

Corus Construction & Industrial

# Frodingham and Larssen sheet piling - imperial units



## Frodingham piles summary table

section	width of one pile	thickness of the pan	mass	elastic section modulus	plastic section modulus
	ins	ins	lbs/ft <sup>2</sup>	ins <sup>3</sup> /ft	ins <sup>3</sup> /ft
1 BXN	18.75	0.50	27.26	12.88	15.98
1N	19.00	0.35	20.35	13.29	15.46
2N	19.00	0.38	23.27	21.60	24.80
3NA	19.00	0.38	26.61	31.38	36.02
4N	19.00	0.55	35.10	44.92	51.84
5	16.75	0.67	48.63	58.98	68.51

## LX and Larssen piles summary table

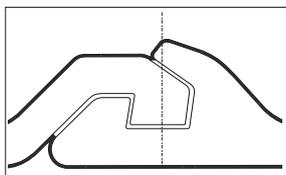
section	width of one pile	thickness of the pan	mass	elastic section modulus	plastic section modulus
	ins	ins	lbs/ft <sup>2</sup>	ins <sup>3</sup> /ft	ins <sup>3</sup> /ft
LX8	23.62	0.32	18.62	15.44	18.91
LX12	23.62	0.38	21.79	22.47	25.69
LX12d	23.62	0.39	22.28	23.06	26.36
LX12d10	23.62	0.39	24.85	23.84	27.78
LX16	23.62	0.41	25.28	30.53	35.32
LX20	23.62	0.49	28.37	37.62	43.83
LX20d	23.62	0.44	28.76	37.36	44.28
LX25	23.62	0.53	32.40	46.63	54.21
LX25d	23.62	0.59	34.09	47.32	55.50
LX32	23.62	0.75	39.01	59.68	68.88
LX32d	23.62	0.85	43.14	62.27	72.91
LX38	23.62	0.89	47.90	70.77	82.96
6W	20.67	0.31	17.48	11.42	13.23
20Wd	20.67	0.44	31.45	37.73	44.18
6-42	19.69	0.81	54.41	78.33	91.75
6(122)	16.54	0.87	59.66	77.88	92.93
6(131)	16.54	1.00	63.65	85.90	101.95
6(138)	16.54	1.13	67.36	93.09	110.19

In addition to the sections listed above, Corus can produce a range of rolled corner sections and fabricated corner and junction piles, tailored to project requirements. Full details available on request.

# Frodingham piles

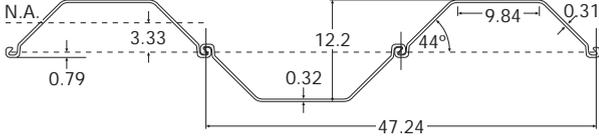
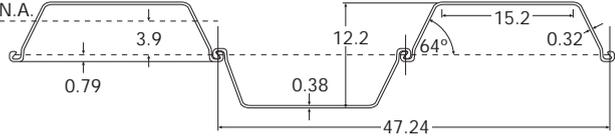
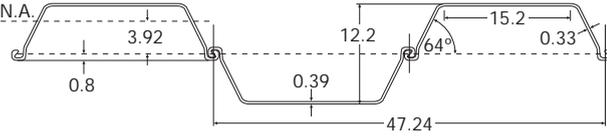
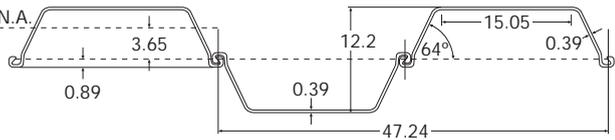
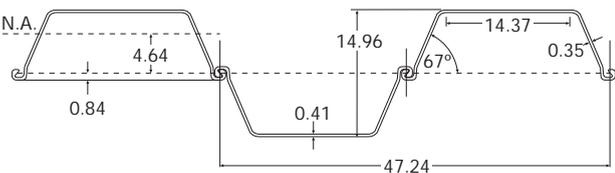
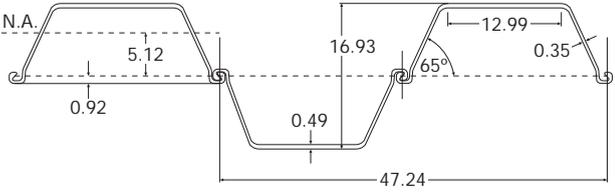
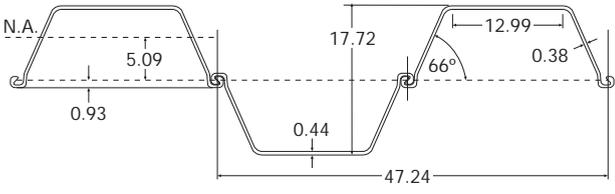
section	dimensions	sectional area	mass	mass	combined moment of inertia	elastic section modulus	plastic section modulus	coating area* per pile	coating area* per m wall
<b>1BXN</b>		8.01	42.59	27.26	36.22	12.88	15.98	3.82	2.44
<b>1N</b>		5.98	32.22	20.35	44.46	13.29	15.46	4.01	2.53
<b>2N</b>		6.84	36.84	23.27	99.89	21.60	24.80	4.41	2.78
<b>3NA</b>		7.82	42.14	26.61	188.27	31.38	36.02	4.85	3.06
<b>4N</b>		10.31	55.57	35.10	291.96	44.92	51.84	5.00	3.16
<b>5</b>		14.29	67.88	48.63	361.23	58.98	68.51	4.96	3.56

