



AZ 39-700

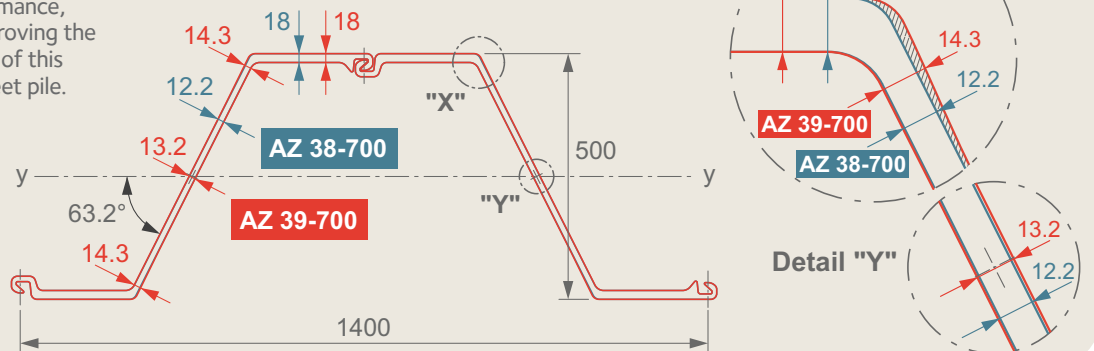
The AZ 38-700, introduced in 2004, represented an important milestone for our rolling mill: the first 700 mm wide hot rolled Z-section, reducing installation time, and material cost due to a 14% savings on weight compared to its predecessor AZ 38.

Although customers and designers confirmed its excellent performance, the challenge consisted in improving the driveability in very dense soils of this already highly competitive sheet pile.

From January 2008 on, the new **AZ 39-700** will replace the existing AZ 38-700:

- same geometry, with 'reinforced shoulders'
- higher section modulus W_x
- stiffer driving element.

The new **AZ 39-700** is bound to meet the highest expectations from our customers.



Section	Width b mm	Height h mm	Thickness		Sectional Area cm ² /m	Mass		Moment of Inertia cm ⁴ /m	Elastic Section Modulus cm ³ /m	Static Moment cm ³ /m	Plastic Section Modulus cm ³ /m	Class *					
			t	s		kg/m of single pile	kg/m ² of wall					S 240 GP	S 270 GP	S 320 GP	S 355 GP	S 390 GP	S 430 GP
AZ 37-700	700	499	17.0	12.2	226	124.2	177.4	92 400	3 705	2 130	4 260	2	2	2	2	2	2
AZ 39-700	700	500	18.0	13.2	240	131.9	188.4	97 500	3 900	2 250	4 500	2	2	2	2	2	2
AZ 41-700	700	501	19.0	14.2	254	139.5	199.4	102 610	4 095	2 370	4 745	2	2	2	2	2	2

* Classification according to EN 1993-5. Class 1 is obtained by verification of the rotation capacity for a class-2 cross-section. Steel grade S 460 AP following specification of the mill and ASTM A 690 are available on request.

Section properties

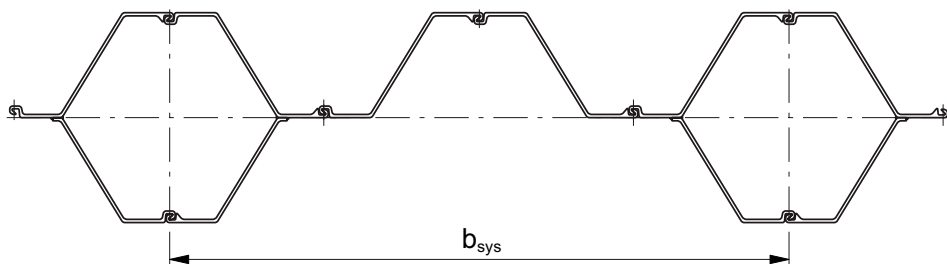
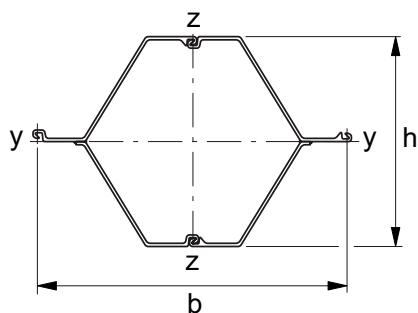
Section	S = Single pile D = Double pile	Sectional Area cm ²	Mass kg/m	Moment of Inertia cm ⁴	Elastic Section Modulus cm ³	Radius of Gyration cm	Coating Area * m ² /m
AZ 37-700	Per S	158.2	124.2	64 680	2 590	20.22	1.03
	Per D	316.4	248.4	129 350	5 185	20.22	2.04
	Per m of wall	226.0	177.4	92 400	3 705	20.22	1.46
AZ 39-700	Per S	168.0	131.9	68 250	2 730	20.16	1.03
	Per D	336.0	263.7	136 500	5 460	20.16	2.04
	Per m of wall	240.0	188.4	97 500	3 900	20.16	1.46
AZ 41-700	Per S	177.8	139.5	71 830	2 865	20.10	1.03
	Per D	355.5	279.1	143 650	5 735	20.10	2.04
	Per m of wall	254.0	199.4	102 610	4 095	20.10	1.46

* One side, excluding inside of interlocks

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CAZ Box pile

Section	Width b	Height h	Perimeter cm	Steel Section cm ²	Total Section cm ²	Mass * kg/m	Moment of Inertia		Elastic Section Modulus		Min. Radius of Gyration cm	Coating Area ** m ² /m
							y - y cm ⁴	z - z cm ⁴	y - y cm ³	z - z cm ³		
CAZ 37-700	1 400	998	431	556	7 223	437	652 440	738 380	13 030	10 285	34.2	4.10
CAZ 39-700	1 400	1 000	432	592	7 253	465	692 730	784 530	13 805	10 930	34.2	4.10
CAZ 41-700	1 400	1 002	432	628	7 283	493	733 230	830 690	14 585	11 570	34.2	4.10

* The mass of the welds is not taken into account

** Outside surface, excluding inside of interlocks

Combined wall : CAZ box piles / AZ sheet piles

Section	System Width b _{sys} mm	Mass ₁₀₀ * kg/m ²	Mass ₆₀ * kg/m ²	Moment of Inertia cm ⁴ /m	Elastic Section Modulus cm ³ /m
CAZ 37-700 / AZ 18-700	2 800	211	189	251 910	5 030
CAZ 39-700 / AZ 13-770	2 940	210	189	247 340	4 930
CAZ 39-700 / AZ 18-700	2 800	221	199	266 300	5 305
CAZ 41-700 / AZ 13-770	2 940	219	199	261 110	5 195
CAZ 41-700 / AZ 18-700	2 800	231	209	280 770	5 585

* Mass₁₀₀: L_{AZ} = 100% L_{box pile}; Mass₆₀: L_{AZ} = 60% L_{box pile}

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