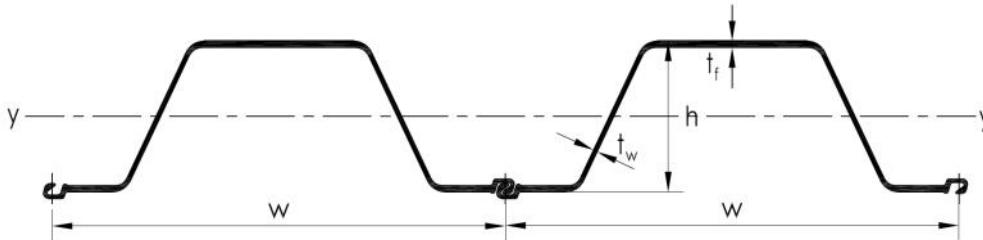


# NS-SP SERIES

The NS-SP series is a hot rolled sheet pile profile. It offers interlocked clutches on one side and features a wide profile of 900mm width. Interlocking clutches are located at the outer fibre. This results in an optimized section profile for high strength and low material weight. The profile features a high moment of inertia reducing deflection meeting serviceability requirements. The wider profile width for a hot rolled sheet pile reduces handling and installation time with normal driving equipment. The wider profile also reduces the number of interlocks required for a set wall run length, improving water-tightness capabilities.

## INTERLOCKING CLUTCH



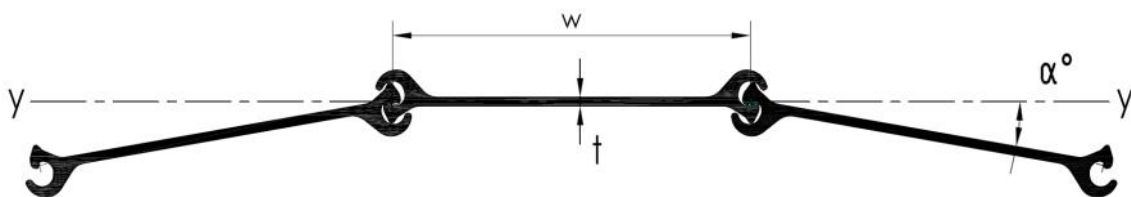
Section	Width (w) mm	Height (h) mm	Thickness Flange (t <sub>f</sub> ) mm	Web (t <sub>w</sub> ) mm	Cross Sectional Area cm <sup>2</sup> /m	Weight Per Pile kg/m	Per Wall kg/m <sup>2</sup>	Elastic Section Modulus cm <sup>3</sup> /m	Moment of Inertia cm <sup>4</sup> /m
NS-SP-10H	900	230	10.8	-	122.2	86.4	96.0	902	10,500
NS-SP-25H	900	300	13.2	-	160.4	113.0	126.0	1,610	24,400
NS-SP-45H	900	368	15.0	-	207.8	147.0	163.0	2,450	45,000
NS-SP-50H	900	370	17.0	-	236.3	167.0	186.0	2,760	51,100

## ORDER OPTIONS

- Steel Grades** ✓ SYW295, SYW390, SYW430(on request)
- Length** 30.0m maximum
- Delivery Options** ✓ Lifting Hole
- ✓ By container (11.8m or less) or Break Bulk
- ✓ Corrosion Protection Coatings

# FL SERIES

The FL series is a hot rolled straight web sheet pile profile. It features high interlocking clutch strength. It is ideal for circular structures and coffering. The FL Series Sheet Piles can be preassembled as one large cellular unit and dropped in a submerged location, where they can be driven in sequence.



Section	Width (w) mm	Height (h) mm	Thickness (t) mm	Cross Sectional Area cm <sup>2</sup> /m	Weight Per Pile kg/m	Per Wall kg/m <sup>2</sup>	Elastic Section Modulus cm <sup>3</sup> /m	Moment of Inertia cm <sup>4</sup> /m	Coating Area (both sides per pile) m <sup>2</sup> /m
FL1	500	45	9.5	157.2	61.7	123.4	89	396	1.39
FL2	500	47	12.7	196.7	77.2	154.4	121	570	1.41

## ORDER OPTIONS

- Steel Grades** ✓ SYW295, SYW390, SYW430
- ✓ SY295, SY390
- ✓ S355GP, S430GP
- ✓ A572Gr50
- Length** 38.0m maximum
- Delivery Options** ✓ By container (11.8m or less) or Break Bulk

# 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

