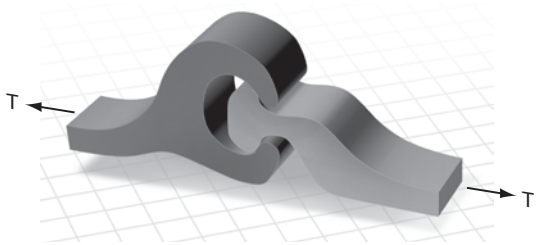
Steel Sheet Piling

Quick Reference Guide

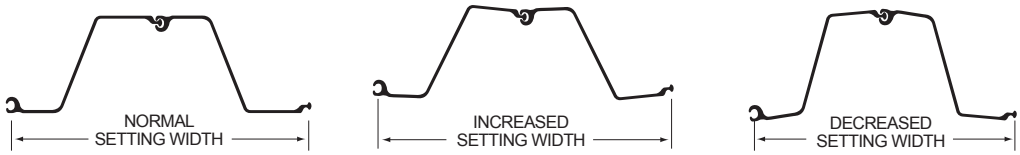
GERDAU

BALL AND SOCKET INTERLOCK

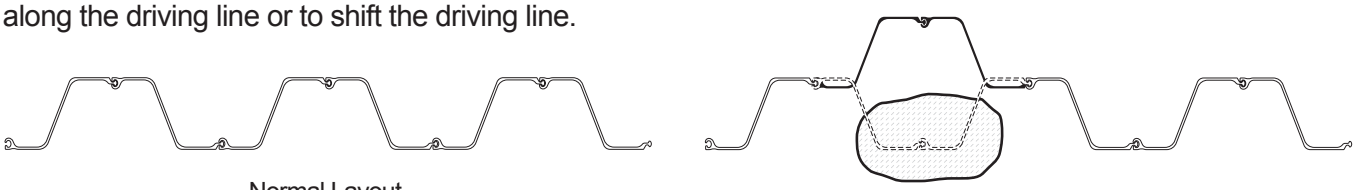


The advantages of the ball-and-socket interlock:

- Most rugged, durable, and flexible interlock available.
- Easier setting, driving, and extraction.
- Highest interlock "T" (tensile) strength relative to other Z-Profiles.
- Ideal for reuse in multiple projects.
- Higher "buy back/resale" value.
- Flexibility when setting-allows adjustment by interlock swing/rotation.



The reversed interlock arrangement can be utilized to bypass obstructions when they are encountered along the driving line or to shift the driving line.



Normal Layout

Layout to Avoid an Obstruction

100% MELTED AND HOT-ROLLED IN THE UNITED STATES

Please refer to www.sheet-piling.com for an extensive solution list and CAD downloads. This website also has tools available to estimate material requirements. For further assistance, please contact us directly.

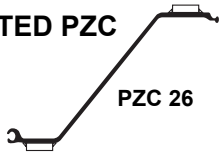
COVER PLATED PZC 26 PROPERTIES (TO OBTAIN HIGHER SECTION MODULII)

Section	Nominal Width	Plate Size	Per Single Section: Area	Per Single Section: Weight	Per Single Section: Total Surface Area	Per Single Section: Nominal Coating Area*	Per Unit of Wall: Weight Plates Full Length	Per Unit of Wall: Weight Plates Half Length	Per Unit of Wall: Moment of Inertia	Per Unit of Wall: Section Modulus
	in. *(mm)*	in. *(mm)*	$in.^2$ *(cm^2)*	lbs/ft *(kg/m)*	ft^2/ft *(m^2/m)*	ft^2/ft *(m^2/m)*	lbs/ft^2 *(kg/m^2)*	lbs/ft^2 *(kg/m^2)*	$in.^4/ft$ *(cm^4/m)*	$in.^3/ft$ *(cm^3/m)*
PZC 37-CP *(PZC 26)*	27.88	3.5 x 0.9375	28.28	96.2	6.96	6.46	41.4	36.6	673.3	68.8
	708	*89 x 24*	*182.5*	*143.1*	*2.12*	*1.97*	*202.2*	*178.7*	*91,900*	*3,700*
PZC 39-CP *(PZC 26)*	27.88	3.5 x 1.125	29.60	100.6	7.03	6.53	43.3	37.6	728.3	73.0
	708	*89 x 29*	*190.9*	*149.7*	*2.14*	*1.99*	*211.6*	*183.4*	*99,500*	*3,930*
PZC 41-CP *(PZC 26)*	27.88	3.5 x 1.25	30.47	103.6	7.07	6.57	44.6	38.2	766.1	75.8
	708	*89 x 32*	*196.6*	*154.2*	*2.15*	*2.00*	*217.8*	*186.6*	*104,600*	*4,080*

