



**HIRNBÖCK
STABAU**

SALE / REPURCHASE / RENTAL

TRADITION AND COMPETENCE - HIRNBÖCK STABAU GMBH

**Sheet piles - Trench sheets - Lightweight sections -
Interlock seal Melavill SP - Steel beams - DU-Beams - Steel pipes -
Tracks - Pit reinforcement**



ABOUT US

TRADITION AND COMPETENCE - HIRNBÖCK STABAU GMBH

In 2004, Friedrich Hirnböck started trading in steel sheet piles by founding Spundwand Handels- und Vermietungs GmbH. His father, Friedrich Hirnböck Sen., successfully introduced the sheet pile wall as a product in Austria with his company Friedrich Hirnböck, Stahlhandel in Salzburg more than 40 years ago. Since 2012, STABAU Holding GmbH, Haida / Germany has a 50% stake in Spundwand Handels- und Vermietungs GmbH. The company name has been changed to Hirnböck Stabau GmbH.

Together with our co-owner, STABAU Holding GmbH, we have a warehouse stock of approx. 50,000 tonnes of new and used steel profiles for special civil engineering.

BMI Austria GmbH exclusively produces the bituminous sheet pile interlock seal “Melavill SP” and the additive “Melavill Plus” for us. This makes us your competent and reliable partner for being able to quickly meet your demands

Our company is your specialist for the **sale/repurchase/rent** of:

- › **Steel sheet piles (hot-rolled / cold-profiled)** for excavation protection / flood protection / quayside / sewage treatment plants / pumping stations / groundwater pans
- › **Trench sheets** for canal and trench shoring
- › **Steel beams** for excavation reinforcement / scaffolding / temporary bridges / double U-profiles for walling and Berlin type pit lining
- › **Steel pipes** for the foundation of noise barriers / forest road construction / creek diversions / horizontal pressing / pit reinforcement / tubular sheet piles / dolphins
- › **Tracks** for driven piles / crane runway
- › **Steel sheets** for trench covers / sole plates for construction roads and storage areas



OUR RANGE OF SERVICES

› Consulting

We are at your disposal for any questions. Profit from our many years of experience in the steel trade and especially in the field of special civil engineering.

› Material availability

Our well-stocked warehouse, as well as unrestricted access to the different stockpiles of our co-owner, allows for a short-term availability of the required or an equivalent profile.

› Steel beams for excavation reinforcement / scaffolding / temporary bridges / double U-sections for walling and Berlin type pit lining.

› Sale

Of sections which remain in the structure or for your own storage.

› Sale with repurchase agreement

Ideal if it is not clear in advance if the sections will be removed or not. We undertake to repurchase the delivered sections from you on the terms already determined at the time of purchase.

› Rental

The low-cost solution for temporary operations. You do not need your own stock and do not have any capital tied up.

› Delivery

We offer our sections from warehouse for self-pick-up or take over dispatching and delivery done by a forwarding agent on fixed dates.

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IMPRINT

Media owner:
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All data provided acts as a guide for product selection. Changes and further technical developments are possible at any time.

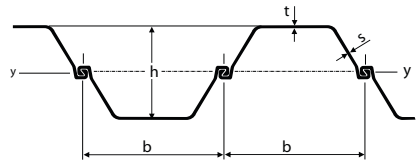
Concept & realisation:
WDW WerbeDesign Wanger e.U.
www.wdw.at



SHEET PILES

LARSSEN SECTIONS

(DIN EN 10248-2)

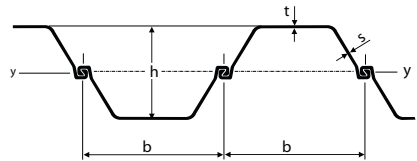


Section	Width	Height	Back-thickness	Web-thickness	Weight			Section-modulus	Moment of inertia
	b	h	t	s	EB	DB	Wall		
	mm	mm	mm	mm	kg/m	kg/m	kg/m ²		
Larssen 22	500	340	10,0	9,0	61,8	123,6	123,6	1260	21420
Larssen 23	500	420	11,5	10,0	77,5	155,0	155,0	2000	42000
Larssen 24	500	420	15,6	10,0	87,5	175,0	175,0	2500	52500
Larssen 25	500	420	20,0	11,5	103,0	206,0	206,0	3040	63840
Larssen 600	600	150	9,5	9,5	56,4	112,8	94,0	510	3825
Larssen 601	600	310	7,5	6,4	46,8	93,6	78,0	745	11520
Larssen 602	600	310	8,2	8,0	53,4	106,8	89,0	830	12870
Larssen 603	600	310	9,7	8,2	64,8	129,6	108,0	1200	18600
Larssen 604	600	380	10,5	9,0	74,5	149,0	124,2	1620	30400
Larssen 604n	600	380	10,0	9,0	73,8	147,6	123,0	1600	30400
Larssen 605	600	420	12,5	9,0	83,5	167,0	139,2	2020	42420
Larssen 606	600	435	15,6	9,2	94,4	188,8	157,3	2500	54375
Larssen 606n	600	435	14,4	9,2	94,2	188,4	157,0	2500	54375
Larssen 628	600	456	16,3	9,8	99,3	198,6	165,5	2775	63270
Larssen 607	600	435	21,5	9,8	114,4	228,8	190,7	3200	72320
Larssen 607n	600	452	19,0	10,6	114,0	228,0	190,0	3200	72320
Larssen 703	700	400	9,5	8,0	67,5	135,0	96,4	1210	24200
Larssen 716	700	440	10,2	9,5	79,9	159,8	114,2	1600	35200
Larssen 720	750	450	12,0	10,0	96,4	192,8	128,5	2000	45000

The section modulus values of the sections may only be used in the calculation of static loads if at least every second interlock in the wall is crimped to absorb shear forces.

