

Hat-type sheet piles



Superb drivability

The large sectional area of the Hat-type sheet pile realizes superior drivability.

High structural reliability

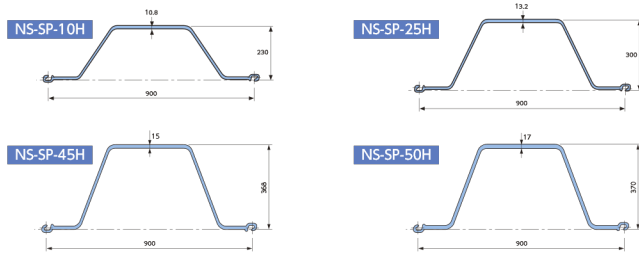
No reduction is required in sectional properties to consider the possible lack of shear force transmission at the interlocks, which is true for U-type steel sheet piles.

Excellent cost-effectiveness

The amount of steel per unit wall can be reduced, resulting in improved total cost.



Shapes



Deviation angle

Each interlock allows for a certain rotation. The minimum angle of coupling mating joint (the interlock swing) for the combination of the identical versions of Hat-type sheet piles is shown in the figure below.

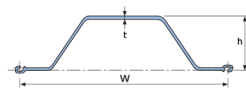


Compatibility



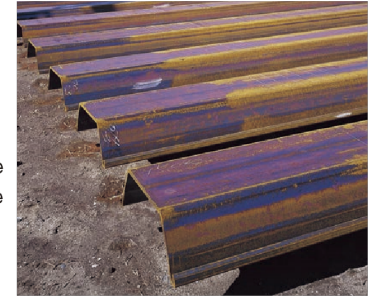
Sectional properties

Type	Dimension			Per pile				Per 1 m of pile wall width			
	Effective width W mm	Effective height h mm	Thickness t mm	Sectional area cm <sup>2</sup>	Moment of inertia cm <sup>4</sup>	Section modulus cm <sup>3</sup>	Unit mass kg/m	Sectional area cm <sup>2</sup> /m	Moment of inertia cm <sup>4</sup> /m	Section modulus cm <sup>3</sup> /m	Unit mass kg/m <sup>2</sup>
NS-SP-10H	900	230	10.8	110.0	9,430	812	86.4	122.2	10,500	902	96.0
NS-SP-25H	900	300	13.2	144.4	22,000	1,450	113	160.4	24,400	1,610	126
NS-SP-45H	900	368	15.0	187.0	40,500	2,200	147	207.8	45,000	2,450	163
NS-SP-50H	900	370	17.0	212.7	46,000	2,490	167	236.3	51,100	2,760	186

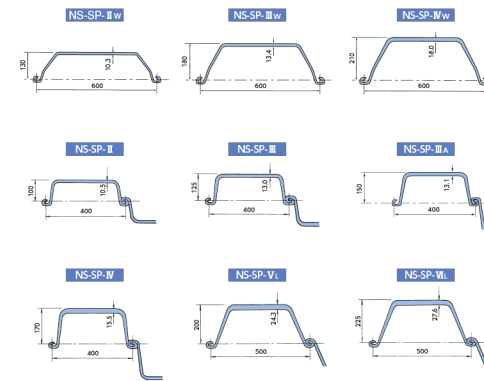


U-type sheet piles

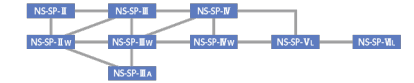
- U-type sections have been widely used for various types of permanent and temporary structures, and are one of the most familiar sheet piles among both designers and users.
- NS-SP-II, III, IIIA, IV, V<sub>L</sub> and VI<sub>L</sub> are solidly designed. These sections are especially suitable for repeated use, and have acquired high market acceptance from users.
- U-type sections offer section modulus ranging from 874 cm<sup>3</sup>/m to 3,820 cm<sup>3</sup>/m.



Shapes

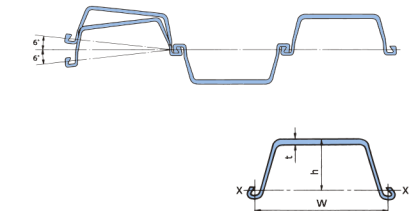


Compatibility



Deviation Angle

Each interlock allows a certain rotation. The minimum angle of deviation (the interlock swing) for the combination of the identical versions of U-type sheet piles is shown in the figure below.



Sectional properties

Type	Dimension			Per pile				Per 1 m of pile wall width			
	Effective width W mm	Effective height h mm	Thickness t mm	Sectional area cm <sup>2</sup>	Moment of inertia cm <sup>4</sup>	Section modulus cm <sup>3</sup>	Unit mass kg/m	Sectional area cm <sup>2</sup> /m	Moment of inertia cm <sup>4</sup> /m	Section modulus cm <sup>3</sup> /m	Unit mass kg/m <sup>2</sup>
NS-SP-II	400	100	10.5	61.18	1,240	152	48.0	153.0	8,740	874	120
NS-SP-III	400	125	13.0	76.42	2,220	223	60.0	191.0	16,800	1,340	150
NS-SP-IIIA	400	150	13.1	74.40	2,790	250	58.4	186.0	22,800	1,520	146
NS-SP-IV	400	170	15.5	96.99	4,670	362	76.1	242.5	38,600	2,270	190
NS-SP-V <sub>L</sub>	500	200	24.3	133.8	7,960	520	105	267.6	63,000	3,150	210
NS-SP-VI <sub>L</sub>	500	225	27.6	153.0	11,400	680	120	306.0	86,000	3,820	240
NS-SP-II <sub>w</sub>	600	130	10.3	78.70	2,110	203	61.8	131.2	13,000	1,000	103
NS-SP-III <sub>w</sub>	600	180	13.4	103.9	5,220	376	81.6	173.2	32,400	1,800	136
NS-SP-IV <sub>w</sub>	600	210	18.0	135.3	8,630	539	106	225.5	56,700	2,700	177