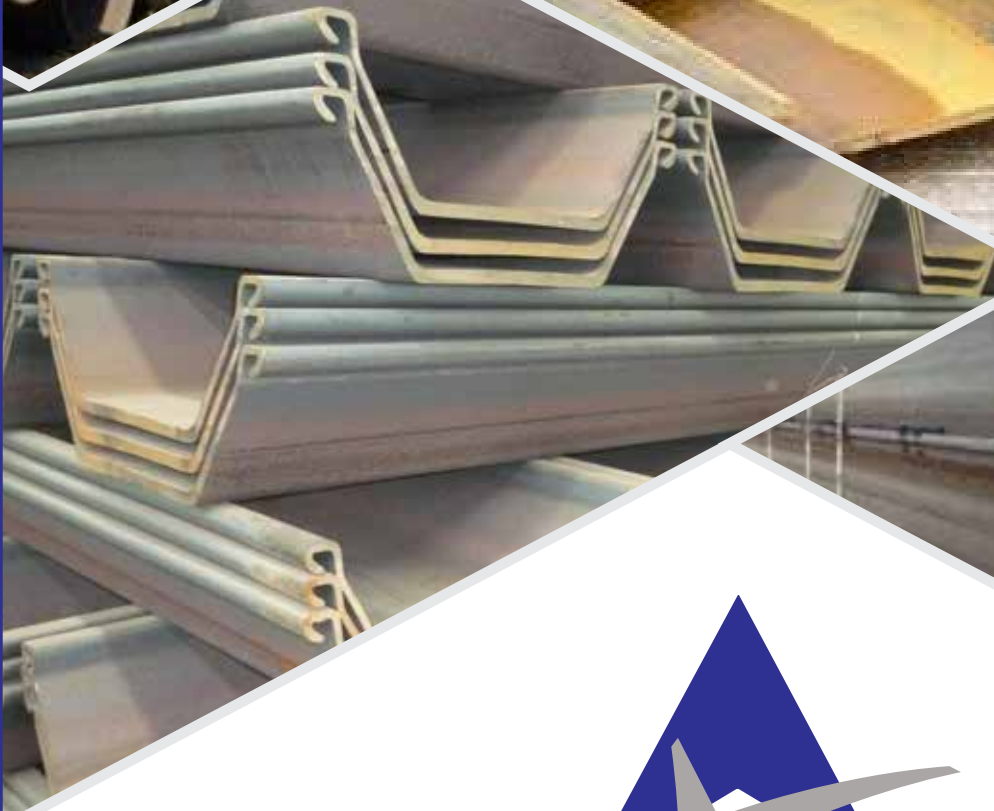
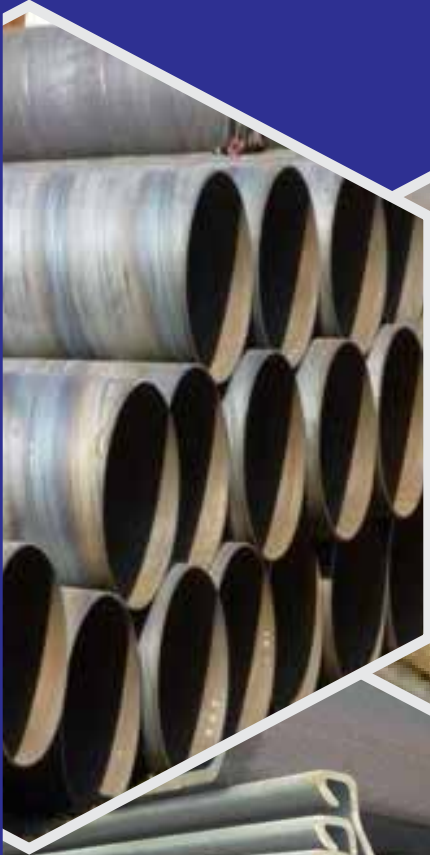


# STEEL PILES



**ALRITE STEEL & SERVICES NZ LIMITED**

## WELCOME TO ALRITE STEEL & SERVICES NZ LIMITED

Alrite Steel & Services NZ Ltd is an importer, stockist and distributor of all types of Building and Civil Construction Steel with warehousing based in Auckland, New Zealand. With over 30 years' industry knowledge and experience, Alrite Team has earned an enviable reputation for outstanding customer service and as a supplier of high quality compliant steel products. We specialize in the supply of materials on "Indent" direct to our clients and end users. We carry a modest amount of steel stock locally and are able to supply the whole range of commonly used Hollows (SHS, RHS, CHS), Structural Steel UBs, UCs, Channels, Angles, Flat Bars, Sheet / Circular and Bearing H Piles, HR & CR Coils, Sheets and Plates, etc. and these can be available ex our offshore stock within 2-6 weeks.

**We specialize in supply of all types of Steel Piles, Casings and associated accessories.**

**Products are available in various specifications, standards and grades in 6, 9 & 12m lengths or to required lengths from mill rolling.**

- **Sheet Piles**
- **Circular / Hollow Piles and Casing**
- **Bearing / H Beam Piles**
- **Accessories**

**Our team specializes  
in supplying all types of  
steel piles and associated  
products to top mark quality.**

# STEEL PILES CATALOGUE

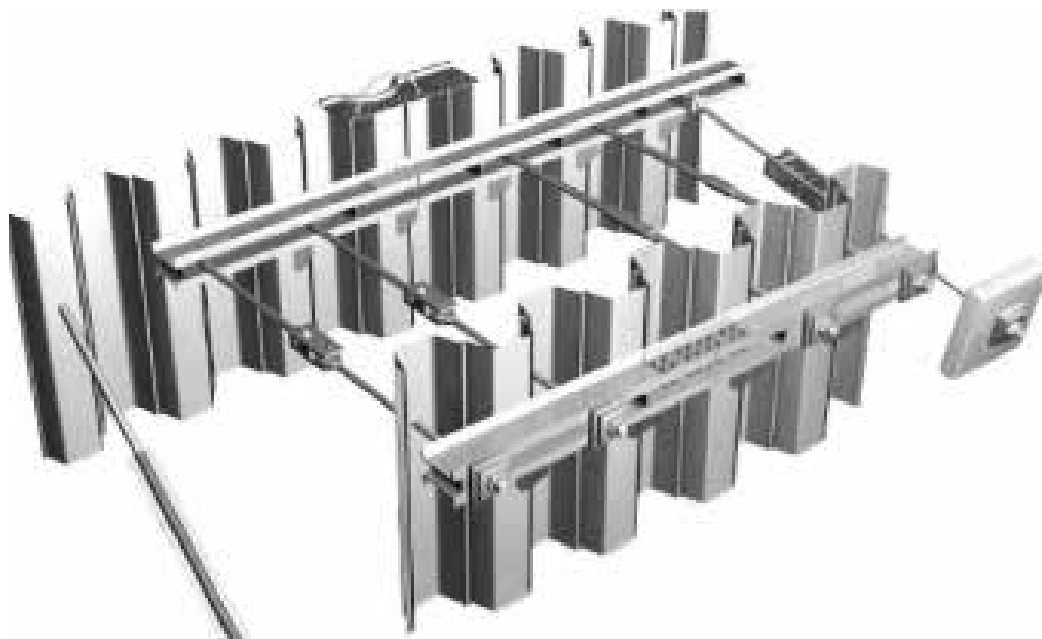
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## TYPES OF ALRITE SHEET PILES

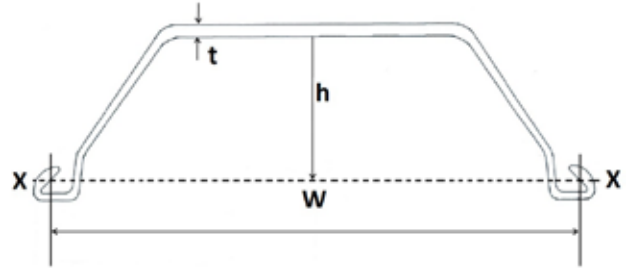
- Hot & Cold Rolled Sheet Piles
- "U" & "Z" Types Sheet Piles
- Hat Type Sheet Piles
- Asia Type / Profile Sheet Piles
- Hoesch Sheet Piles
- European Type Sheet Piles
- Wide Type Sheet Piles
- Web Type Sheet Piles
- Box Type Sheet Piles
- Straight Web Section Sheet Piles
- Combined Wall Section Sheet Piles – Pipe plus Hat or U
- Fiber Reinforced Polymer (FRP) Sheet Piles – Box & Z profile
- Marine Grade Sheet Piles
- Vinyl Sheet Piles (PVC, UPVC, Composite, Plastic Sheet Piles)
- Corner Piles / Joiners / Clutches

1



**HOT  
ROLLED  
STEEL  
SHEET  
PILES**

# HOT ROLLED U TYPE STEEL SHEET PILE



SECTION	WIDTH	HEIGHT	t - PLATE THICK.	PER PIECE				FACE PER METER OF PILE'S WALL WIDTH			
				SECTION AREA	WEIGHT	INERTIA MOMENT	SECTION MODULUS	SECTION AREA	WEIGHT	SINERTIA MOMENT	SSECTION MODULUS
	mm	mm	mm	cm <sup>2</sup>	kg/m	cm <sup>4</sup> /m	cm <sup>3</sup> /m	cm <sup>2</sup>	kg/m <sup>2</sup>	cm <sup>4</sup> /m	cm <sup>3</sup> /m
AL U II	400	100	10.5	61.18	48	1240	152	153	120.1	8740	874
AL U III	400	125	13	76.42	60	2220	223	191	149.9	16800	1340
AL U IIIA	400	150	13.1	74.4	60	2790	250	186	146	22800	1520
AL U IV	400	170	15.5	96.99	76.1	4670	362	242.5	190.4	38600	2270
AL U VL	500	200	24.3	133.8	105	7960	520	267.6	210	63000	3150
AL U VIL	500	225	27.6	153	120	11400	680	306	240	86000	3820
AL U IIW (Sx10)	600	130	10.3	78.7	61.8	2110	203	131.2	103	13000	1000
AL U IIIW (Sx18)	600	180	13.4	103.9	81.6	5220	376	173.2	136	32400	1800
AL U IVW (Sx18)	600	210	18	135.3	106	8630	539	225.5	177	56700	2700

