm³/m	cm⁴/m	mm	mm	mm	mm	kg/m	kg/m²	m²/m	m²/m²
	23.2	156.9	30.32	13.54	0.335	0.335	48.79	19.31	6.06	2.40
AZ 12-770	1 245	21 430	770	344	8.5	8.5	72.6	94.0	1.86	2.40
	24.2	163.7	30.32	13.54	0.354	0.354	51.11	20.23	6.06	2.40
AZ 13-770	1 300	22 360	770	344	9.0	9.0	76.1	99.0	1.86	2.40
	25.2	170.6	30.32	13.58	0.375	0.375	53.44	21.14	6.06	2.40
AZ 14-770	1 355	23 300	770	345	9.5	9.5	79.5	103.0	1.86	2.40
AZ 14-770-	26.1	177.5	30.32	13.58	0.394	0.394	55.70	22.05	6.06	2.40
10/10	1 405	24 240	770	345	10.0	10.0	82.9	108.0	1.86	2.40
	22.4	138.3	27.56	12.36	0.335	0.335	45.49	19.81	5.62	2.44
AZ 12-700	1 205	18 880	700	314	8.5	8.5	67.7	97.0	1.72	2.44
	24.3	150.4	27.56	12.40	0.375	0.375	49.72	21.65	5.62	2.44
AZ 13-700	1 305	20 540	700	315	9.5	9.5	74.0	106.0	1.72	2.44
AZ 13-700-	25.2	156.5	27.56	12.42	0.394	0.394	51.85	22.58	5.62	2.44
10/10	1 355	21 370	700	316	10.0	10.0	77.2	110.0	1.72	2.44
	26.1	162.5	27.56	12.44	0.413	0.413	53.96	23.50	5.62	2.44
AZ 14-700	1 405	22 190	700	316	10.5	10.5	80.3	115.0	1.72	2.44
	32.2	265.3	27.56	16.54	0.335	0.335	49.11	21.38	6.10	2.66
AZ 17-700	1 730	36 230	700	420	8.5	8.5	73.1	104.0	1.86	2.66
17.40.000	33.5	276.8	27.56	16.54	0.354	0.354	51.43	22.39	6.10	2.66
AZ 18-700	1 800	37 800	700	420	9.0	9.0	76.5	109.0	1.86	2.66
1710 700	34.8	288.4	27.56	16.57	0.375	0.375	53.75	23.40	6.10	2.66
AZ 19-700	1 870	39 380	700	421	9.5	9.5	80.0	114.0	1.86	2.66
47.00.700	36.2	300.0	27.56	16.57	0.394	0.394	56.13	24.44	6.10	2.66
AZ 20-700	1 945	40 960	700	421	10.0	10.0	83.5	119.0	1.86	2.66
47.24.700	45.2	408.8	27.56	18.07	0.441	0.441	64.30	28.00	6.34	2.76
AZ 24-700	2 430	55 820	700	459	11.2	11.2	95.7	137.0	1.94	2.76
A7 26 700	48.4	437.3	27.56	18.11	0.480	0.480	69.12	30.10	6.34	2.76
AZ 26-700	2 600	59 720	700	460	12.2	12.2	102.9	147.0	1.94	2.76
AZ 28-700	51.3	465.9	27.56	18.15	0.520	0.520	73.93	32.19	6.34	2.76
AZ 20-700	2 760	63 620	700	461	13.2	13.2	110.0	157.0	1.94	2.76
AZ 36-700N	66.8	656.2	27.56	19.65	0.591	0.441	79.72	34.71	6.72	2.94
AZ 30-700N	3 590	89 610	700	499	15.0	11.2	118.6	169.0	2.06	2.94
AZ 38-700N	70.6	694.5	27.56	19.69	0.630	0.480	84.94	36.98	6.72	2.94
AZ 30-700N	3 795	94 840	700	500	16.0	12.2	126.4	181.0	2.06	2.94
AZ 40-700N	74.3	732.9	27.56	19.72	0.669	0.520	90.16	39.26	6.72	2.94
AL 40-70014	3 995	100 080	700	501	17.0	13.2	134.2	192.0	2.06	2.94
AZ 42-700N	78.2	768.4	27.56	19.65	0.709	0.551	95.51	41.59	6.72	2.94
712 12 7 0014	4 205	104 930	700	499	18.0	14.0	142.1	203.0	2.06	2.94
AZ 44-700N	81.9	806.6	27.56	19.69	0.748	0.591	100.74	43.87	6.72	2.94
,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	4 405	110 150	700	500	19.0	15.0	149.9	214.0	2.06	2.94
AZ 46-700N	85.7	844.9	27.56	19.72	0.787	0.630	105.97	46.14	6.72	2.94
,	4 605	115 370	700	501	20.0	16.0	157.7	225.0	2.06	2.94
AZ 48-700	88.4	876.2	27.56	19.80	0.866	0.591	106.49	46.37	6.70	2.92
,	4 755	119 650	700	503	22.0	15.0	158.5	226.0	2.04	2.92
AZ 50-700	92.2	914.6	27.56	19.84	0.906	0.630	111.73	48.65	6.70	2.92
	4 955	124 890	700	504	23.0	16.0	166.3	238.0	2.04	2.92
AZ 52-700	95.9	953.0	27.56	19.88	0.945	0.669	116.97	50.93	6.70	2.92
/ 00	5 155	130 140	700	505	24.0	17.0	174.1	249.0	2.04	2.92

<sup>\*</sup> Excluding the interlock interior – coating on both sides.













Section	Wy		Width		Thick				Coatin	g Area*
										wall
			inch	inch	inch	inch				ft²/ft²
										m²/m²
77.40 770	23.3	157.41	30.31	13.52	0.339	0.335	48.92	19.37	6.44	2.40
ZZ 12-770	1.252	21.496	770	344	8.6	8.5	72.8	94.5	1.96	2.40
ZZ 13-770	24.3	164.3	30.31	13.52	0.358	0.354	51.22	20.28	6.44	2.40
22 13-770	1.304	22.433	770	344	9.1	9.0	76.2	99.0	1.96	2.40
ZZ 14-770	25.2	171.1	30.31	13.56	0.378	0.375	53.52	21.19	6.44	2.40
22 14 770	1.357	23.370	770	345	9.6	9.5	79.6	103.4	1.96	2.40
ZZ 17-700	32.3	266.73	27.6	16.54	0.335	0.331	49.26	21.45	6.46	2.66
22 700	1.735	36.425	700	420	8.5	8.4	73.3	104.7	1.97	2.66
ZZ 18-700	33.6	278.28	27.6	16.56	0.358	0.354	51.55	22.45	6.46	2.66
	1.807	38.001	700	421	9.1	9.0	76.7	109.6	1.97	2.66
ZZ 19-700	35.0	289.82	27.6	16.57	0.378	0.374	53.90	23.47	6.46	2.66
	1.880	39.578	700	421	9.6	9.5	80.2	114.6	1.97	2.66
ZZ 20-700	36.3	301.37	27.6	16.59	0.398	0.394	56.25	24.48	6.46	2.66
	1.953	41.155	700	422	10.1	10.0	83.7	119.5	1.97	2.66
ZZ 24-700	45.3	409.71	27.6	18.08	0.445	0.441	64.38	28.04	6.73	2.76
	2.437	55.949	700	459	11.3	11.2	95.8	136.9	2.05	2.76
ZZ 26-700	48.4	438.22	27.6	18.12	0.484	0.480	69.22	30.13	6.73	2.76
	2.601	59.843	700	460	12.3	12.2	103.0	147.1	2.05	2.76
ZZ 27-700	49.8	451.39	27.6	18.14	0.504	0.500	71.51	31.13	6.73	2.76
	2.676	61.641	700	461	12.8	12.7	106.4	152.0	2.05	2.76
ZZ 28-700	<b>51.4</b> 2.764	<b>466.76</b> 63.740	27.6 700	18.16 461	0.524 13.3	0.520 13.2	73.99	<b>32.22</b> 157.3	6.73	<b>2.76</b> 2.76
	66.9				0.594	0.441	110.1 79.77	34.74	2.05	2.94
ZZ 36-700	3.596	<b>657.25</b> 89.753	27.6 700	19.65 499	15.1	11.2	118.7	169.6	<b>7.15</b> 2.18	2.94
	70.6	695.55	27.6	19.69	0.634	0.480	85.1	37.01	7.15	2.94
ZZ 38-700	3.798	94.984	700	500	16.1	12.2	126.5	180.7	2.18	2.94
	74.4	733.89	27.6	19.73	0.673	0.520	90.26	39.29	7.15	2.94
ZZ 40-700	3.999	100.219	700	501	17.1	13.2	134.3	191.8	2.18	2.94
	78.6	772.87	27.6	19.65	0.713	0.551	96.10	41.83	7.12	2.94
ZZ 42-700	4.228	105.543	700	499	18.1	14.0	143.0	204.2	2.17	2.94
	82.5	812.41	27.6	19.69	0.752	0.591	101.28	44.10	7.12	2.94
ZZ 44-700	4.436	110.942	700	500	19.1	15.0	150.7	215.3	2.17	2.94
	86.2	850.61	27.6	19.73	0.791	0.630	106.52	46.39	7.12	2.94
ZZ 46-700	4.635	116.159	700	501	20.1	16.0	158.5	226.5	2.17	2.94
	89.3	847.34	22.8	18.98	0.756	0.594	94.02	49.39	6.59	3.26
ZZ 48-580	4.801	115.712	580	482	19.2	15.1	139.9	241.1	2.01	3.26
	89.1	882.16	27.6	19.81	0.870	0.591	107.06	46.62	7.12	2.92
ZZ 48-700	4.788	120.467	700	503	22.1	15.0	159.3	227.6	2.17	2.92
	92.5	917.98	27.6	19.85	0.909	0.630	112.03	48.79	7.12	2.92
ZZ 50-700	4.973	125.358	700	504	23.1	16.0	116.7	238.2	2.17	2.92
77 -0	96.0	954.92	27.6	19.89	0.949	0.669	117.14	51.00	7.12	2.92
ZZ 52-700	5.162	130.403	700	505	24.1	17.0	174.3	249.0	2.17	2.92

### Manufactured in accordance with: Technical delivery conditions in accordance with

Technical delivery conditions in accordance of EN 10248-1
Tolerances in accordance with EN 10248-2.

Tolerances in accordance with EN 10248-2.

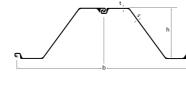
Steel qualities:
S 270GP, S355GP, S 390GP, S 430GP with 3.1

certificate in accordance with EN 10204.

Standard availability:

Lengths up to 80 ft, longer lengths on request.

\* Excluding the interlock interior – coating on both sides.



### Flat Sections

Section	Width (w)	Web (t <sub>w</sub> )	Maximum Interlock	Allowable interlock	Cross sectional	Wei	ight	Elastic section	moment of Inertia	Coating	Area*
			Strength	rotation	area	Single pile	Wall area	modules		Both sides	Wall surface
	in	in	k/in	(α)	in²/ft	lb/ft	lb/ft²	in³/sheet	in⁴/sheet	ft²/ft of single	ft²/ft² of wall
	mm	mm	kN/m	Degrees	cm²/m	kg/m	kg/m²	cm³/sheet	cm⁴/sheet	m²/m	m²/m²
DC 07 5	19.69	0.4	20		8.09	45.1	27.5	3.3	5.3	3.65	1.11
PS 27.5	500	10.2	3500	7.0	171.2	67.1	134.3	54	221	1.11	1.11
PS 31	19.69	0.5	20	7.0	9.12	50.9	31	3.3	5.3	3.65	1.11
PS 31	500	12.7	3500	7.0	193.0	75.7	151.4	54	221	1.11	1.11

Minimum cell diameter cannot be guaranteed for piles over 65 feet (19.81 m) in length, or if piles are spliced. 58 piles are needed to make a 30 foot diameter cell.



