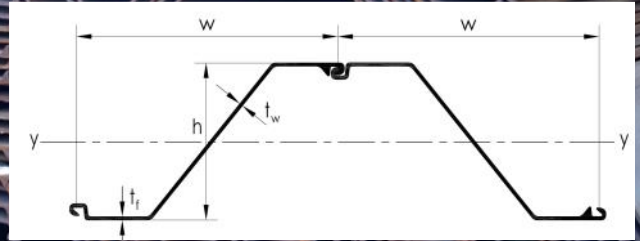
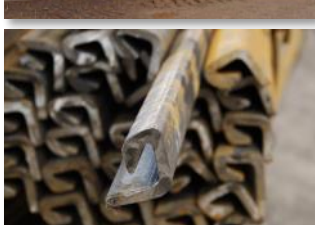
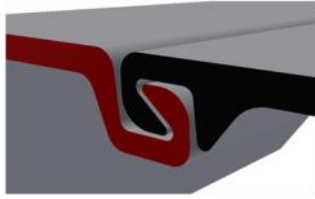


# ESC-HRZ SERIES

## HOT ROLLED SHEET PILES



ESC is proud to present the new Hot Rolled ESC-HRZ Profile Sheet Piles. The design features interlocks that are located symmetrically on both sides of the neutral axis. The web is continuous, thus the section modulus and shear load transfer are optimised. The ESC-HRZ sheet pile features a durable interlock that provides effective water tightness capabilities. The profile design has a very competitive strength to weight ratio. Due to a deep profile, the design features a higher Inertia resulting in reduced deflection. This higher inertia offers the ability to choose higher steel grades (60ksi or up to 430Mpa) for the most economical solution that meets serviceability requirements. The piles are usually shipped in pairs to accommodate faster installation and better alignment. The ESC-HRZ Sheet Piles conform to both BS EN 10248/10249 and/or ASTM A6.