Frodingham piles may be available rolled up or down on request.



\* The coating area excludes the inside of the interlock as shown on the adjacent drawing.

# LX and Larssen piles

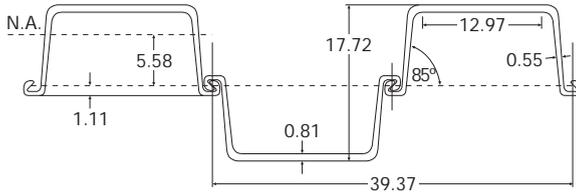
section	dimensions	sectional area	mass	combined moment of inertia	elastic section modulus	plastic section modulus	coating area*
	ins	ins <sup>2</sup>	lbs/ft	ins <sup>4</sup>	ins <sup>3</sup>	ins <sup>3</sup>	ft <sup>2</sup> /ft
<b>LX8</b>	per ft of wall per single pile	5.48 10.78	18.62 36.66	94.19 65.9	15.44 16.04	18.91	2.54 4.99
							
<b>LX12</b>	per ft of wall per single pile	6.41 12.61	21.79 42.89	137.14 77.74	22.47 16.60	25.69	2.72 5.35
							
<b>LX12d</b>	per ft of wall per single pile	6.55 12.9	22.28 43.85	140.73 79.24	23.06 16.83	26.36	2.72 5.36
							
<b>LX12d10</b>	per ft of wall per single pile	7.31 14.39	24.85 48.91	145.48 94.63	23.84 20.89	27.78	2.74 5.4
							
<b>LX16</b>	per ft of wall per single pile	7.43 14.63	25.28 49.75	228.35 134.87	30.53 24.64	35.32	2.91 5.73
							
<b>LX20</b>	per ft of wall per single pile	8.34 16.42	28.37 55.84	318.43 195.71	37.62 32.42	43.83	3.00 5.91
							
<b>LX20d</b>	per ft of wall per single pile	8.46 16.65	28.76 56.6	330.97 220.4	37.36 36.67	44.28	3.07 6.04
							

