

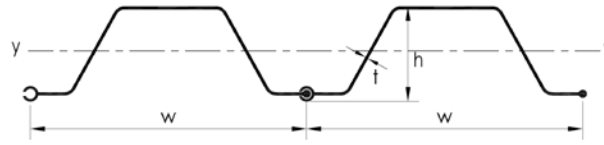
SHEET PILE TECHNICAL SPECIFICATION

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An affiliate of:

ESC-EU SERIES



Interlocking Clutch



SECTION	WIDTH	HEIGHT	THICKNESS	CROSS SECTIONAL AREA	WEIGHT		ELASTIC SECTION MODULUS	MOMENT OF INERTIA	COATING AREA
	(w) in mm	(h) in mm	(t) in mm	in ² /ft cm ² /m	Per Pile lb/ft kg/m	Per Wall lb/ft ² kg/m ²	in ³ /ft cm ³ /m	in ⁴ /ft cm ⁴ /m	ft ² /ft m ² /m
ESC-EU3	31.5 800	6.73 171	0.23 5.75	3.45 73	30.84 45.9	11.74 57.3	6.14 330	22.19 3,040	6.5 1.98
ESC-EU4	30.31 770	7.4 188	0.23 5.75	3.58 75.8	30.84 45.9	12.19 59.5	7.44 400	28.47 3,900	6.5 1.98
ESC-EU5	29.13 740	8.23 209	0.23 5.75	3.73 79	30.84 45.9	12.7 62	9.3 500	36.94 5,060	6.5 1.98
ESC-EU6	27.17 690	9.33 237	0.23 5.75	3.99 84.6	30.84 45.9	13.6 66.4	11.16 600	50.22 6,880	6.5 1.98
ESC-EU7	28.74 730	8.27 210	0.31 7.75	5.07 107.5	41.4 61.6	17.29 84.4	12.83 690	50.15 6,870	6.59 2.01
ESC-EU8	27.56 700	9.29 236	0.31 7.75	5.3 112.2	41.4 61.6	18.04 88.1	15.07 810	64.61 8,850	6.63 2.02
ESC-EU9	30.31 770	10.28 261	0.31 7.75	5.42 114.9	46.7 69.5	18.47 90.2	16.93 910	81.91 11,220	7.28 2.22
ESC-EU12	45.67 1,160	15.98 406	0.31 7.75	5.36 113.5	69.42 103.3	18.25 89.1	23.25 1,250	190.02 26,030	10.7 3.26
ESC-EU13	44.88 1,140	16.1 409	0.31 7.75	5.45 115.4	69.42 103.3	18.55 90.6	24.18 1,300	198.27 27,160	10.7 3.26
ESC-EU14	43.7 1,110	16.89 429	0.31 7.75	5.6 118.6	69.42 103.3	19.07 93.1	26.23 1,410	221.19 30,300	10.66 3.25
ESC-EU15	41.73 1,060	17.28 439	0.31 7.75	5.86 124.2	69.42 103.3	19.97 97.5	28.27 1,520	245.5 33,630	10.66 3.25
ESC-EU18	55.51 1,410	19.06 484	0.37 9.5	6.24 132.2	98.31 146.3	21.26 103.8	33.48 1,800	308.13 42,210	12.63 3.85
ESC-EU19	54.72 1,390	19.49 495	0.37 9.5	6.33 134.1	98.31 146.3	21.57 105.3	34.78 1,870	324.85 44,500	12.63 3.85
ESC-EU20	53.15 1,350	19.41 493	0.37 9.5	6.51 138	98.31 146.3	22.18 108.3	36.27 1,950	342.66 46,940	12.63 3.85
ESC-EU21	51.97 1,320	20.12 511	0.37 9.5	6.67 141.3	98.31 146.3	22.71 110.9	38.69 2,080	372.74 51,060	12.63 3.85
ESC-EU22	50.39 1,280	20.31 516	0.38 9.75	7.03 149	100.67 149.8	23.96 117	40.92 2,200	406.17 55,640	12.63 3.85
ESC-EU23	50 1,270	20.31 516	0.38 9.75	7.09 150.3	100.67 149.8	24.17 118	42.22 2,270	411.28 56,340	12.63 3.85
ESC-EU24	47.64 1,210	23.03 585	0.38 9.75	7.03 149	100.67 149.8	23.96 117	44.64 2,400	406.17 55,640	11.94 3.64
ESC-EU25	46.46 1,180	22.4 569	0.38 9.75	6.61 140.1	100.67 149.8	22.53 110	46.5 2,500	411.28 56,340	11.48 3.5
ESC-EU26	46.06 1,170	22.28 566	0.38 9.75	7.7 163.2	100.67 149.8	26.23 128.1	48.36 2,600	519.4 71,150	12.63 3.85
ESC-EU27	45.67 1,160	22.6 574	0.38 9.75	8.09 171.5	104.83 156	27.57 134.6	49.85 2,680	563.93 77,250	12.76 3.89