U - TYPE SHEET PILE

3

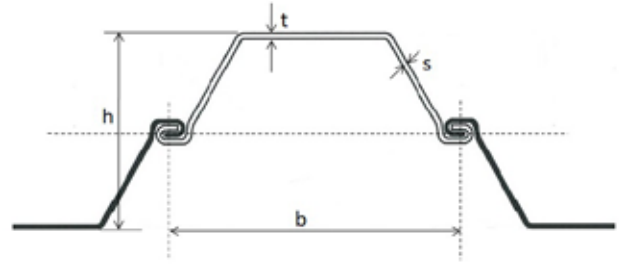
HOT ROLLED

STANDARD	GRADE	MECHANICAL PROPERTIES			
		YIELD POINT	TENSILE STRENGTH	ELONGATION	TOUGHNESS
		(N/mm <sup>2</sup> )	(N/mm <sup>2</sup> )	(%)	[(O°C)(J)]
JISA 5523	SYW295	295 Min	450 Min	18 Min	43 Min
	SYW390	390 Min	490 Min	16 Min	43 Min
JISA 5528	SY295	295 Min	450 Min	18 Min	-
	SY390	390 Min	490 Min	16 Min	-



## HOT ROLLED

# U TYPE STEEL SHEET PILE



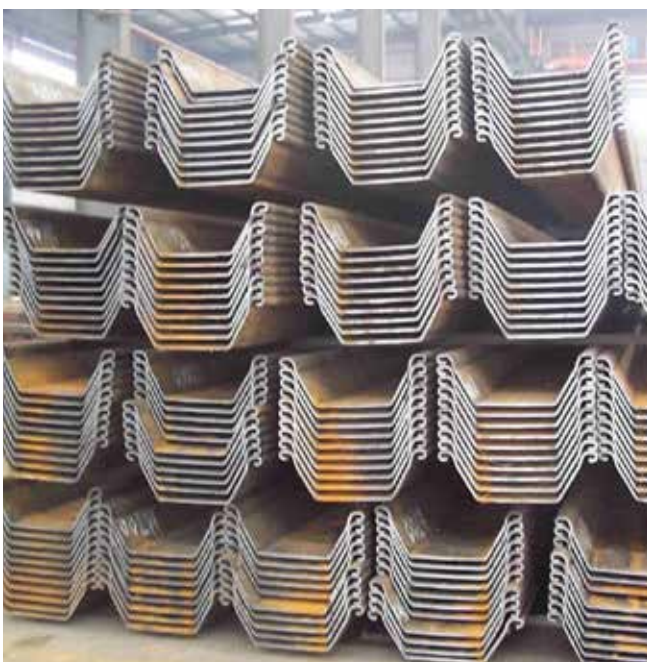
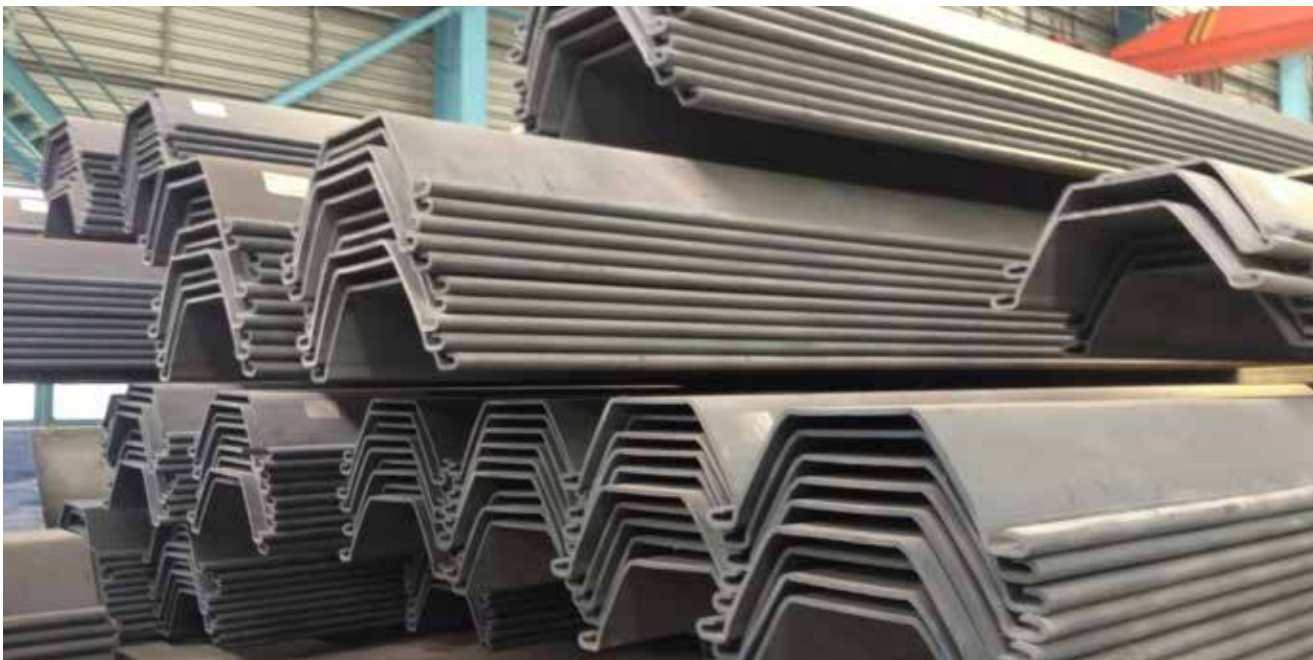
SECTION	PER PIECE							
	b - WIDTH	h - HEIGHT	t	s	ELASTIC SECTION MODULUS	WEIGHT	INERTIA MOMENT	ELASTIC SECTION MODULUS
	mm	mm	mm	cm <sup>2</sup>	cm <sup>3</sup> /m	kg/m	cm <sup>4</sup> /m	cm <sup>3</sup> /m
AL U 1	600	309	7.5	6.5	858	46.7	11496	742
AL U 2	600	309	8.2	8.0	990	54.3	13075	845
AL U 3	600	309	9.7	8.4	1308	64.8	18251	1180
AL U 4	600	380	10.5	9.0	1822	74.1	30726	1620
AL U 5	600	410	12.8	9	2256	82.4	41127	2006
AL U 6A	600	420	14.0	9.0	2476	86.2	46217	2200
AL U 16	750	411	11.5	9.3	1891	86.3	32850	1600
AL U 20	750	444	12.0	10.0	2339	96.9	44440	2000
AL U 25	750	450	14.5	10.2	2866	110.4	56240	2500

U-Shaped sheet piles have been used extensively in the construction industry due to their versatility, reliability & strength.

U-Shaped sheet piles are used for ground support and have multiple advantages:

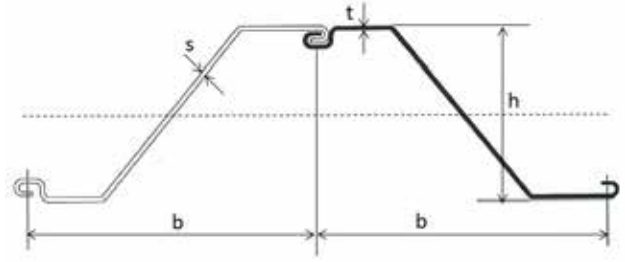
- Wide range of selection in terms of geometrical characteristics
- Great aptitude for repetitive use
- Wide range of section modulus, suitable for various types of construction purposes







# HOT ROLLED Z TYPE STEEL SHEET PILE



SECTION	PER PIECE				THEORETICAL WEIGHT			
	b - WIDTH	h - HEIGHT	t	s	SINGLE PILE	WALL	INERTIA MOMENT	ELASTIC SECTION MODULUS
	mm	mm	mm	cm <sup>2</sup>	kg/m	kg/m <sup>2</sup>	cm <sup>4</sup> /m	cm <sup>3</sup> /m
AL Z 12	580	314	8.5	8.5	67.7	96.7	18880	1205
AL Z 13	700	315	9.5	9.5	74.0	105.7	20540	1305
AL Z 14	700	316	10.5	10.5	80.3	114.7	22190	1405
AL Z 17	700	420	8.5	8.5	73.1	104.4	36230	1730
AL Z 18	700	418	9.10	9.10	76.9	110.2	37726	1807
AL Z 19	700	421	9.5	9.5	80.0	114.3	39380	1870
AL Z 20	700	421	10	10	83.5	119.3	40960	1945
AL Z 24	700	459	11.2	11.2	95.7	136.7	55820	2430
AL Z 26	700	459	12.3	12.3	103.3	147.7	59759	2604
AL Z 28	700	461	13.2	13.2	110	157.2	63620	2760
AL Z 36	700	499	15	11.2	118.6	169.5	89610	3590
AL Z 38	700	500	16.0	12.2	126.4	180.6	94840	3795
AL Z 40	700	501	17	13.2	134.2	191.7	100080	3995

The Z-Shaped presents the following advantages:

- Extremely competitive section modulus
- Economical solution
- Large width resulting in high performance installation
- High tensile strength
- Ideal for permanent structures