VL - SECTIONS

(DIN EN 10248-2)

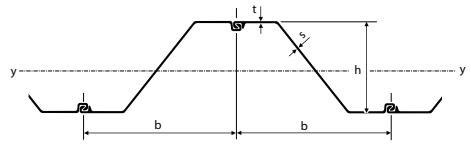


Standard profiles	Width	Height	Back-thickness	Web-thickness	Weight			Section-modulus	Moment of inertia
	b	h	t	s	EB	DB	Wall		
	mm	mm	mm	mm	kg/m	kg/m	kg/m ²		
VL 601	600	310	7,5	6,4	46,3	92,6	77,2	744	11530
VL 602	600	310	8,4	7,6	53,4	106,8	89,0	842	13046
VL 603	600	320	9,6	8,2	64,2	128,4	107,0	1200	19199
VL 604	600	390	10,0	9,0	73,1	146,2	121,8	1618	31548
VL 605A	600	420	10,7	9,0	76,5	153,0	127,5	1821	38243
VL 605N	600	422	12,0	9,5	82,1	164,2	136,9	2019	42664
VL 606A	600	430	13,4	9,0	85,4	170,8	142,3	2205	47402
VL 606N	600	434	15,4	9,8	94,1	188,2	156,8	2502	54389
VL 628	600	455	16,3	10,1	101,8	203,6	169,6	2841	64640
VL 607	600	456	19,0	10,6	112,4	224,8	187,3	3211	73300

Profiles on request	Width	Height	Back-thickness	Web-thickness	Weight			Section-modulus	Moment of inertia
	b	h	t	s	EB	DB	Wall		
	mm	mm	mm	mm	kg/m	kg/m	kg/m ²		
VL 601FP	600	310	7,2	7,0	47,4	94,8	79,0	745	11547
VL 601K	600	310	7,8	6,8	48,5	97,0	80,8	775	12019
VL 602A	600	310	8,0	7,3	51,3	102,6	85,5	806	12499
VL 602K	600	310	8,8	7,9	55,4	110,8	92,3	877	13590
VL 603A	600	320	9,0	8,0	61,5	123,0	102,5	1138	18205
VL 603N	600	381,2	9,8	7,9	63,4	126,8	105,7	1273	24269
VL 603KN	600	320	9,8	8,6	66,9	133,8	111,5	1230	19682
VL 603K	600	320	9,8	9,0	67,8	135,6	113,0	1241	19853
VL 603Z	600	322	10,0	10,0	72,1	144,2	120,2	1300	20930
VL 603Z11	600	320	11,0	11,0	78,6	157,2	131,0	1404	22470
VL 604A	600	390	9,6	8,8	71,0	142,0	118,3	1564	30495
VL 604K	600	390	10,4	9,2	75,2	150,4	125,3	1672	32600
VL 605KN	600	424	12,6	10,0	85,6	171,2	142,7	2117	44886
VL 606AN	600	432	14,4	9,4	89,8	179,6	149,6	2355	50878
VL 628-1,5	600	452,1	14,8	9,5	95,2	190,4	158,6	2607	58938
VL 628AN	600	453,3	15,4	9,8	97,9	195,8	163,1	2701	61219
VL 628A	600	454,7	16,1	10,0	100,8	201,6	168,0	2809	63856
VL 628K	600	455,9	16,7	10,3	103,5	207,0	172,5	2903	66165
VL 607A	600	453,9	17,7	10,0	106,2	212,4	177,1	3006	68232
VL 607K	600	458,5	20,0	11,0	116,8	233,6	194,7	3365	77153

The section modulus values of the sections may only be used in the calculation of static loads if at least every second interlock in the wall is crimped to absorb shear forces.

Z - SECTIONS

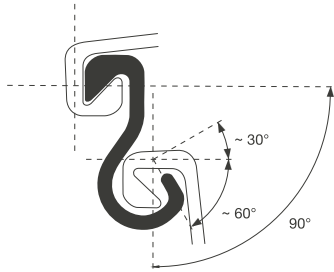


Section	Width	Height	Back-thickness	Web-thickness	Weight			Section-modulus	Moment of inertia
	b	h	t	s	EB	DB	Wall		
	mm	mm	mm	mm	kg/m	kg/m	kg/m ²		
ZZ12-770	770	344	8,6	8,5	72,8	145,6	94,5	1252	21496
ZZ13-770	770	344	9,1	9,0	76,2	152,4	99,0	1304	22433
ZZ14-770	770	345	9,6	9,5	79,6	159,2	103,4	1357	23370
ZZ17-700	700	420	8,5	8,4	73,3	146,6	104,7	1735	36425
ZZ18-700	700	421	9,1	9,0	76,7	153,4	109,6	1807	38001
ZZ19-700	700	421	9,6	9,5	80,2	160,4	114,6	1880	39578
ZZ20-700	700	422	10,1	10,0	83,7	167,4	119,5	1953	41155
ZZ24-700	700	460	11,3	11,2	95,8	191,6	136,9	2437	55949
ZZ26-700	700	460	12,3	12,2	103,0	206,0	147,1	2601	59843
ZZ27-700	700	461	12,8	12,7	106,4	211,8	152,0	2676	61641
ZZ28-700	700	461	13,3	13,2	110,1	220,2	157,3	2764	63740
ZZ36-700	700	500	15,1	11,2	118,7	237,4	169,6	3596	89753
ZZ38-700	700	500	16,1	12,2	126,5	253,0	180,7	3798	94984
ZZ40-700	700	501	17,1	13,2	134,3	268,6	191,8	3999	100219
ZZ42-700	700	500	18,1	14,0	143,0	286,0	204,2	4228	105543
ZZ44-700	700	500	19,1	15,0	150,7	301,4	215,3	4436	110942
ZZ46-700	700	501	20,1	16,0	158,5	317,0	226,5	4635	116159
ZZ48-700	700	503	22,1	15,0	159,3	318,6	227,6	4788	120467
ZZ50-700	700	504	23,1	16,0	166,7	333,4	238,2	4973	125358
ZZ52-700	700	505	24,1	17,0	174,3	348,6	249,0	5162	130403
ZZ48-700	700	503	22,1	15,0	159,3	318,6	227,6	4788	120467
ZZ50-700	700	504	23,1	16,0	166,7	333,4	238,2	4973	125358
ZZ52-700	700	505	24,1	17,0	174,3	348,6	249,0	5162	130403