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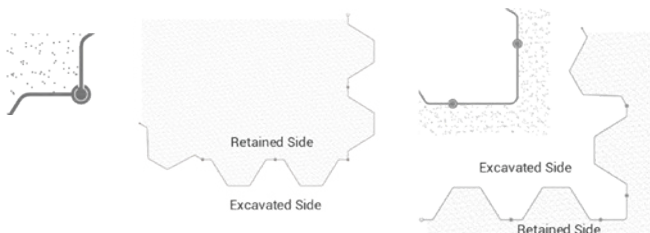
SECTION	WIDTH	HEIGHT	THICKNESS	CROSS SECTIONAL AREA	WEIGHT		ELASTIC SECTION MODULUS	MOMENT OF INERTIA	COATING AREA *(both side per pile)
	(w)	(h)	(t)		Per Pile	Per Wall			
	in	in	in	in ² /ft	lb/ft	lb/ft ²	in ³ /ft	in ⁴ /ft	ft ² /ft
	mm	mm	mm	cm ² /m	kg/m	kg/m ²	cm ³ /m	cm ⁴ /m	m ² /m
ESC-EU28	50.39 1,280	20.87 530	0.46 11.75	8.72 184.8	124.86 185.8	29.72 145.1	51.34 2,760	522.24 71,540	12.8 3.9
ESC-EU32	54.33 1,380	24.21 615	0.46 11.75	8.9 188.5	137.22 204.2	30.31 148	59.52 3,200	701.97 96,160	14.07 4.29
ESC-EU36	50.79 1,290	25.28 642	0.46 11.75	9.52 201.7	137.22 204.2	32.42 158.3	66.77 3,590	817.16 111,940	14.11 4.3
ESC-EU38	49.21 1,250	26.02 661	0.46 11.75	8.9 188.5	137.22 204.2	30.31 148	59.52 3,200	701.97 96,160	12.76 3.89
ESC-EU40	56.69 1,440	23.23 590	0.61 15.5	12.38 262.3	182.58 271.7	42.17 205.9	85.56 4,600	1006.67 137,900	15.55 4.74
ESC-EU46	51.97 1,320	24.49 622	0.61 15.5	12.38 262.3	182.58 271.7	42.17 205.9	85.56 4,600	1006.67 137,900	14.24 4.34
ESC-EU48	50.39 1,280	25.24 641	0.61 15.5	12.76 270.3	182.58 271.7	43.46 212.2	89.28 4,800	1090.55 149,390	14.24 4.34
ESC-EU50	48.82 1,240	25.51 648	0.61 15.5	13.17 279.1	182.58 271.7	44.87 219.1	93 5,000	1153.98 158,080	11.48 3.5
ESC-EU60	41.73 1,060	29.09 739	0.61 15.5	15.41 326.5	182.58 271.7	52.49 256.3	111.6 6,000	1636.51 224,180	13.45 4.1
ESC-EU65	59.06 1,500	29.09 739	0.71 18	14.73 312.1	246.96 367.5	50.18 245	120.9 6,500	1718.06 235,350	11.25 3.43
ESC-EU70	59.06 1,500	29.61 752	0.79 20	16.23 343.9	272.29 405.2	55.3 270	131.69 7,080	1924.21 263,590	11.22 3.42
ESC-EU80	59.06 1,500	30.08 764	0.87 22	18.2 385.5	298.84 444.7	61.97 302.6	148.99 8,010	2205.55 302,130	11.48 3.5

*excludes internal section of interlock

NORTH AMERICAN SIZES



ESC-EU14-770	60.676 1,540	15.839 402	0.375 9.525	5.79 122.5	99.52 148.1	19.68 96.1	27 1,440	224 30,640	12.83 3.91
ESC-EU19-700	55.16 1,400	18.794 477	0.375 9.525	6.39 135.1	99.52 148.1	21.71 106.0	36 1,930	339 46,480	12.86 3.92
ESC-EU26-700	55.16 1,400	18.912 480	0.500 12.7	8.55 180.9	133.59 198.8	29.08 142.0	49 2,610	460 63,010	12.96 3.95
ESC-EU38-700	55.16 1,400	24.152 613	0.500 12.7	9.86 208.6	154.02 229.2	33.55 163.8	73 3,900	874 119,700	14.93 4.55
ESC-EU48-700	55.16 1,400	25.768 654	0.625 15.875	12.15 257.0	189.77 282.4	41.31 201.7	88 4,740	1132 155,080	14.93 4.55
ESC-EU50-580	45.704 1,160	28.053 712	0.500 12.7	11.90 251.8	154.02 229.2	40.49 197.7	94 5,080	1328 181,880	14.93 4.55



CORNER PILES

The slotted pipe clutch can be orientated at any angle allowing almost any corner configuration, without requiring any wastage or additional welding. For internal corners a special piece can be fabricated with little cost due to the flexibility in the cold forming process. 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

