



ESC-CFW SERIES

WIDE U PROFILE SHEET PILES

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

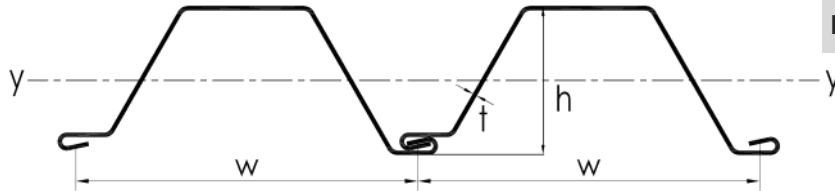
The ESC CFW series was developed to enable a wide profile sheet pile to be produced economically without any requirement for interlock clutch welding. ESC-CFW sheet piles have excellent driveability due to the interlock design. A large range of sizes and strengths can be designed. The manufacturing process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

ORDER OPTIONS

- | | |
|-------------------------|--|
| Steel Grades | <ul style="list-style-type: none"> ✓ Q235B, Q345B, Q345C, Q390B, Q420B ✓ S235, S275JR, S355JR ✓ ASTM A572 Gr42, Gr50, Gr60 ✓ Others available on request |
| Length | <ul style="list-style-type: none"> 14.0m maximum Longer lengths can be spliced Any project specific length can be produced |
| Delivery Options | <ul style="list-style-type: none"> ✓ Lifting Hole ✓ Grip Plate ✓ By container (11.8m or less) or Break Bulk ✓ Corrosion Protection Coatings |



INTERLOCKING CLUTCH

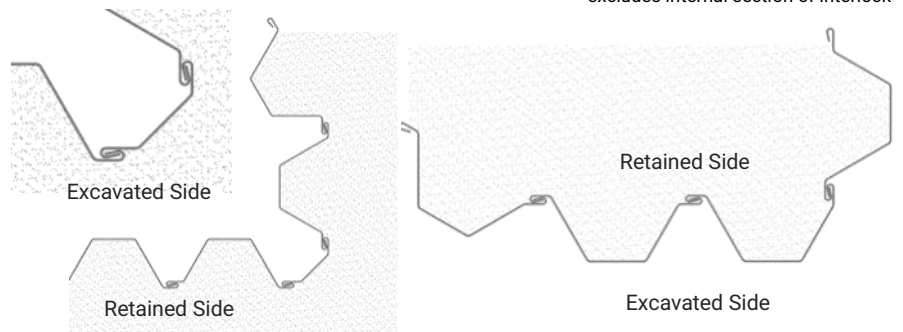


| Section | Width | Height | Thickness | Cross Sectional | Weight | | Elastic Section | Moment of Inertia | Coating Area (both sides per pile) |
|-------------|-------|--------|-----------|--------------------|----------|-------------------|--------------------|--------------------|---------------------------------------|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



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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 |
| Squariness of Ends | 2% of width | 13mm | ± 0.46mm |
| | | 15mm | ± 0.46mm |
| | | | |

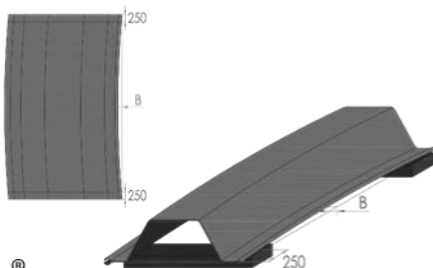
SHEET PILE MARKING

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.

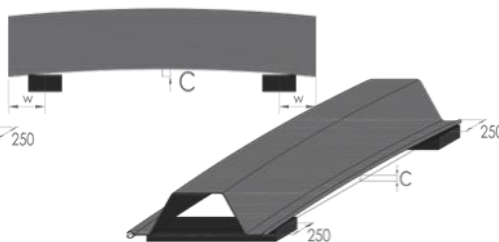


Bending B

±0.2% of the length



Curving C



Twisting T

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

