



**INCLUDES  
THE  
ALL-NEW  
PZC 39**

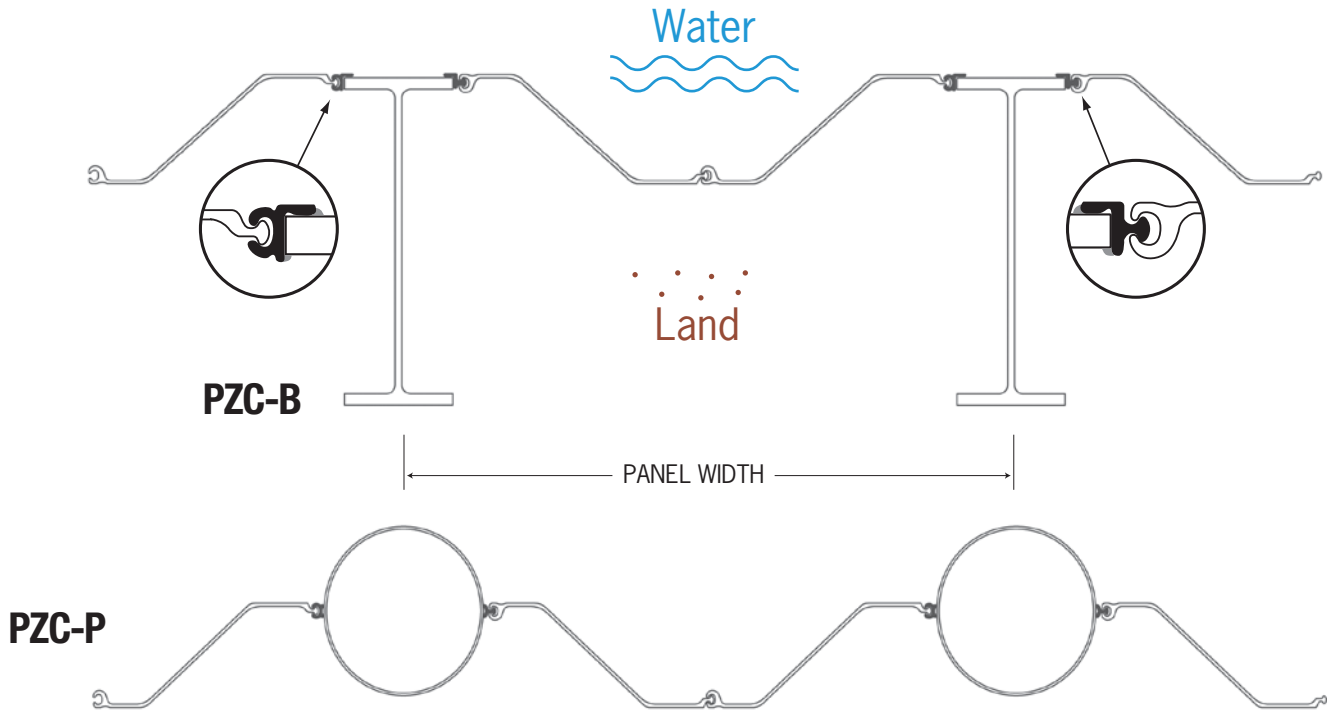
**Steel Sheet Piling**

# **GERDAU SHEET PILING**

QUICK REFERENCE GUIDE 2011

# PZC HIGH SECTION MODULUS SYSTEMS

PZC High Section Modulus systems are combinations of beams (PZC-B) or pipe (PZC-P) with PZC sheet piling designed to achieve higher section modulus requirements. The main load-carrying elements are the beams or pipe. The intermediate sheet piling, along with extruded connectors, serves to close the face of the wall.



Please refer to [www.sheet-piling.com](http://www.sheet-piling.com) for an extensive solution list and complete details on PZC High Section Modulus systems. This website also has tools available to estimate material requirements. For further assistance, please contact us directly.

## COVER PLATED PZC 39 PROPERTIES (TO OBTAIN HIGHER SECTION MODULI)

Section	Nominal Width	Plate Size	Per Single Section				Per Unit of Wall			
			Area	Weight	Total Surface Area	Nominal Coating Area*	Plates Full Length	Plates Half Length	Moment of Inertia	Section Modulus
			in. <sup>2</sup> (cm <sup>2</sup> )	lbs/ft (kg/m)	ft. <sup>2</sup> /ft (m <sup>2</sup> /m)	ft. <sup>2</sup> /ft (m <sup>2</sup> /m)	lbs/ft <sup>2</sup> (kg/m <sup>2</sup> )	lbs/ft <sup>2</sup> (kg/m <sup>2</sup> )	in. <sup>4</sup> /ft (cm <sup>4</sup> /m)	in. <sup>3</sup> /ft (cm <sup>3</sup> /m)
PZC 46-CP (PZC 39)	22.5	3 x 0.50	24.76	84.2	6.82	6.32	44.9	42.1	947.8	86
	572	76 x 13	159.8	125.2	2.08	1.93	219.3	205.6	129,400	4,630
PZC 48-CP (PZC 39)	22.5	3 x 0.625	25.51	86.7	6.86	6.36	46.3	42.9	997	89.4
	572	76 x 16	164.6	129	2.09	1.94	226.1	209.5	136,100	4,810
PZC 50-CP (PZC 39)	22.5	3 x 0.8125	26.64	90.6	6.92	6.42	48.3	43.9	1,073	94.6
	572	76 x 21	171.9	134.8	2.11	1.96	235.9	214.4	146,400	5,090

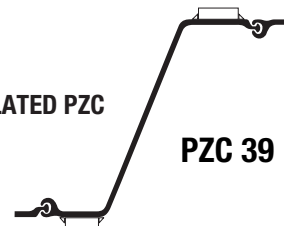
\*Both sides of sheet; excludes socket interior and ball of interlock

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.