MANUFACTURING TOLERANCES

COMPONENT	BS EN1024-9	ASTM A6	NOMINAL THICKNESS	TOLERANCE
Mass	± 5%	±2.5%	0.197" / 5mm	± 0.0114" / 0.29mm
Length	± 2.0" / 50mm	+ 5.0" / 127mm	0.236" / 6mm	± 0.0122" / 0.31mm
Height (≤ 7.87" / 200mm)	± 0.157" / 4.0mm		0.315" / 8mm	± 0.0138" / 0.35mm
Height (> 7.87" / 200mm & ≤ 11.8" / 300mm)	± 0.236" / 6.0mm		0.354" / 9mm	± 0.0157" / 0.40mm
Height (> 11.8" / 300mm & ≤ 15.8" / 400mm)	± 0.315" / 8.0mm		0.393" / 10mm	± 0.0157" / 0.40mm
Height (> 15.8" / 400mm)	± 0.394" / 10.0mm		0.472" / 12mm	± 0.0169" / 0.43mm
Width of Single Pile	± 2% of width		0.512" / 13mm	± 0.0181" / 0.46mm
Width of Double Z or Wide U	± 3% of width		0.591" / 15mm	± 0.0181" / 0.46mm
Squareness of Ends	2% of width		N/A	
Straightness	±0.2% of the length			
Squareness of Ends	± 2% of the width			



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.



STEEL GRADES

CLASSIFICATION		MECHANICAL PROPERTIES					CHEMICAL COMPOSITION % (MAX)					
		MINIMUM YIELD STRENGTH		ULTIMATE TENSILE STRENGTH		MINIMUM ELONGATION	IMPACT STRENGTH (CHARPY)	C	Si	Mn	P	S
		ksi	MPa	ksi	MPa							
ASTM A36-14	A36	36	250	58-80	400-550	23	-	0.26	0.40	-	0.040	0.050
ASTM A572-2013a	A572 Gr.42	42	290	≥ 60	≥415	20	-	0.21	0.40	1.35	0.040	0.050
	A572 Gr.50	50	345	≥ 65	≥450	18	-	0.23	0.40	1.30	0.040	0.050
	A572 Gr.55	55	380	≥ 60	≥485	17	-	0.25	0.40	1.35	0.030	0.030
	A572 Gr.60	60	413	≥ 75	≥517	16	-	0.26	0.40	1.35	0.040	0.050
	A572 Gr.65	65	450	≥ 80	≥550	15	-	0.23	0.40	1.35	0.030	0.030
ASTM A588	A588 Gr.50A	50	345	≥ 70	≥485	18	-	0.19	0.30-0.65	0.80-1.25	0.040	0.050
	A588 Gr.50B	50	345	≥ 70	≥485	18	-	0.20	0.15-0.50	0.75-1.35	0.040	0.050
ASTM A690	A690 Gr.50	50	345	≥ 70	>485	21	-	0.22	0.40	0.60-0.90	0.08-.015	0.040
ASTM A871	A871 Gr.60 Type I	60	415	≥ 75	>520	16	15ft-lb [20J] @ 0°F [-18°C] for t≤0.5" [12mm] 15ft-lb [20J] @ -20°F [-29°C] for t>0.5" [12mm]	0.19	0.30-0.65	0.8-1.35	0.030	0.030
	A871 Gr.60 Type II	60	415	≥ 75	>520	16		0.20	0.15-0.50	0.75-1.35	0.030	0.030
	A871 Gr.60 Type IV	60	415	≥ 75	>520	16		0.17	0.25-0.50	0.50-1.20	0.030	0.030
	A871 Gr.65 Type I	65	450	≥ 80	>550	15	15ft-lb [20J] @ 0°F [-18°C] for t≤0.5" [12mm] 15ft-lb [20J] @ -20°F [-29°C] for t>0.5" [12mm]	0.19	0.30-0.65	0.80-1.35	0.030	0.030
	A871 Gr.65 Type II	65	450	≥ 80	>550	15		0.20	0.15-0.50	0.75-1.35	0.030	0.030
	A871 Gr.65 Type IV	65	450	≥ 80	>550	15		0.17	0.25-0.50	0.50-1.20	0.030	0.030
ASTM A1018	A1018 Gr.50 Class1	50	340	≥ 65	>450	16	-	0.23	-	1.50	0.040	0.040
	A1018 Gr.50 Class2	50	340	≥ 60	>410	16	-	0.15	-	1.50	0.040	0.040
	A1018 Gr.60 Class1	60	410	≥ 75	>520	14	-	0.26	-	1.50	0.040	0.040
	A1018 Gr.60 Class2	60	410	≥ 70	>480	14	-	0.15	-	1.50	0.040	0.040
	A1018 Gr.70 Class1	70	480	≥ 85	>590	10	-	0.26	-	1.65	0.040	0.040
	A1018 Gr.70 Class2	70	480	≥ 80	>550	10	-	0.15	-	1.65	0.040	0.040
	A1018 Gr.80	80	550	≥ 90	>620	10	-	0.15	-	1.65	0.025	0.035

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