**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.

**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, IV, V, and VI are solidly designed. These sections are especially suitable for repeated use, and have acquired high market acceptance from users.**

**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**

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**

<table>
<thead>
<tr>
<th>Type</th>
<th>Effective width W mm</th>
<th>Effective height h mm</th>
<th>Thickness t mm</th>
<th>Sectional area cm²</th>
<th>Moment of inertia cm⁴</th>
<th>Section modulus cm³</th>
<th>Unit mass kg/m</th>
<th>Per pile</th>
<th>Per 1 m of pile wall width</th>
</tr>
</thead>
<tbody>
<tr>
<td>NS-SP-10H</td>
<td>900</td>
<td>230</td>
<td>10.8</td>
<td>110.0</td>
<td>9,430</td>
<td>1,240</td>
<td>152</td>
<td>48.0</td>
<td>8,740</td>
</tr>
<tr>
<td>NS-SP-25H</td>
<td>900</td>
<td>300</td>
<td>13.2</td>
<td>144.4</td>
<td>22,000</td>
<td>2,490</td>
<td>207.8</td>
<td>150.0</td>
<td>9,180</td>
</tr>
<tr>
<td>NS-SP-45H</td>
<td>900</td>
<td>360</td>
<td>15.0</td>
<td>187.0</td>
<td>40,500</td>
<td>1,450</td>
<td>147</td>
<td>126.0</td>
<td>9,740</td>
</tr>
<tr>
<td>NS-SP-50H</td>
<td>900</td>
<td>370</td>
<td>17.0</td>
<td>212.7</td>
<td>46,000</td>
<td>2,450</td>
<td>167</td>
<td>163.0</td>
<td>9,380</td>
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</tbody>
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