*Both sides of sheet; excludes socket interior and ball of interlock

Notes: • Best economy is obtained when plate length is limited to area of high moment.
• Cover plate length depends upon moment curve.
• Filet weld should be sized to adequately resist design loads. Weld requirements should be specified by design engineer.

All dimensions given are nominal. Actual flange and web thicknesses vary due to mill rolling practices; however, permitted variations for such dimensions are not addressed.



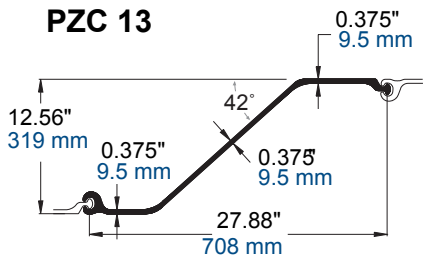
PZC SHEET PILING PROPERTIES

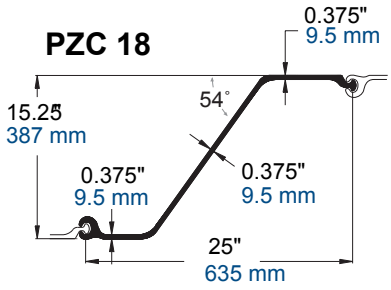
PZC profiles are named for their strength in metric designations. For example, PZC 18 has a Section Modulus of 1,800 cm^3/meter. **PZC profiles should always be the designer's first choice in order to provide the end user with a highly efficient ratio of section modulus to weight.** The following PZC sections are part of the Guide Specification published by the U.S. Army Corps of Engineers.