### **Walers and Tie Rods**

Meever USA and the Meever Group produce and sell tie back products and systems to meet a wide variety of specifications which include:

- Structural steel channel and beam walers
- Tie rod and anchor rods from Dywidag (domestic) and Tabanker (foreign) which include:
- Hot rolled anchor bars and accessories
- Hollow threaded anchor bars and accessories
- High strength solid threaded anchor bars
- Soil anchor systems
- Corrosion protection systems for the above items per specifications

Diam		Cross S	ninal Section		ninal ght	Yield	mum Stress	Brea	mum king	Mini Yield	Load	Mini	nate
HR			a A				le		s Rm	R		Stres	
in	mm	in²	mm²	lbs/ft	kg/m	ksi	Mpa	ksi	Мра	kips	kN	kips	kN
0.75	19	0.59	380	2.0	2.98	97.1	670	116	800	57.3	255	68.3	304
0.98	25	0.76	491	2.6	3.85	97.1	670	116	800	74.0	329	88.3	393
1.10	28	0.95	616	3.2	4.83	97.1	670	116	800	92.8	413	110.8	493
1.18	30	1.10	707	3.7	5.55	97.1	670	116	800	106.6	474	127.0	565
1.38	35	1.49	962	5.1	7.55	97.1	670	116	800	145.0	645	173.1	770
1.69	43	2.25	1.452	7.7	11.4	97.1	670	116	800	218.7	973	261.2	1.162
1.97	50	3.04	1.963	10.4	15.41	97.1	670	116	800	295.8	1.316	353.2	1.571
2.26	57.5	4.03	2.597	13.7	20.38	97.1	670	116	800	391.2	1.740	466.9	2.077
2.50	63.5	4.91	3.167	16.7	24.86	97.1	670	116	800	477.0	2.122	569.7	2.534
2.95	75	6.85	4.418	23.3	34.68	97.1	670	116	800	665.4	2.960	794.5	3.534















### U Sections:

U shaped sheet piles were first produced in the early 1900s and are the basis for all sheet pile sections we know today U sections are used globally for permanent and temporary use and can be used in all types of soil because of its shape. U sections perform especially well in heavy soil types and temporary uses where the pile is driven multiple times. In the last 60 years, US mills promoted Z shaped pile which caused the U shape to fall out of favor with contractors. We strongly believe U shaped sheet pile can be the right solution for your job!



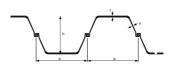


Do you want to save up to 40% on these profiles?

"Then look at the tailor-made suit in the sheet pile world on page 14."



2	Section	vvy			neight	Inick			ignt	Area*
eeve				inch	inch	inch	inch	lb/ft	lb/ft²	ft²/ft
_						t (mm)				
	VL 601	13.8	84.4	23.62	12.2	0.295	0.252	31.1	15.81	5.24
	VE 001	744	11.530	600	310	7.5	6.4	46.3	77.2	1.6
	VL 601FP	13.9	84.6	23.6	12.2	0.283	0.276	31.9	16.18	5.24
		745	11.547	600	310	7.2	7	47.4	79	1.6
	VL 601K	14.4	88	23.62	12.2	0.307	0.268	32.6	16.56	5.24
		775 15	12.019 <b>91.5</b>	600 23.62	310 12.2	7.8	6.8 <b>0.287</b>	48.5 <b>34.5</b>	80.8 17.51	1.6 5.24
	VL 602A	806	12.499	600	310	0.315	7.3	51.3	85.5	1.6
		15.7	95.5	23.62	12.2	0.331	0.299	35.9	18.23	5.24
	VL 602	842	13.046	600	310	8.4	7.6	53.4	89	1.6
		16.3	99.5	23.62	12.2	0.346	0.311	37.2	18.91	5.24
	VL 602K	877	13.590	600	310	8.8	7.9	55.4	92.3	1.6
	VII. 602 A	21.2	133.3	23.62	12.6	0.354	0.315	41.3	21	5.53
	VL 603A	1.138	18.205	600	320	9	8	61.5	102.5	1.72
	VII. 602	22.3	140.6	23.62	12.6	0.378	0.323	43.1	21.92	5.53
	VL 603	1.200	19.199	600	320	9.6	8.2	64.2	107	1.73
	VI 602N	23.8	197.9	23.6	16.6	0.358	0.287	40.1	20.4	5.7
	VL 603N	1.279	27.020	600	422.6	9.1	7.3	59.7	99.6	1.73
	VL 603KN	22.9	144.1	23.6	12.6	0.386	0.339	45.0	22.8	5.7
	VL OUSKIN	1.230	19.682	600	320	9.8	8.6	66.9	111.5	1.73
	VL 604Z	24.2	153.3	23.62	12.68	0.394	0.394	48.5	24.61	5.53
	VL 0042	1.300	20.930	600	322	10	10	72.1	120.2	1.73
	VL 604AN	26.2	201.2	23.62	15.35	0.343	0.303	43.2	21.95	6.05
	VE 00-7/11	1.409	27.478	600	390	8.7	7.7	64.3	107.1	1.85
	VL 604A	29.1	223.3	23.62	15.35	0.378	0.346	47.7	24.24	5.96
	VE 00 171	1.564	30.495	600	390	9.6	8.8	71	118.3	1.85
	VL 604	30.1	231	23.62	15.35	0.394	0.354	49.1	24.96	5.96
		1.618	31.548	600	390	10	9	73.1	121.8	1.85
	VL 604K	31.1	238.7	23.62	15.35	0.409	0.362	50.5	25.67	5.96
		1.672	32.600	600	390	10.4	9.2	75.2	125.3	1.85
	VL 605A	33.9	280	23.62	16.54	0.421	0.354	51.4	26.12	6.02
		1.821	38.243	600	420	10.7	9	76.5	127.5	1.89
	VL 605N	37.6	312.4	23.62	16.64	0.472	0.374	55.2	28.03	6.15
		2.019	42.664	600	422.6	12	9.5	82.1	136.9	1.88
	VL 605KN	39.4	328.7	23.62	16.69	0.496	0.394	57.5	29.22	6.15
		2.117	44.886	600	424	12.6	10	85.6	142.7	1.88
	VL 606A	2.205	<b>347.1</b> 47.402	23.62 600	16.93 430	<b>0.528</b> 13.4	0.354	<b>57.4</b> 85.4	<b>29.16</b> 142.3	<b>6.18</b>
		42.0	272.6	22.62	47.04	0.543	0.070		20.00	
	VL 606AN	<b>43.8</b> 2.355	<b>3/2.6</b> 50.878	600	432	14.4	9.4	60.3 89.8	30.66 149.6	1.89
		44.7	380.2	23.62	17.02	0.571	0.394	61.8	31.41	6.18
	VL 606AN10	2.402	51.913	600	432.2	14.5	10	92	153.4	1.89
		46.6	398.3	23.62	17.09	0.606	0.386	63.2	32.13	6.18
	VL 606N	2.506	54.389	600	434	15.4	9.8	94.1	156.8	1.89
		47.5	402.1	23.62	16.93	0.63	0.394	65.4	33.22	6.18
	VL 606K	2.602	56.116	600	431	16.5	9.5	96.6	161	1.89
		52.8	473.4	23.62	17.92	0.64	0.40	68.4	34.76	6.38
	VL 628	2.841	64.640	600	455.1	16.3	10.1	101.8	169.6	1.95
		55.9	499.7	23.62	17.87	0.697	0.394	71.4	36.26	6.38
	VL 607A	3.006	68.232	600	453.9	17.7	10	106.2	177.1	1.95
		59.7	536.8	23.62	17.97	0.748	0.417	75.5	38.37	6.38
	VL 607	3.211	73.300	600	456.5	19	10.6	112.4	187.3	1.95
		62.6	565.0	23.62	18.05	0.787	0.433	78.5	39.88	6.38
	VL 607K	2.265	77.150	600	450.5	20	4.4	1160	1047	1.05



Tolerances in accordance with EN 10248-2.

Steel qualities: S 270GP, S355GP, S 390GP, S 430GP with 3.1 certificate in accordance with EN 10204.

Standard availability: Lengths up to 80 ft, longer lengths on request.



our own production.





 $<sup>\</sup>mbox{\ensuremath{\star}}$  Excluding the interlock interior – coating on both sides.





### IBO® VKZ:

The first sheet pile sections produced were narrow, thick, and heavy but with smart engineering and improved production facilities, we are now capable of producing wider and thinner sections. This results in more economic sections with less Lbs/Ft2 and less interlocks per wall feet which means less leakage risk and less interlocks to seal.

Meever USA invented the "Precision pile" to reduce costs and increase the capacity of a design.

When designing a sheet pile wall, come to Meever USA with your design parameters (S, I, thickness etc.) and we can provide a section unique to your job! This Unique concept allows you to save up to 20-40% of costs compared to current options on the market.

### How does it work:

Meever USA creates a design which meets the required Section modulus/Moment of Inertia with multiple options determined by, Installation Technique, Tiebacks, Soil Conditions and Design Life.

Another option is to send your already approved design to Meever USA.

Its trained Engineers will prepare an Alternative Design for you to compare.

### What makes the Precision Pile unique:

- In House Designing and Production.
- Custom shapes and measurements. Think about installing with a radius and any corner solution.
- The unique interlocks have less friction during installation and are more water-tight.
- Lighter per ft2/wall has compounding savings, less material costs,
- less transport, less handling and installation time.
- $\bullet \quad \text{Available in small tonnages with no minimum order quantity} \\$
- Larger effective width = fewer interlocks, which in turn would require less interlock sealant on water tight jobs.
- Lower emission values. We must highlight this in a way. Because less steel (20-40%) and transport(20-40%) and on top of that also the production is proven in a report that it saves 7% emission.
- Welding on anchor plates is easier and faster because an IBO® has no middle lock.
   Please see the picture from regular Z piles below.
- · Customizable to any layout.
- Increased pile driving efficiency.

Z Sheet Pile

**IBO® Sheet Pile** 









Sheet piling that in terms of dimensions, weight and technical specifications exactly match the strength and stiffness required in the specifications.

### The Benefits:

- IBO® sheet piles are lighter than regular hot-rolled sheet piles.
- Well-nigh no lock friction in the sheet piles during installation.
- Many options in shapes and measurements
- Create an angle without using loose corner sections.
- The locks are ideal for water-inhibiting products.
- Larger effective width = fewer interlocks.
- Less material = lower weight per ft<sup>2</sup> and less CO2 emission.
- Suitable for smaller series.
- · Fast delivery.

### Meever USA optimizes the standard

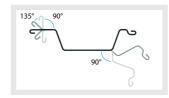
Our IBO® profiles are developed by certified engineers whereby your requirements are the basis. We will develop the most advantageously profile with the required Moment of Inertia and Section Modulus. Your requirements regarding steel grade, thickness, width and height will be considered in this development.

On demand you will receive a made-to-order profile which is especially developed for your project.

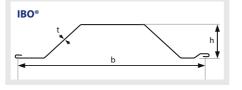
In the table you will find a number of examples of possible savings.



On request we can make the required Sheet Pile Cap.



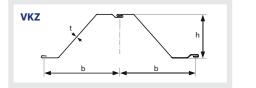
Meever USA can produce almost any specified angle corner piles from 40 - 300°.



IBO° is a double
VKZ without the lock.