# HOT ROLLED STRAIGHT WEB SECTIONS



MATERIAL SPECIFICATION						
SECTION	WIDTH	HEIGHT	WEIGHT PER WALL	WEIGHT PER PILE	MOMENT OF INERTIA SINGLE	ELASTIC SECTION MODULUS
	mm	mm	kg/m <sup>2</sup>	kg/m	cm <sup>4</sup> /m	cm <sup>3</sup> /m
A WP 9.5	500	9.5	128	63.8	168	46
A WP 11	500	11	141.0	70.6	186.0	49
A WP 12	500	12	149	74.3	196	51
A WP 12.5	500	12.5	153.0	76.3	201.0	51
A WP 12.7	500	12.7	154.00	77.1	204	51

CHEMICAL COMPOSITION (% MAX)						
SECTION	C	MN	SI	P	S	N
A 240 GP	0.25	--	--	0.055	0.055	0.011
A 270 GP	0.27	--	--	0.055	0.055	0.011
A 320 GP	0.27	1.70	0.60	0.055	0.055	0.011
A 355 GP	0.27	1.70	0.60	0.055	0.055	0.011
A 390 GP	0.27	1.70	0.60	0.050	0.050	0.011
A 430 GP	0.27	1.70	0.60	0.050	0.050	0.011
A 460 GP	0.27	1.70	0.60	0.050	0.050	0.011

MECHANICAL PROPERTIES (MINI)			
SECTION	YIELD STRENGTH	TENSILE STRENGTH	ELONGATION
	N/mm <sup>2</sup>	N/mm <sup>2</sup>	%
A 240 GP	240	340	26
A 270 GP	270	410	24
A 320 GP	320	440	23
A 355 GP	355	480	22
A 390 GP	390	490	20
A 430 GP	430	510	19

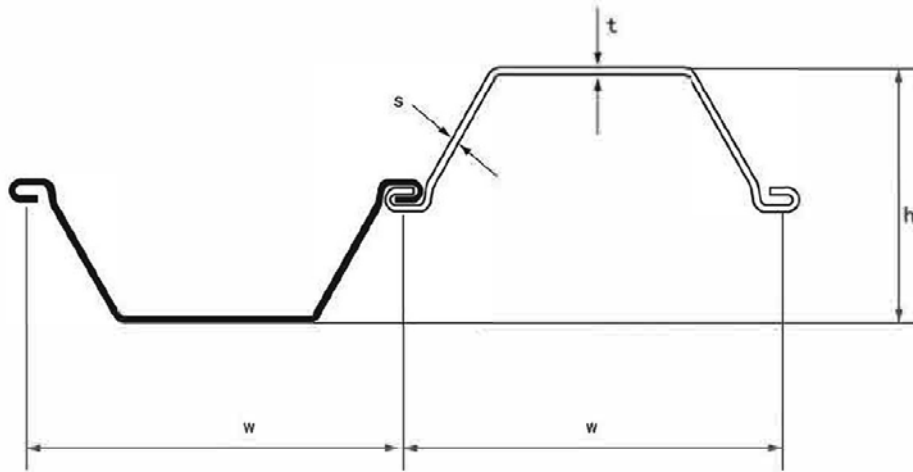
Straight Web sheet piles are generally used for cylindrical structures retaining a soil backfill. These are mostly used on projects where:

- Rock layers are close to ground level
- The excavation depth is very important or
- Anchoring would be difficult or even impossible

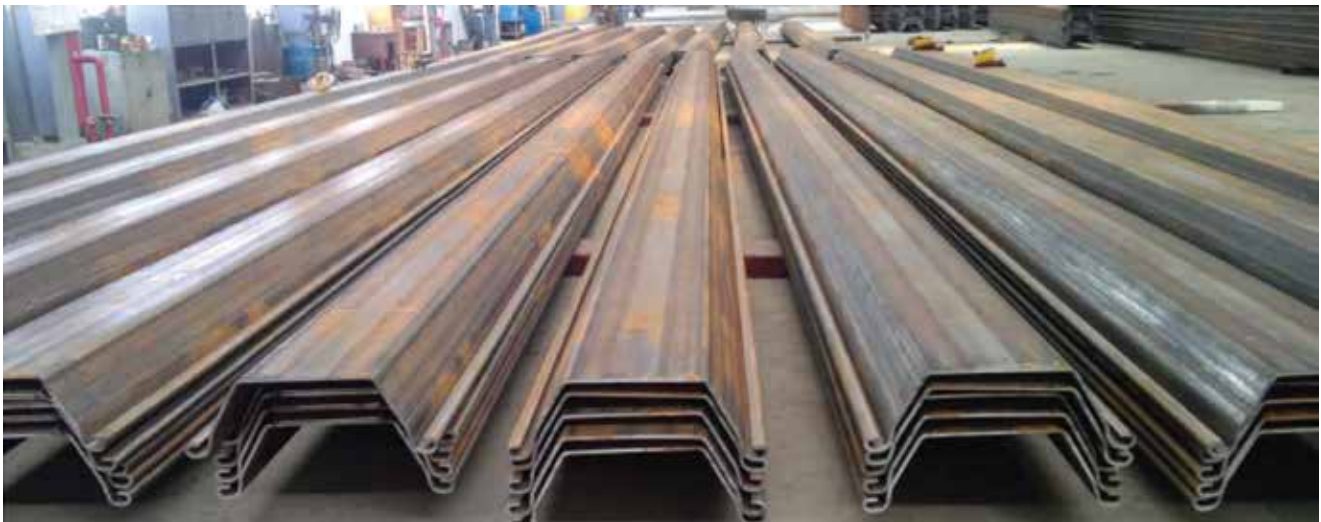
**COLD  
FORMED  
STEEL  
SHEET  
PILES**

## COLD FORMED

# U TYPE STEEL SHEET PILE



SECTION	DIMENSIONS				MASS		MODULUS OF SECTION	MOMENT OF INERTIA
	WIDTH	HEIGHT	THICKNESS		PER PILE	WALL		
	w	h	t	s				
mm	mm	mm	mm	kg/m	kg/m <sup>2</sup>	cm <sup>3</sup> /m	cm <sup>4</sup> /m	
ALU7-750	750	320	5	5	42.8	57	693	11089
ALU7-600	600	310	6.5	6.5	46.3	77	745	11520
ALU8-600a	600	320	6	6	44	73.3	799	12791
ALU8-750	750	320	6	6	51.1	68.1	824	13191
ALU8-600b	600	310	7.5	7.5	53.4	89	830	12870
ALU9-600a	600	320	7	7	51	85	924	14783



## COLD FORMED

# U TYPE STEEL SHEET PILE

SECTION	DIMENSIONS				MASS		MODULUS OF SECTION	MOMENT OF INERTIA
	WIDTH	HEIGHT	THICKNESS		PER PILE	WALL		
	w	h	t	s				
mm	mm	mm	mm	kg/m	kg/m <sup>2</sup>	cm <sup>3</sup> /m	cm <sup>4</sup> /m	
ALU9-750	750	320	7	7	59.3	79	953	15256
ALU10-700	700	310	9	9	71.2	101.7	1049	16270
ALU11-600	600	360	8	8	62.2	103.6	1162	20769
ALU12-600a	600	310	9	9	64.8	108	1200	18600
ALU12-600b	600	380	8.5	8.5	66.1	110.1	1200	22833
ALU12-600c	600	310	9.5		68.1	113	1240	19220
ALU13-600a	600	380	9	9	69.6	116	1255	23856
ALU13-600b	600	430	7	7	59.9	99.8	1270	27412
ALU13-600c	600	360	9	9	70	116.5	1292	23187
ALU13-600d	600	400	8	8	65.3	109	1342	266702
ALU14-600a	600	430	8.0	8.0	64.3	107.1	1400	30200
ALU14-750	750	440	8	8	77.9	103.8	1410	31382
ALU14-600b	600	360	10	10	77.7	129.5	1422	25566
ALU15-600a	600	400	9	9	73.5	123	1495	29870
ALU15-600b	600	430	8.5	8.5	68.7	114.5	1530	32916
ALU16-400	400	290	11	11	62.0	154.9	1560	22580
ALU16-750	750	440	9	9	86.3	115	1600	35211
ALU16-600a	600	380	9.5	9.5	74.5	124	1620	30710
ALU16-600b	600	480	8	8	67.8	113	1645	39481
ALU17-600a	600	400	10	10	82	136.7	1665	33761
ALU17-600b	600	430	9	9	72.6	121	1670	35950
ALU17-750	750	480	8	8	77.2	102.9	1687	40497
ALU18-750	750	460	9	9	88.5	118	1780	40988
ALU18-400	400	292	12.5	12.5	69.3	173.3	1785	26090
ALU18-600	600	430	9.5	9.5	76.9	128.2	1800	38650
ALU18-650	650	500	9	9	86	132	1850	46257
ALU19-600a	600	480	9	9	76	126.7	1854	44674
ALU19-600b	600	350	12	12	103.1	171.9	1874	32797
ALU19-750	750	480	9	9	86	114.7	1885	45241
ALU19-600c	600	430	10	10	81.1	135.2	1920	41320
ALU20-750	750	460	10.0	10.0	96.9	129.2	2000	46121
ALU20-600a	600	420	10	10	83.5	139	2020	42370
ALU20-650	650	500	10	10	95.3	147	2025	50582
ALU20-600b	600	420	10.5	10.5	86.7	144	2030	42550
ALU21-600	600	450	10	10	81.9	136.5	2060	46380