CORNER SECTIONS

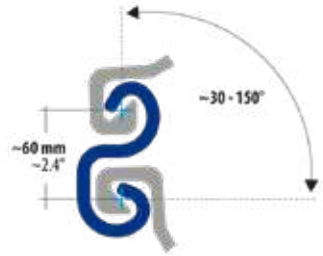
E20XL

11,7 kg/m



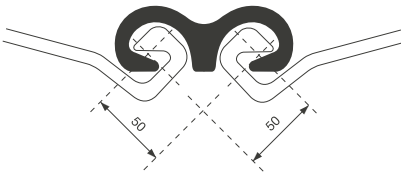
LV20n

13,8 kg/m



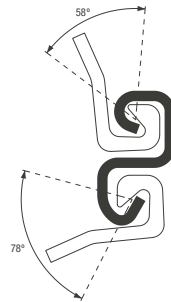
OMEGA

17,3 kg/m



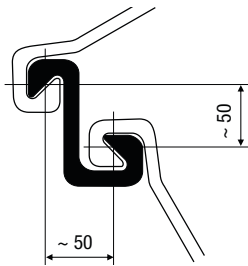
S20

14,7 kg/m



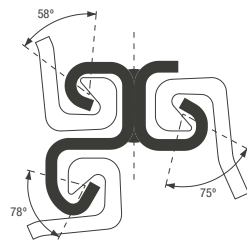
E20

15,4 kg/m



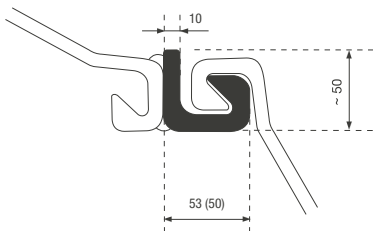
ST

24,3 kg/m



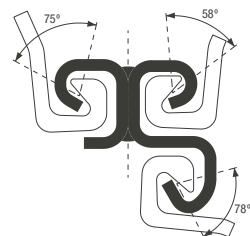
E22

10,2 kg/m



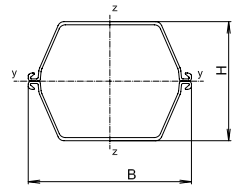
STO

24,3 kg/m



BOX PILES

DOUBLE BOX PILES

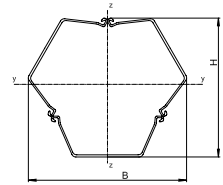


Profile	Dimensions		Perimeter	Area		Weight	Moment of inertia		Section modulus		Min. radius of gyration	Coating area
	Width	Height		SP	Box		y-y	z-z	y-y	z-z		
	mm	mm		cm ²	cm ²		cm ⁴	cm ⁴	cm ³	cm ³		
VL 601	632	348	188	118,0	1593	92,6	18229	48407	1047	1532	12,43	1,61
VL 601FP	632	348	188	120,8	1593	94,8	18310	50222	1052	1589	12,31	1,61
VL 601K	632	349	188	123,5	1597	97,0	19119	50563	1096	1600	12,44	1,61
VL 602A	633	350	188	130,7	1603	102,6	19987	54270	1144	1715	12,37	1,61
VL 602	633	350	188	136,0	1608	106,8	20976	56067	1197	1771	12,42	1,61
VL 602K	633	351	188	141,2	1613	110,8	21968	57872	1251	1828	12,47	1,62
VL 603A	637	362	201	156,7	1823	123,0	28925	68300	1598	2144	13,59	1,74
VL 603	637	363	202	163,6	1831	128,4	30718	70370	1692	2209	13,70	1,74
VL 603KN	638	365	202	170,4	1844	133,8	31872	74292	1747	2329	13,68	1,74
VL 603K	638	365	202	172,7	1844	135,6	32180	75576	1764	2369	13,65	1,74
VL 603Z	638	369	202	183,7	1864	144,2	34350	81479	1863	2554	13,67	1,75
VL 604A	638	435	214	181,0	2178	142,0	46946	80555	2161	2525	16,10	1,86
VL 604	638	435	214	186,3	2180	146,2	48661	82354	2238	2582	16,16	1,86
VL 604K	638	436	214	191,7	2185	150,4	50437	84288	2316	2642	16,22	1,87
VL 605A	638	465	218	194,9	2299	153,0	58035	84324	2497	2643	17,26	1,90
VL 605N	638	467	219	209,2	2313	164,2	64607	87814	2764	2753	17,57	1,91
VL 605KN	638	469	219	218,1	2321	171,2	67950	90864	2898	2848	17,65	1,91
VL 606A	638	475	219	217,6	2340	170,8	71383	87654	3006	2748	18,11	1,92
VL 606AN	638	477	220	228,7	2351	179,6	76538	90482	3210	2836	18,29	1,92
VL 606N	638	479	220	239,7	2362	188,2	81740	93307	3414	2925	18,47	1,93
VL 606K	638	477	220	246,2	2351	193,2	84585	93502	3547	2931	18,54	1,92
VL 606KN	638	479	220	260,6	2366	204,6	90579	98184	3783	3078	18,64	1,93
VL 607A	638	499	222	270,7	2430	212,4	100704	101843	4033	3193	19,29	1,95
VL 607	638	502	223	286,3	2445	224,8	105163	109326	4190	3427	19,17	1,97
VL 607K	638	504	223	297,5	2457	233,6	108118	114994	4290	3605	19,06	1,96

The mass of the welds was not taken into account.
Outside surface, excluding inside of interlocks.

