

voestalpine Profilafröid design and manufacture, from first quality steel, profiles with various shape and for multiple use. Our profiles are rolled in France in our factory located near Paris, F-60 Bailleul-sur-Thérain.



## Sheet piles tolerances according to EN 10249

	Nominal Size	Tolerances
Height (h)	$h < 200$ mm $200 < h < 300$ mm $300 < h < 400$ mm $400 < h$	$\pm 4$ mm $\pm 6$ mm $\pm 8$ mm $\pm 10$ mm
Width (b)	Single sheet piles Sheet piles threaded in pairs	$\pm 2\%$ b $\pm 3\%$ b
Thickness e	$e = 3,00$ mm $3,00 < e \leq 4,00$ mm $4,00 < e \leq 5,00$ mm $5,00 < e \leq 6,00$ mm $6,00 < e \leq 8,00$ mm $8,00 < e \leq 10,00$ mm	$\pm 0,26$ mm $\pm 0,27$ mm $\pm 0,29$ mm $\pm 0,31$ mm $\pm 0,35$ mm $\pm 0,40$ mm
Bending Bow-Height (S)		0,25 % L
Curving Bow-Height (C)		0,25 % L
Twisting Dimension (V)		$\pm 2\%$ L or 100 mm max.
Profile Length L Normal tolerance (*)		$\pm 50$ mm
Squareness of ends (t)		$\pm 2\%$ b
Mass Difference between the theoretical mass and the total actual mass delivered (*)		$\pm 7\%$

\*Reduced tolerance on demand.



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 ONE STEP AHEAD.

## Surface Treatment

Our sections can be delivered with pre applied coatings including standard primers, multi-pack paint systems and hot dipped galvanisation according to EN ISO 1461. Applying a surface protection system not only reduces corrosion but also improves the appearance of your product which can be an interesting compromise between cost and life expectancy.

## Steel qualities

Grade	Tensile strenght	Yield strenght	Elongation
S 235 JR	360/510 MPa	S 235 MPa	26 %
S 275 JR	410/460 MPa	S 275 MPa	23 %
S 355 JO	470/630 MPa	S 355 MPa	22 %
S 500 MC	550/700 MPa	S 500 MPa	14 %

Other grades on request

## Slings hole

Our sections are delivered with a  $\varnothing 40$  mm slinging hole. Other drilling can be arranged by prior agreement.



## Accessories and options on demand

- > Connector profiles
- > Angle or U shape sections for sheet pile covering
- > Marking on profile

Made in  
**France**

## Sheet piles Trench sheets

Cold formed steel profiles

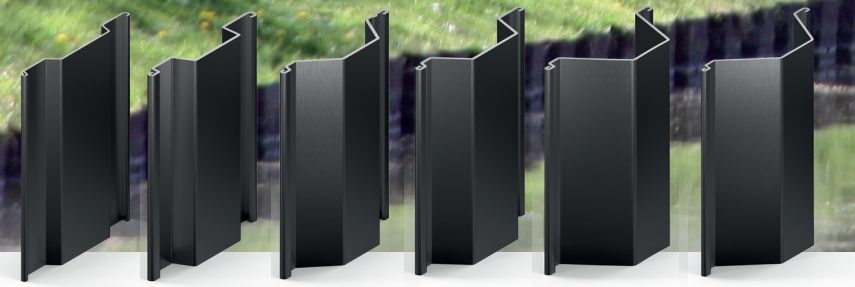


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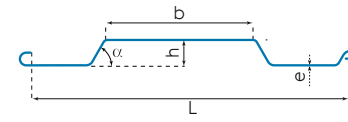


## Ω Omega sheet



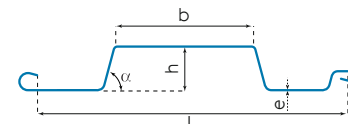
L 8 FLP 500 FLP 600 FLP 700 FLP 750 FLP 840

### L 8



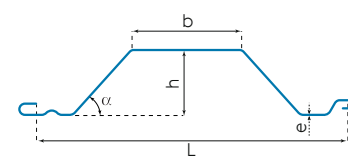
e	h	L	b	α	Weight	Section modulus	Moment of inertia	Sectional area	Class according to NF EN 1993-5		
(mm)	(mm)	(mm)	(mm)	(°)	Single pile (kg/ml)	Elastic $W_{el}$ (cm <sup>3</sup> /ml)	$I_y$ (cm <sup>4</sup> /ml)	$A_g$ (cm <sup>2</sup> /ml)	S 235	S 275	S 355
3,5	38	434	195	60	14,39	52	98	42,2	4	4	4