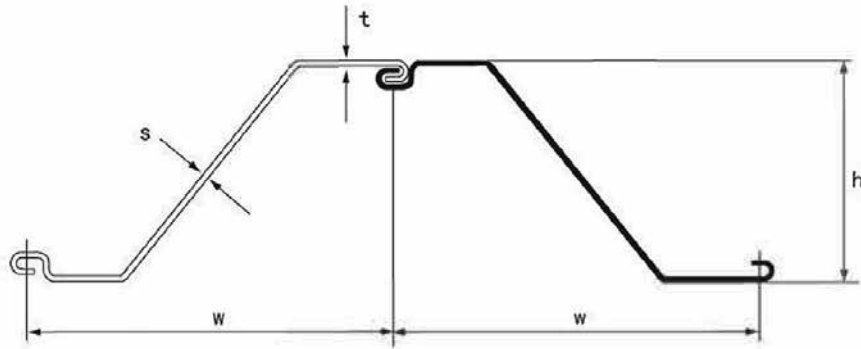
## COLD FORMED

# U TYPE STEEL SHEET PILE

SECTION	DIMENSIONS				MASS		MODULUS OF SECTION	MOMENT OF INERTIA
	WIDTH	HEIGHT	THICKNESS		PER PILE	WALL		
	w	h	t	s				
mm	mm	mm	mm	kg/m	kg/m <sup>2</sup>	cm <sup>3</sup> /m	cm <sup>4</sup> /m	
ALU22-600a	600	450	10.5	10.5	86.1	143.6	2200	49460
ALU22-600b	600	480	10	10	86.1	143.6	2200	52835
ALU22-650	650	500	11	11	104.8	161.2	2218	55388
ALU23-750a	750	480	10.5	10.5	102.1	136.1	2270	54495
ALU23-650	650	540	9	9	86	133	2298	61960
ALU23-750b	750	540	9	9	93.1	124.1	2310	62155
ALU23-600	600	450	11	11	90.4	150.7	2335	52510
ALU24-650	650	500	12	12	114.3	175.9	2412	60152
ALU25-600a	600	435	11.5	11.5	94.4	157	2500	54370
ALU25-750	750	470	11.5	11.5	110.4	147.2	2500	58765
ALU25-600b	600	435	12	12	97.5	162	2540	55240
ALU25-650	650	540	10	10	95.6	147	2540	68553
ALU26-750	750	540	10	10	104.1	138.8	2562	69033
ALU26-600	600	452	12	12	97.4	162.3	2680	60580
ALU27-750	750	560	10	10	111.5	148.6	2715	75582
ALU28-750	750	540	11	11	113.8	151.7	2795	75342
ALU28-600	600	454	12.5	12.5	101.8	169.6	2840	64460
ALU30-700	700	560	11	11	118.6	169.4	2993	83813
ALU30-600	600	456	13	13	106.2	177.1	3000	68380
ALU30-750	750	540	12	12	124	165	3038	81852
ALU31-600	600	452	13.5	13.5	109.9	183.2	3065	69210
ALU32-600a	600	452	14	14	114.1	190.2	3200	72320
ALU32-600b	600	452	14.1	14.1	115.2	192	3220	70030
ALU32-700	700	560	12	12	128.9	184.1	3246	90880
ALU33-750	750	598	11	11	127.1	169.5	3265	97362
ALU33-600	600	452	14.5	14.5	118.4	197.3	3340	75410
ALU35-700	700	562	13	13	144.3	192.5	3509	98607
ALU35-750	750	600	12	12	138.3	184.4	3547	106416
ALU37-700	700	558	14	14	156.2	223.2	3661	102145
ALU38-750	750	602	13	13	149.4	199.2	3837	115505
ALU39-700	700	560	15	15	166.9	238.5	3916	109655
ALU40-750	750	598	14	14	166.1	221.5	4011	119918
ALU41-700	700	562	16	16	177.6	253.7	4170	117194
ALU43-700	750	600	15	15	177.5	236.7	4291	128724
ALU45-750	750	602	16	16	188.9	251.8	4570	137561

## COLD FORMED

# Z TYPE STEEL SHEET PILE



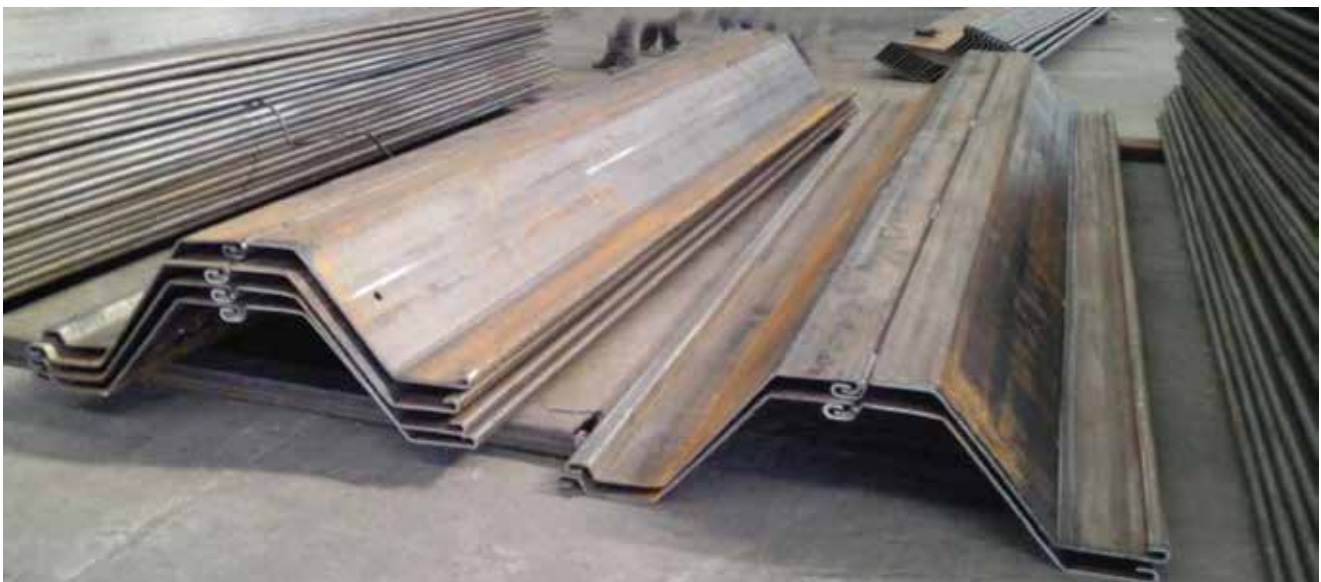
SECTION	DIMENSIONS				MASS		MODULUS OF SECTION	MOMENT OF INERTIA
	WIDTH	HEIGHT	THICKNESS		PER PILE	WALL		
	w	h	t	s				
mm	mm	mm	mm	kg/m	kg/m <sup>2</sup>	cm <sup>3</sup> /m	cm <sup>4</sup> /m	
ALZ12-770	770	344	8.5	8.5	72.6	94	1245	21430
ALZ13-770	770	344	9	9	76.1	99	1300	22360
ALZ14-770	770	345	9.5	9.5	79.5	103	1355	23300
ALZ14-770 10/10	770	345	10	10	82.9	108	1405	24240
ALZ12-700	700	314	8.5	8.5	67.7	96.7	1205	18880
ALZ13-700	700	315	9.5	9.5	74.0	105.7	1305	20540
ALZ13-700 10/10	700	316	10	10	77.2	110.2	1355	21370
ALZ14-700	700	316	10.5	10.5	80.3	114.7	1405	22190
ALZ18	630	380	9.5	9.5	74.4	118	1800	34200
ALZ18 10/10	630	381	10	10	77.8	123	1870	35540
ALZ17-700	700	419	8.5	8.5	73.1	104	1730	36230
ALZ18-700	700	420	9	9	76.5	109	1800	37800
ALZ19-700	700	420	9.5	9.5	80.0	114	1870	39380
ALZ20-700	700	421	10	10	83.5	119	1945	40960
ALZ18-800	800	449	8.5	8.5	80.7	100.9	1840	41320
ALZ20-800	800	450	9.5	9.5	88.6	110.7	2000	45050
ALZ22-800	800	451	10.5	10.5	96.4	120.5	2165	48790
ALZ23-800	800	474	10	10	94.6	118.2	2330	55260
ALZ25-800	800	475	11	11	102.6	128.2	2500	59410
ALZ27-800	800	476	11.5	11.5	110.5	138.1	2670	63570
ALZ26	630	470	11.5	11.5	97.8	155	2600	61135
ALZ24-700	700	459	11.2	11.2	95.7	136	2430	55820
ALZ26-700	700	460	12.2	12.2	102.9	147	2600	59720
ALZ28-700	700	461	13.2	13.2	110.0	157	2760	63620



## COLD FORMED

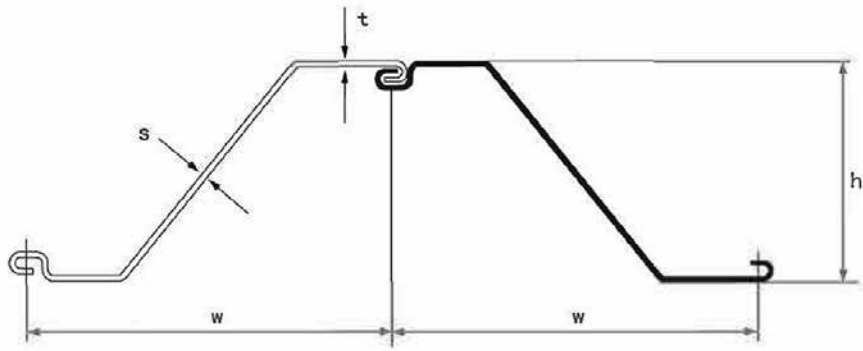
# Z TYPE STEEL SHEET PILE

SECTION	DIMENSIONS				MASS		MODULUS OF SECTION	MOMENT OF INERTIA
	WIDTH	HEIGHT	THICKNESS		PER PILE	WALL		
	w	h	t	s				
mm	mm	mm	mm	kg/m	kg/m <sup>2</sup>	cm <sup>3</sup> /m	cm <sup>4</sup> /m	
ALZ24-700N	700	459	10.5	10.5	89.7	128	2435	55890
ALZ26-700N	700	460	11.5	11.5	96.9	138	2600	59790
ALZ28-700N	700	461	12.5	12.5	104.1	149	2765	63700
ALZ28-750	750	509	11	11	100.8	134.4	2810	71540
ALZ30-750	750	510	12	12	108.8	145.0	3005	76670
ALZ32-750	750	511	13	13	116.7	155.6	3200	81800
ALZ36-700N	700	499	13	13	118.6	169	3590	89610
ALZ38-700N	700	500	13.5	13.5	126.4	181	3795	94840
ALZ40-700N	700	501	14.2	14.2	134.2	192	3995	100080
ALZ42-700N	700	499	15	15	142.1	203.1	4205	104930
ALZ44-700N	700	520	15.5	15.5	149.9	214.2	4405	114566
ALZ46-700N	700	520	16	16	157.7	225.3	4605	119752
ALZ46	580	540	15	15	132.6	229	4595	127015
ALZ48	580	570	15.5	15.5	139.6	241	4800	136872
ALZ50	580	580	16	16	146.7	253	5015	145521
ALZ48-700	700	525	16	16	158.5	226.4	4755	123655
ALZ50-700	700	540	16	16	166.3	237.5	4955	133887
ALZ52-700	700	560	16	16	174.1	248.7	5155	144653