BOX PILES

TRIPLE BOX PILES

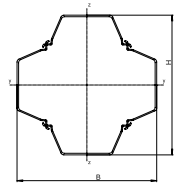


Profile	Dimensions		Perimeter	Area		Weight	Moment of inertia		Section modulus		Min. radius of gyration	Coating area
	Width	Height		SP	Box		y-y	z-z	y-y	z-z		
	mm	mm		cm ²	cm ²		cm ⁴	cm ⁴	cm ³	cm ³		
VL 601	745	724	278	177,0	4035	138,9	111704	111704	3000	2999	25,12	2,41
VL 601FP	745	724	278	181,2	4035	142,2	114291	114291	3070	3068	25,11	2,41
VL 601K	745	725	278	185,3	4040	145,5	116954	116954	3140	3138	25,12	2,41
VL 602A	747	726	279	196,1	4054	153,9	123978	123978	3322	3321	25,14	2,42
VL 602	747	727	279	204,0	4062	160,2	129056	129056	3457	3454	25,15	2,42
VL 602K	748	727	279	211,8	4070	166,2	134138	134138	3591	3587	25,17	2,42
VL 603A	817	735	298	235,0	4395	184,5	160165	160165	4258	3923	26,11	2,60
VL 603	818	737	299	245,3	4407	192,6	167522	167522	4450	4097	26,13	2,61
VL 603KN	820	739	299	255,6	4431	200,7	175086	175086	4641	4271	26,17	2,61
VL 603K	820	739	299	259,1	4431	203,4	177531	177531	4706	4331	26,18	2,61
VL 603Z	823	741	300	275,6	4459	216,3	189690	189690	5022	4612	26,24	2,62
VL 604A	879	773	317	271,5	4933	213,0	207010	207010	5223	4709	27,61	2,80
VL 604	879	773	317	279,4	4936	219,3	213276	213276	5379	4850	27,63	2,80
VL 604K	880	774	318	287,5	4943	225,6	219765	219765	5538	4995	27,65	2,80
VL 605A	899	789	324	292,4	5115	229,5	232134	232134	5641	5165	28,18	2,86
VL 605N	901	791	324	313,8	5136	246,3	251195	251195	6085	5573	28,29	2,87
VL 605KN	902	791	325	327,1	5148	256,8	262422	262422	6346	5817	28,32	2,87
VL 606A	906	794	326	326,4	5176	256,2	264870	265870	6359	5850	28,49	2,88
VL 606AN	907	795	326	343,0	5192	269,4	279738	279738	6700	6167	28,56	2,89
VL 606N	909	796	327	359,6	5209	282,3	294669	294669	7041	6483	26,63	2,89
VL 606K	907	795	326	369,3	5193	289,8	302124	302194	7236	6661	26,60	2,89
VL 606KN	909	796	327	390,9	5125	306,9	321140	321140	7673	7063	26,66	2,89
VL 607A	921	806	330	406,0	5312	318,6	343170	343170	8004	7453	29,07	2,93
VL 607	923	807	331	429,5	5334	337,2	364602	364602	8478	7898	29,14	2,92
VL 607K	925	808	331	446,3	5351	350,4	380300	380300	8822	8223	29,19	2,94

The mass of the welds was not taken into account.
Outside surface, excluding inside of interlocks.

BOX PILES

QUADRUPLE BOX PILES



Profile	Dimensions		Perimeter	Area		Weight	Moment of inertia		Section modulus		Min. radius of gyration	Coating area
	Width	Height		SP	Box		y-y	z-z	y-y	z-z		
	mm	mm		cm ²	cm ²		cm ⁴	cm ⁴	cm ³	cm ³		
VL 601	968	968	369	236,0	7027	185,2	258198	258198	5335	5335	33,08	3,20
VL 601FP	968	968	369	241,6	7027	189,6	263945	263945	5454	5454	33,05	3,20
VL 601K	969	969	369	247,0	7034	194,0	270384	270384	5582	5582	33,09	3,20
VL 602A	970	970	369	261,5	7058	205,2	286438	286438	5905	5905	33,10	3,20
VL 602	971	971	369	272,0	7068	213,6	298312	298312	6145	6145	33,12	3,21
VL 602K	972	972	369	282,4	7079	221,6	310178	310178	6384	6384	33,14	3,21
VL 603A	985	985	395	313,3	7530	246,0	364817	364817	7407	7407	34,12	3,45
VL 603	986	986	397	327,1	7545	256,8	381896	381896	7744	7744	34,17	3,45
VL 603KN	989	989	396	340,8	7583	267,6	398749	398749	8063	8063	34,21	3,46
VL 603K	989	989	396	345,5	7583	271,2	404227	404227	8174	8174	34,20	3,46
VL 603Z	993	993	398	367,4	7621	288,4	431074	431074	8684	8684	34,25	3,47
VL 604A	1059	1059	421	362,0	8252	284,0	461491	461491	8718	8718	35,70	3,70
VL 604	1059	1059	421	372,6	8257	292,4	475644	475644	8982	8982	35,73	3,71
VL 604K	1060	1060	421	383,3	8266	300,8	490200	490200	9252	9252	35,76	3,71
VL 605A	1089	1089	429	389,9	8495	306,0	514635	514635	9451	9451	36,33	3,79
VL 605N	1092	1092	430	418,5	8523	328,4	557375	557375	10211	10211	36,49	3,80
VL 605KN	1093	1093	431	436,2	8539	342,4	582398	582398	10656	10656	36,54	3,80
VL 606A	1099	1099	432	435,2	8576	341,6	587726	587726	10695	10695	36,75	3,82
VL 606AN	1101	1101	433	457,3	8598	359,2	620950	620950	11279	11279	36,85	3,82
VL 606N	1103	1103	433	479,5	8620	376,4	654278	654278	11863	11863	36,94	3,83
VL 606K	1101	1101	432	492,4	8599	386,4	672021	672021	12207	12207	36,94	3,82
VL 606KN	1103	1103	433	521,2	8628	409,2	714235	714235	12950	12950	37,02	3,83
VL 607A	1124	1124	438	541,3	8757	424,8	759384	759384	13517	13517	37,46	3,88
VL 607	1126	1126	439	572,6	8787	449,6	806845	806845	14329	14329	37,54	3,87
VL 607K	1128	1128	440	595,1	8810	467,2	841559	841559	14919	14919	37,61	3,89

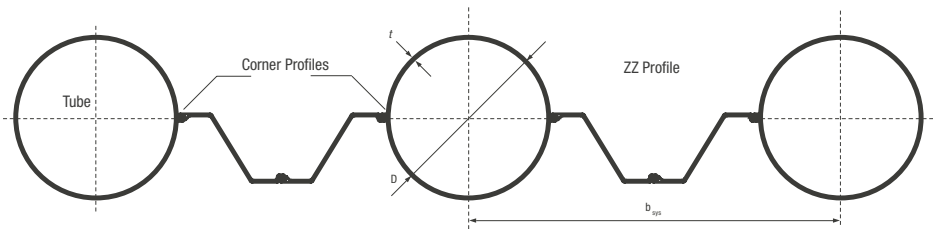
The mass of the welds was not taken into account.
Outside surface, excluding inside of interlocks.

COMBINED TUBULAR SHEET PILE WALLS

An increasing part to secure large ground steps is taken by combined tubular sheet pile walls. This economical way of producing a wall, tubular piles alternate with infill steel sheet piles.

Corner profiles are welded to the steel tubes into which the sheet piles are threaded during installation. Both ZZ sheet piles and U-sheet piles can be used as infill piles.

This creates a cost-effective wall that can withstand high loads.