Section	Wy in³/ft cm³/m	Ly in/ /ft cm /m	Flange inch mm	Weight Ibs/ft² kgs/m²	Weight
PZ 22	18.1	84.38	0.375	22.0	advantage
	973	11.500	9.5	107.4	
VKZ 1033-7	19.2	122.9	0.276	16.3	26%
VKZ 1055-7	1.033	16.783	7.0	79.5	20%
VKZ 1045-8	19.4	103.4	0.315	18.4	16%
VKZ 1045-6	1.045	14.115	8.0	89.7	1070
VKZ 986-9	18.3	90.3	0.354	20.3	8%
VKZ 986-9	986	12.331	9.0	98.9	8%
VKZ 1318-10	24.5	149.7	0.394	21.7	20/
VKZ 1518-1U	1.318	20.438	10.0	105.7	2%
BO® 1093-7	20.3	144.1	0.276	15.6	29%
BO* 1095-7	1.093	19.678	7.0	76.1	<b>27</b> %
BO® 999-8	18.6	104.5	0.315	17.1	22%
BO 777-0	999	14.270	8.0	83.7	<b>22</b> 70
BO® 1029-9	19.1	127.4	0.354	17.9	19%
BO 1029-9	1.029	17.404	9.0	87.5	1770
BO® 990-10	18.4	83.8	0.394	20.8	5%
BO - 990-10	990	11.450	10.0	101.7	570
BO® 1295-10	24.1	144.8	0.394	21.3	70/
DO- 1275-10	1.295	19.777	10.0	104.1	3%











Section	Wy in³/ft cm³/m	Ly in/ /ft cm /m	Flange inch mm	Weight lbs/ft² kgs/m²	Weight
PZ 27	18.1	84.38	0.375	22.0	advantage
PL ZI	973	11.500	9.5	107.4	
PZC 17	31.0	236.1	0.335	22.3	17%
PZC 17	1.670	32.235	8.5	108.8	1770
VKZ 1808-7	33.6	331.1	0.276	17.8	34%
VKZ 10U0-/	1.808	45.210	7.0	87.1	34%
VKZ 1704-8	31.7	256.0	0.315	19.5	13%
VKZ 1/U4-0	1.704	34.954	8.0	95.1	13%
VKZ 1771-9	32.9	291.9	0.354	20.9	23%
VKZ 1//1-9	1.771	39.857	9.0	102.0	25%
VKZ 1793-10	33.4	262.6	0.394	23.1	14%
VKZ 1/93-10	1.793	35.864	10.0	112.7	1470
IBO® 1805-6	33.6	298.6	0.315	20.5	24%
IBO" 1005-0	1.805	40.771	8.0	100.2	Z470
IBO® 1639-8	32.4	255.7	0.315	19.4	28%
IBO* 1037-0	1.743	34.916	8.0	94.8	20%
IBO® 1661-9	30.9	247.0	0.354	21.1	22%
IBU- 1061-9	1.661	33.734	9.0	102.9	ZZ70
IBO® 1652-10	30.7	237.2	0.394	22.5	470/
	1.652	32.398	10.0	110.0	17%

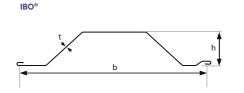
Section	Wy in³/ft cm³/m	Ly in/ /ft cm /m	Flange inch mm	Weight Ibs/ft² kgs/m²	We	eight	
PZ 35	48.5	361.22	0.600	35.0	advantage		
PZ 33	2.608	49.300	15.2	170.9			
PZC 26	48.4	428.1	0.600	31.8	9%		
PZC 20	2.600	58.460	15.2	155.4	7/0		
AZ 26-700	48.4	437.3	0.480	30.1	14%		
AZ 20-700	2.600	59.720	12.2	146.9	14/0		
ESZ 26-700	48.4	438.0	0.512	28.3	19%		
E32 20-700	2.600	59.810	13.0	138.1	17/0		
VKZ 2628-10	48.9	514.7	0.394	26.4	250/		
VKZ 2628-1U	2.628	70.289	10.0	128.9	25%		
VKZ 2886-10	53.7	581.3	0.394	27.7	21%		
VKZ 2000-10	2.886	79.377	10.0	135.2	2170		
VKZ 3082-10	57.3	648.8	0.394	28.6	18%		
VKZ 5062-10	3.082	88.594	10.0	139.8	10%		
VKZ 4665-10	86.8	1332.3	0.394	32.2	9%		
VKZ 4005-10	4.665	181.942	10.0	157.0	770		
IBO® 2625-10	48.8	501.5	0.394	28.2	10%		
100 2020-10	2.625	68.487	10.0	137.5	10%		
IBO® 3030-10	56.4	610.9	0.394	30.9	12%		
	3.030	83.417	10.0	150.9	12%	lan	

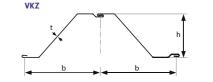
"Less material means less co2 emissions and this makes the IBO° sheet piles a perfect solution for an environmentally friendly approach."

Section	Wy in³/ft cm³/m	Ly in/ /ft cm /m	Flange inch mm	Weight Ibs/ft² kgs/m²	Weight		
D7 40	60.7	490.85	0.600	40.0	advantage		
PZ 40	3.263	67.000	15.2	195.3			
VV7 7750 10	62.5	781.0	0.394	26.6	33%		
VKZ 3359-10	3.359	106.651	10.0	130.1	33%		
VKZ 3658-10	68.0	870.6	0.394	28.1	700/		
VKZ 3658-1U	3.658	118.893	10.0	137.1	30%		
VKZ 4665-10	86.8	1332.3	0.394	32.2	000/		
VKZ 4005-1U	4.665	181.942	10.0	157.0	20%		
IBO® 3030-10	56.4	610.9	0.394	30.9	070/		
	3.030	83.417	10.0	150.9	23%		

Section	Wy in³/ft cm³/m	Ly in/ /ft cm /m	Flange inch mm	Weight Ibs/ft² kgs/m²	Weight
PZC 13	24.2	152.0	0.375	21.7	advantage
PZC 13	1.300	20.760	9.5	106.0	
VKZ 1453-7	27.0	207.5	0.276	18.6	14%
VKZ 1455-7	1.453	28.331	7.0	90.8	1470
VKZ 1342-9	25.0	162.2	0.354	21.6	40/
VKZ 1342-9	1.342	22.151	9.0	105.3	1%
VK7 1481-8	27.5	205.1	0.315	20.5	<b>7</b> 0/
VKZ 1401-0	1.481	28.008	8.0	100.1	6%
IBO® 1310-8	24.4	173.0	0.315	17.8	100/
IBO° 1510-8	1.310	23.620	8.0	87.1	18%
IDO8 1447.0	26.8	208.0	0.354	20.7	40/
IBO® 1443-9	1.443	28.410	9.0	101.3	4%
IDO8 4770 (C	25.5	168.5	0.394	21.3	20/
BO® 1372-10	1.372	23.008	10.0	104.2	2%

Section	Wy in³/ft cm³/m	Ly in/ /ft cm /m	Flange inch mm	Weight lbs/ft² kgs/m²	Weight
PZC 18	33.5	255.5	0.375	24.2	advantage
PZC 10	1.800	34.890	9.5	118.2	
VKZ 1808-7	33.6	331.1	0.276	17.8	26%
VKZ 1808-7	1.808	45.210	7.0	87.1	20%
VW7 4050 0	34.4	328.4	0.315	19.2	049/
VKZ 1850-8	1.850	44.850	8.0	93.7	21%
VKZ 1832-9	34.1	301.9	0.354	21.2	13%
VKZ 1052-7	1.832	41.228	9.0	103.3	13%
IBO® 1805-8	33.6	298.6	0.315	20.5	450/
IBO 1005-0	1.805	40.771	8.0	100.2	15%
IBO® 1963-8	36.5	338.3	0.315	21.5	440/
IBO° 1965-8	1.963	46.196	8.0	105.2	11%
IBO® 1922-9	35.7	302.7	0.354	22.6	70/
IBO° 1922-9	1.922	41.339	9.0	110.5	7%

















Sectio	n	Wy	ly	Width	Height	Thickness		Weight		Coating
		in³/ft	in⁴/ft	inch	inch	flange	web	single	wall	2 sides
		cm³/m				inch	inch			m²/m²
			cm⁴/m	mm	mm	mm	mm	kg/m	kg/m²	
VKZ 784	l-5	14.6 784	96.2 13.136	28.43 722	13.98 355	<b>0.197</b> 5.0	0.197 5.0	<b>26.9</b> 40.0	11.3 55.4	<b>8.17</b> 2.49
VKZ 965	5	17.9	150.2	26.61	16.73	0.197	0.197	26.9	12.1	8.72
VKZ 903	,-5	965	20.516	676	425	5.0	5.0	40.0	59.2	2.66
VKZ 783	I-6	792	87.4	29.45 748	12.01 305	<b>0.236</b> 6.0	<b>0.236</b> 6.0	<b>32.3</b> 48.0	13.1	7.90
		783 <b>21.4</b>	11.939 159.2	25.79	14.84	0.236	0.236	32.3	64.1 15.0	2.41 9.02
VKZ 115	3-6	1.153	21.741	655	377	6.0	6.0	48.0	73.2	2.75
VKZ 124	16-6	23.2	214.4	35.55	18.50	0.236	0.236	40.3	13.6	8.36
VIX. 12-	.0.0	1.246	29.280	903	470	6.0	6.0	60.0	66.4	2.55
VKZ 846	i-7	15.7 846	85.2 11.628	29.02 737	10.83 275	0.276 7.0	0.276 7.0	37.6 56.0	15.5 75.9	8.00 2.44
		19.2	122.9	27.72	12.80	0.276	0.276	37.6	16.3	8.53
VKZ 103	13-7	1.033	16.783	704	325	7.0	7.0	56.0	79.5	2.60
VKZ 107	18-7	20.1	130.3	27.32	12.99	0.276	0.276	37.6	16.5	8.50
***************************************		1.078	17.790	694	330	7.0	7.0	56.0	80.6	2.59
VKZ 133	30-7	<b>24.7</b> 1.330	184.0 25.130	25.35 644	14.88 378	<b>0.276</b> 7.0	<b>0.276</b> 7.0	37.6 56.0	17.8 86.9	9.18 2.80
		27.0	207.5	24.29	15.35	0.276	0.276	37.6	18.6	9.54
VKZ 145	3-7	1.453	28.331	617	390	7.0	7.0	56.0	90.8	2.91
VKZ 180	18-7	33.6	331.1	31.65	19.69	0.276	0.276	47.0	17.8	9.18
**************************************	.0 /	1.808	45.210	804	500	7.0	7.0	70.0	87.1	2.80
VKZ 812	2-8	<b>15.1</b> 812	<b>72.9</b> 9.955	30.91 785	9.65 245	0.315 8.0	0.315 8.0	<b>44.2</b> 65.7	17.1 83.7	8.23 2.51
VKZ 1006-8 VKZ 1045-8 VKZ 1481-8		18.7	106.9	28.25	11.42	0.315	0.315	43.0	18.3	8.36
	06-8	1.006	14.596	718	290	8.0	8.0	64.0	89.2	2.55
	15-8	19.4	103.4	27.56	10.63	0.315	0.315	43.0	18.4	8.43
		1.045	14.115	700	270	8.0	8.0	64.0	89.7	2.57
	31-8	<b>27.5</b> 1.481	205.1 28.008	<b>25.20</b> 640	14.88 378	0.315 8.0	0.315 8.0	<b>43.0</b> 64.0	20.5 100.1	9.22 2.81
		31.7	256.0	33.11	16.14	0.315	0.315	53.8	19.5	8.79
VKZ 170	)4-8	1.704	34.954	841	410	8.0	8.0	80.0	95.1	2.68
VKZ 185	60-8	34.4	328.4	32.91	19.09	0.315	0.315	53.8	19.2	8.82
		1.850	44.850	836	485	8.0	8.0	80.0	93.7	2.69
VKZ 986	5-9	18.3 986	90.3 12.331	28.66 728	9.84 250	<b>0.354</b> 9.0	<b>0.354</b> 9.0	<b>48.4</b> 72.0	20.3 98.9	8.10 2.47
		25.0	162.2	26.93	12.99	0.354	0.354	48.4	21.6	8.63
VKZ 134	12-9	1.342	22.151	684	330	9.0	9.0	72.0	105.3	2.63
VKZ 183	32-9	34.1	301.9	34.29	17.72	0.354	0.354	60.5	21.2	8.46
		1.832	41.228	871	450	9.0	9.0	90.0	103.3	2.58
VKZ 137	9-9.5	<b>25.6</b> 1.379	1 <b>75.2</b> 23.929	30.31 770	13.66 347	0.375 9.5	<b>0.375</b> 9.5	<b>55.8</b> 83.1	<b>21.7</b> 106.0	8.30 2.53
107.120	2.05	25.9	186.1	29.92	14.37	0.375	0.375	51.1	20.1	7.77
VKZ 139	12-9.5	1.392	25.419	760	365	9.5	9.5	76.0	98.2	2.37
VKZ 145	4-9.5	27.0	189.1	36.18	13.98	0.375	0.375	63.8	20.8	8.04
		1.454	25.820	919	355	9.5	9.5	95.0	101.4	2.45
VKZ 131	8-10	24.5 1.318	149.7 20.438	37.24 946	12.20 310	0.394 10.0	0.394 10.0	67.2 100.0	21.7 105.7	7.81 2.38
\//Z 4 7 7		32.9	291.9	34.72	17.72	0.354	0.354	60.5	20.9	8.36
VKZ 177	1-9	1.771	39.857	882	450	9.0	9.0	90.0	102.0	2.55
VKZ 137	75-10	25.6	138.5	26.08	10.83	0.394	0.394	53.8	24.7	9.02
		1.375 <b>33.4</b>	18.908 <b>262.6</b>	663 <b>34.92</b>	275 <b>15.75</b>	10.0 <b>0.394</b>	10.0 <b>0.394</b>	80.0 <b>67.2</b>	120.8 23.1	2.75 <b>8.33</b>
VKZ 179	93-10	1.793	35.864	<b>34.92</b> 887	400	10.0	10.0	100.0	112.7	2.54
VVZ 262	10 10	48.9	514.7	30.55	21.06	0.394	0.394	67.2	26.4	9.77
VKZ 262	:o-1U	2.628	70.289	776	535	10.0	10.0	100.0	128.9	2.98
VKZ 288	86-10	53.7	581.3	30.55	21.65	0.394	0.394	67.2	27.7	9.77
		2.886	79.377 648 8	776	550	10.0	10.0	100.0	135.2	2.98
VKZ 308	32-10	<b>57.3</b> 3.082	648.8 88.594	28.15 715	22.64 575	0.394 10.0	0.394 10.0	67.2 100.0	28.6 139.8	3.23
		86.8	1332.3	30.10	30.71	0.394	0.394	80.6	32.2	11.91
VKZ 466	55-10	4.665	181.942	765	780	10.0	10.0	120.0	157.0	3.63