## COLD FORMED

# Z TYPE STEEL SHEET PILE



SECTION	DIMENSIONS				MASS		MODULUS OF SECTION	MOMENT OF INERTIA
	WIDTH	HEIGHT	THICKNESS		PER PILE	WALL		
	w	h	t	s				
mm	mm	mm	mm	kg/m	kg/m <sup>2</sup>	cm <sup>3</sup> /m	cm <sup>4</sup> /m	
ALZ5-850	850	253	5	5	40.8	48.0	507	6416
ALZ6-850	850	254	6	6	48.9	57.5	604	7671
ALZ10-700	700	350	5	5	41.7	59.6	983	17208
ALZ11-700	700	351	6	6	50.3	71.8	1172	20560
ALZ11-635	635	301	7	7	52.7	83	1092	16390
ALZ12-650	650	319	7	7	57.8	88.9	1229	19603
ALZ12-635	635	302	8	8	60.2	94.8	1243	18735
ALZ14-675	675	379	7	7	47.6	85.3	1387	26105
ALZ14-650	650	320	8	8	65.8	101.2	1395	22312
ALZ14-635	635	303	9	9	69.5	110	1413	21368
ALZ15-685	685	399	7	7	58.8	85.7	1453	28915
ALZ15-675	675	400	7	7	59.8	88.6	1472	29291
ALZ16-700	700	428	7	7	60.6	86.5	1558	33225
ALZ16-635a	635	304	10	10	77.2	121.5	1567	23746
ALZ16-675	675	380	8	8	65.8	97.4	1579	29843
ALZ16-635b	635	379	7	7	61	96.1	1610	30502
ALZ17-685	685	400	8	8	67.2	98.2	1654	33048
ALZ18-700	700	429	8	8	70	99	1770	37981
ALZ18-630a	630	380	8	8	61	98.9	1788	34321
ALZ18-675	675	381	9	9	75.6	112	1800	34098
ALZ18-630b	630	380	9.5	9.5	74.4	118	1800	34200
ALZ18-700	700	430	9	9	79.5	113.6	1800	37800
ALZ18-635	635	380	8	8	69.6	109.6	1827	34717

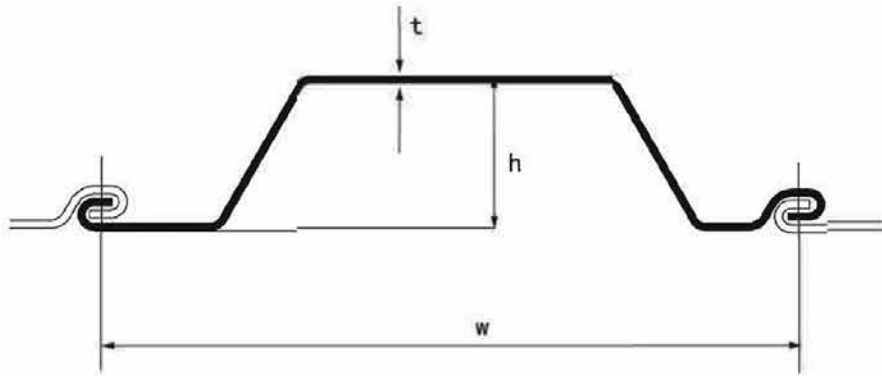
## COLD FORMED

# Z TYPE STEEL SHEET PILE

SECTION	DIMENSIONS				MASS		MODULUS OF SECTION	MOMENT OF INERTIA
	WIDTH	HEIGHT	THICKNESS		PER PILE	WALL		
	w	h	t	s				
mm	mm	mm	mm	kg/m	kg/m <sup>2</sup>	cm <sup>3</sup> /m	cm <sup>4</sup> /m	
ALZ19-685	685	401	9	9	76.8	112.1	1862	37335
ALZ20-675	675	382	10	10	84	125	1985	37886
ALZ20-630	630	380	9	9	68.6	111	1995	38667
ALZ21-685	685	402	10	10	85.7	125.2	2055	41304
ALZ22-650	650	440	9	9	79.5	122.2	2228	48536
ALZ22-630	630	380	10	10	76.5	122.9	2245	43112
ALZ23-700	700	430	10	10	88.4	126.5	2250	48306
ALZ23-635	635	417	9	9	81	127.6	2265	47225
ALZ25-635	635	418	10	10	94.4	148.6	2500	52258
ALZ27-700	700	448	10	10	101.9	145.6	2730	61144
ALZ28-700	700	500	10	10	95.1	135.7	2752	68812
ALZ28-635	635	419	11	11	103.6	163.2	2806	58786
ALZ29-700	700	500	10.5	10.5	99.9	142.6	2915	72316
ALZ30-700a	700	449	11	11	111.5	159.3	2986	67025
ALZ30-700b	700	500	11	11	104.6	150	3022	74621
ALZ30-635	635	420	12	12	112.8	177.5	3042	63889
ALZ32-675	675	490	11	11	108.4	160.6	3188	77402
ALZ32-700	700	450	12	12	121.6	173.7	3238	72863
ALZ32-635	635	421	13	13	122.3	192.7	3276	68954
ALZ33-700	700	500	12	12	114.1	163	3299	82315
ALZ35-675	675	490	12	12	117.9	174.7	3455	84135
ALZ37-675	675	491	13	13	128.4	190.2	3720	91327
ALZ38-700	700	560	13	13	128	182.9	3815	107558
ALZ39-675	675	491.5	13.5	13.5	132.3	196	3853	94699
ALZ39-700	700	560	13.5	13.5	132	188.6	3912	109415
ALZ40-675	675	492	14	14	136.9	202.9	3984	98065
ALZ41-700	700	560	14	14	139.6	199.4	4122	114682
ALZ44-700	700	518	13	13	138.4	197.8	4400	120551
ALZ48-700	700	549	14	14	148.7	212.4	4712	129356
ALZ51-700	700	550	15	15	165.8	236.9	5146	141518
ALZ54-700	700	551	16	16	176.3	251.9	5461	150443

**COLD FORMED**

**OMEGA TYPE STEEL SHEET PILE**



OMEGA - TYPE SHEET PILE

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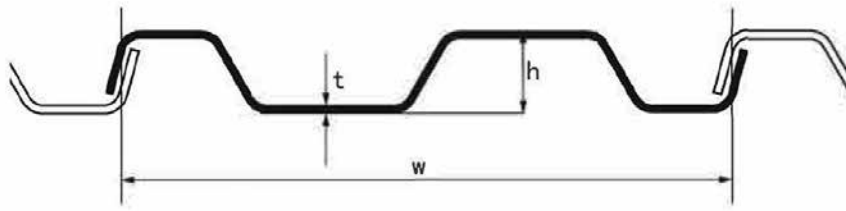
COLD FORMED

## COLD FORMED

# OMEGA TYPE STEEL SHEET PILE

SECTION	DIMENSIONS			MASS		PER METER OF WALL	
	WIDTH	HEIGHT	THICKNESS	SINGLE PILE	WALL	MODULUS OF SECTION	MOMENT OF INERTIA
	w	h	t			W	I
	mm	mm	mm	kg/m	kg/m <sup>2</sup>	cm <sup>3</sup>	cm <sup>4</sup>
ALL600-3.5	600	127.5	3.5	23.1	38.5	183	1172
ALL600-5	600	129	5	32.72	51.4	257	1677
ALL600-6	600	130	6	38.8	64.6	306	2012
ALL700-4	700	147	4	31.4	44.85	276	2042
ALL700-5	700	148	5	39.4	56.2	343	2567
ALL700-6	700	149	6	47.2	66.9	409	3068
ALL700-7	700	150	7	54.34	77.6	474	3612
ALL700-7.5	700	150.5	7.5	58.22	83.17	507	3868
ALL700-8	700	151	8	61.9	88.45	540	4100
ALL750a-4	750	250	4	37.5	50	517	6542
ALL750a-5	750	250	5	47	62.7	655	8266
ALL750a-6	750	250	6	56.4	75.2	786	9965
ALL750a-7	750	250	7	66	88	921	11764
ALL840-6	840	250	6	57.46	68.4	617	7765
ALL840-7	840	251	7	67	79.76	718	9022
ALL840-8	840	252	8	76.61	91.2	817	10313
ALL750b-7	750	277	7	68	90	1065	14800
ALL750b-8	750	278	8	76.8	103	1237	17352
ALL750b-9	750	278	9	86.3	115	1393	19402
ALL750c-6	750	283	6	57.46	76.6	788	11223
ALL750c-7	750	283	7	67	89.3	912	12988
ALL750c-8	750	283	8	76.6	102	1044	14895
ALL 900a-4.5	900	310	4.5	50.4	56	687	11097
ALL900a-5	900	310	5	55.8	62	785	12276
ALL900a-5.5	900	310	5.5	61.2	68	821	12876
ALL900a-6	900	310	6	66.6	74	891	13684
ALL900a-7	900	310	7	77.4	86	1042	16013
ALL900a-8	900	310	8	88.5	98.3	1184	18306
ALL900b-7	900	350	7	81	91	1205	20805
ALL900b-8	900	350	8	93.6	104	1365	23715
ALL900b-9	900	350	9	104.4	116	1525	36635

