



# ESC-CRW SERIES

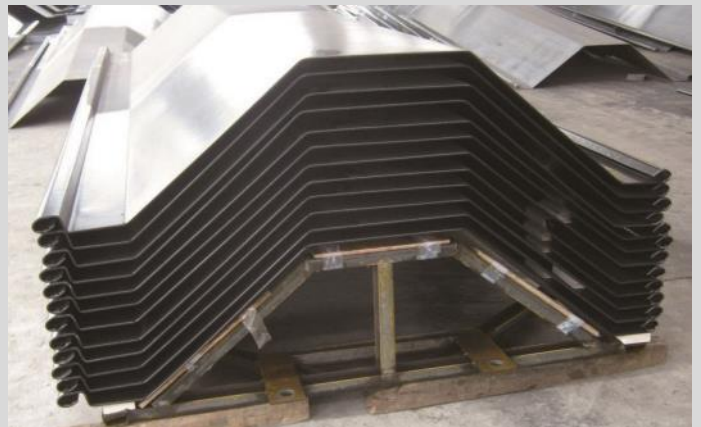
## WIDE U PROFILE SHEET PILES

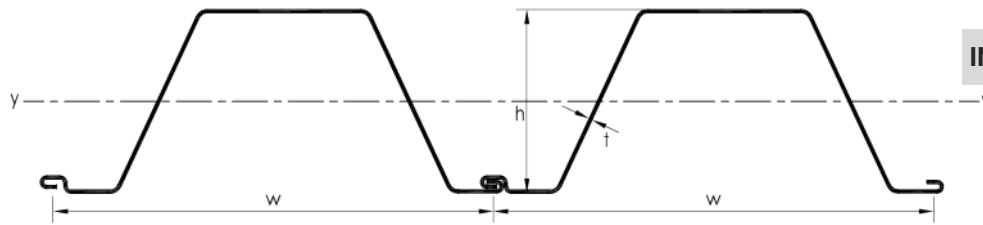
### ECONOMICAL WIDE PROFILE SHEET PILE WITH HALF THE INTERLOCKS OF Z SHEET PILE WALLS

The ESC CRW Series is a wide profile U Sheet Pile which is the widest rolled single sheet pile in the industry. It features the same interlocks as the ESC-CRZ Series, but is equivalent to a paired Z sheet pile. It has a high strength to weight ratio and excellent seepage characteristics as it has the fewest interlocks per unit width. There is a large spectrum in the strength and sizing, allowing the designer to optimise their design to the application. The lower strength range is optimal for cutoff wall applications.

#### ORDER OPTIONS

- |                         |  |
|-------------------------|--|
| <b>Steel Grades</b>     | <ul style="list-style-type: none"> <li>✓ Q235B, Q345B, Q345C, Q390B, Q420B</li> <li>✓ S235, S275JR, S355JR, S355JO</li> <li>✓ ASTM A572 Gr42, Gr50, Gr60</li> <li>✓ Others available on request</li> </ul> |
| <b>Length</b>           | <ul style="list-style-type: none"> <li>24.0m maximum for ESC-CRW6 to ESC-CRW14</li> <li>35.0m maximum for ESC-CRW14 to ESC-CRW34</li> <li>Any project specific length can be produced</li> </ul>           |
| <b>Delivery Options</b> | <ul style="list-style-type: none"> <li>✓ Lifting Hole</li> <li>✓ Grip Plate</li> <li>✓ By container (11.8m or less) or Break Bulk</li> <li>✓ Corrosion Protection Coatings</li> </ul>                      |