SA	Section	Wy	ly	Width	Height	Thickness		Weight		Coating
Meever USA										2 sides
eve				inch	inch	inch	inch			ft²/ft²
Me										m²/m²
	IBO® 154-4	2.9	5.0	32.17	3.54	0.157	0.157	21.5	8.0	6.56
	100 1344	154	683	817	90	4.0	4.0	32.0	39.2	2.00
	IBO® 272-4	5.1	13.0	27.56	5.12	0.157	0.157	21.5	9.9	6.56
		272 <b>4.9</b>	1.780 12.3	700 <b>30.24</b>	130 <b>4.92</b>	4.0 <b>0.197</b>	4.0 <b>0.197</b>	32.0 <b>26.9</b>	48.5 <b>10.7</b>	2.00 <b>6.56</b>
	IBO® 265-5	265	1.679	768	125	5.0	5.0	40.0	52.1	2.00
	IBO® 781-5	14.5	103.4	52.48	14.17	0.197	0.197	48.4	11.1	7.90
	100 701 3	781	14.118	1.333	360	5.0	5.0	72.0	54.1	2.41
	IBO® 949-5	17.7	157.5	56.30	17.72	0.197	0.197	53.8	11.5	8.27
		949 <b>6.7</b>	21.511 19.9	1.430 49.88	450 5.91	5.0 <b>0.236</b>	5.0 <b>0.236</b>	80.0 48.4	55.9 11.6	2.52 6.72
	IBO® 361-6	361	2.724	1.267	150	6.0	6.0	72.0	56.8	2.05
	IBO° 537-6	10.0	45.0	67.68	8.90	0.236	0.236	64.5	11.4	6.86
	100 337-0	537	6.142	1.719	226	6.0	6.0	96.0	55.8	2.09
	IBO® 744-6	13.8	81.6	64.13	11.81	0.236	0.236	58.1	12.8	7.61
		744 16.6	11.138 106.8	1.629 <b>60.20</b>	300 <b>12.80</b>	6.0 <b>0.236</b>	6.0 <b>0.236</b>	86.4 <b>64.5</b>	62.6 12.9	2.32 <b>7.71</b>
	IBO® 895-6	895	14.586	1.529	325	6.0	6.0	96.0	62.8	2.35
	IBO® 1552-6	28.9	284.6	47.44	19.69	0.236	0.236	64.5	16.3	9.81
	100 1332-0	1.552	38.867	1.205	500	6.0	6.0	96.0	79.7	2.99
	IBO® 741-7	13.8	71.0	64.29	10.24	0.276	0.276	75.3	13.9	7.22
		741 20.3	9.692 <b>144.1</b>	1.633 <b>51.14</b>	260 <b>14.17</b>	7.0 <b>0.276</b>	7.0 <b>0.276</b>	112.0 67.7	67.9 15.6	2.20 <b>8.63</b>
	IBO® 1093-7	1.093	19.678	1.299	360	7.0	7.0	100.8	76.1	2.63
	IDO8 1420 7	26.7	226.5	53.19	16.93	0.276	0.276	75.3	17.0	8.72
	IBO® 1438-7	1.438	30.932	1.351	430	7.0	7.0	112.0	82.9	2.66
	IBO® 1770-7	32.9	342.1	47.80	20.67	0.276	0.276	75.3	18.9	9.74
		1.770	46.721	1.214	525	7.0	7.0	112.0	92.3	2.97
	IBO® 999-8	18.6 999	104.5 14.270	<b>54.17</b> 1.376	11.22 285	<b>0.315</b> 8.0	<b>0.315</b> 8.0	<b>77.4</b> 115.2	1 <b>7.1</b> 83.7	<b>8.17</b> 2.49
		24.4	173.0	57.87	14.17	0.315	0.315	86.0	17.8	8.50
	IBO° 1310-8	1.310	23.620	1.470	360	8.0	8.0	128.0	87.1	2.59
	IBO° 1639-8	32.4	255.7	52.87	16.73	0.315	0.315	86.0	19.4	9.28
		1.743	34.916	1.343	425	8.0	8.0	128.0	94.8	2.83
	IBO® 1805-8	33.6 1.805	<b>298.6</b> 40.771	50.31 1.278	17.72 450	<b>0.315</b> 8.0	<b>0.315</b> 8.0	86.0 128.0	20.5 100.2	<b>9.74</b> 2.97
		36.5	338.3	47.91	18.50	0.315	0.315	86.0	21.5	10.27
	IBO® 1963-8	1.963	46.196	1.217	470	8.0	8.0	128.0	105.2	3.13
	IBO® 1029-9	19.1	127.4	54.45	12.40	0.354	0.354	96.8	17.9	8.13
		1.029	17.404	1.383	315	9.0	9.0	144.0	87.5	2.48
	IBO® 1443-9	<b>26.8</b> 1.443	208.0 28.410	55.94 1.421	14.96 380	<b>0.354</b> 9.0	<b>0.354</b> 9.0	96.8 144.0	20.7 101.3	<b>7.90</b> 2.41
	10004	30.9	247.0	55.12	15.98	0.354	0.354	96.8	21.1	8.04
	IBO® 1661-9	1.661	33.734	1.400	406	9.0	9.0	144.0	102.9	2.45
	IBO® 1922-9	35.7	302.7	51.30	16.93	0.354	0.354	96.8	22.6	8.59
		1.922	41.339	1.303	430	9.0	9.0	144.0	110.5	2.62
	IBO® 2265-9	<b>42.1</b> 2.265	<b>427.9</b> 58.431	<b>47.56</b> 1.208	<b>20.28</b> 515	<b>0.354</b> 9.0	<b>0.354</b> 9.0	96.8 144.0	<b>24.4</b> 119.2	<b>9.77</b> 2.98
		18.4	83.8	55.75	9.06	0.394	0.394	96.8	20.8	7.94
	IBO® 990-10	990	11.450	1.416	230	10.0	10.0	144.0	101.7	2.42
	IBO* 1295-10	24.1	144.8	60.51	11.81	0.394	0.394	107.5	21.3	8.13
	.55 1275-10	1.295	19.777	1.537	300	10.0	10.0	160.0	104.1	2.48
	IBO® 1372-10	25.5	168.5	60.47	13.19	0.394	0.394	107.5	21.3	8.13
		1.372 30.7	23.008	1.536 <b>57.24</b>	335 15.35	10.0 <b>0.394</b>	10.0 <b>0.394</b>	160.0 107.5	104.2 22.5	2.48 <b>8.59</b>
	IBO® 1652-10	1.652	32.398	1.454	390	10.0	10.0	160.0	110.0	2.62
	IBO® 2625-10	48.8	501.5	45.83	20.47	0.394	0.394	107.5	28.2	10.82
	.55 2025 10	2.625	68.487	1.164	520	10.0	10.0	160.0	137.5	3.30
	IBO® 2825-10	56.4	610.9	41.73	21.65	0.394	0.394	107.5	30.9	11.81
		3.030 <b>52.5</b>	83.417 <b>582.1</b>	1.060 <b>43.82</b>	550 <b>22.05</b>	10.0 <b>0.394</b>	10.0 <b>0.394</b>	160.0 <b>107.5</b>	150.9 <b>29.5</b>	3.60 <b>10.59</b>
	IBO® 3030-10	2.825	79.494	1.113	560	10.0	10.0	160.0	143.8	3.23













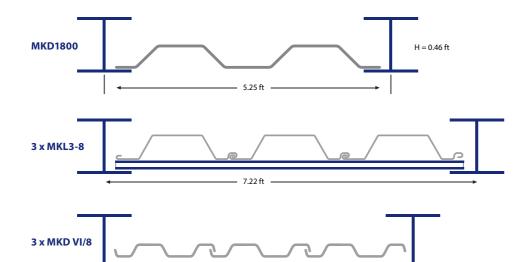


# **Trench Sheets**

USA	Section	Wy		Width	Height	Thickness		ight
				inch	inch	inch	lb/ft¹	lb/ft²
Meever								
2	MKD VI/6	3.4	5.3	23.62	3.07	0.236	25.2	12.80
		182	726	600	78	6.0	37.5	62.5
	MKD VI/8	4.5	7.1	23.62	3.15	0.315	33.6	17.07
	IVIND VI/8	242	968	600	80	8.0	50.0	83.3



Section	Wy	ly Width Height Thickness					eight
			inch	inch	inch	lb/ft¹	lb/ft²
MKD 1500	7.1	15.4	53.15	4.33	0.394	80.6	18.2
WIND 1300	382	2.108	1.350	110	10.0	120.0	88.9
MKD 1800	9.1	25.6	62.99	5.51	0.394	96.8	18.4
MKD 1800	490	3.492	1.600	140	10.0	144.0	90.0
MKD 2000	10.0	29.9	70.24	5.91	0.394	107.5	18.4
IVIND 2000	540	4 081	1 784	150	10.0	160.0	89 7





