WATCH ESC INSTALL IT'S CORNER HOT ROLLED U SHEET PILE

HOT ROLLED U SERIES

U PROFILE SHEET PILES

THE MOST COMMMONLY USED U SHEET PILES IN THE WORLD

The Hot Rolled U Sheet Pile was produced over 90 years ago and millions of tons of it have been used globally. The thicker rolled flange and interlock design enable multiple reusage making Hot Rolled U Sheet Piles a common choice for temporary works. Utilising various profile and interlock designs, ESC is able to offer stock and made-to-order Hot Rolled U Sheet Piles available from various countries in the world. With stock available in ESC facilities in China and UAE ESC is able to respond to urgent customer requests in a timely fashion at competitive prices.

ORDER OPTIONS

Steel Grades	✓ SY295, SY390 & S355GP for Type II to Type VI_L
	✓ S240GP, S275GP, S355GP & S390 for VL506A to VL606K
Length	27.0m maximum
Delivery Options	✓ Single or Pairs
	✓ Pairs either loose, welded or crimped
	✓ Lifting Hole
	✓ By container (11.8m or less) or Break Bulk
	✓ Corrosion Protection Coatings

Type II to Type VL

Type IIw to HRU30-600

Section	Width (w)	Height (h)	Thickness Flange (t_f)	Thickness Web (t_w)	Cross Sectional Area	Weight Per Pile	Weight Per Wall	Elastic Section Modulus	Moment of Inertia	Coating Area (both sides per pile)
	mm	mm	mm	mm	cm²/m	kg/m	kg/m²	cm³/m	cm⁴/m	m²/m
Type II	400	200	10.5	-	152.9	48.0	120.0	**874**	8,740	1.33
Type III	400	250	13.0	-	191.1	60.0	150.0	**1,340**	16,800	1.44
Type IIIA	400	300	13.1	-	186.0	58.4	146.0	**1,520**	22,800	1.44
Type IV	400	340	15.5	-	242.0	76.1	190.0	**2,270**	38,600	1.61
Type VL	500	400	24.3	-	267.5	105.0	210.0	**3,150**	63,000	1.75
Type II_w	600	260	10.3	-	131.2	61.8	103.0	**1,000**	13,000	1.77
Type III_w	600	360	13.4	-	173.2	81.6	136.0	**1,800**	32,400	1.90
Type IV_w	600	420	18.0	-	225.5	106.0	177.0	**2,700**	56,700	1.99
Type VI_L	500	450	27.6	-	305.7	120.0	240.0	**3,820**	86,000	1.82

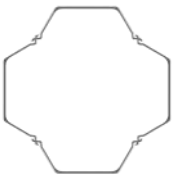
HRU25-750

Section	Width (w)	Height (h)	Thickness Flange (t_f)	Thickness Web (t_w)	Cross Sectional Area	Weight Per Pile	Weight Per Wall	Elastic Section Modulus	Moment of Inertia	Coating Area (both sides per pile excluding inside of the clutch)
	mm	mm	mm	mm	cm²/m	kg/m	kg/m²	cm³/m	cm⁴/m	m²/m
HRU601-600	600	310	7.5	6.4	98.3	46.3	77.2	**744**	11,530	1.60
HRU602-600	600	310	8.2	8.0	113.3	53.4	89.0	**830**	12,870	1.60
HRU603-600	600	310	9.7	8.2	138.3	64.8	108.0	**1200**	18,600	1.69
HRU607-600	600	452	19.0	10.6	241.7	114.0	190.0	**3200**	72,320	1.91
HRU16-600	600	430	10.2	8.4	154.2	72.6	121.0	**1670**	35,950	1.74
HRU18-600	600	430	11.2	9.0	163.3	76.9	128.2	**1800**	38,650	1.74
HRU19-600	600	430	12.2	9.5	172.3	81.1	135.2	**1920**	41,320	1.74
HRU20-600	600	450	11.1	9.0	173.9	81.9	136.5	**2060**	46,380	1.80
HRU22-600	600	450	12.1	9.5	182.9	86.1	143.6	**2200**	49,460	1.80
HRU23-600	600	450	13.1	10.0	192.0	90.4	150.7	**2335**	52,510	1.80
HRU26-600	600	452	14.2	9.7	206.8	97.4	162.3	**2680**	60,580	1.86
HRU28-600	600	454	15.2	10.1	216.1	101.8	169.6	**2840**	64,460	1.86
HRU30-600	600	456	16.2	10.5	225.6	106.2	177.1	**3000**	68,380	1.86
HRU25-750	750	450	14.5	10.2	188.0	110.4	147.2	**2500**	56,240	2.06

OTHER CONFIGURATIONS

Double U Box Pile

Triple U Box Pile



Quadruple U Box Pile

Box Piles can be fabricated out of individual U sections to boost the Moment Capacity of the wall without changing the pile profile. Corners and junctions can be implemented using either a welded interlock or slicing a profile and welding it to the end profile.

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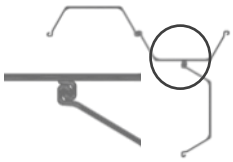
1/4

ESC-9J Welded Interlock



U Pile cut in half and welded on flange

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STEEL GRADES & MANUFACTURING TOLERANCES

HOT ROLLED SHEET PILES

STEEL GRADES

CLASSIFICATION			Minimum Yield Strength	Ultimate Tensile Strength	Minimum Elongation
Region	Code	Grade	MPa	MPa	%
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
	ASTM A572	Grade 65	450	550	15
Canada	**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

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

CLASSIFICATION			Minimum Yield Strength	Ultimate Tensile Strength	Minimum Elongation
Region	Code	Grade	MPa	MPa	%
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
	GB/T 1591	Q420B	420	680	19
Japan	**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

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