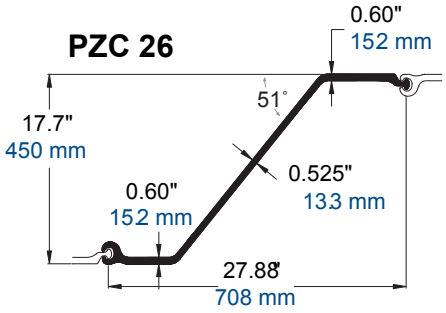
					Per Single Section						Per Unit of Wall			
Section	Nominal Width	Wall Depth (Height)	Web Thickness	Flange Thickness	Area	Weight	Moment of Inertia	Section Modulus	Total Surface Area	Nominal Coating Area*	Area	Weight	Moment of Inertia	Section Modulus
	in. *(mm)*	in. *(mm)*	in. *(mm)*	in. *(mm)*	$in.^2$ *(cm^2)*	lbs/ft *(kg/m)*	$in.^4$ *(cm^4)*	$in.^3$ *(cm^3)*	ft^2/ft *(m^2/m)*	ft^2/ft *(m^2/m)*	$in.^2$/ft *(cm^2/m)*	lbs/ft^2 *(kg/m^2)*	$in.^4$/ft *(cm^4/m)*	$in.^3$/ft *(cm^3/m)*
PZC 13	27.88	12.56	0.375	0.375	14.82	50.4	353.0	56.2	6.10	5.60	6.38	21.7	152.0	24.2
	708	*319*	*9.5*	*9.5*	*95.6*	*75.1*	*14,690*	*920*	*1.86*	*1.71*	*135.1*	*106.0*	*20,760*	*1,300*
PZC 14	27.88	12.60	0.420	0.420	16.15	55.0	381.6	60.5	6.10	5.60	6.95	23.7	164.3	26.0
	708	*320*	*10.7*	*10.7*	*104.2*	*81.8*	*15,890*	*990*	*1.86*	*1.71*	*147.2*	*115.5*	*22,440*	*1,400*
PZC 18	25.00	15.25	0.375	0.375	14.82	50.4	532.2	69.8	6.10	5.60	7.12	24.2	255.5	33.5
	635	*387*	*9.5*	*9.5*	*95.6*	*75.1*	*22,150*	*1,145*	*1.86*	*1.71*	*150.6*	*118.2*	*34,890*	*1,800*
PZC 19	25.00	15.30	0.420	0.420	16.16	55.0	576.3	75.3	6.10	5.60	7.75	26.4	276.6	36.1
	635	*388*	*10.7*	*10.7*	*104.2*	*81.8*	*23,990*	*1,235*	*1.86*	*1.71*	*164.1*	*128.8*	*37,780*	*1,945*
PZC 25	27.88	17.66	0.485	0.560	20.40	69.4	938.7	106.3	6.65	6.15	8.78	29.9	404.1	45.7
	708	*449*	*12.3*	*14.2*	*131.6*	*103.3*	*39,070*	*1,740*	*2.03*	*1.87*	*185.9*	*145.9*	*55,190*	*2,455*
PZC 26	27.88	17.70	0.525	0.600	21.72	73.9	994.3	112.4	6.65	6.15	9.35	31.8	428.1	48.4
	708	*450*	*13.3*	*15.2*	*140.1*	*110.0*	*41,390*	*1,840*	*2.03*	*1.87*	*197.9*	*155.4*	*58,460*	*2,600*
PZC 28	27.88	17.75	0.570	0.645	23.22	79.0	1,057	119.1	6.65	6.15	10.00	34.0	455.1	51.3
	708	*451*	*14.5*	*16.4*	*149.8*	*117.6*	*44,000*	*1,950*	*2.03*	*1.87*	*211.6*	*166.1*	*62,150*	*2,755*

*Both sides of sheet; excludes socket interior and ball of interlock.

All dimensions given are nominal. Actual flange and web thicknesses vary due to mill rolling practices; however, permitted variations for such dimensions are not addressed.







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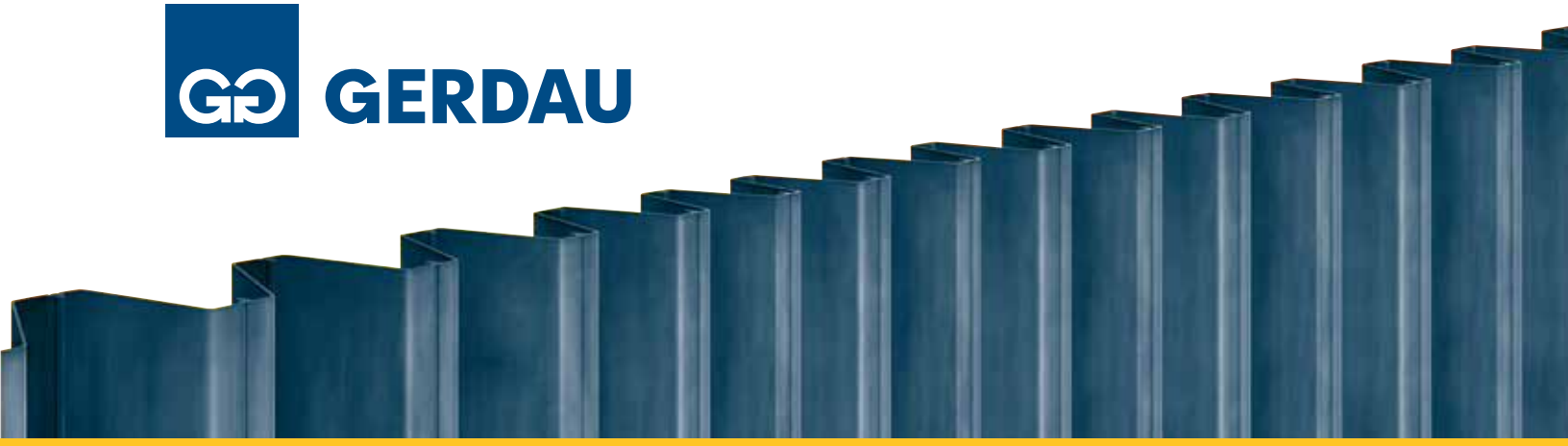
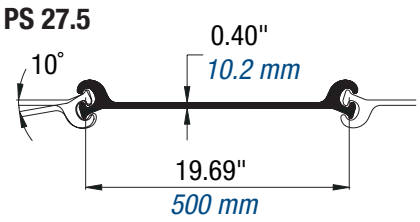
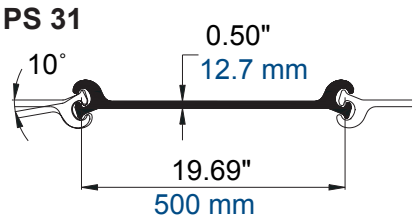