# COLD FORMED TRENCH SHEET



SECTION	DIMENSIONS			MASS		PER METER OF WALL	
	WIDTH	HEIGHT	THICKNESS	SINGLE PILE	WALL	MODULUS OF SECTION	MOMENT OF INERTIA
	w	h	t			W	I
mm	mm	mm	kg/m	kg/m <sup>2</sup>	cm <sup>3</sup>	cm <sup>4</sup>	
ALT600-6	600	78	6	37.5	62	184	722
ALT600-7	600	79	7	44.5	74.1	232	835
ALT600-8	600	80	8	50	83	237	955
ALT600-9	600	81	9	55.53	92.55	263	1072

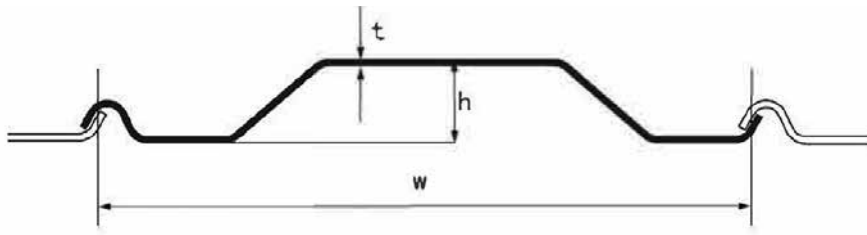
TRENCH SHEET

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COLD FORMED

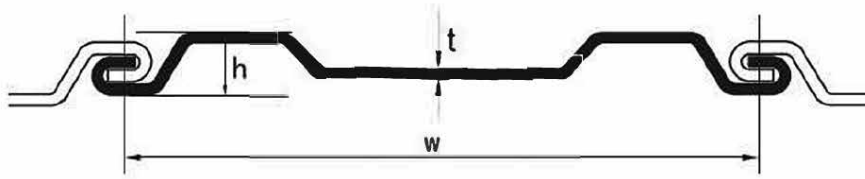


# COLD FORMED TRENCH SHEET



SECTION	DIMENSIONS			MASS		PER METER OF WALL	
	WIDTH	HEIGHT	THICKNESS	SINGLE PILE	WALL	MODULUS OF SECTION	MOMENT OF INERTIA
	w	h	t			W	I
mm	mm	mm	kg/m	kg/m <sup>2</sup>	cm <sup>3</sup>	cm <sup>4</sup>	
ALT330-3	330	34	3	9.72	29.45	39.79	72
ALT330-3.S	330	34.5	3.5	11.34	34.36	45.72	81
ALT330-4	330	35	4	12.96	39.29	51.52	93
ALT33Q-4.5	330	35.5	4.5	14.53	44.04	57.16	106
ALT330-5	330	36	5	16.09	48.76	62.66	116
ALT400-5	400	49	5	18.52	46.3	83.75	208
ALT400-5.5	400	49.5	5.5	20.37	50.92	91.37	237
ALT400-6	400	50	6	22.23	55.57	98.75	256
ALT742-5	742	91	5	33.79	45.54	163	743
ALT 742-6	742	92	6	40.9	54.66	194	896
ALT742-6.5	742	92.5	6.5	43.72	58.9	209	967
ALT742-7	742	93	7	47.03	63.4	224	1045
ALT742-7.S	742	93.5	7.5	50.3	67.8	239	1135
ALT742-8	742	94	8	53.56	72.18	254	1194

# COLD FORMED STRAIGHT WEB STEEL SHEET PILE



SECTION	DIMENSIONS			MASS		PER METER OF WALL	
	WIDTH	HEIGHT	THICKNESS	SINGLE PILE	WALL	MODULUS OF SECTION	MOMENT OF INERTIA
	w	h	t			W	I
mm	mm	mm	kg/m	kg/m <sup>2</sup>	cm <sup>3</sup>	cm <sup>4</sup>	
ALS 500-9.5	500	69	9.5	65.8	128	46	168
ALS 500-11	500	70	11	70.6	141	49	186
ALS 500-12	500	71	12	74.3	149	51	196
ALS 500-12.5	500	72	12.5	76.3	153	51	201
ALS 500-12.7	500	72	12.7	77.1	154	52	204
ALS 500-13	500	73	13	79	158	54	213

STRAIGHT WEB STEEL SHEET PILE

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COLD FORMED





# COLD FORMED STRAIGHT WEB STEEL SHEET PILE

## Steel Grade

MECHANICAL CHARACTERISTICS				CHEMICAL COMPOSITION				
MATERIAL	MINIMUM YIELD STRENGTH	MINIMUM TENSILE STRENGTH	MINIMUM ELONGATION	C	Si	Mn	P	S
	Mpa	Mpa	%	%	%	%	%	%

### European standard

5235	235	340	26	0.25	–	1.4	0.035	0.035
5275	275	410	22	0.27	–	1.5	0.035	0.035
5320	320	440	23	0.27	0.55	1.6	0.045	0.045
5355	355	480	22	0.27	0.55	1.6	0.045	0.045
5390	390	490	20	0.27	0.55	1.6	0.04	0.04
5430	430	510	19	0.27	0.55	1.6	0.04	0.04
5460	460	550	17	0.27	0.6	1.7	0.04	0.04

### American standard

A36	250	400	21	0.23	0.4	1.5	0.035	0.045
A328	270	485	20	0.2	–	–	0.035	–
A 572 Grade 42	290	415	24	0.21	0.4	1.35	0.04	0.05
A572 Grade 50	345	450	21	0.23	0.4	1.35	0.04	0.05
A 572 Grade 55	380	485	20	0.25	0.4	1.35	0.04	0.05
A572Grade60	415	520	18	0.26	0.4	1.35	0.04	0.05
A 572 Grade 65	450	550	17	0.23	0.4	1.65	0.04	0.05
AS88	345	485	21	0.19	0.3-0.6S	0.8-1.25	0.04	0.05
A690	345	485	21	0.22	0.4	0.6-0.9	0.08-0.15	0.04

### British standard

40A	235	340	25	0.22	0.5	1.6	0.05	0.05
43A	275	430	23	0.25	0.5	1.6	0.05	0.05
50A	355	490	20	0.23	0.5	1.6	0.05	0.05

### Germany standard

St37-2	235	360	24	0.17	–	1.4	0.045	0.045
St52-3	355	490	20	0.24	0.55	1.6	0.045	0.045

### Australian standard

C250	250	320	22	0.12	0.05	0.5	0.03	0.03
C350	350	430	20	0.2	0.45	1.6	0.03	0.03
C450	450	500	16	0.2	0.45	1.7	0.03	0.03

## COLD FORMED

# TUBULAR COMBINED WALL PILES

- Length: Up to 20m
- Diameter: Up to 4000mm
- Thickness: Up to 120mm
- Steel grade: From grade B to X65 X70,S235 to S420 S460,or other requested steel grades

Pipe piles can be supplied with both - cold rolled clutches and hot rolled clutches



Finished products ready to be shipped at port

# COLD FORMED TUBULAR COMBINED WALL PILES



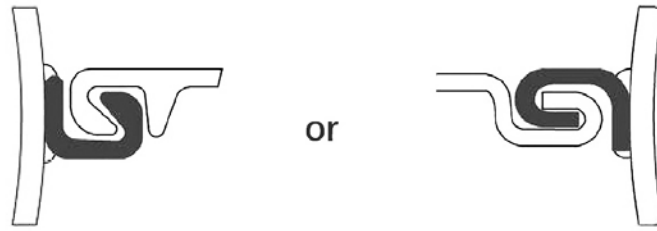
With cold rolled interlocks



With hot rolled interlocks

## COLD FORMED

# TUBULAR COMBINED WALL PILES



PIPE DIMENSIONS		INTERMEDIATE PILES = GPZ 18-700				INTERMEDIATE PILES = TRIPLE GPU 18			
DIAMETER	THICKNESS	WIDTH	M100%	I	W	WIDTH	M100%	I	W
mm	mm	mm	kg/m <sup>3</sup>	cm <sup>4</sup> /m	cm <sup>3</sup> /m	mm	kg/m <sup>3</sup>	cm <sup>4</sup> /m	cm <sup>3</sup> /m
711	10	2171	150	86698	2439	2571	157	77612	2183
	12	2171	166	98531	2772	2571	170	87604	2464
	14	2171	181	110159	3099	2571	183	97423	2740
813	10	2273	154	112751	2774	2673	160	100114	2463
	12	2273	172	129852	3194	2673	175	114656	2821
	14	2273	189	146695	146695	3609	2673	190	128978
914	10	2374	158	144510	3162	2774	164	127753	2795
	12	2374	177	167991	3676	2774	176	147848	3235
	14	2374	195	191157	4183	2774	195	167673	3669
1016	12	2476	182	214016	4213	2876	184	188187	3704
	14	2476	202	244795	4819	2876	201	214684	4226
	16	2476	221	275202	5417	2876	217	240862	4741
1219	14	2679	212	378870	6216	3079	210	333326	5469
	16	2679	234	428149	7025	3079	229	376204	6172
	18	2679	256	476933	7825	3079	248	418650	6869
1600	18	3060	279	932011	11650	3460	270	827536	10344
	20	3060	305	1029827	12873	3460	292	914044	11426
	22	3060	330	1126894	14086	3460	314	999889	12499
1800	18	3260	290	1243339	13815	3660	279	1110548	12339
	20	3260	316	1375132	15279	3660	303	1227937	13644
	22	3260	343	1506029	16734	3660	327	1344528	14939
2000	20	3460	326	1777489	17775	3860	313	1596226	15962
	22	3460	354	1947882	19479	3860	338	1748961	17490
	24	3460	382	2117233	21172	3860	363	1900763	19008
2200	21	3660	350	2345823	21326	4060	335	2117496	19250
	23	3660	379	2560881	23281	4060	361	2311366	21012
	25	3660	408	2774744	25225	4060	387	2504159	22765
2500	21	3960	363	3186179	25489	4360	347	2896465	23172
	23	3960	393	3479998	27840	4360	375	3163328	25307
	25	3960	424	3772384	30179	4360	403	3428890	27431

