

STEEL SHEET PILES



Steel Sheet Piles JIS A 5528

Standard Specifications

Mechanical Properties

(Grade SY295 or SY390)

JIS A 5528:2000

Type of Product	Classifications		Mechanical Properties		
			Yield Point N/mm ² (min.)	Tensile Strength N/mm ²	Elongation % (min.)
Sheet Pile	JIS A 5528 : 2000	SY295	295	490 min	17
		SY390	390	540 min	15

Chemical Compositions

Type of Product	Classifications		Chemical Compositions (Iadle analysis), %									
			C (max.)	Si (max.)	Mn (max.)	P (max.)	S (max.)	CE ^E (max.)	SW ^F (max.)	Nb (max.)	V (max.)	N (max.)
Sheet Pile	JIS A 5528 : 2000	SY295	-	-	-	0.040	0.040	-	-	-	-	-
		SY390	-	-	-	0.040	0.040	-	-	-	-	-

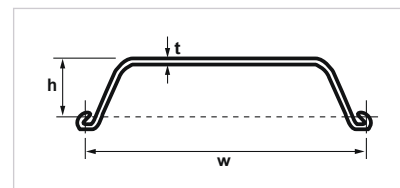
Tolerances

JIS A 5528 : 2000		
Hot Rolled Steel Sheet Pile "U" Shape		
Dimension		Tolerance
Height		± 4%
Width (B)		+ 10 - 5
Thickness	t < 10	± 1.0
	10 ≤ t < 16	± 1.2
	t ≤ 16	± 1.5
Length (L)		+Not Specified 0
Deflection	L ≤ 10 m	Full Length (M) x 0.12% max.
	L > 10 m	Full Length - 10 m x 0.10% + 12 mm max.
Camber	L ≤ 10 m	Full Length (M) x 0.25% max.
	L > 10 m	Full Length - 10 m x 0.20% + 25 mm max.
Difference in Vertically Cut Sections		Within 4% of Width

Note : The deflection shall be in the direction parallel to the sheet pile wall and the camber shall be in the direction vertical to the sheet pile wall.

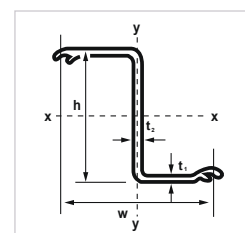
Steel Sheet Piles

Dimensions and Properties



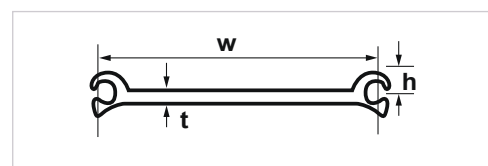
i) U Type

Type	Dimensions			Sectional Area	Weight		Moment Of Inertia		Section Modulus	
	Width w mm	Height h mm	Thickness t mm	Per Pile cm ²	Per Pile kg / m	Per Linear Meter Of Wall kg / m ²	Per Pile cm ⁴	Per Linear Meter Of Wall cm ⁴ / m	Per Pile cm ³	Per Linear Meter Of Wall cm ³ / m
I A	400	85	8.0	45.2	35.5	88.8	598	4,500	88	529
II	400	100	10.5	61.2	48.0	120	1,190	8,700	146	870
II A	400	120	9.2	55.0	43.2	108	1,450	10,600	162	880
III	400	130	13.0	76.4	60.0	150	2,320	17,400	232	1,340
III A	400	150	13.1	74.4	58.4	146	2,840	22,800	253	1,520
IV	400	160	16.0	96.9	76.1	190	4,110	34,400	334	2,150
IV A	400	180	16.2	94.2	74.0	185	4,910	40,600	374	2,250
V L	500	200	24.3	133.8	105.0	210	7,960	63,000	520	3,150
VI L	500	225	27.6	153.0	120.0	240	11,400	86,000	680	3,820



ii) Z Type

Type	Dimensions				Sectional Area	Weight		Moment Of Inertia		Section Modulus	
	Width w mm	Height h mm	Thickness t ₁ mm	Thickness t ₂ mm	Per Pile cm ²	Per Pile kg / m	Per Linear Meter Of Wall kg / m ²	Per Pile cm ⁴	Per Linear Meter Of Wall cm ⁴ / m	Per Pile cm ³	Per Linear Meter Of Wall cm ³ / m
Z 25	400	305	13.0	9.6	94.32	74.0	185	15,300	38,300	1,000	2,510
Z 32	400	344	14.2	10.4	107.7	84.5	211	21,900	54,900	1,280	3,190
Z 38	400	364	17.2	11.4	122.2	96.0	240	27,700	69,200	1,520	3,800
Z 45	400	367	21.9	13.2	148.2	116.0	290	33,400	83,500	1,820	4,550



iii) Flat Type

Type	Dimensions			Sectional Area	Weight		Moment Of Inertia		Section Modulus	
	Width w mm	Height h mm	Thickness t mm	Per Pile cm ²	Per Pile kg / m	Per Linear Meter Of Wall kg / m ²	Per Pile cm ⁴	Per Linear Meter Of Wall cm ⁴ / m	Per Pile cm ³	Per Linear Meter Of Wall cm ³ / m
F	400	44.5	9.5	69.07	54.2	136	190	525	47.8	120
F A	400	44.5	12.7	77.50	60.8	152	196	520	48.3	117