Section	Width	Height	Thickness		Cross Sectional Area	Weight		Elastic Section Modulus	Moment of Inertia	Coating Area (both side per pile)
	(w)	(h)	Flange (t <sub>f</sub> )	Web (t <sub>w</sub> )		Per Pile	Per Wall			
	in	in	in	in		lb/ft	lb/ft <sup>2</sup>			
	mm	mm	mm	mm	cm <sup>2</sup> /m	kg/m	kg/m <sup>2</sup>	in <sup>3</sup> /ft	in <sup>4</sup> /ft	ft <sup>2</sup> /ft
ESC-HRZ12-770	30.338 <b>770</b>	13.554 <b>344</b>	0.335 <b>8.5</b>	0.335 <b>8.5</b>	14.42 <b>93</b>	48.9 <b>72.8</b>	19.4 <b>94.5</b>	23 <b>1,250</b>	157 <b>31,300</b>	6.43 <b>1.68</b>
ESC-HRZ13-770	30.338 <b>770</b>	13.554 <b>344</b>	0.355 <b>9</b>	0.355 <b>9</b>	15.1 <b>97.4</b>	51.2 <b>76.2</b>	20.3 <b>99</b>	24 <b>1,300</b>	164 <b>22,430</b>	6.43 <b>1.96</b>
ESC-HRZ14-770	30.338 <b>770</b>	13.593 <b>345</b>	0.374 <b>9.5</b>	0.374 <b>9.5</b>	15.78 <b>101.8</b>	53.5 <b>79.6</b>	21.2 <b>103.4</b>	25 <b>1,360</b>	171 <b>23,370</b>	6.43 <b>1.96</b>
ESC-HRZ17-700	27.58 <b>700</b>	16.548 <b>420</b>	0.335 <b>8.5</b>	0.335 <b>8.5</b>	14.42 <b>93</b>	49.3 <b>73.3</b>	21.4 <b>104.7</b>	32 <b>1,740</b>	266 <b>36,430</b>	6.46 <b>1.97</b>
ESC-HRZ18-700	27.58 <b>700</b>	16.587 <b>421</b>	0.355 <b>9</b>	0.355 <b>9</b>	15.1 <b>97.4</b>	51.5 <b>76.7</b>	22.4 <b>109.6</b>	34 <b>1,810</b>	277 <b>38,000</b>	6.46 <b>1.97</b>
ESC-HRZ19-700	27.58 <b>700</b>	16.587 <b>421</b>	0.374 <b>9.5</b>	0.374 <b>9.5</b>	15.78 <b>101.8</b>	53.9 <b>80.2</b>	23.5 <b>114.6</b>	35 <b>1,880</b>	289 <b>39,580</b>	6.46 <b>1.97</b>
ESC-HRZ20-700	27.58 <b>700</b>	16.627 <b>422</b>	0.394 <b>10</b>	0.394 <b>10</b>	16.46 <b>106.2</b>	56.2 <b>83.7</b>	24.5 <b>119.5</b>	36 <b>1,950</b>	300 <b>41,160</b>	6.46 <b>1.97</b>
ESC-HRZ24-700	27.58 <b>700</b>	18.085 <b>459</b>	0.441 <b>11.2</b>	0.441 <b>11.2</b>	18.93 <b>122.1</b>	64.4 <b>95.8</b>	28 <b>136.9</b>	45 <b>2,440</b>	408 <b>55,950</b>	6.73 <b>2.05</b>
ESC-HRZ26-700	27.58 <b>700</b>	18.124 <b>460</b>	0.481 <b>12.2</b>	0.481 <b>12.2</b>	20.34 <b>131.2</b>	69.2 <b>103</b>	30.1 <b>147.1</b>	48 <b>2,600</b>	437 <b>59,840</b>	6.73 <b>2.05</b>
ESC-HRZ27-700	27.58 <b>700</b>	18.163 <b>461</b>	0.5 <b>12.7</b>	0.5 <b>12.7</b>	21 <b>135.5</b>	71.5 <b>106.4</b>	31.1 <b>152</b>	50 <b>2,680</b>	450 <b>61,640</b>	6.73 <b>2.05</b>
ESC-HRZ28-700	27.58 <b>700</b>	18.163 <b>461</b>	0.52 <b>13.2</b>	0.52 <b>13.2</b>	21.75 <b>140.3</b>	74 <b>110.1</b>	32.2 <b>157.3</b>	51 <b>2,760</b>	465 <b>63,740</b>	6.73 <b>2.05</b>
ESC-HRZ36-700	27.58 <b>700</b>	19.661 <b>499</b>	0.591 <b>15</b>	0.441 <b>11.2</b>	123.45 <b>151.3</b>	79.8 <b>118.7</b>	34.7 <b>169.6</b>	67 <b>3,600</b>	655 <b>89,750</b>	7.15 <b>2.18</b>
ESC-HRZ38-700	27.58 <b>700</b>	19.7 <b>500</b>	0.63 <b>16</b>	0.481 <b>12.2</b>	24.99 <b>161.2</b>	85 <b>126.5</b>	37 <b>180.7</b>	71 <b>3,800</b>	693 <b>94,980</b>	7.15 <b>2.18</b>
ESC-HRZ40-700	27.58 <b>700</b>	19.739 <b>501</b>	0.67 <b>17</b>	0.52 <b>13.2</b>	26.52 <b>171.1</b>	90.2 <b>134.3</b>	39.3 <b>191.8</b>	74 <b>4,000</b>	732 <b>100,220</b>	7.15 <b>2.18</b>
ESC-HRZ42-700	27.58 <b>700</b>	19.661 <b>499</b>	0.709 <b>18</b>	0.552 <b>14</b>	28.23 <b>182.1</b>	96.1 <b>143</b>	41.8 <b>204.2</b>	79 <b>4,230</b>	770 <b>105,540</b>	7.12 <b>2.17</b>
ESC-HRZ44-700	27.58 <b>700</b>	19.7 <b>500</b>	0.749 <b>19</b>	0.591 <b>15</b>	29.76 <b>192</b>	101.3 <b>150.7</b>	44.1 <b>215.3</b>	83 <b>4,440</b>	810 <b>110,940</b>	7.12 <b>2.17</b>
ESC-HRZ46-700	27.58 <b>700</b>	19.739 <b>501</b>	0.788 <b>20</b>	0.63 <b>16</b>	31.29 <b>201.9</b>	106.5 <b>158.5</b>	46.4 <b>226.5</b>	86 <b>4,640</b>	848 <b>116,160</b>	7.12 <b>2.17</b>
ESC-HRZ48-700	27.58 <b>700</b>	19.818 <b>503</b>	0.867 <b>22</b>	0.591 <b>15</b>	31.47 <b>203</b>	107 <b>159.3</b>	46.6 <b>227.6</b>	89 <b>4,790</b>	879 <b>120,470</b>	7.12 <b>2.17</b>
ESC-HRZ50-700	27.58 <b>700</b>	19.858 <b>504</b>	0.906 <b>23</b>	0.63 <b>16</b>	32.92 <b>212.4</b>	112 <b>166.7</b>	48.8 <b>238.2</b>	92 <b>4,970</b>	915 <b>125,360</b>	7.12 <b>2.17</b>
ESC-HRZ52-700	27.58 <b>700</b>	19.897 <b>505</b>	0.946 <b>24</b>	0.67 <b>17</b>	34.43 <b>222.1</b>	117.1 <b>174.3</b>	51 <b>249</b>	96 <b>5,160</b>	952 <b>130,400</b>	7.12 <b>2.17</b>