# LX and Larssen piles

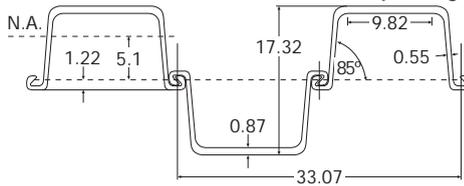
section	dimensions	sectional area	mass	combined moment of inertia	elastic section modulus	plastic section modulus	coating area*
	ins						
<b>LX25</b>	<b>per ft of wall per single pile</b>	9.53 18.76	32.4 63.78	422.21 251.63	46.63 38.77	54.21	3.15 6.21
<b>LX25d</b>	<b>per ft of wall per single pile</b>	10.03 19.74	34.09 67.11	419.21 245.79	47.32 38.79	55.50	3.05 6.01
<b>LX32</b>	<b>per ft of wall per single pile</b>	11.47 22.58	39.01 76.78	540.44 278.73	59.68 40.79	68.88	3.11 6.12
<b>LX32d</b>	<b>per ft of wall per single pile</b>	12.69 24.98	43.14 84.92	551.59 291.93	62.27 44.35	72.91	3.03 5.97
<b>LX38</b>	<b>per ft of wall per single pile</b>	14.09 27.73	47.9 94.28	640.83 337.79	70.77 49.64	82.96	3.11 6.13
<b>6W</b>	<b>per ft of wall per single pile</b>	5.14 8.85	17.48 30.11	47.66 30.08	11.42 9.36	13.23	2.54 4.38
<b>20Wd</b>	<b>per ft of wall per single pile</b>	9.25 15.93	31.45 54.18	297.12 169.43	37.73 30.46	44.18	3.26 5.61

# LX and Larssen piles

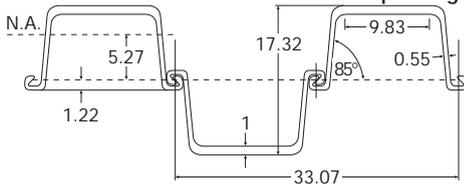
section	dimensions	sectional area ins <sup>2</sup>	mass lbs/ft	combined moment of inertia ins <sup>4</sup>	elastic section modulus ins <sup>3</sup>	plastic section modulus ins <sup>3</sup>	coating area* ft <sup>2</sup> /ft
	ins						
<b>L6-42</b>	<b>per ft of wall per single pile</b>	16.01	54.41	693.88	78.33	91.75	3.64
		26.26	89.27	321.76	48.13		5.98



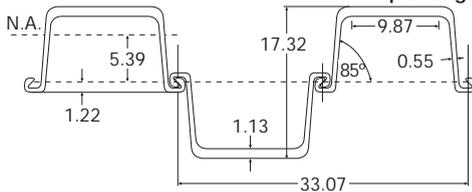
<b>6 (122)</b>	<b>per ft of wall per single pile</b>	17.55	59.66	674.54	77.88	92.93	3.92
		24.18	82.23	301.09	47.65		5.4



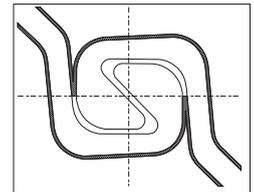
<b>6 (131)</b>	<b>per ft of wall per single pile</b>	18.73	63.65	743.99	85.9	101.95	3.90
		25.8	87.73	311.3	48.04		5.38



<b>6 (138.7)</b>	<b>per ft of wall per single pile</b>	19.82	67.36	806.31	93.09	110.19	3.89
		27.3	92.84	318.83	48.26		5.36

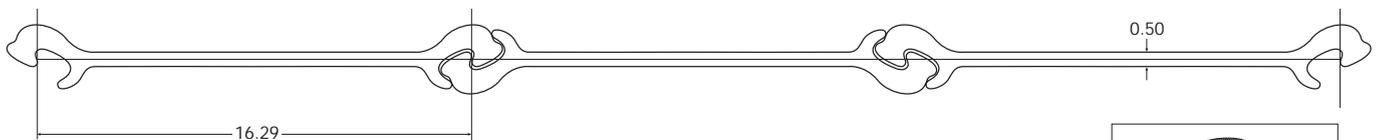


\* The coating area excludes the inside of the interlock as shown on the adjacent drawing.