### FLP 500



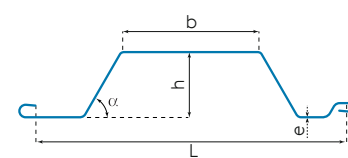
e	h	L	b	α	Weight	Section modulus	Moment of inertia	Sectional area	Class according to NF EN 1993-5		
(mm)	(mm)	(mm)	(mm)	(°)	Single pile (kg/ml)	Elastic $W_{el}$ (cm <sup>3</sup> /ml)	$I_y$ (cm <sup>4</sup> /ml)	$A_g$ (cm <sup>2</sup> /ml)	S 235	S 275	S 355
5	74	494	212	75	28,02	156	621	72,3	3	3	4
6	75	494	212	75	33,53	186	747	86,5	2	3	3

### FLP 600



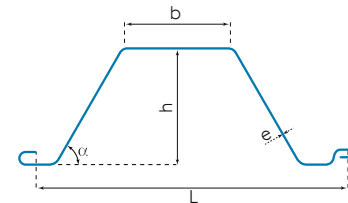
e	h	L	b	α	Weight	Section modulus	Moment of inertia	Sectional area	Class according to NF EN 1993-5		
(mm)	(mm)	(mm)	(mm)	(°)	Single pile (kg/ml)	Elastic $W_{el}$ (cm <sup>3</sup> /ml)	$I_y$ (cm <sup>4</sup> /ml)	$A_g$ (cm <sup>2</sup> /ml)	S 235	S 275	S 355
3	127	600	201	48	19,73	156	1038	41,9	4	4	4
3,5	128	600	203	48	23,08	183	1215	48,8	4	4	4
4	128	600	203	48	26,15	207	1583	55,5	4	4	4
5	129	600	202	48	32,72	257	1728	68,9	3	3	4
6	130	600	201	48	38,80	306	2067	82,3	2	2	3

### FLP 700



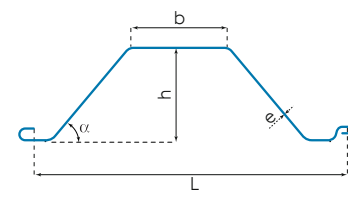
e	h	L	b	α	Weight	Section modulus	Moment of inertia	Sectional area	Class according to NF EN 1993-5		
(mm)	(mm)	(mm)	(mm)	(°)	Single pile (kg/ml)	Elastic $W_{el}$ (cm <sup>3</sup> /ml)	$I_y$ (cm <sup>4</sup> /ml)	$A_g$ (cm <sup>2</sup> /ml)	S 235	S 275	S 355
4	147	700	294	60	31,40	276	2061	57,1	4	4	4
5	148	700	294	60	39,40	343	2576	71,6	4	4	4
6	149	700	294	60	47,20	409	3084	85,2	3	4	4
7	150	700	294	60	54,34	474	3591	98,9	3	3	4
8	151	700	294	60	61,90	540	4100	112,7	2	3	3

### FLP 750



e	h	L	b	α	Weight	Section modulus	Moment of inertia	Sectional area	Class according to NF EN 1993-5		
(mm)	(mm)	(mm)	(mm)	(°)	Single pile (kg/ml)	Elastic $W_{el}$ (cm <sup>3</sup> /ml)	$I_y$ (cm <sup>4</sup> /ml)	$A_g$ (cm <sup>2</sup> /ml)	S 235	S 275	S 355
6	283	750	241	60	57,46	788	11375	97,6	3	3	4
7	284	750	241	60	67,00	912	13263	113,8	2	3	3
8	285	750	241	60	76,60	1044	15170	129,9	2	2	3