· USA	Section	Wy	ly	Width	Height	Thickness	Weight pile	Weight area	Coating*	Coating*
Meever				inch mm	inch mm	inch mm		<b>lb/ft²</b> kg/m²	ft²/ft m²/m	ft²/ft² m²/m²
ž	MIZL 2.4	5.62	16.2	27.56	5.91	0.157	21.8	9.5	6.46	2.43
	MKL 3-4	302	2.209	700	150	4.0	32.4	46.3	2.0	2.43
	MIZL 2.5	7.0	20.2	27.56	5.98	0.197	27.1	11.8	6.46	2.43
	MKL 3-5	374	2.753	700	152	5.0	40.4	57.7	1.96	2.43
	MKL 3-6	8.5	24.7	27.56	6.06	0.236	32.6	14.2	6.46	2.43
	IVINL 3-0	455	3.369	700	154	6.0	48.5	69.3	1.96	2.43
	MIZI 2.7	10.0	29.3	27.56	6.14	0.276	37.8	16.5	6.46	2.43
	MKL 3-7	540	4.004	700	156	7.0	56.3	80.4	1.95	2.43
	MIZI 2.0	11.2	32.7	27.56	6.22	0.315	43.1	18.2	6.36	2.43
	MKL 3-8	600	4.460	700	158	8.0	64.2	88.9	1.94	2.43
	MIZI 2.0	12.6	37.5	27.56	6.30	0.354	48.4	21.1	6.46	2.43
	MKL 3-9	680	5.120	700	160	9.0	72	102.9	1.94	2.43

NSA .	Section	Wy		Width		Thickness	Weight pile		Coating*	Coating*
Meever				inch mm	inch mm	inch mm		<b>lb/ft²</b> kg/m²		
Ž	MKL 4-5	14.4	80.0	27.95	11.57	0.197	33.3	14.3	7.84	3.37
	IVINL 4-5	774	10.920	710	294	5.0	49.5	69.7	2.40	3.37
	MKL 4-6	17.4	99.1	27.95	11.65	0.236	38.9	16.7	7.64	3.29
	WINL 4-0	933	13.530	710	296	6.0	57.9	81.6	2.34	3.29
	MKL 4-7	194.9	115.0	27.95	11.73	0.276	45.2	19.4	7.62	3.29
	WINL 4-7	10480	15.701	710	298	7.0	67.3	94.8	2.34	3.29
	MKL 4-8	22.9	131.1	27.95	11.81	0.315	51.5	22.1	7.59	3.27
	IVINL 4-0	1230	17.896	710	300	8.0	76.7	108.1	2.32	3.27
	MKL 4-9	25.7	153.0	27.95	11.89	0.354	57.5	24.7	7.54	3.24
	WINL 4-9	1380	20.896	710	302	9.0	85.6	120.6	2.30	3.24

Meever USA	Section	Wy		Width		Thickness	Weight pile		Coating*	Coating*
evel			<b>in⁴/ft</b> cm⁴/m	inch mm	inch mm	inch mm		<b>lb/ft²</b> kg/m²	ft²/ft m²/m	ft²/ft² m²/m²
Ž	MKZ 785-5	11.3	61.5	30.91	10.87	0.197	28.2	10.9	6.64	2.58
	IVINZ 703-3	605	8.395	785	276	5.0	41.9	53.4	2.03	2.58
	MKZ 785-6	13.5	73.6	30.91	10.91	0.236	33.9	13.2	6.65	2.59
	WIKZ 765-0	724	10.053	785	277	6.0	50.4	64.2	2.03	2.59
	MKZ 785-7	15.5	85.4	30.91	10.94	0.276	39.2	15.2	6.61	2.57
	WINZ 703-7	836	11.657	785	278	7.0	58.4	74.4	2.02	2.57
	MKZ 785-8	17.7	97.4	30.91	10.98	0.315	44.8	17.3	6.59	2.57
	WIKZ 703-0	951	13.302	785	279	8.0	66.6	84.4	2.02	2.57
	MKZ 785-9	19.8	109.4	30.91	11.02	0.354	50.3	19.5	6.58	2.56
	WINE 703-3	1.067	14.944	785	280	9.0	74.8	95.3	2.01	2.56

Section	Wy		Width		Thickness	Weight pile		Coating*	Coating*
			inch mm	inch mm	inch mm		lb/ft² kg/m²		
MKZ 675-5	18.1	135.5	26.57	14.80	0.197	28.2	12.7	6.64	3.01
MKZ 6/5-5	972	18.500	675	376	5.0	41.9	62.1	2.03	3.01
MV7.675.6	21.7	162.1	26.57	14.84	0.236	33.9	15.3	6.64	3.01
MKZ 675-6	1.164	22.131	675	377	6.0	50.4	74.7	2.03	3.01
M/7 (75 7	25.1	188.2	26.57	14.88	0.276	39.2	17.7	6.61	2.99
MKZ 675-7	1.350	25.698	675	378	7.0	58.4	86.5	2.02	2.99
M/7 (75 0	28.6	214.8	26.57	14.92	0.315	44.8	20.2	6.60	2.99
MKZ 675-8	1.540	29.332	675	379	8.0	66.6	98.7	2.02	2.99
MV7.675.0	32.1	241.0	26.57	14.96	0.354	50.3	22.7	6.58	2.99
MKZ 675-9	1.728	32.914	675	380	9.0	74.8	110.8	2.01	2.99

<sup>\*</sup> Excluding the interlock interior – coating on both sides.

















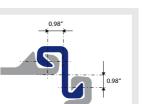
Section	Wy	ly	Width	Height	Thick	cness	W	eight	Coating Area*
	in³/ft cm³/m	<b>in⁴/ft</b> cm⁴/m	inch mm	inch mm	inch t (mm)	inch s (mm)	<b>lb/ft</b> kg/m¹	<b>lb/ft²</b> kg/m²	ft²/ft² m²/m²
SCZ 14	14.36 772	71.82 9808	<b>28.5</b> 724	10 254	<b>0.25</b> 6.4	<b>0.25</b> 6.4	<b>33.81</b> 50.3	<b>14.24</b> 69.5	<b>6.1</b> 1.86
SCZ 16	<b>15.8</b> 847	<b>78.7</b> 10751	<b>28.50</b> 724	10.00 254	<b>0.276</b> 7.0	<b>0.276</b> 7.0	<b>37.4</b> 55.6	<b>15.73</b> 76.8	<b>6.10</b> 1.86
SCZ 18N	<b>18.1</b> 973	<b>90.5</b> 12356	<b>28.50</b> 724	10.00 254	<b>0.317</b> 8.1	<b>0.317</b> 8.1	<b>42.9</b> 63.9	18.08 88.3	<b>6.10</b> 1.86
SKZ 20	<b>31.7</b> 1704	<b>253.5</b> 34619	<b>28.50</b> 724	16.00 406	<b>0.315</b> 8.0	<b>0.315</b> 8.0	<b>48.2</b> 71.8	<b>20.31</b> 99.2	<b>7.60</b> 2.31
SKZ 22	<b>33.4</b> 1797	<b>267.4</b> 36516	<b>28.50</b> 724	16.00 406	<b>0.335</b> 8.5	<b>0.335</b> 8.5	<b>51.3</b> 76.3	<b>21.60</b> 105.5	<b>7.60</b> 2.31
SKZ 24	<b>37.7</b> 2028	<b>301.8</b> 41213	<b>28.50</b> 724	16.00 406	<b>0.375</b> 9.5	<b>0.375</b> 9.5	<b>57.4</b> 85.5	<b>24.18</b> 118.1	<b>7.60</b> 2.31
SKZ 31	<b>51.6</b> 2772	<b>464.1</b> 63370	<b>28.50</b> 724	18.00 457	<b>0.450</b> 11.4	<b>0.450</b> 11.4	<b>73.8</b> 109.9	<b>31.08</b> 151.8	<b>8.06</b> 2.46
SKZ 36	<b>60.7</b> 3264	<b>546.4</b> 74619	<b>28.50</b> 724	18.00 457	<b>0.535</b> 13.6	<b>0.535</b> 13.6	<b>86.8</b> 129.2	<b>36.55</b> 178.5	<b>8.06</b> 2.46

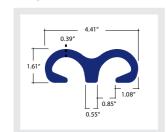
Section	Wy	ly	Width	Height	Thick- ness	Weight single	Weight	Coating 2 sides
	in³/ft	in⁴/ft	inch	inch	inch	lbs/ft	lbs/ft²	ft²/ft²
MSZ 13 - 312	14.13	67.86	36.38	9.58	0.312	49.72	16.40	7.51
MSZ 13 - 340	15.32	73.79	36.38	9.58	0.340	54.10	17.85	7.52
MSZ 13 - 350	15.74	75.93	36.38	9.58	0.350	55.69	18.37	7.53
MSZ 13 - 375	16.81	81.34	36.38	9.58	0.375	59.67	19.68	7.54
MSZ 13 - 406	18.18	88.27	36.38	9.58	0.406	64.60	21.31	7.54
MSZ 14 - 312	19.62	120.97	34.56	12.24	0.312	49.72	17.27	7.51
MSZ 14 - 340	21.29	131.28	34.56	12.24	0.340	54.10	18.79	7.52
MSZ 14 - 350	21.91	135.5	34.56	12.24	0.350	55.69	19.34	7.53
MSZ 14 - 375	23.38	144.93	34.56	12.24	0.375	59.67	20.72	7.54
MSZ 14 - 406	25.29	157.25	34.56	12.24	0.406	64.60	22.43	7.54
MSZ 15 - 312	24.24	172.66	32.79	14.11	0.312	49.72	18.20	7.51
MSZ 15 - 340	26.27	187.52	32.79	14.11	0.340	54.10	19.80	7.52
MSZ 15 - 350	27.06	193.26	32.79	14.11	0.350	55.69	20.38	7.53
MSZ 15 - 375	28.91	207.03	32.79	14.11	0.375	59.67	21.84	7.54
MSZ 15 - 406	31.27	224.46	32.79	14.11	0.406	64.60	23.64	7.54
MSZ 16 - 312	28.45	223.36	31.05	15.54	0.312	49.72	19.22	7.51
MSZ 16 - 340	30.88	242.98	31.05	15.54	0.340	54.10	20.91	7.52
MSZ 16 - 350	31.74	249.85	31.05	15.54	0.350	55.69	21.53	7.53
MSZ 16 - 375	33.95	267.87	31.05	15.54	0.375	59.67	23.06	7.54
MSZ 16 - 406	36.75	290.74	31.05	15.54	0.406	64.60	24.97	7.54
MSZ 17 - 312	31.60	262.34	29.71	16.43	0.312	49.72	20.09	7.51
MSZ 17 - 340	34.27	285.1	29.71	16.43	0.340	54.10	21.86	7.52
MSZ 17 - 350	35.25	293.36	29.71	16.43	0.350	55.69	22.50	7.53
MSZ 17 - 375	37.71	314.57	29.71	16.43	0.375	59.67	24.11	7.54
MSZ 17 - 406	40.80	341.03	29.71	16.43	0.406	64.60	26.10	7.54
MSZ 18 - 312	34.57	300.16	28.38	17.2	0.312	49.72	21.03	7.51
MSZ 18 - 340	37.54	326.53	28.38	17.2	0.340	54.10	22.88	7.52
MSZ 18 - 350	38.60	336.07	28.38	17.2	0.350	55.69	23.56	7.53
MSZ 18 - 375	41.30	360.01	28.38	17.2	0.375	59.67	25.23	7.54
MSZ 18 - 406	44.70	390.78	28.38	17.2	0.406	64.60	27.33	7.54
MSZ 19 - 340	41.32	373.81	26.88	17.9	0.340	54.10	24.15	7.52
MSZ 19 - 350	42.44	384.52	26.88	17.9	0.350	55.69	24.86	7.53
MSZ 19 - 375	45.41	411.98	26.88	17.9	0.375	59.67	26.64	7.54
MSZ 19 - 406	49.20	446.95	26.88	17.9	0.406	64.60	28.84	7.54

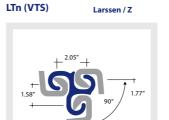
Meever USA has a solution in stock to fit every possible corner connection you might need. Meever USA is always happy to advise on tailor-made solutions and/or connections between different types of sheet piling sections.

If you don't have the time or possibility to weld the corner sections to your sheet piling yourself, why not leave that to us? For **PZ-Corner Sections** we refer you to our website.