PS (FLAT SHEET) PILING PROPERTIES



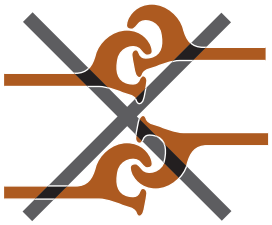


Section	Nominal Width	Depth (Height)	Wall Depth (Height)	Web Thickness	Per Single Section: Area	Weight	Moment of Inertia	Section Modulus	Total Surface Area	Nominal Coating Area*	Per Unit of Wall: Area	Weight	Moment of Inertia	Section Modulus
	in. *(mm)*	in. *(mm)*	in. *(mm)*	in. *(mm)*	$in.^2$ *(cm^2)*	lbs/ft *(kg/m)*	$in.^4$ *(cm^4)*	$in.^3$ *(cm^3)*	ft^2/ft *(m^2/m)*	ft^2/ft *(m^2/m)*	$in.^2/ft$ *(cm^2/m)*	lbs/ft^2 *(kg/m^2)*	$in.^4/ft$ *(cm^4/m)*	$in.^3/ft$ *(cm^3/m)*
PS 27.5	19.69	2.83	3.55	0.40	13.26	45.1	5.0	3.2	4.50	3.64	8.08	27.5	3.0	1.9
	500	*72*	*90*	*10.2*	*85.5*	*67.1*	*207*	*52*	*1.37*	*1.11*	*171.0*	*134.2*	*414*	*103*
PS 31	19.69	2.83	3.55	0.50	14.96	50.9	5.0	3.2	4.50	3.64	9.11	31.0	3.0	1.9
	500	72	90	12.7	96.5	75.7	207	52	1.37	1.11	192.9	151.4	414	103

*Both sides of sheet; excludes interior of interlock.

All dimensions given are nominal. Actual web thickness varies due to mill rolling practices; however, permitted variations for such dimension are not addressed.

Proper Interlock



Improper Interlock

Grade	Minimum Interlock Strength(1)	Minimum Swing(2)
A328	16 kips/in. (2,800 kN/m)	10 degrees
A572-50	20 kips/in. (3,500 kN/m)	10 degrees
A572-60	24 kips/in. (4,200 kN/m)	10 degrees

Higher interlock strengths are available but obtainable swing may be reduced in interlock strengths above 24 kips/in (4,200 kN/m).

(1) These minimum ultimate interlock strengths assume proper interlocking of sheets. To verify the strength of PS Sheet Piling, both yielding of the web and failure of the interlock should be considered.

(2) Swing reduces 1.5 degrees for each 10 feet (3 meters) in length over 70 feet (21 meters).

NOTE: INTERLOCKING OF GERDAU PS SECTIONS WITH ANOTHER PRODUCER'S SECTION SHOULD NEVER BE CONSIDERED UNLESS APPROVED IN ADVANCE BY GERDAU. PS and Z-Piling sections should not be interlocked together. Gerdau PS 27.5 and PS 31 can be interlocked with each other.

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