**Interlock Compatibility** - Compatible with the ESC-9E Hot Rolled Interlock. All HRZ

**Steel Grades** - S355GP, S390GP, S430GP, ASTM A572 Gr50 & Gr60

**Delivery Options** - Supplied in singles or paired. Pairs either loose, welded or crimped. Can be supplied with Lifting Hole. Shipping by container (38.7ft or less) or Break Bulk. Corrosion Protection Coatings are an option.

**Length** - 19.7ft to 101.7ft. Can be spliced to greater lengths. Can also be produced to project specific lengths.

\*excludes internal section of interlock

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# STEEL GRADES & MANUFACTURING TOLERANCES

## HOT ROLLED SHEET PILES

### STEEL GRADES

Other Steel Grades are available on request. The Yield Point provided is applicable to thicknesses less than or equal to 16mm.

Region	CLASSIFICATION		Minimum Yield Strength MPa	Ultimate Tensile Strength MPa	Minimum Elongation %
	Code	Grade			
USA	ASTM A252	Grade 1	205	345	18
	ASTM A252	Grade 2	240	415	14
	ASTM A252	Grade 3	310	455	-
	ASTM A572	Grade 42	290	415	20
	ASTM A572	Grade 50	345	450	18
	ASTM A572	Grade 55	380	485	17
	ASTM A572	Grade 60	415	520	16
Canada	ASTM A572	Grade 65	450	550	15
	CSA 40.21	260W	260	590	20
	CSA 40.21	300W	300	620	20
	CSA 40.21	350W	350	650	19
	CSA 40.21	400W	400	690	16

Region	CLASSIFICATION		Minimum Yield Strength MPa	Ultimate Tensile Strength MPa	Minimum Elongation %
	Code	Grade			
Europe	EN 10248	S240GP	240	340	26
	EN 10248	S270GP	270	410	24
	EN 10248	S320GP	320	440	23
	EN 10248	S355GP	355	480	22
	EN 10248	S430GP	430	490	20
China	GB/T 700	Q235B	235	500	26
	GB/T 1591	Q345B	345	630	20
	GB/T 1591	Q345C	345	630	21
	GB/T 1591	Q390B	390	650	20
Japan	GB/T 1591	Q420B	420	680	19
	JIS A5528	SY295	295	490	17
	JIS A5528	SY390	390	540	15

### MANUFACTURING TOLERANCES TO BS EN 10248



Component	ESC-HRZ Series	Hot Rolled U Series	NS-SP Series	FL Series
Mass	± 5%	± 5%	± 5%	± 5%
Length	± 200mm	± 200mm	± 200mm	± 200mm
Height (≤ 200mm)	± 5.0mm	± 4.0mm	± 4.0mm	N/A
Height (> 200mm & ≤ 300mm)	± 6.0mm	± 5.0mm	± 4.0mm	N/A
Height (> 300mm)	± 7.0mm	± 5.0mm	± 4.0mm	N/A
Thickness (≤ 8.5 mm)	± 0.5 mm	± 0.5 mm	± 0.5 mm	± 0.5 mm
Thickness (> 8.5 mm)	± 6% of thickness	± 6% of thickness	± 6% of thickness	N/A
Width of Single	± 2% of width	± 2% of width	± 2% of width	± 2% of width
Width of Pair	± 3% of width	± 3% of width	N/A	N/A
Straightness	±0.2% of the length	±0.2% of the length	±0.2% of the length	±0.2% of the length
Squareness of Ends	± 2% of the width	± 2% of the width	± 2% of the width	± 2% of the width