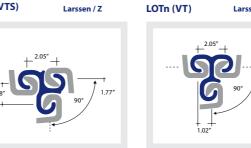
#### E-20 Larssen / Z

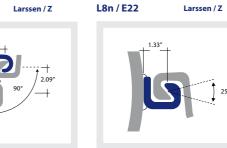




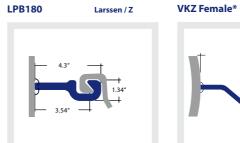


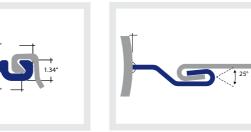
LV20/M20



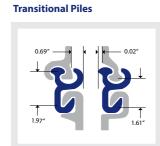


VKZ 90 B\*



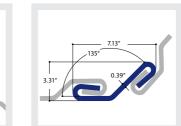


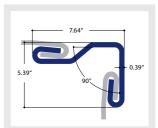
VKZ 45 B





\* More options available



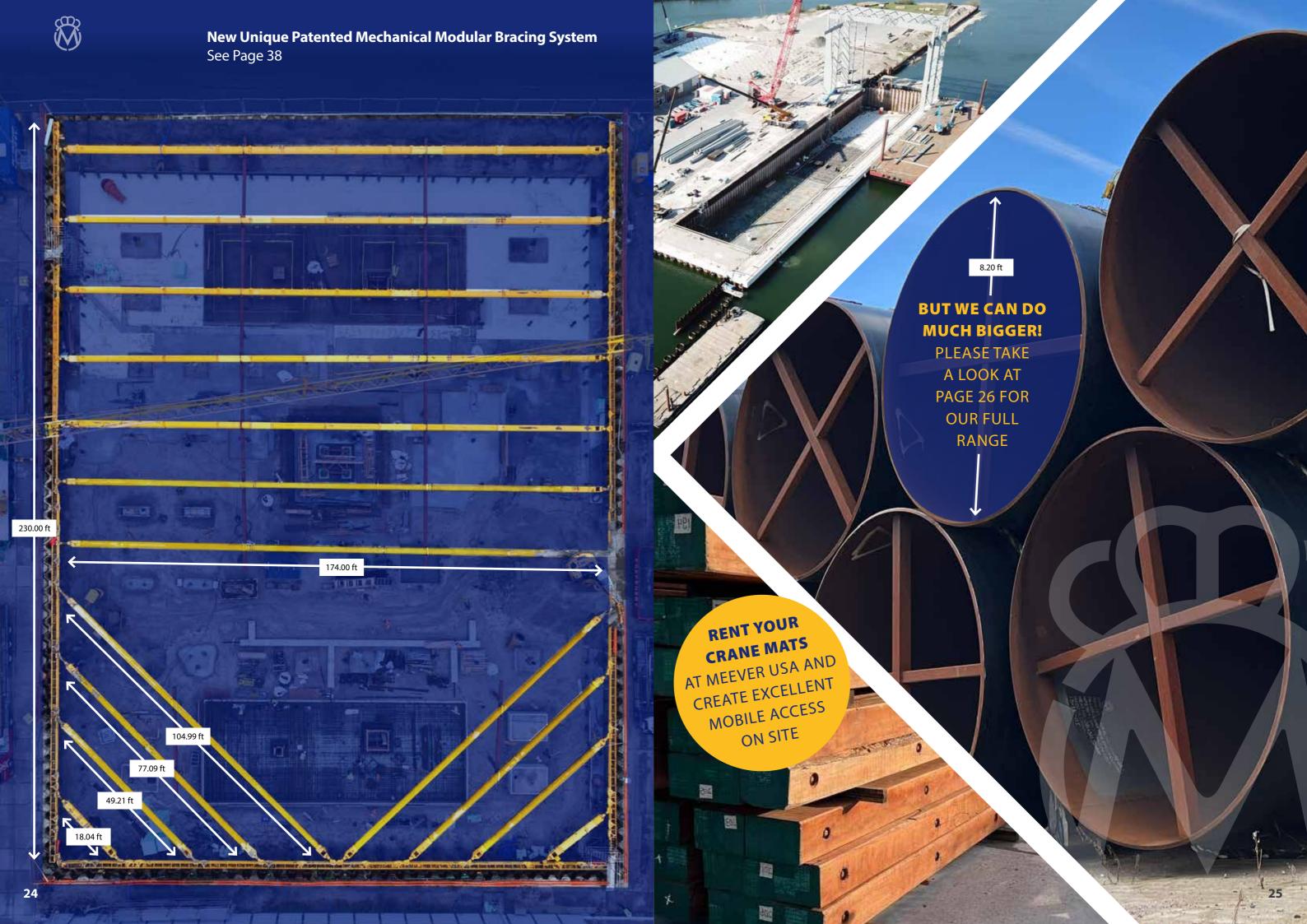


"Meever USA can even supply the sheet pile sections with the required angle for you, so they can be immediately placed and connected upon arrival."



















Our steel tubular pipes are being used for countless ground, road and hydraulic engineering projects throughout the US and beyond. We have a wide range of diameters and wall thicknesses in stock (seamless, longitudinally welded and spirally welded), which enables us to meet the wishes and requirements of the customer and to deliver quickly from stock. For example, for outrigger constructions, pipelines, noise barriers or deeply founded flood defences.

Meever USA delivers steel pipes according to API, ASTM, DIN or NEN. On request we can deliver every quality from stock or production including CE-marking. Steel grades up to X80, S555 or L555. We deliver quickly and on your terms; with or without certificates. The pipes are usually provided with a 3.1/3.2 certificate or a material analysis 2.1 certificate. We have a wide range of pipes; new, second choice or used.

Туре	Diam	neter	Thickness			
	mm	inch	mm	inch		
Seamless Tube	21.30 - 725.00	0.84 - 28.50	2.5 - 150.00	0.10 - 5.90		
Longitudinally Welded Tube	42.40 - 5,600.00 *	1.66 - 220.00 *	2.0 - 60.00 *	0.08 - 2.35 *		
Spirally Welded Tube	219.00 - 3,048.00	8.60 - 120.00	3.5 - 30.00	0.14 - 1.18		

<sup>\*</sup> Larger diameters and/or thicknesses on request.

#### Optional

- Non-destructive Testing (NDT)
  - Ultrasonic testing
  - o Magnetic testing
- o Radiographic examination (X-ray or gamma ray)
- Extruded ends
- Footplates
- Various welding options (e.g. mooring post attributes)
- Coating/galvanizing
- CE-marking

- Destructive testing (DO)
- o Tensile test
- o Chemical Analysis
- o Impact test
- Drilling head; design Meever USA, also possible with a large injection lance

ASTM	Yield S	trength	ASTM	Yield S	trength	Available Steel Specifications
	(ksi)	(MPa)		(ksi)	(MPa)	ASTM
A 139 Grade A	30	206	A 252 Grade 1	30	205	A 588
A 139 Grade B	35	240	A 252 Grade 2	35	240	A 690
A 139 Grade C	42	290	A 252 Grade 3	45	310	A 572
A 139 Grade D	46	315	A 252 Grade 3 (Mod)*	50-80	345-555	A 1011
A 139 Grade E	52	360				A 1011
						Abrasion Resistant

#### Seamless

Seamless pipes are, as the word says, pipes that are produced without a weld/seam. This makes seamless pipes ideal for high pressure projects, and are therefore perfect for projects where high demands are made.

A steel billet will be heated to high temperatures in an oven after which it is possible to create a cylindrical hollow. This hollow is produced using a rotary piercer and rollers.

#### **Longitudinally Welded**

Longitudinally welded pipes are welded along the length of the pipe and can be produced in two ways. Both forms of production provide their own advantages.

The first type of production is from a coil. The coil is rolled out and folded over the width into a round shape. Then the seam is welded and a "longitudinal seam" is created over the entire length. This is a continuous process until the coil is unwound and is common for standard diameters and thicknesses.

The second form of production is from a steel plate. This plate is rolled into a pipe shape whose specification exactly fits the customer's project. These pipes are also welded along the length of the pipe and for this reason also bear the name 'longitudinally welded'. The separately produced pipes have got a limited length and therefore the elements are usually welded together by means of a round seam. This method is not limited in diameters and/or thicknesses and is therefore very suitable for projects which contain specific sizes, for example with thick-walled pipes.

#### **Spirally Welded**

Spirally welded pipes are pipes where the weld runs across the pipe as a spiral. A coil is rolled out and formed into a pipe-shaped spiral. It is then completely spirally welded. This is a continuous welding process until the coil is unwound. This is the ideal production form for larger tons of steel/projects with long pipes and relatively thin wall thicknesses.

Spirally welded pipes are very suitable for combined wall constructions, outrigger pipes, pipes, mooring posts/fenders and guideways.

#### **Combined Pipes**

With a combined pipe, various pipes with different diameters and/or wall thicknesses are assembled into one pipe. Here, the demand for different strengths (Wx) and stiffnesses (lx) can be met along the length of one pipe. This saves tons of steel where the Wx and Ix may be lower.













## **Thick-Walled Tubes From Our Own Production**

### The Highest Quality

These pipes are very suitable for heavy duty applications and are often seen in mooring posts or guideways, wind turbines, support structures/foundations in the offshore industry.



1100 pressure equipments since 1951





Global footprint on 5 continents

Certifications	Welding Processes	Surface Treatment	Testing Equipment
DIN EN 1090 EXC 4	TIG	Sandblasting	Radiographic test
DIN EN 10219	SMAW	Corrosion protection	Ultrasonic test
DIN EN ISO 9001 : 2008	E	Coating	Magnetic particle test
DIN EN ISO 3834	MIG / MAG	Rubber lining	Dye penetration test
DGRL		CPL	Pressure test
AD HP 0		PE-, PP-, PVC - lining	
AD W			
WHG			
ASME Boiler & Pressure Vessel Code (U+S)			









Other specifications available upon request.



Weight up to 220.46 Si



Wall thickness up to 6.3 inch

Length up to 262.5 ft.

Diameter up to 236.2 inch

Weight up to 220.46 St.



"These tubes are made in our own production facility in Germany and can be made on request."









### **Combined Walls**









A Combined Wall (also referred to as a "Combi-wall") is a structural design for a bulkhead wall using a combination of pipe, beams, and/or sheetpiling that are connected with interlocks in order to provide a very high strength alternative to typical sheetpiling designs.

As project requirements vary greatly, the component choices can be custom designed to meet almost all specifications. The choices includes: sheet piling with beams, sheet piling with pipe piling, beams only with interlocks, and pipe piling only with interlocks. With the many options for sheet piling, wide flange beams and pipe piling, the design options and properties are almost limitless.

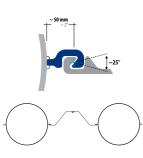
The Meever Group has the capability to provide value-engineered designs, material procurement, fabrication, corrosion protection and shipping from multiple locations domestically and worldwide to meet any project requirements with delivery and budget concerns kept in mind.

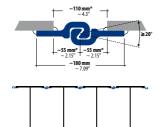
**Pipe-Z Sheetpiling System** is composed of large diameter pipe, weld-on interlock connectors and Z sheetpiling between pipes. The sheetpiling transfers load to the pipe which carries the majority of the required strength. Pipe piling is available in multiple sizes and grades in order to meet the required properties.

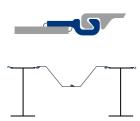
**Beam-Z Sheetpiling System** is similar to the Pipe-Z System with wide-flange beams replacing the pipe. With the many beam sizes available, this system is also very versatile.

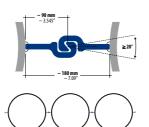
**Pipe-to-Pipe (or Beam-to-Beam) Wall Systems** with weld-on interlocks are available to provide the greatest design capacity alternatives.

