



# ESC-CFW SERIES

## WIDE U PROFILE SHEET PILES

### AN ECONOMIC & SIMPLE WIDE PROFILE COLD FORMED SHEET PILE WITHOUT ANY WELDING

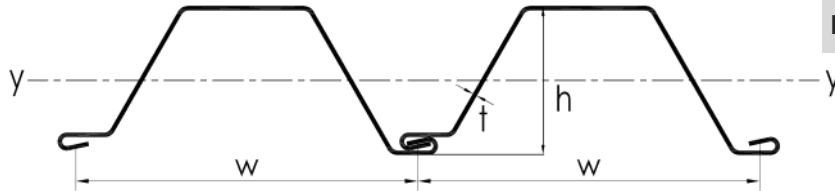
The ESC CFW series was developed to enable a wide profile sheet pile to be produced economically without any requirement for interlock clutch welding. ESC-CFW sheet piles have excellent driveability due to the interlock design. A large range of sizes and strengths can be designed. The manufacturing process gives full flexibility in the profile design allowing features such as corner piles, tapered piles.

#### ORDER OPTIONS

- |                         |  |
|-------------------------|--|
| <b>Steel Grades</b>     | <ul style="list-style-type: none"> <li>✓ Q235B, Q345B, Q345C, Q390B, Q420B</li> <li>✓ S235, S275JR, S355JR</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>14.0m maximum</li> <li>Longer lengths can be spliced</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