# COLD FORMED TUBULAR COMBINED WALL PILES

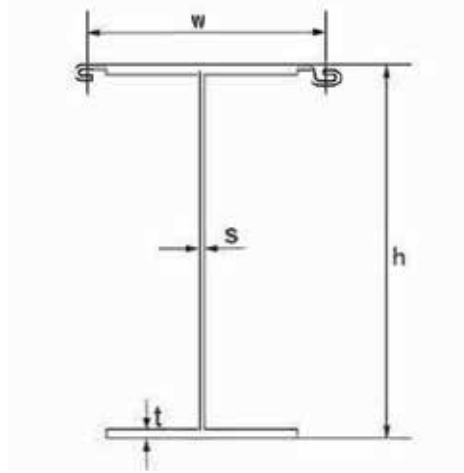


Painted, rope separator protected, with corner piles welded



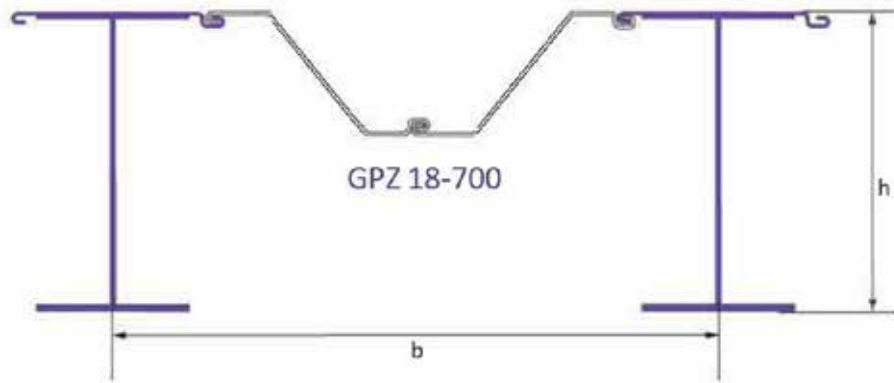
Pipe pile painting house

# HZ COMBINED WALL PILES



SIZE	DIMENSIONS				SECTIONAL AREA	WEIGHT	MOMENT OF INERTIA	MODULUS OF SECTION
	h	b	t	s				
	mm	mm	mm	mm	cm <sup>2</sup>	kg/m	cm <sup>4</sup>	cm <sup>3</sup>
ALH775A	775	530	17	12.5	299	234.7	322820	7555
ALH7758	779	530	19	12.5	317.4	249.2	361420	8225
ALH775C	783	530	21	14	352.7	276.9	401790	9100
ALH7750	787	530	23	14	371.2	291.4	430930	9770
ALH975A	975	530	17	14	338.1	265.4	561650	10280
ALH9758	979	530	19	14	356.5	279.9	606800	11120
ALH975C	983	530	21	16	399.8	313.8	677600	12385
ALH9750	987	530	23	16	418.3	328.4	723490	113235
ALH680	630	527	22	14	298.9	234.7	210510	6225
ALH880A	830	527	24	13	333.5	261.8	410770	9185
ALH8808	830	527	25	15	365.8	287.2	446960	10045
ALH880C	830	527	26	15	380.3	298.5	471210	10580
ALH1080A	1075	527	24	16	412.2	232.6	799480	13980
ALH10808	1075	527	26	16	435.2	341.6	864430	15115
ALHIOSOC	1075	527	27	18	477.2	374.6	943630	16530
ALH10800	1075	527	30	19	511.2	401.3	1020560	17840
ALH1180A	1075	527	33	20	538.4	422.7	1078560	18785
ALH11808	1080	527	35	20	555.6	436.1	1129000	19670
ALH1180C	1085	527	37	21	589.2	462.5	1203660	20830
ALH11800	1090	527	39	22	616.1	483.6	1262570	21915

# HZ COMBINED WALL PILES



SIZE	DIMENSIONS		SECTIONAL AREA	WEIGHT	MOMENT OF INERTIA	MODULUS OF SECTION
	a	h				
	mm	mm	cm <sup>2</sup> /m	kg/m <sup>2</sup>	cm <sup>4</sup> /m	cm <sup>3</sup> /m
ALH775A-12	1.93	775	255.9	201	199870	4535
ALH7758-12	1.93	779	265.5	208	214680	4885
ALH775C-12	1.93	783	283.7	223	235600	5335
ALH775D-12	1.93	787	293.3	230	250700	5685
ALH975A-12	1.93	975	276.2	217	318430	5825
ALH975B-12	1.93	979	285.7	224	341820	6265
ALH975C-12	1.93	983	308.2	242	378510	6920
ALH9750-12	1.93	987	317.7	249	402280	7360
ALH680-12	1.927	630	256.3	201	136700	4045
ALHBSOA-12	1.927	830	274.1	215	240500	5380
ALH8808-12	1.927	830	290.5	228	259000	5820
ALH880C-12	1.927	830	298	234	271570	6100
ALHIOSOA-12	1.927	1075	315.5	248	443030	7745
ALH10808-12	1.927	1075	327.5	257	476790	8340
ALHIOSOC-12	1.927	1075	349	274	517420	9065
ALH10800-12	1.927	1075	366.4	288	557070	9735
ALH1180A-12	1.927	1075	380.4	299	586870	10220
ALH11808-12	1.927	1080	389.3	306	613030	10680
ALH1180C-12	1.927	1085	406.5	319	651410	11275
ALH11800-12	1.927	1090	420.2	330	681600	11830

## ALRITE CIRCULAR HOLLOW PILES & CASINGS

- SSAW – Spiral Submerged Arc Welding pipe pile
- LSAW – Longitudinally Submerged Arc Welding pipe pile
- ERW – Electric Resistance Welded pipe piles
- Seamless Pipes
- Spiral Pipes
- Beveled / Chamfered ends
- Protective Pipe Coatings – internal and external





**ALRITE CIRCULAR**  
HOLLOW PILES & CASINGS



# ALRITE COATING SYSTEM

We supply & offer all types of internal and external coating application to pipes ranging from 30mm to 1800mm diameter in three and two layer polyethylene coating as well as FBE (Fusion Bond Epoxy) coating. We can also offer the inner/outer plastic composite steel pipe coating, epoxy coal tar, epoxy paint and cement mortar lining coatings.

## INTERNAL COATING

Liquid Epoxy Coating	AWWA C210-2007
FBE	AWWA C213-2001
Cement Mortar Lining	BS 534-1990 AWWA C205-2001
Bitumen Coating	BS 534-199

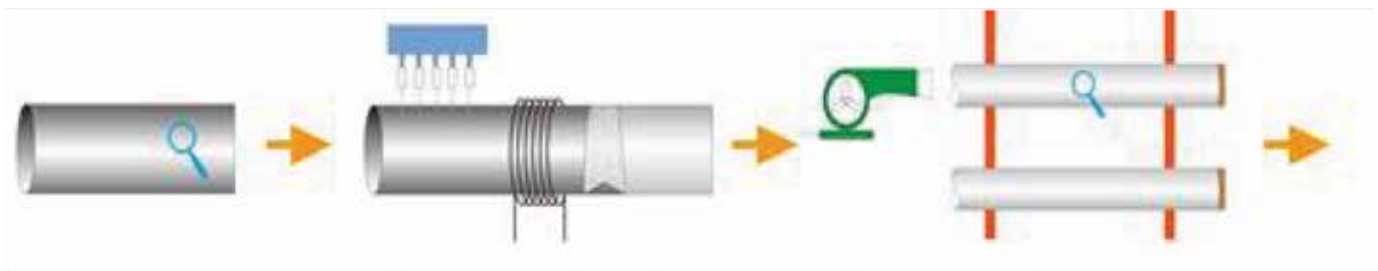
## EXTERNAL COATING

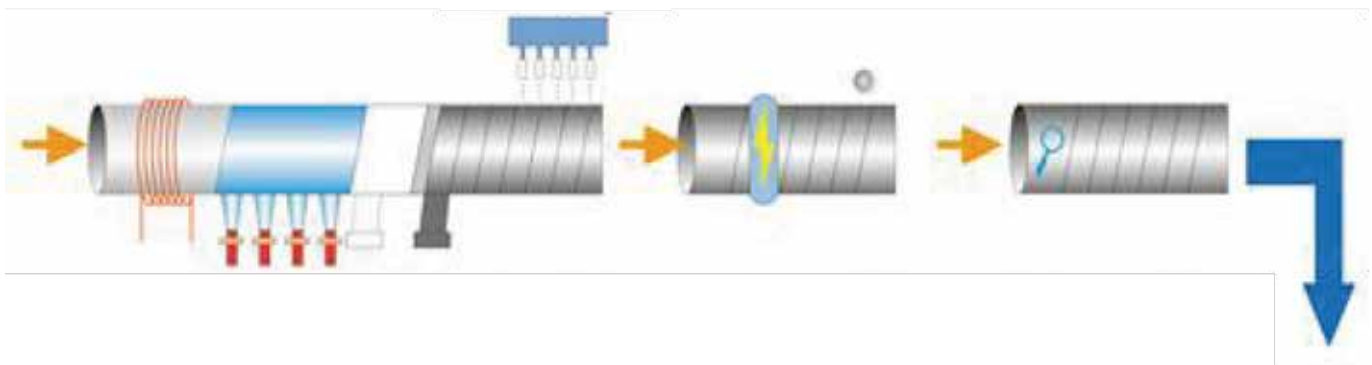
Coating Type	Coating Standard
3LPE/3LPP Coating	DIN 30670-1991, CAN/CSA 724521-2010, ISO 21809-1-2009 SY/T 0413-2002, GB/T 23257-2009
2LPE/2LPP Coating	SY/T 0413-2002, GB/T 23257-2009, ISO 21809-1-2009
(Fusion Bond Epoxy) FBE	SY/T 0315-2005, AWWA C213-2001, CAN/CSA Z24520-2010, ISO 21809-2-2007, AP1 RP 5L9-2001
Bitumen Coating / Enamel & tape-hot applied	BS 534-1990 AWWA203-2002, AWWA 214-2000
Liquid Epoxy Coating	AWWA C210-2007
Polyurethane Insulated Coating	SY/T 0415-1996, CJ/T 114-2000, EN 53-1994