Combined tubular sheet pile walls			Combined walls Intermediate sheet pile ZZ 12-770/C9				
Tube dimension	Thickness	System width	Weight 60%	Weight 80%	Weight 100%	Moment of inertia	Section modulus
mm	mm	m	kg/m ²	kg/m ²	kg/m ²	cm ⁴ /m	cm ³ /m
813	10	2,40	123,41	137,08	150,74	98 410	2 421
	12		139,64	153,31	166,98	114 586	2 819
	14		155,80	169,46	183,13	130 517	3 211
914	10	2,50	128,38	141,49	154,61	129 098	2 825
	12		145,95	159,06	172,18	151 360	3 312
	14		163,44	176,56	189,67	173 323	3 793
1 016	10	2,61	133,01	145,61	158,21	166 141	3 271
	12		151,82	164,42	177,02	195 740	3 853
	14		170,56	183,16	195,76	224 983	4 429
1 220	12	2,81	162,28	173,97	185,66	307 435	5 040
	14		183,24	194,93	206,61	355 012	5 820
	16		204,13	215,81	227,50	402 113	6 592
1 420	14	3,01	194,01	204,92	215,83	518 717	7 306
	16		216,78	227,69	238,60	588 793	8 293
	18		239,49	250,40	261,31	658 266	9 271
1 620	18	3,21	252,23	262,46	272,69	915 777	11 306
	20		276,54	286,77	297,00	1 012 651	12 502
	22		300,78	311,02	321,25	1 108 791	13 689

Combined tubular sheet pile walls			Combined walls Intermediate sheet pile ZZ 20-700/C9				
Tube dimension	Thickness	System width	Weight 60%	Weight 80%	Weight 100%	Moment of inertia	Section modulus
mm	mm	m	kg/m ²	kg/m ²	kg/m ²	cm ⁴ /m	cm ³ /m
914	10	2,36	141,51	157,25	172,99	147 111	3 219
	12		160,13	175,86	191,60	170 691	3 735
	14		178,65	194,39	210,12	193 955	4 244
1 016	10	2,47	145,86	160,95	176,03	185 512	3 652
	12		165,74	180,83	195,91	216 791	4 268
	14		185,54	200,63	215,71	247 695	4 876
1 220	12	2,67	175,69	189,62	203,56	332 734	6 455
	14		197,75	211,68	225,61	382 806	6 276
	16		219,73	233,66	247,60	432 376	7 088
1 420	14	2,87	208,03	220,99	233,95	552 560	7 783
	16		231,91	244,88	257,84	626 054	8 818
	18		255,73	268,70	281,66	698 916	9 844
1 520	16	2,97	237,39	249,92	262,44	739 209	9 726
	18		262,07	274,60	267,12	825 983	10 868
	20		286,68	299,21	311,73	912 058	12 001
1 620	18	3,07	267,99	280,11	292,23	965 522	11 920
	20		293,41	305,53	317,64	1 066 813	13 171
	22		316,76	330,88	343,00	1 167 338	14 412
1 820	18	3,27	278,76	290,13	301,50	1 262 627	14 095
	20		305,63	317,01	328,38	1 418 541	15 588
	22		332,45	343,83	355,20	1 553 543	17 072
2 020	20	3,47	316,44	327,16	337,88	1 827 503	18 094
	22		344,56	355,28	366,00	2 002 665	19 628
	24		372,62	383,34	394,06	2 176 767	21 552

STEEL GRADES

The steel grades of our hot-rolled steel sheet piles meet DIN EN 10248-1. Steels according to DIN EN 10025 (structural steels), DIN EN 10155 (weather-resistant structural steels) or other regulations can also be supplied on request. High-strength, weldable sheet pile wall steels with a minimum yield strength of up to 460 N / mm² according to works standards are available.

SHEET PILE–STEEL GRADES ACCORDING TO DIN EN 10248-1

Steel grade	Minimum yield strength MPa	Tensile strength MPa	Minimum elongation %
S240GP	240	340	26
S270GP	270	410	24
S320GP	320	440	23
S355GP	355	480	22
S390GP	390	490	20
S430GP	430	510	19

For the higher-strength sheet pile wall steels S390GP and S430GP, the approval notice dated February 1st, 2010 presents the building approval Z-30.1-17.

HIGHER-STRENGTH WELDABLE SHEET PILING STEEL GRADES ACCORDING TO WORKS STANDARDS

S460H	460	550	17
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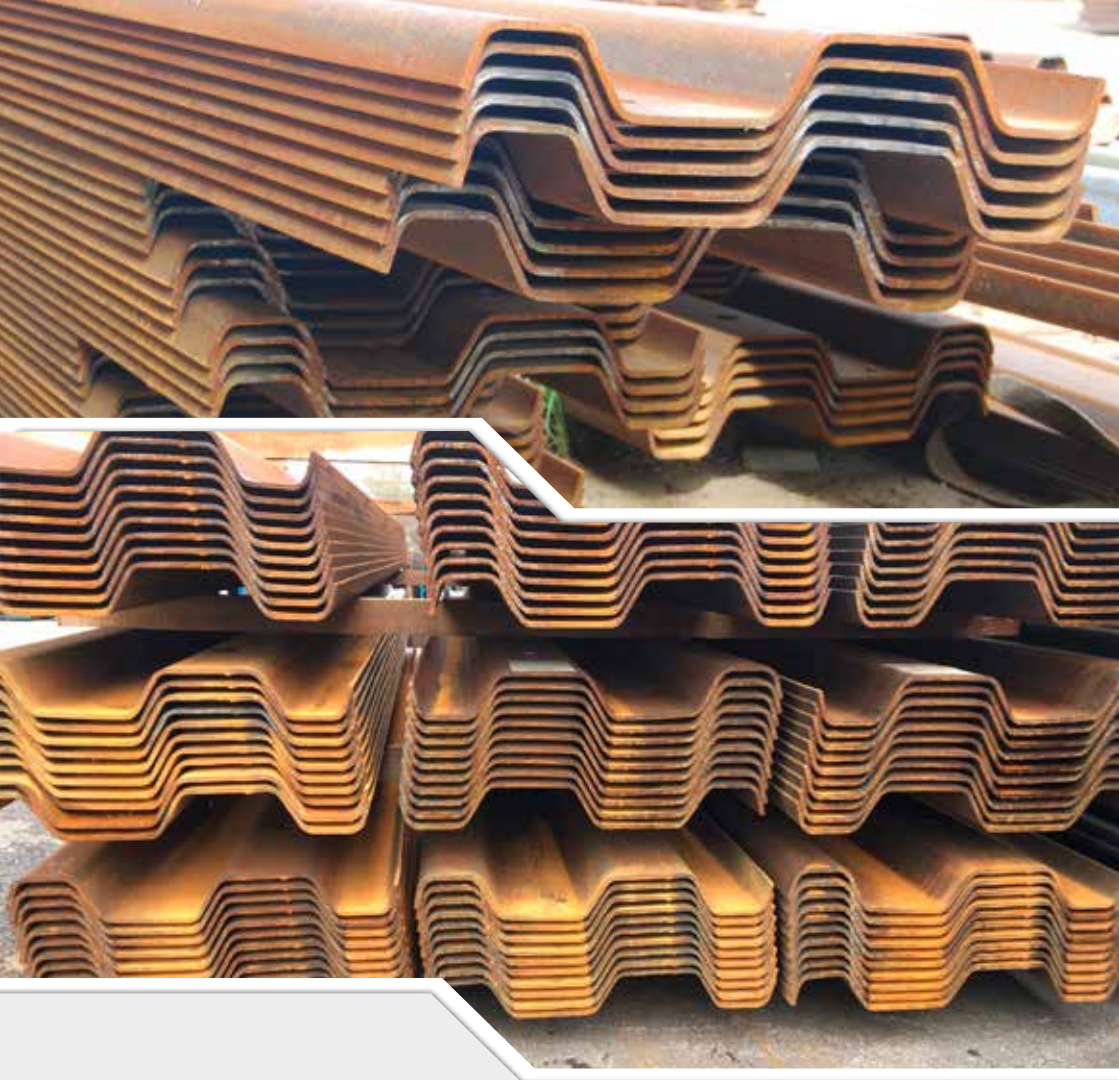
STEEL PILE WALL STEELS ACCORDING TO ASTM