## INTERLOCKING CLUTCH

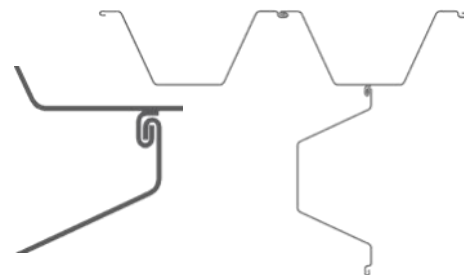


Section	Width	Height	Thickness	Cross Sectional		Weight		Elastic Section	Moment of	Coating Area
	(w)	(h)	(t)	Area	Per Pile	Per Wall	Modulus	Inertia	(both sides per pile)	
	mm	mm	mm	cm <sup>2</sup> /m	kg/m	kg/m <sup>2</sup>	cm <sup>3</sup> /m	cm <sup>4</sup> /m	m <sup>2</sup> /m	
ESC-CRW3A	700	146	4.0	56.0	30.80	44.0	265	1,945	1.97	
ESC-CRW3B	700	147	5.0	70.3	38.60	55.2	328	2,417	1.98	
ESC-CRW4A	700	148	6.0	84.1	46.20	66.0	392	2,910	1.97	
ESC-CRW4B	700	149	7.0	96.8	53.20	76.0	447	3,385	1.95	
ESC-CRW5A	700	150	8.0	112.0	61.60	88.0	508	3,872	1.98	
ESC-CRW6	1,575	345	5.0	63.5	78.50	49.8	620	11,220	4.05	
ESC-CRW7	1,560	340	6.0	76.9	94.20	60.4	740	13,400	4.06	
ESC-CRW9	1,420	407	6.0	84.5	94.20	66.3	980	21,540	4.05	
ESC-CRW10	1,350	450	5.0	74.0	78.50	58.1	970	22,960	4.05	
ESC-CRW11	1,330	450	6.0	90.2	94.20	70.8	1,060	27,140	4.04	
ESC-CRW12A	1,270	450	6.0	94.5	94.20	74.2	1,250	30,000	4.05	
ESC-CRW12B	1,430	391	8.5	118.9	133.50	93.3	1,260	27,400	4.05	
ESC-CRW13	1,185	500	6.5	109.7	102.10	86.1	1,390	29,910	4.05	
ESC-CRW14A	1,195	481	7.0	117.2	109.90	92.0	1,460	40,410	4.05	
ESC-CRW14B	1,400	377	9.5	135.7	149.20	106.5	1,420	30,110	4.05	
ESC-CRW15	1,280	450	8.0	125.0	125.60	98.1	1,500	37,960	4.04	
ESC-CRW16A	1,130	500	7.0	123.9	109.90	97.2	1,580	45,910	4.05	
ESC-CRW17	1,320	450	9.0	136.3	141.30	107.0	1,720	41,610	4.05	
ESC-CRW18	1,245	491	8.0	125.5	122.62	98.5	1,760	54,674	3.92	
ESC-CRW19	1,245	491	8.5	133.8	130.76	105.0	1,880	58,325	3.94	
ESC-CRW20	1,245	492	9.0	142.2	138.95	111.6	2,000	61,996	3.95	
ESC-CRW21	1,245	492	9.5	150.6	147.19	118.2	2,120	65,687	3.97	
ESC-CRW22	1,245	493	10.0	159.1	155.49	124.9	2,250	69,397	3.98	
ESC-CRW24	1,250	493	10.5	167.0	163.84	131.1	2,360	73,125	4.00	
ESC-CRW25	1,250	494	11.0	175.5	172.25	137.8	2,490	76,871	4.01	
ESC-CRW26	1,250	494	11.5	184.2	180.72	144.6	2,610	80,632	4.03	
ESC-CRW27	1,250	495	12.0	192.9	189.24	151.4	2,720	84,409	4.04	
ESC-CRW28	1,255	495	12.5	200.8	197.81	157.6	2,820	88,200	4.06	
ESC-CRW29	1,255	496	13.0	209.5	206.44	164.5	2,940	92,005	4.07	
ESC-CRW30	1,255	496	13.5	218.4	215.13	171.4	3,050	95,822	4.09	
ESC-CRW31	1,255	497	14.0	227.2	223.87	178.4	3,160	99,652	4.10	
ESC-CRW32	1,260	497	14.5	235.2	232.66	184.7	3,260	103,494	4.12	
ESC-CRW34	1,260	498	15.0	244.2	241.51	191.7	3,370	107,346	4.13	
ESC-CRW35	1,260	498	15.5	253.2	250.42	198.7	3,480	111,208	4.15	
ESC-CRW36	1,260	499	16.0	262.2	259.38	205.9	3,590	115,079	4.16	

\*excludes internal section of interlock

## CORNER PILES

A welded interlock can be positioned on the ESC-CRW flange to allow corner configurations. Note the flange should be orientated towards the excavated side and the interlock orientated towards the retained side.