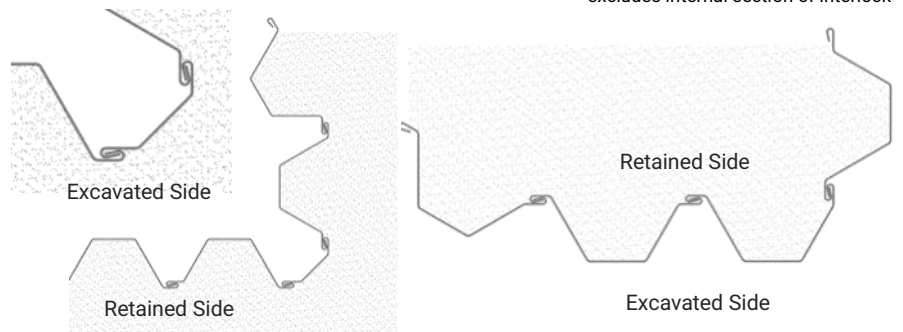


Section	Width	Height	Thickness	Cross Sectional Area	Weight		Elastic Section Modulus	Moment of Inertia	Coating Area (both sides per pile)
	(w)	(h)	(t)		Per Pile	Per Wall			
	mm	mm	mm	cm <sup>2</sup> /m	kg/m	kg/m <sup>2</sup>	cm <sup>3</sup> /m	cm <sup>4</sup> /m	m <sup>2</sup> /m
ESC-C-CFW7	995	297	5.75	86.6	67.71	68.0	<b>710</b>	10,700	2.71
ESC-C-CFW8	960	323	5.75	90.1	67.71	70.7	<b>800</b>	13,160	2.81
ESC-C-CFW9	900	343	5.75	95.7	67.71	75.1	<b>910</b>	15,910	3.00
ESC-C-CFW10	855	356	5.75	100.6	67.71	79.0	<b>1,000</b>	18,100	3.16
ESC-C-CFW11	805	365	5.75	107.1	67.71	84.1	<b>1,090</b>	20,280	3.35
ESC-C-CFW12	745	377	5.75	115.8	67.71	90.9	<b>1,220</b>	23,350	3.62
ESC-C-CFW13	1,162	401	7.75	120.1	109.51	94.2	<b>1,308</b>	26,340	2.80
ESC-C-CFW14	1,127	416	7.75	123.8	109.51	97.2	<b>1,408</b>	29,290	2.89
ESC-C-CFW15	1,101	430	7.75	126.7	109.51	99.5	<b>1,486</b>	31,940	2.97
ESC-C-CFW16	1,059	444	7.75	131.7	109.51	103.4	<b>1,600</b>	35,520	3.10
ESC-C-CFW17	1,020	454	7.75	136.4	109.51	107.0	<b>1,697</b>	38,660	3.22
ESC-C-CFW18	985	464	7.75	141.6	109.51	111.2	<b>1,802</b>	41,990	3.35
ESC-C-CFW19	947	474	7.75	147.3	109.51	115.6	<b>1,910</b>	45,460	3.50
ESC-C-CFW20	916	480	7.75	152.3	109.51	119.5	<b>2,016</b>	48,450	3.63
ESC-C-CFW21	884	487	7.75	157.8	109.51	123.9	<b>2,114</b>	51,510	3.77
ESC-C-CFW22	860	488	7.75	162.4	109.51	127.5	<b>2,187</b>	53,380	3.89
ESC-C-CFW23	946	450	9.75	185.5	137.77	145.6	<b>2,295</b>	52,100	3.51
ESC-C-CFW24	920	464	9.75	190.8	137.77	149.7	<b>2,405</b>	56,260	3.61
ESC-C-CFW25	894	467	9.75	196.3	137.77	154.1	<b>2,493</b>	58,970	3.73
ESC-C-CFW26	864	473	9.75	203.1	137.77	159.5	<b>2,611</b>	62,620	3.87
ESC-C-CFW27	855	471	9.75	205.3	137.77	161.1	<b>2,686</b>	63,370	3.91
ESC-C-CFW28	830	481	9.75	211.4	137.77	166.0	<b>2,785</b>	67,470	4.04
ESC-C-CFW29	1,120	519	11.75	209.8	184.48	164.7	<b>2,911</b>	75,570	3.27
ESC-C-CFW30	1,100	528	11.75	213.6	184.48	167.7	<b>2,995</b>	79,400	3.34
ESC-C-CFW32	1,058	535	11.75	222.1	184.48	174.4	<b>3,192</b>	85,490	3.48
ESC-C-CFW34	1,016	546	11.75	231.3	184.48	181.6	<b>3,393</b>	92,800	3.64
ESC-C-CFW36	974	556	11.75	241.3	184.48	189.4	<b>3,604</b>	100,440	3.81
ESC-C-CFW38	935	563	11.75	250.8	184.48	196.9	<b>3,794</b>	107,180	3.97
ESC-C-CFW40	900	569	11.75	261.1	184.48	205.0	<b>3,995</b>	114,220	4.14

\*excludes internal section of interlock

## CORNER PILES

Due to the flexibility of the forming process, the ESC-C-CFW Series Sheet Piles can be formed to almost any corner configuration, without requiring any wastage or welding. Note that the interlocks should be orientated toward the retained side as shown in the following figures.



# STEEL GRADES & MANUFACTURING TOLERANCES

## COLD ROLLED & COLD FORMED SHEET PILES

### STEEL GRADES

Classification		Mechanical Properties				Chemical Composition % (max)					
		Minimum Yield Point MPa		Ultimate Tensile Strength MPa	Elongation % (min) 3≤t≤40	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/T1591:2008	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

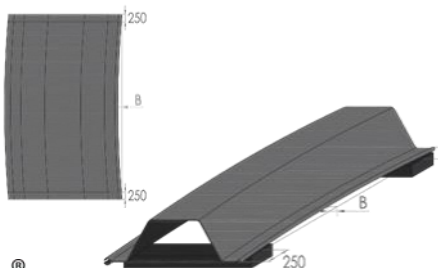
### SHEET PILE MARKING

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.

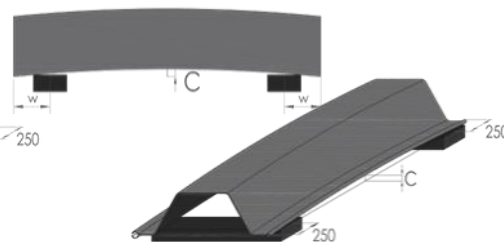


#### Bending B

±0.2% of the length



#### Curving C



#### Twisting T

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