A 328	270	450	20
A 572 Grade 50	345	485	21
A 572 Grade 60	415	520	18
A 690	345	485	21

SHAPE TOLERANCES

DEVIATION LIMITS AND DIMENSIONAL TOLERANCES FOR HOT ROLLED SHEET PILES MADE OF UNALLOYED STEEL ACCORDING TO DIN EN 10 248-2.

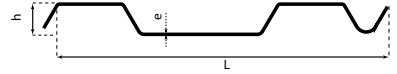
- › **Pile width** Single piles $\pm 2\%$; double and triple piles $\pm 3\%$
- › **Wall thickness** t: up to 8.5 mm = ± 0.5 mm; over 8.5 mm = $\pm 6\%$ t
- › **U-Sections** s: up to 8.5 mm = -0.5 mm; over 8.5 mm = -6% s
- › **Wall thickness, Z-Sections and flat sections** t, s: up to 8.5 mm = ± 0.5 mm; over 8.5 mm = $\pm 6\%$ s, t
- › **Height of U-Sections** h: up to 200 mm = ± 4 mm; over 200 mm = ± 5 mm
- › **Height of Z- Sections** h: up to 200 mm = ± 5 mm; from 200 to 300 mm = ± 6 mm; over 300 mm = ± 7 mm
- › **Deviation from straightness** The longitudinal deviation from straightness must not exceed 0.2% of pile length.
- › **Pile length** Sheet pile lengths are permitted to deviate by ± 200 mm from the ordered lengths.
- › **Cut** Cut at right angle to the longitudinal axis. The total deviation between the highest and lowest points in the cutting plane, measured on a single pile along the longitudinal axis, must not exceed 2% of pile width.
- › **Weight** The tolerance between the arithmetic weight (according to section tables) and weighed weight of the total consignment must be within $\pm 5\%$.
- › **Section interlocks** The interlocks shall have adequate free play so that the piles can be fitted into each other and they must engage in such a manner, that the forces necessary for the calculated connection can be transmitted.



TRENCH SHEETS

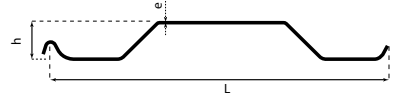
TRENCH SHEETS

CR 430 - CR 450



Profile	Width	Height	Thickness	Weight		Moment of inertia
	L	h	e	kg/m	kg/m ²	
	mm	mm	mm			
CR 430	330	34	3	9,72	29,45	68
CR 435	330	35	3,5	11,21	33,96	79
CR 440	330	35	4	12,96	39,29	91
CR 450	330	36	5	16,09	48,76	114

KD 400



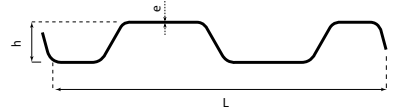
KD 400-5	400	49	5	18,52	46,30	208
KD 400-6	400	50	6	22,23	55,57	250

KD 500



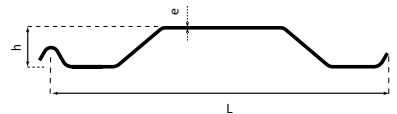
KD 500-5	500	49	5	22,45	44,90	215
KD 500-6	500	50	6	26,94	53,88	258

KD 600



KD 600-6	600	78	6	37,50	62,00	718
KD 600-8	600	80	8	50,00	83,00	947
KD 600-9	600	81	9	55,53	92,55	1066

KD 750



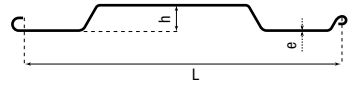
KD 750-5	742	91	5	33,79	45,54	745
KD 750-6	742	92	6	40,90	54,66	893
KD 750-7	742	93	7	47,03	63,40	1042
KD 750-8	742	94	8	53,56	72,18	1197
KD 750-9	742	95	9	60,26	81,21	1346



LIGHTWEIGHT SECTIONS

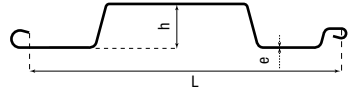
LIGHTWEIGHT SECTIONS

L 8



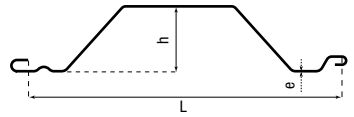
Profile	Width	Height	Thickness	Weight		Moment of inertia
	L	h	e	kg/m	kg/m ²	
	mm	mm	mm			
L 8	434	38	3,5	14,39	33,15	52

FLP 500



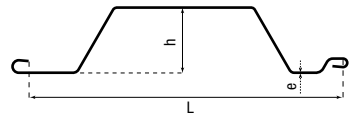
FLP 500-5	494	74	5	28,02	56,72	156
FLP 500-6	494	75	6	33,53	67,88	186