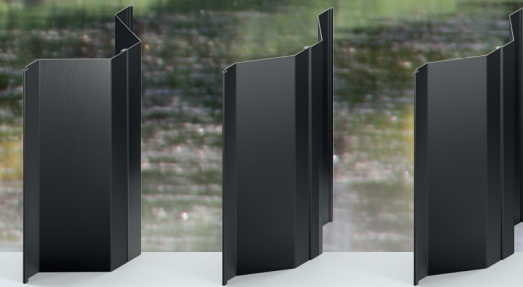
### FLP 840



e	h	L	b	α	Weight	Section modulus	Moment of inertia	Sectional area	Class according to NF EN 1993-5		
(mm)	(mm)	(mm)	(mm)	(°)	Single pile (kg/ml)	Elastic $W_{el}$ (cm <sup>3</sup> /ml)	$I_y$ (cm <sup>4</sup> /ml)	$A_g$ (cm <sup>2</sup> /ml)	S 235	S 275	S 355
6	250	840	241	50	57,46	617	7832	87,1	3	3	4
7	251	840	241	50	67,00	718	9128	101,6	2	3	3
8	252	840	241	50	76,61	817	10474	116,2	2	2	3

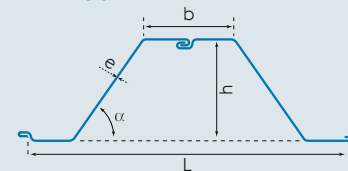
Properties in compliance with Eurocodes 3 part 5.  
Deliveries possible in long lengths (> 14 meters).  
**Other thickness on demand.**

## Z sheet piles



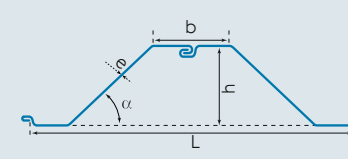
ZP 700 ZP 774 ZP 809

### ZP 700



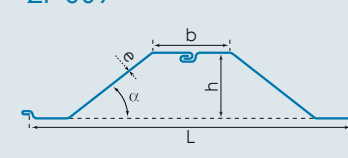
e	h	L	b	α	Weight	Section modulus	Moment of inertia	Sectional area	Class according to NF EN 1993-5		
(mm)	(mm)	(mm)	(mm)	(°)	Single pile (kg/ml)	Elastic $W_{el}$ (cm <sup>3</sup> /ml)	$I_y$ (cm <sup>4</sup> /ml)	$A_g$ (cm <sup>2</sup> /ml)	S 235	S 275	S 355
6	440	1400	371	55	51,00	1289	28351	92,8	3	4	4
7	441	1400	371	55	59,50	1500	33060	108,3	3	3	3
8	442	1400	371	55	68,00	1709	37765	123,7	3	3	3

### ZP 774



e	h	L	b	α	Weight	Section modulus	Moment of inertia	Sectional area	Class according to NF EN 1993-5		
(mm)	(mm)	(mm)	(mm)	(°)	Single pile (kg/ml)	Elastic $W_{el}$ (cm <sup>3</sup> /ml)	$I_y$ (cm <sup>4</sup> /ml)	$A_g$ (cm <sup>2</sup> /ml)	S 235	S 275	S 355
6	375	1548	375	44	51,00	982	18436	83,9	3	4	4
7	376	1548	375	44	59,50	1142	21497	98,0	3	3	3
8	377	1548	375	44	68,00	1300	24555	112,0	3	3	3

### ZP 809



e	h	L	b	α	Weight	Section modulus	Moment of inertia	Sectional area	Class according to NF EN 1993-5		
(mm)	(mm)	(mm)	(mm)	(°)	Single pile (kg/ml)	Elastic $W_{el}$ (cm <sup>3</sup> /ml)	$I_y$ (cm <sup>4</sup> /ml)	$A_g$ (cm <sup>2</sup> /ml)	S 235	S 275	S 355
6	335	1618	378	38	51,00	830	13905	80,3	3	4	4
7	336	1618	378	38	59,50	965	16213	93,6	3	3	4
8	337	1618	378	38	68,00	1100	18518	107,0	3	3	3

Properties in compliance with Eurocodes 3 part 5.  
Deliveries possible in long lengths (> 14 meters).  
**Other thickness on demand.**

## Quality and performance

Our cold rolled sheet piles have a wide spectrum of mechanical value in compliance with Eurocodes 3 Parts 5 and with the EN 10249. Our sheet piles present an optimal ratio volume/mechanical value because of a reduced "h". The Z sections present the best rate weight/mechanical value on the market.

## Welding

The voestalpine Profilafroid Z sheet piles can be delivered, on request, in pairs welded with 150 mm long weld seam, regularly spaced out.