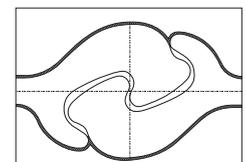


## Straight Web SW1A

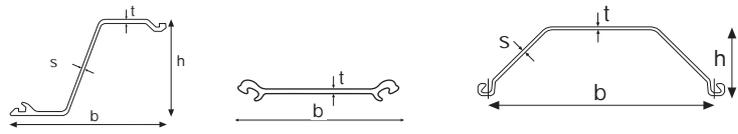
B nominal ins	t ins	area single pile ins <sup>2</sup>	mass per ft of pile lb/ft	mass per ft <sup>2</sup> of pile lb/ft <sup>2</sup>	mass per ft of junction lb/ft	ultimate interlock strength			coating area per single pile** ft <sup>2</sup> /ft	coating area per metre of wall** ft <sup>2</sup> /ft <sup>2</sup>	max deviation angle degrees
						S270GP KIPS/inch	S355GP KIPS/inch	ASTM A328 KIPS/inch			
16.29	0.50	12.53	42.65	31.42	63.98	16.0	21.5	16.7	3.27	2.41	6



\*\* The coating area excludes the inside of the interlock as shown on the adjacent drawing.



# Tolerances for piles



section	width		thickness		weight length	squareness of cut % of width	straightness	depth (h)			
	single pile	interlocked piles	≤ 0.335 in	> 0.335 in				h ≤ 8 in	8 in < h < 11.8 in	h ≥ 11.8 in	
<b>Frodingham &amp; SW1A</b>	± 2% b	± 3% (2b)	(s or t) ± 0.02 in	(s or t) ± 6%	± 5%	± 8 in	≤ 2%	≤ 0.2% of length	± 0.20 in	± 0.24 in	± 0.28 in
<b>LX &amp; Larssen</b>	± 2% b	± 3% (2b)	t ± 0.02 in s - 0.02 in	± 6% t - 6% s	± 5%	± 8 in	≤ 2%	≤ 0.2% of length	± 0.16 in	± 0.2 in	

Squareness of cut tolerance applies in both the x-x and y-y axes.

## Steel qualities

### ASTM Specification

specification	minimum yield strength**		minimum tensile strength**		elongation on a gauge length of L <sub>o</sub> = 8 inches A%
	ksi	N/mm <sup>2</sup>	ksi	N/mm <sup>2</sup>	
A328	39	270	70	485	17
A572: Grade 50	50	345	65	450	18

Marine grades are also available on request.

ASTM A572 55 and 60 ksi equivalent steel grades may be available on request.

### European Specification

designation EN 10027		classification EN 10020	minimum yield strength**		minimum tensile strength**		elongation on a gauge length of L <sub>o</sub> = 5.65 √S <sub>o</sub> A%
steel name	steel number		ksi	N/mm <sup>2</sup>	ksi	N/mm <sup>2</sup>	
EN 10248 S270GP	1.0023	Base Steel	39	270	59	410	24
EN10248 S355GP	1.0083	Base Steel	51	355	69	480	22

S390GP or S430GP equivalent steel grades may be available on request.

\*\* The values in the table apply to longitudinal test pieces for the tensile test.

## Interlocking options for LX and Larssen piles

	LX8	LX12	LX16	LX20	LX25	LX32	LX38	6W	20Wd	6-42	6
LX8	.	.	.					.			
LX12 <sup>+</sup>	.	.	.					.			
LX16	.	.	.	.	.	.	.	.	.	.	.
LX20 <sup>+</sup>			.	.	.	.	.	.	.	.	.
LX25 <sup>+</sup>			.	.	.	.	.	.	.	.	.
LX32 <sup>+</sup>			.	.	.	.	.	.	.	.	.
LX38			.	.	.	.	.	.	.	.	.
6W	.	.	.					.			
20Wd			.	.	.	.	.	.	.	.	.
6-42			.	.	.	.	.	.	.	.	.
6			.	.	.	.	.	.	.	.	.

<sup>+</sup>Interlocking capability also applies to d versions of these sections.

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