FLP 600



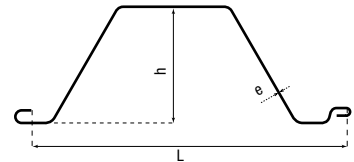
FLP 600-3	600	127	3	19,73	32,90	156
FLP 600-3,5	600	128	3,5	23,08	38,30	183
FLP 600-4	600	128	4	26,15	43,58	207
FLP 600-5	600	129	5	32,72	54,10	257
FLP 600-6	600	130	6	38,80	64,60	306

FLP 700

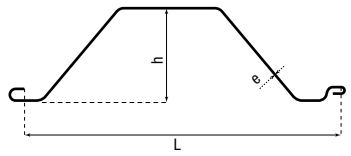


FLP 700-4	700	147	4	31,40	44,85	276
FLP 700-5	700	148	5	39,40	56,20	343
FLP 700-6	700	149	6	47,20	66,90	409
FLP 700-7	700	150	7	54,34	77,60	474
FLP 700-8	700	151	8	61,90	88,45	540

FLP 750

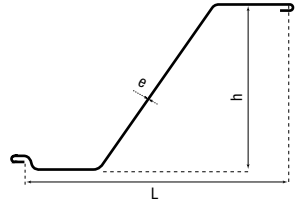


FLP 750-6	750	283	6	57,46	76,60	788
FLP 750-7	750	284	7	67,00	89,30	912
FLP 750-8	750	285	8	76,60	102,00	1044
SLP 750-8XL	750	348	8	85,60	115,50	1512
SLP 750-9XL	750	349	9	98,50	131,40	1702



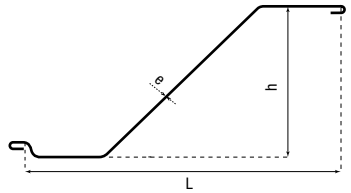
FLP 840

Profile	Width	Height	Thickness	Weight		Moment of inertia
	L	h	e	kg/m	kg/m ²	
	mm	mm	mm			cm ³ /m
FLP 840-6	840	250	6	57,46	68,40	617
FLP 840-7	840	251	7	67,00	79,76	718
FLP 840-8	840	252	8	76,61	91,20	817



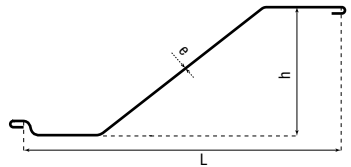
ZP 700

ZP 700-6	1400	440	6	51,00	72,85	1289
ZP 700-7	1400	441	7	59,50	85,00	1500
ZP 700-8	1400	442	8	68,00	97,14	1709



ZP 774

ZP 774-6	1548	375	6	51,00	65,90	982
ZP 774-7	1548	376	7	59,50	76,90	1142
ZP 774-8	1548	377	8	68,00	87,90	1300



ZP 809

ZP 809-6	1618	335	6	51,00	63,00	830
ZP 809-7	1618	336	7	59,50	75,50	965
ZP 809-8	1618	337	8	68,00	84,00	1100



INTERLOCK SEAL MELAVILL SP

INTERLOCK SEAL MELAVILL SP

BITUMINOUS HOT SEALING COMPOUND FOR SEALING SHEET PILING INTERLOCKS

The Product

Melavill SP is a special bitumen for sealing sheet pile wall interlocks prior to the driving or threading of the steel sheet piles, especially on sandy ground. The manufacturing process and self-monitoring are certified according to EN ISO 9001.

Product Features

Melavill SP is a hot-workable hardened sealing compound. It is distinguished by its high-temperature stability. Melavill SP has excellent adhesion to metal substrates. The mass is liquid, soft to viscous and hard, depending on the ambient temperature. Melavill SP is harmless to the environment and can be used in drinking water protection zones. Bitumen does not contain any water-soluble or water-polluting substances and was classified by the Commission as a non-hazardous to water hazard class 0 for the assessment of water-endangering substances. (Umweltbundesamt, Bitumen, identification number 326)

Application and Processing

Melavill SP is heated with the packaging in the suitable indirectly heated agitator boiler to max. 200° C, and potted into the interlocks by hand or with a lance. There is no packaging waste. After the mass has cooled, the sheet piles can be further processed. There the mass prevents the penetration of soil constituents into the sheet pile interlock and thus also the seizing up of the planks during the pile driving. Furthermore, the use of Mellavill SP reduces the interlock friction.

Consumption: approx. 0.25 to 0.5 kg/lm sheet pile interlock.

The sheet pile interlock has to be dry, clean and free of loose parts, free of grease, oil and dust. Overheated sealing compound should not be used further.

Processing temperature: from +5°C.

For cold temperatures we recommend the special additive Melavill Plus to improve the viscosity of Melavill SP.

Storage instructions

The material must be protected from heat during storage.

TECHNICAL DATA

Density at 25 °C	g/cm ³	1.02 - 1.05
Penetration approx.	°C	50
Softening point (ring and ball).	°C	85
Evaporation loss at 163 °C, 5 hours	%	max. 0.5
Flashpoint	°C	min. 250
Delivery	In blocks of 20 kg each / 360kg/pallet	
Parts-Nr.	102252	

The figures are nominal values which are subject to statistical fluctuations. We reserve the right to make technical changes. It is up to the user to assess the suitability of the product for the object and to ensure that he has the valid version of the data sheet. Melavill SP | Last update: August 2010

RECOMMENDATIONS FOR USE

Processing

Melavill SP is heated with the packaging in the suitable indirectly heated agitator boiler to max. 200° C.

Preparation

The sheet pile interlocks have to be dry, clean, free of loose parts, free of grease, oil and dust. Otherwise, for Melavill SP to stick in the interlocks, a cleaning with compressed air, wire brush or high pressure water jet is recommended. The steel sheets must be laid out in a perfectly horizontal position. In order to prevent the liquid Melavill SP from flowing out of the interlocks at the ends, they must be sealed with putty or similar.

Consumption

approx. 0.30 kg per lm in threading interlock
approx. 0.10 kg per lm in pressed middle interlock
approx. 0.35 kg per m² sheet pile wall - at 600 mm sheet pile width
approx. 0.30 kg per m² sheet pile wall - at 700 mm sheet pile width
approx. 0.25 kg per m² sheet pile wall - at 750 mm sheet pile width

The quantities given are based on the Larssen interlock according to EN 10248. For other types of interlocks, consumption may vary accordingly.