# STEEL GRADES & MANUFACTURING TOLERANCES

## COLD ROLLED & COLD FORMED SHEET PILES

### STEEL GRADES

Classification		Mechanical Properties					Chemical Composition % (max)				
		Minimum Yield Point		Ultimate Tensile Strength	Elongation % (min)	Impact Strength (Charpy)	C	Si	Mn	P	S
		t ≤ 16	16 < t ≤ 40								
BS EN 10025-2: 2004	S275JR	275	265	410-560	23	27J at 20°C	0.21	-	1.50	0.035	0.035
	S275J2	275	265	410-560	21	27J at -20°C	0.18	-	1.50	0.025	0.025
	S355JR	355	345	470-630	22	27J at 20°C	0.24	0.55	1.60	0.035	0.035
BS EN 102481: 1998	S390GP	390	390	≥ 490	20	-	0.24	0.55	1.60	0.04	0.040
	S430GP	430	430	≥ 510	19	-	0.24	0.55	1.60	0.04	0.040
GB/T 700:2006	Q235B	235	225	375-500	26	27J at 20°C	0.20	0.35	1.40	0.045	0.045
	Q275B	275	265	410-540	22	27J at 20°C	0.21	0.35	1.50	0.045	0.045
GB/T 1591:2008	Q345B	345	335	470-630	20	34J at 20°C	0.20	0.50	1.70	0.035	0.035
	Q390B	390	370	490-650	20	34J at 20°C	0.20	0.50	1.70	0.030	0.030
	Q420B	420	400	540-680	19	34J at 20°C	0.20	0.50	1.70	0.030	0.030
	MDB350	350	350	470-630	21	40J at 20°C	0.20	0.50	1.50	0.025	0.020
ASTMA36-14	A36	250	250	400-550	23	-	0.26	0.40	-	0.040	0.050
ASTM A572-2013a	A572 Gr.42	290	290	≥ 415	20	-	0.21	0.40	1.35	0.040	0.050
	A572 Gr.50	345	345	≥ 450	18	-	0.23	0.40	1.30	0.040	0.050
	A572 Gr.60	413	413	≥ 517	16	-	0.26	0.40	1.35	0.040	0.050
ASTM A690-2013a	A690	345	345	> 485	21	-	0.22	0.40	0.60-0.90	0.08-.015	0.040
JIS G3101-2010	SS400	245	235	400-510	17 (5 < t < 16), 21 (t ≤ 5 or t > 16)	-	-	-	-	0.050	0.050
	SS490	285	275	490-610	15 (5 < t < 16), 19 (t ≤ 5 or t > 16)	-	-	-	-	0.050	0.050
	SS540	400	330	≥ 540	13 (5 < t < 16), 16 (t ≤ 5 or t > 16)	-	0.30	-	1.60	0.040	0.040
JIS A5523-2012	SYW295	295	295	≥ 490	17	43J at 0°C	0.18	0.55	1.50	0.040	0.040
	SYW390	390	390	≥ 540	15	43J at 0°C	0.18	0.55	1.50	0.040	0.040
MS 2025-1:2006	S235JR	235	225	360-510	26	-	0.17	-	1.40	0.035	0.035
	S275JR	275	265	410-560	23	-	0.21	-	1.50	0.035	0.035
	S355JO	355	345	470-630	22	-	0.20	0.55	1.60	0.030	0.030

### MANUFACTURING TOLERANCES TO BS EN 10249

Component	Tolerance	Nominal Thickness	Tolerance
Mass	± 5%		
Length	± 50mm		
Height (≤ 200mm)	± 4.0mm	5mm	± 0.29mm
Height (> 200mm & ≤ 300mm)	± 6.0mm	6mm	± 0.31mm
Height (> 300mm & ≤ 400mm)	± 8.0mm	8mm	± 0.35mm
Height (> 400mm)	± 10.0mm	9mm	± 0.40mm
Width of Single Pile	± 2% of width	10mm	± 0.40mm
Width of Double Z or Wide U	± 3% of width	12mm	± 0.43mm
Squareness of Ends	2% of width	13mm	± 0.46mm
		15mm	± 0.46mm

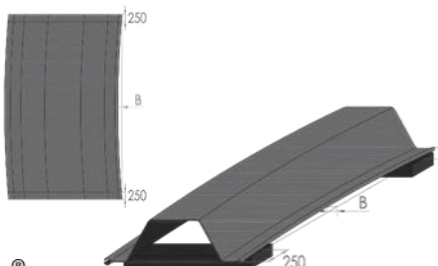
### SHEET PILE MARKING

ESC is able to apply adhesive stickers to its products to provide useful information such as destination, order number, project identifier, client name and others. To enable good traceability, material heat number & pile specification is included as standard.

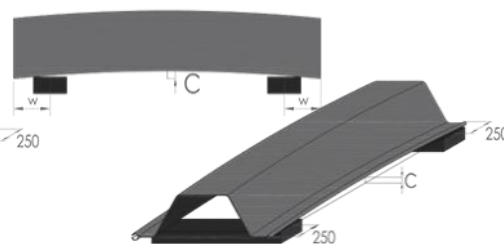


#### Bending B

±0.2% of the length



#### Curving C



#### Twisting T

±0.2% of the length but no more than 100mm