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

COVER PLATED PZC

PZC 39



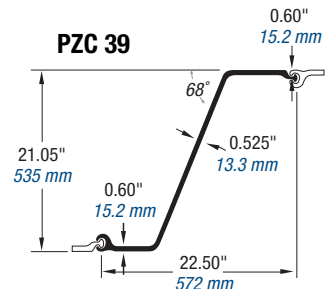
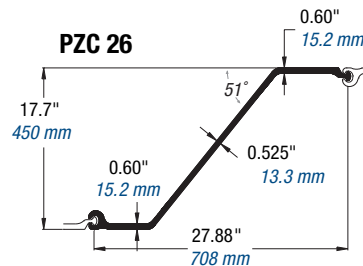
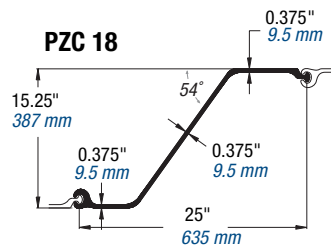
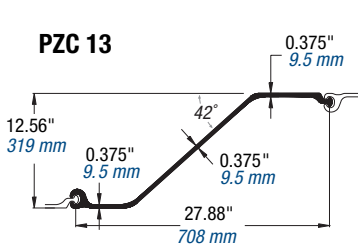
# PZC SHEET PILING PROPERTIES

PZC sections are the “latest generation” of sheet piling profiles and were developed to be lighter, wider, and stronger than the older traditional PZ sections. PZC profiles are named for their strength in metric designations. For example, PZC 18 has a Section Modulus of 1,800 cm<sup>3</sup>/meter. **PZC profiles should always be the designer’s first choice in order to provide the end user the most efficient retention wall with the most efficient ratio of section modulus to weight.**

Section	Nominal Width	Wall Depth (Height)	Web Thickness	Flange Thickness	Per Single Section						Per Unit of Wall			
					Area	Weight	Moment of Inertia	Section Modulus	Total Surface Area	Nominal Coating Area*	Area	Weight	Moment of Inertia	Section Modulus
					in. <sup>2</sup> (cm <sup>2</sup> )	lbs/ft (kg/m)	in. <sup>4</sup> (cm <sup>4</sup> )	in. <sup>3</sup> (cm <sup>3</sup> )	ft <sup>2</sup> /ft (m <sup>2</sup> /m)	ft <sup>2</sup> /ft (m <sup>2</sup> /m)	in. <sup>2</sup> /ft (cm <sup>2</sup> /m)	lbs/ft <sup>2</sup> (kg/m <sup>2</sup> )	in. <sup>4</sup> /ft (cm <sup>4</sup> /m)	in. <sup>3</sup> /ft (cm <sup>3</sup> /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
PZC 37	22.50	21.02	0.488	0.563	20.45	69.6	1,349	128.4	6.65	6.15	10.91	37.1	719.6	68.5
	572	534	12.4	14.3	132.0	103.6	56,160	2,100	2.03	1.87	230.9	181.2	98,270	3,680
PZC 39	22.50	21.05	0.525	0.600	21.76	74.0	1,429	135.6	6.65	6.15	11.61	39.5	762.1	72.3
	572	535	13.3	15.2	140.4	110.2	59,480	2,220	2.03	1.87	245.6	192.8	104,100	3,890
PZC 41	22.50	21.09	0.561	0.636	23.03	78.4	1,507	142.7	6.65	6.15	12.28	41.8	803.6	76.1
	572	536	14.2	16.2	148.6	116.6	62,720	2,340	2.03	1.87	260.0	204.1	109,700	4,090

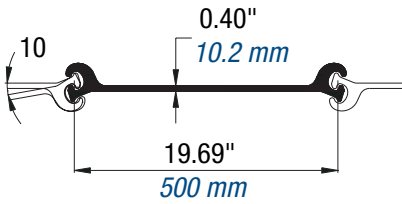
\*Both sides of sheet; excludes socket interior and ball of interlock.

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.

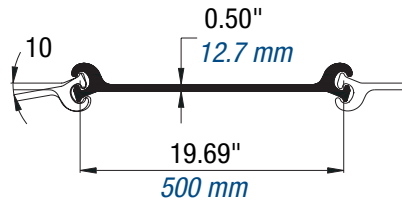


# PS (FLAT SHEET) PILING PROPERTIES

PS 27.5



PS 31



Section	Nominal Dimensions				Per Single Section						Per Unit of Wall			
	Nominal Width	Depth (Height)	Wall Depth (Height)	Web 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. <sup>2</sup> (cm <sup>2</sup> )	lbs/ft (kg/m)	in. <sup>4</sup> (cm <sup>4</sup> )	in. <sup>3</sup> (cm <sup>3</sup> )	ft <sup>2</sup> /ft (m <sup>2</sup> /m)	ft <sup>2</sup> /ft (m <sup>2</sup> /m)	in. <sup>2</sup> /ft (cm <sup>2</sup> /m)	lbs/ft <sup>2</sup> (kg/m <sup>2</sup> )	in. <sup>4</sup> /ft (cm <sup>4</sup> /m)	in. <sup>3</sup> /ft (cm <sup>3</sup> /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.



Grade	Minimum Interlock Strength <sup>(1)</sup>	Minimum Swing <sup>(2)</sup>
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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