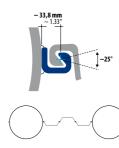
If a design is specified on a project, the Meever Group can provide a value-engineered alternative that can potentially produce time and cost savings.

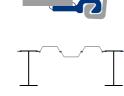






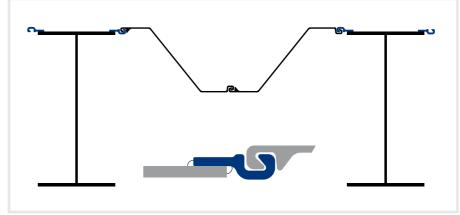






#### **Example Designs**

Example	Design			
King Pile	Sheet pile	Section Modules	Moment of Inertia	System Width
		in³/ft	in⁴/ft	inch
W 36 x 160	ESZ 19-700 A572 GR 50	112.9	2188.6	67.13



	Section	Moment	Width	Height	Thic	kness	Weight	Weight	Coating	Cros
Section	Modules	of Inertia			pipe	sheet pile	unit		2 sides	section area
	in³/ft cm³/m	in⁴/ft cm4/m	inch mm	inch mm	inch mm	inch mm	<b>lbs/ft</b> kg/m	lbs/ft² kg/m²	ft²/ft m²/m	in² mm²
12"x0.650 pipe with	<b>107.87</b> 5.700	<b>2.484</b> 339.211	<b>99.72</b> 2.532.8	<b>42</b> 1066.76	<b>0.650</b>	<b>0.375</b>	<b>407.02</b> 605.71	<b>48.98</b> 239.14	<b>25.04</b> 7.63	<b>116.35</b> 75.064
ESZ 19-700		555211	2.332.0	1000,70	10.51	0.5	003.71	235.14	7.05	75.50-
ESZ 19-700		33211	25520		10.51	0.5	003.71	237.14	7.33	73.00-
SZ 19-700		55211		~50 mm		U.5	003.71	235.14		,3.00

















	Section Modulus	Moment of Inertia	Width		Thickness Flange			Coating
		in4/ft				inch		ft2/ft
								m2/m
LID026	29.8	119.0	8.16	8.02	0.445	0.445	36.0	3.92
HP8 x36	1.602	16.250	207	204	11.3	11.3	53.6	1.19
LID10 42	43.4	210.0	10.10	9.70	0.420	0.415	42.0	4.83
HP10 x42	2.333	28.677	257	246	10.7	10.5	62.5	1.47
LID1042	58.8	294.0	10.20	9.99	0.565	0.565	57.0	4.91
HP10 x42	3.161	40.148	259	254	14.4	14.4	84.8	1.50
UD1252	66.7	393.0	12.00	11.80	0.435	0.435	53.0	5.82
HP12 x53	3.586	53.667	305	300	11.0	11.0	78.9	1.77
LID12 (2	79.1	472.0	12.10	11.90	0.515	0.515	63.0	5.86
HP12 x63	4.253	64.455	307	302	13.1	13.1	93.8	1.78
UD12 71	93.8	569.0	12.20	12.10	0.610	0.605	74.0	5.91
HP12 x74	5.043	77.702	310	307	15.5	15.4	110.1	1.80
LID12 04	106.0	650.0	12.30	12.30	0.685	0.685	84.0	5.97
HP12 x84	5.699	88.763	312	312	17.4	17.4	125.0	1.82
LID46	111.6	689.0	12.32	12.36	0.720	0.720	89.0	6.04
HP12 x89	6.000	94.089	313	314	18.3	18.3	132.4	1.84
LIDAG	129.3	811.0	12.64	12.56	0.819	0.819	102.0	6.17
HP12 x102	6.952	110.749	321	319	20.8	20.8	151.8	1.88
	148.2	946.0	12.87	12.76	0.929	0.929	117.0	6.26
HP12 x117	7.968	129.184	327	324	23.6	23.6	174.1	1.91
	107.0	729.0	14.60	13.60	0.505	0.505	73.0	6.96
HP14 x73	5.753	99.551	371	345	12.8	12.8	108.6	2.12
	131.0	904.0	14.70	13.80	0.615	0.615	89.0	7.02
HP14 x89	7.043	123.449	373	351	15.6	15.6	132.4	2.14
	150.0	1.050.0	14.80	14.00	0.705	0.705	102.0	7.06
HP14 x102	8.064	143.386	376	356	17.9	17.9	151.8	2.15
	172.0	1.220.0	14.90	14.20	0.805	0.805	117.0	7.12
HP14 x117	9.247	166.601	378	361	20.4	20.4	174.1	2.17
	145.0	1.110.0	15.70	15.30	0.540	0.540	88.0	7.52
HP16 x88	7.796	151.580	399	389	13.7	13.7	131.0	2.29
	168.0	1.300.0	15.80	15.50	0.625	0.625	101.0	7.56
HP16 x101	9.032	177.526	401	394	15.9	15.9	150.3	2.30
	201.0	1.590.0	15.90	15.80	0.750	0.750	121.0	7.62
HP16 x121	10.806	217.128	404	401	19.1	19.1	180.1	2.32
	234.0	1.870.0	16.00	16.00	0.875	0.875	141.0	7.69
HP16 x141	12.581	255.364	406	406	22.2	22.2	209.8	2.34
	269.0	2.190.0	16.10	16.30	1.000	1.000	162.0	7.75
HP16 x162	14.462	299.062	409	414	25.4	25.4	241.1	2.36
	304.0	2.510.0	16.30	16.50	1.130	1.130	183.0	7.81
HP16 x183	16.344	342.761	414	419	28.7	28.7	272.3	2.38
	251.0	2.200.0	17.80	17.50	0.750	0.750	135.0	8.54
HP18 x135	13495	300428	452	445	19.1	19.1	200.9	2.60
	290.0	2.570.0	17.90	17.70	0.870	0.870	157.0	8.60
HP18 x157	15.591	350.955	455	450	22.1	22.1	233.6	2.62
	336.0	3.020.0	18.00	18.00	1.000	1.000	181.0	8.66
HP18 x181	18.064	412.406	457	457	25.4	25.4	269.4	2.64
	380.0	3.480.0	18.10	18.30	1.130	1.130	204.0	8.73
HP 18x204	20430	475223	460	465	28.7	28.7	303.6	2.66



Meever USA offers steel beams and sections from stock or directly from production, delivered quickly and flexibly and with ample choice as to types and specifications. They can also be made to measure for your specific application if you so desire. We supply H-beams, U-sections and I-sections of several different lengths, grades and types.

Materials can be offered in accordance with ASTM standards and A572 or A690 steel grades. On request we also have the availability for special high yield strength steel grades. Aside from standard rolled shapes we also provide fabricated shapes. Cutting holes, welding attachments, coating or galvanizing and other value added services can be offered.

• HEA • HEB • HEM • UNP • IPE • Double-U

If you are interested in using lesser quality or used steel beams, we can email you some photos of examples in advance. And we are always happy to advise you on the best choice for your specific project.

In our material database you can find the section properties of all commonly used construction steel sections.





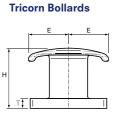


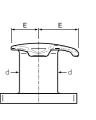


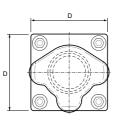
### **Bollards**

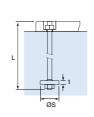
## **Anchoring**



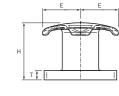




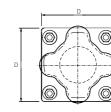


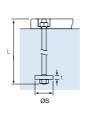


**Square Head Bollards** 

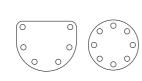








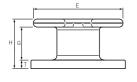
Standard



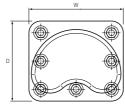
**Optional Baseplates** 

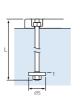
MEEVER Supplies different types of bollards. Here you can find our available bollard types. If there are any questions or you need more information, please contact us.

**K-Head Bollards** 

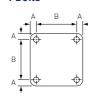








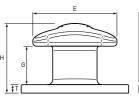
4 Bolts

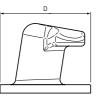


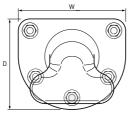


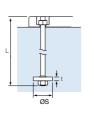


**T-Head Bollards** 





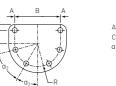




5 Bolts



6 Bolts



7 Bolts



8 Bolts



Meever USA offers several solutions for anchoring sheet piles, the right solution depends on the specifics of your project. Factors to consider here are the length and depth of the sheet pile wall, the soil situation, and whether the sheet pile wall is a temporary or permanent wall.

#### **Grout Injection Anchors**

A grout anchor is a hollow borehole tube in which grout is injected under high pressure. The anchor is connected to the sheet pile wall to enable damming constructions with major differences in height to be constructed.

GTB anchors are applied in the bottom as a grouted anchor. Installation is done by mean of a cased drilling technique. A temporary drill tube is inserted to a final depth and is flushed empty. The anchor rod is in the drill tube drained where after, with simultaneous injection of cement grout, the drilling pipes are drawn again.

#### **Micro Piles**

These are driven deep into the ground, into a sufficiently load-bearing layer; the micro pile that displaces the soil is constructed of tubular steel segments. These segments are interconnected by means of a threaded coupling sleeve to avoid having to be welded on the building site.

#### **Screw Injection Piles**

The seamless tubes have a threaded connection and are available with various dimensions. The thread guarantees an excellent connection which has been developed especially for heavy processing conditions. We can also supply the necessary drill bits and other accessories in accordance with your personal preferences.

#### **Folding Anchors**

Folding anchors are quick and easy to install. The anchor is first driven into the ground, at any angle required, using a vibro hammer. It is then tilted using a removable pull rod. When it is in this position (i.e. at a right angle), the folding anchor can immediately be subjected to a load. Our folding anchors are CE-certified.

#### **Anchor Rods**

Anchor Rods are high-quality steel solid bars that come in different versions. These rods are often installed horizontally and connected to the sheet pile wall and anchor wall by means of fasteners, anchor plates, an eye,  $hammer\ head\ and\ skull cap/flat\ nuts.\ Meever\ USA\ can\ offer\ all\ supplies\ from\ stock\ and\ production.$ 





















### **Interlock Sealing**

#### Pile Lock

Pile Lock is the best option when the sealing needs to be completely waterproof. This product expands up to 20 times its original volume when it comes into contact with water, enabling a waterproof solution.

#### **Intra Expanding Seal**

Where soil is contaminated, an interlock seal based on polyurethane (PU) will often be the best solution. Read more about this on the right.



#### **Pertex Bituminous Filling**

This type of interlock sealing is very interesting from an economic point of view and significantly reduces leaking.



### **Surface Treatment**

#### Blasting and Coating

We offer a full range of high quality coating systems from experienced, qualified coating facilities. Whether it's an anti-corrosion coating to increase the material lifetime or a paint for esthetic purposes, we can do it.

#### Galvanizing

We can deliver our products hot dipped galvanized.

#### Cathodic Protection (Anti Corrosion)

Especially in salt water environments steel gets affected quickly and marine coatings are almost a standard procedure to increase the lifetime. In addition to coating systems we provide zinc and aluminum anodes the have a huge effect on the material lifetime. Anodes and coating are often used in conjunction with each other to get the best result.

#### **Product Modification**

On request we can modify all products according to your specific requirements.

- Weld on interlocks
- Add slinging / handling holes
- Cut in lengths
- Corner sections
- · Multiple sheet piles
- Loose / welded / punched

#### **Project Design & Engineering**

Our certified engineers can draw construction plans or calculate your complete project. We can help you with finding the best and most price efficient solution. Our experience has made us a reliable partner. We have seen that the best results are accomplished when working together with the contractor on a project starting from the tender phase until the end.

- Drawings and calculations
- Design building plans
- Developing alternative construction
- Cost efficient engineering

The Intra Expanding Seal is the product with watertight sheet pile joints as a result. This Hydrophilic swelling sealant on Polyurethane (PU) basis expands up to 350% of its original volume when it comes into contact with moisture and it can be applied to the sheet piling interlock structure on site.