# ALRITE COATING SYSTEM

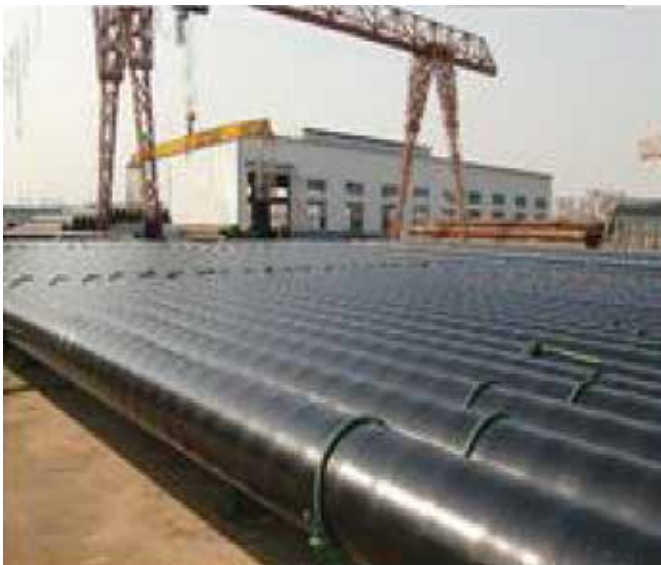


# PROCESS FLOW CHART OF INTERNAL & EXTERNAL COATING





# INTERNAL & EXTERNAL COATING PIPES



## INTRODUCTION

# POLYURETHANE INSULATION PIPE

The thermal insulation pipe is composed of the steel pipe for conveying medium, polyurethane rigid cellular plastics insulation layer and outer casing of high density polythene protection layer, which are tightly combined to provide excellent anti-corrosion and thermal-insulation functions. The structure is shown detailedly as the right drawing.



## FUSION BONDED EXPOXY (FBE) COATED PIPES

The FBE (Fusion Bonded Epoxy) coated pipes are commonly used to carry drinking water, oil and gas. These are specially used for drinking water distribution system in the international market. Fusion bonded epoxy coatings are heat-activated, chemically cured coating systems applied to interior and exterior surface.

FBE is offered to American Water Works Association standard i.e. AWWA C213

### Thickness

The coating is applied to the preheated pipe at a uniform cured-film thickness of not less than 12mils (305 $\mu$ m) on the exterior and interior. The maximum thickness shall not exceed a nominal 16mils (406 $\mu$ m) unless specified by the purchaser.





# ALRITE BEARING H BEAM PILES

- Bearing piles – sizes from 200 x 200 up to 400 x 400
- Metric & Imperial Size H Beams
- Universal Columns
- Universal Beams



## ACCESSORIES

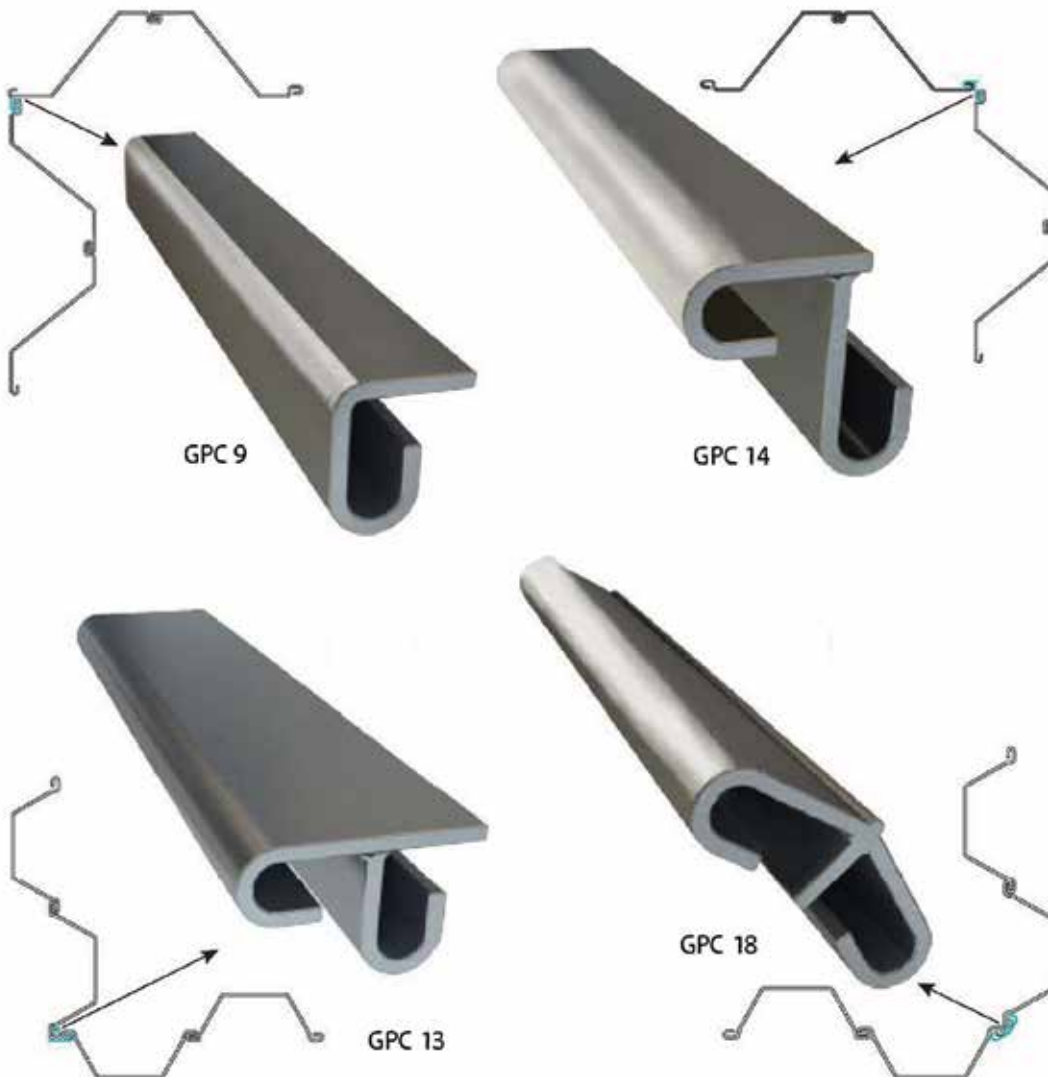
- Joiners / Clutches / Corner Piles
- Waling – Steel Channels, Angles & Beams
- Reinforcing Steel
- Piling Hammers – excavator mounted & crane hang on type
- Piling Shoes
- Lifting lugs
- Steel Plates
- Cold Formed special sections to suit
- Steel Tie Rods & Fittings- Turnbuckle/Coupler and hinge (ring) joint, 2 hinge joints, cardan joint and 2 cardan joints
- Protective Coatings – painting, zinc rich epoxy paint, hot dip galvanizing, denso wrapping, bitumen, concrete lined, etc.
- Third Party / Independent Inspection and reporting from SGS

ALRITE ACCESSORIES  
CORNER SECTION

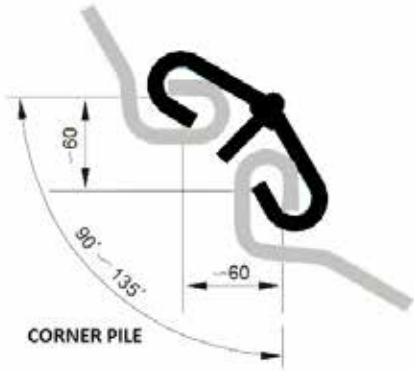
CORNER SECTION

39

ACCESSORIES



**ALRITE**  
ACCESSORIES



**CORNER PILE**



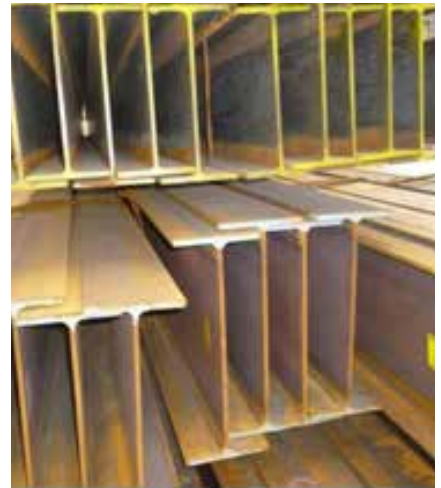
**TIE RODS**



**CHANNELS**



**ANGLES**



**BEAMS**



**EXCAVATOR**



**PILING CAGE**

# ALRITE PROJECTS



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