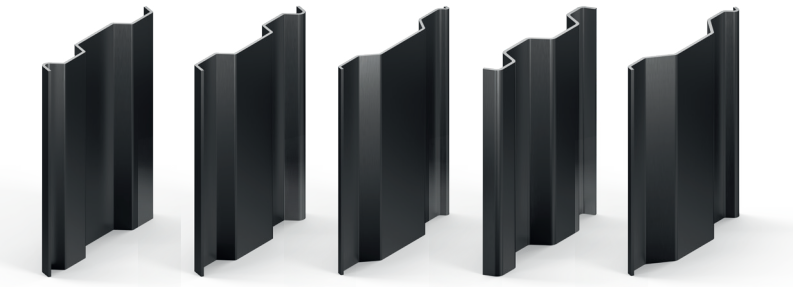
Pile length (L) en m	Weld number
L ≤ 3,0	2
3,0 < L ≤ 8,0	3
8,0 < L ≤ 12,0	4
12,0 < L	5

## Locks

Each sheet pile has locks in compliance with EN 10249.2. Each section could be adapted to your foundation geometries. Our locks are resistant to opening and unlocking and present a large deflection angle. Considering equivalent section, our Omega sheet piles section has higher mechanical value than « U » warm laminated sheet piles because of a better forces transmission into the locks.

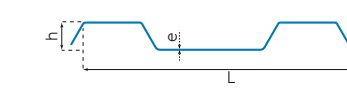


## Trench sheet



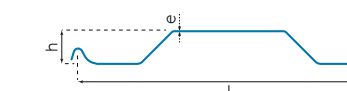
CR 430 KD 400 KD 500 KD 600 KD 750

### CR 430 à 450



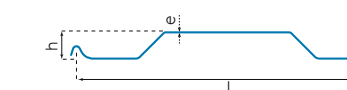
Ref.	e	h	L	Weight	Section modulus	Moment of inertia
	(mm)	(mm)	(mm)	Single pile (kg/ml)	(cm <sup>3</sup> /ml)	(cm <sup>4</sup> /ml)
CR 430	3	34	330	9,72	40	68
CR 435	3,5	35	330	11,34	44	79
CR 440	4	35	330	12,96	52	91
CR 450	5	36	330	16,09	63	114

### KD 400



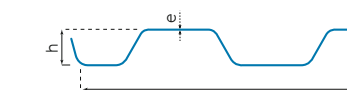
Ref.	e	h	L	Weight	Section modulus	Moment of inertia
	(mm)	(mm)	(mm)	Single pile (kg/ml)	(cm <sup>3</sup> /ml)	(cm <sup>4</sup> /ml)
KD 400	5	49	400	18,52	84	208
KD 400	6	50	400	22,23	99	250

### KD 500



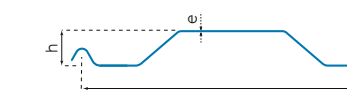
Ref.	e	h	L	Weight	Section modulus	Moment of inertia
	(mm)	(mm)	(mm)	Single pile (kg/ml)	(cm <sup>3</sup> /ml)	(cm <sup>4</sup> /ml)
KD 500	5	49	500	22,45	86	215
KD 500	6	50	500	26,94	101	258

### KD 600



Ref.	e	h	L	Weight	Section modulus	Moment of inertia
	(mm)	(mm)	(mm)	Single pile (kg/ml)	(cm <sup>3</sup> /ml)	(cm <sup>4</sup> /ml)
KD 600	6	78	600	37,50	184	718
KD 600	8	80	600	50,00	237	947
KD 600	9	61	600	55,53	263	1066

### KD 750



Ref.	e	h	L	Weight	Section modulus	Moment of inertia
	(mm)	(mm)	(mm)	Single pile (kg/ml)	(cm <sup>3</sup> /ml)	(cm <sup>4</sup> /ml)
KD 750	5	91	742	33,79	163	745
KD 750	6	92	742	40,90	194	893
KD 750	7	93	742	47,03	224	1042
KD 750	8	94	742	53,56	254	1197
KD 750	9	95	742	60,26	283	1346

Properties in compliance with Eurocodes 3 part 5.  
Deliveries possible in long lengths (> 14 meters).  
Other thickness on demand.