#### **Field of Application**

- · Sealing of the locks between sheet piles.
- Sealing of joints of in-situ cast concrete in moist conditions.
- Sealing joints between precast segments in wet or underwater applications (e.g. manholes, box culverts, cable ducts and pipes).

#### The Advantages of the Intra Expending Seal:

- Due to its special formulation, Intra Expanding Seal can be applied in moist conditions.
- The Intra Expanding Seal is very sustainable: it will exceed the construction's lifespan.
- · Solvent free.
- Intra Expanding Seal adheres to steel, concrete, PVC, HDPE, fibreglass, etc.
- In contact with moisture Intra Expanding Seal will expand to about 350% of its original volume.
- Flexible system, which adapts to the irregular surface of the substrate.
- · Easy application with a standard caulking gun.
- Good chemical resistance: The ideal solution with contaminated soil.
- Environmentally friendly (find the explanation further on this page).

#### **Environmentally Friendly**

Intra Expanding Seal is an air moisture curing polyurethane sealant. The product does not contain any raw materials that are classified as dangerous to the environment.

Once cured, the expected life time is 100 years; during this life cycle Intra Expanding Seal will not release any substances that are harmful to the environment, ground water or soil.

#### Consumption

Nozzle diameter	Length (sausage)
0.12 inch	131.00 - 164.00 ft.
0.24 inch	53.00 - 66.00 ft.
0.31 inch	26.00 - 33.00 ft.
0.39 inch	Approx. 20.00 ft.





















### **Meever Patented Bracing Systems**

Meever Bracing Series is a modular system designed & engineered to maintain excavation integrity, it allows flexibility on site and saves time and money. Most importantly it provides a safe working environment.  $Meever\ Bracing\ Series\ is\ manufactured\ in\ house\ so\ we\ are\ able\ to\ offer\ custom\ solutions\ for\ varying\ excavations.$ 

#### **Meever Series is:**

- The first of its kind, with removable hydraulic rams to create a static temporary support system
- Easy and quick to install
- · Versatile on site
- · Time and money saving
- Easy and fast assembly
- · No welding on site

With 20 inch, 3 ft, 6 ft, 10 ft, 20 ft and 30 ft Modules, Meever Series fits together with a full shear capacity joint, secured with one pin. This simple, easy assembly requires minimal training, saving layout time on site.

#### What projects can the Meever Bracing System be used for?

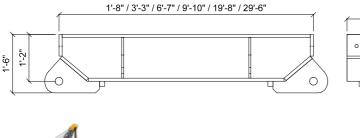
- Meever Series can be used in conjunction with all Steel Sheet Piles U & Z Type and trench sheets.
- Meever Series is not restricted to size or shape it is versatile in every aspect.
- Meever Series offer a preliminary design outlining the sheets and the amount of bracing needed to secure your excavations.

#### There are three kinds of Bracing Series:

- The B300 bracing series is suitable for excavations with a section modulus of 102 in<sup>3</sup> (grade 50) and it can be compared with a HP14 x 73 (Grade 50).
- The B400 bracing series is suitable for excavations with a section modulus of 199 in 3 (grade 65) and it can be compared with a W24 x 104 (Grade 50).
- $\bullet \quad \text{The B500 bracing series is suitable for excavations with a section modulus of 558 in}^3 \, (grade \, 65)$ and it can be compared with a W36 x 210 (Grade 50).

All series are compatible with each other.

Our engineering team can/will design the right bracing series for your project.





"Find out more information and a video about our Meever USA **Bracing System."** 





#### **Reduced Weight**

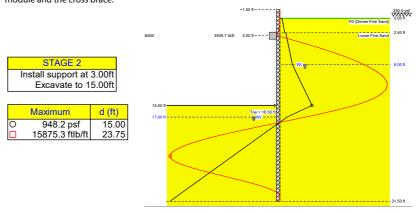
The brace is lighter than conventional method of steel pipe strutting, therefore smaller machines can be used on site.

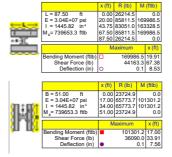
#### **Over-dig Allowance**

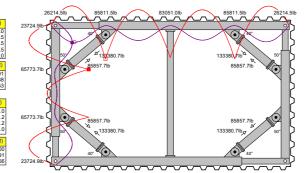
The Meever USA Series mechanical unit extends up to 20 inches and hydraulic unit extends up to 14 inches. This means that if over-digging occurs, the hydraulic unit can extend 14 inches to cover the gap between the modules, creating dig flexibility and convenience on site.

#### **Safe Cross Bracing**

Cross brace connection points have been designed into the modules. This allows a positive connection between the module and the cross brace.







2 3 4 5 6 7 8 9 (ft)











#### Sheet piling steel grades for hot-rolled sheet piles conforming to DIN EN 10 248-1

American			Cai	Canadian			European				
	Yield Strength		ee. e	Yield Strength		EN 10248	Yield Strength		Tensile strength	Minimum elongation	
ASTM	ksi	MPa	CSA G40.21	ksi	MPa	EN 10248	ksi	MPa	MPa	%	
A 328	39	270	Grade 260 W	38	260	S 240 GP	35	240	340	26	
A 572 Gr. 42	42	290	Grade 300 W	43	300	S 270 GP	39	270	410	24	
A 572 Gr 50	50	345	Grade 350 W	51	355	S 320 GP	46	320	440	23	
A 572 Gr. 55	55	380	Grade 400 W	58	400	S 355 GP	51	355	480	22	
A 572 Gr. 60	60	415				S 390 GP*)	57	390	490	20	
A 572 Gr. 65	65	450				S 430 GP*)	62	430	510	19	
A 690	50	345				S 460 AP**)	67	460	550	17	
A 690*	57	390									

\*) For the higher-strength sheet piling steels \$ 390 GP and \$ 430 GP, an approval certificate (Z-30.1-17) from the building supervisory authorities is available.
\*\*) This is not within the 10248 but Arcelor Mittal mill specification.

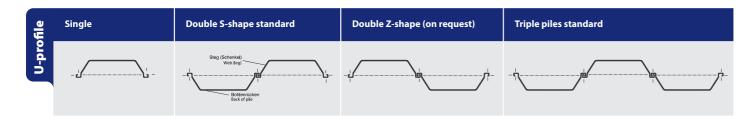
Mechanical proportions according to EN 10025 – 2:2004. Other steel grades on request.

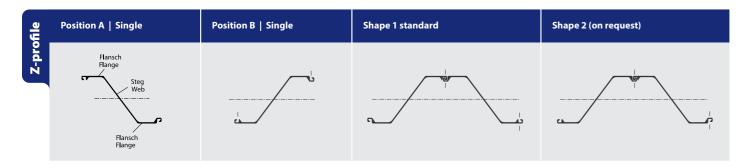
#### Deviation limits and dimensional tolerances for hot-rolled sheet piles made of unalloyed steels conforming to DIN EN 10 248-2.

Pile width	Single piles ± 2%; double and triple piles ± 3%
Wall thicknesses of	t: up to 8.5 mm = $\pm$ 0.5 mm; over 8.5 mm = $\pm$ 6% t
U-sections	s: up to 8.5 mm = $\pm$ 0.5 mm; over 8.5 mm = $\pm$ 6% s*
Wall thicknesses of Z-sections and straight-web sections	t, s: up to 8.5 mm = $\pm$ 0.5 mm; over 8.5 mm = $\pm$ 6% s, t
Height of U-sections	h: up to 200 mm = ± 4 mm; over 200 mm = ± 5 mm
Height of Z-sections	h: up to 200 mm = $\pm$ 5 mm; from 200 up to 300 mm = $\pm$ 6 mm; over 300 mm = $\pm$ 7 mm
Deviation from straightness	The longitudinal deviation from straightness must not exceed 0.2% of pile length.
Pile length	Sheet pile lengths are permitted to deviate by $+5$ in. and $-0$ in. ( $\pm$ 200 mm) from the ordered lengths.
Cut	Cut at right angles to the longitudinal axis. The total deviation between the highest and lowest points in the cutting plane, measured on a single pile along the longitudinal axis, must not exceed 2% of pile width.
Weight	The tolerance between the arithmetic weight (according to section tables) and weighed weight of the total consignment must be within ±2.5% (± 5%).
Section interlocks	The 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. The minimum interlock overlap on U and Z piles must not be less than 4 mm and on straight-web sections not less than 7 mm.

\*) Normally the positive tolerance shall be at the discretion of the manufacturer. At the time of the enquiry and order, a limitation on the positive tolerance can be agreed. In this case, the following values shiuld be chosen: + 0,5 mm for s < 8,5 mm and + 6 % for > 8,5 mm.

# Available Types





#### Sheet pilling steel grades for cold-formed sheet piles conforming to EN 10 249-1

	American								European	
ACTM	Yield Strength			Yield Strength		EN 10249	Yield :	Strength	Tensile strength	Minimum elongation
ASTM	ksi	MPa	ASTM	ksi	MPa	EN 10249	ksi	MPa	MPa	%
A572 Gr. 50	50	345	A588	50	345	S 235 JRC	34	235	360	26
A572 Gr. 55	55	380	A690 Gr. 50	50	345	S 275 JRC	40	275	410	23
A572 Gr. 60	60	415	A490 Gr. 60	60	415	S 355 JOC	51	355	470	22
A572 Gr. 65	65	450								

Mechanical proportions according to EN 10025 – 2:2004. Other steel grades on request.

#### $Deviation \ limits \ and \ dimensional \ tolerances for cold-formed \ sheet \ piles \ made \ of \ unalloyed \ steels \ conforming \ to \ EN \ 10 \ 249-2$

Pile width	Single piles ± 2 %; double piles ± 3 %					
Wall thicknesses	The tickness is indicated in table 3 of the EN 10 051.					
Height	h: up to 200 mm = $\pm$ 4 mm; over 200 up to 300 mm = $\pm$ 6 mm; over 300 up to 400 mm $\pm$ 8 mm; over 400 mm = $\pm$ 10 mm.					
Deviation from straightness S	The longitudinal deviation from straightness S, must not exceed 0,25 % of the pile length.					
	Top View    S   250   25					
Deviation from straightness C	The longitudinal deviation from straightness C, must not exceed 0,25 % of the pile length.					
	Side View  C 250  250  250  250  250					
Torsion V	The Size V must not exceed $\pm$ 0,2 % of the pile length, with a maximum of 100 mm.					
Pile length	Sheet pile lengths are permitted to deviate by $+$ 5 in. and $-$ 0 in. ( $\pm$ 50 mm) from the ordered lengths.					
Cut	Cut at right angles to the longitudinal axis. The total deviation between the highest and lowest points in the cutting plane, measured on a single pile along the longitudinal axis, must not exceed 2 % of the pile width.					
Weight	The tolerance between the arithmetic weight (according to section tables) and weighed weight of the total consignment must be within $\pm$ 2.5% ( $\pm$ 7%).					

#### **Available Types**

	Shape 1 standard	Shape 2 (on request)	Shape 1 standard	Shape 2 (on request)
IBO			MKU	
2	Position A   Single	Position B   Single	Shape 1 standard	Shape 2 (on request)
VKZ				

40 41



District Two-HP Steel Piling 02230134								
Item Number	Quantity	Unit of Measure	Description	Unit Cost	Total			
1	636,000	LBS	12" HP Steel Piling Beams, 40' (12"x53#x40')	\$0.80	\$508,800.00			
2	371,000	LBS	12" HP Steel Piling Beams, 35' (12"x53#x35')	\$0.79	\$293,090.00			
3	318,000	LBS	12"HP Steel Piling Beams, 30' (12"x53#x30')	\$0.80	\$254,400.00			
4	14400	LBS	8Wx40' Wide Flange Beams (8Wx18#x40')	\$0.85	\$12,240.00			
Grand Total			<u> </u>	\$1,068,530.00				