Durability

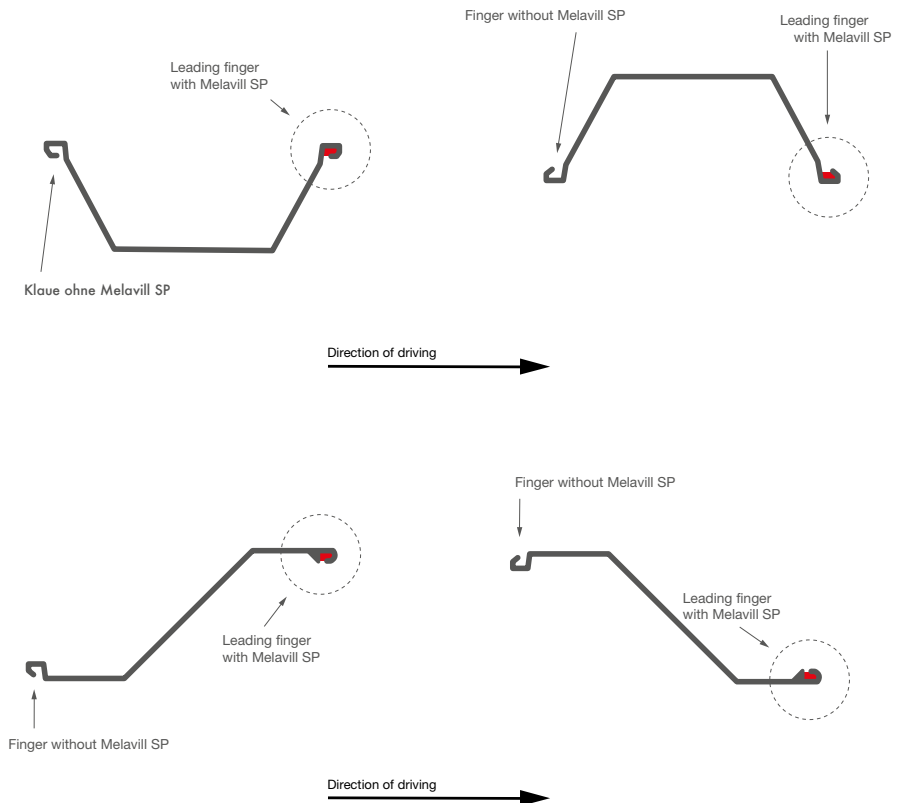
The durability of Melavill SP in the filled sheet pile wall is in water with a pH-value of 3.5 to 11.5:

in seawater:	very good
in mineral oil:	very good
in gasoline and crude oil:	low
	very low

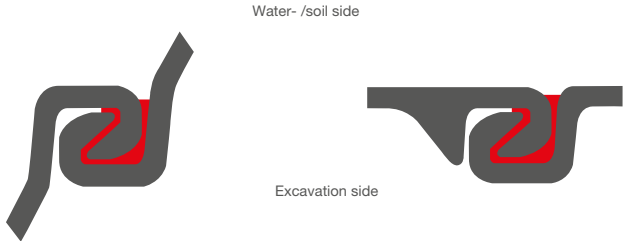
Hot injection of Melavill SP into the sheet pile interlocks



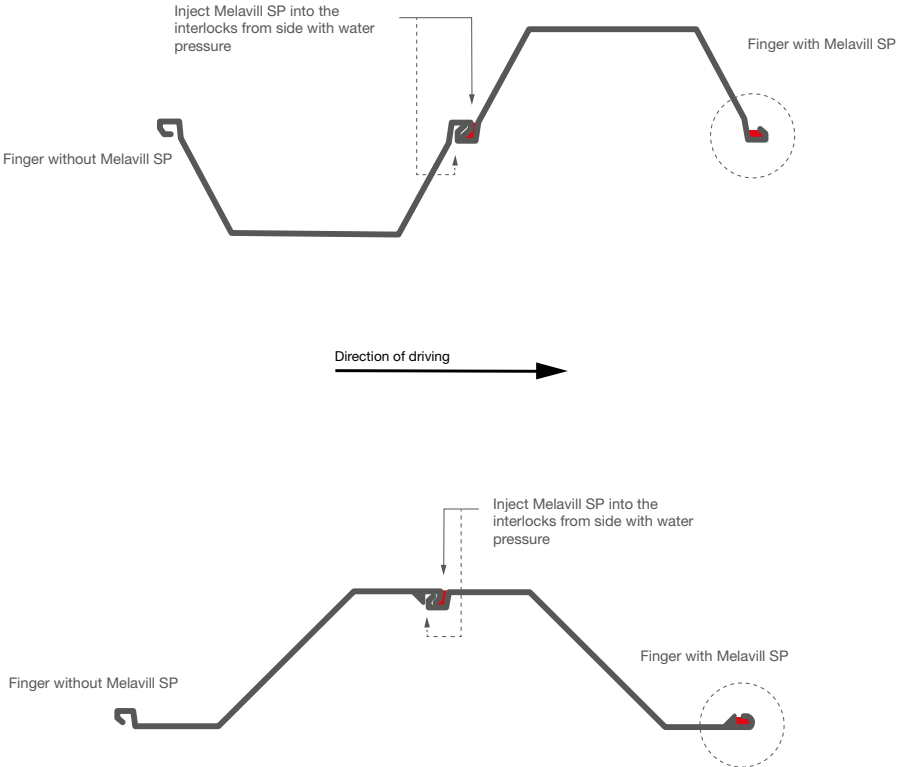
Hot injection of Melavill SP into the fingers of single sheet piles



Hot injection of Melavill SP into the sheet pile interlocks



Hot injection of Melavill SP into the interlocks of tightened sheet piles

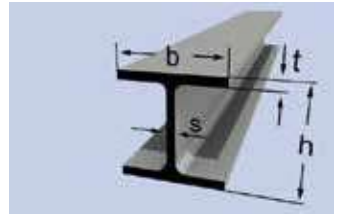




STEEL BEAMS

HEB-WIDE-FLANGED BEAMS

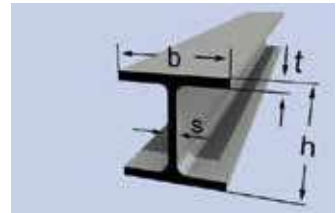
(DIN 1025-2/ EN 10 034)



HEB	Height	Width	Web thickness	Flange thick-ness	Section modulus WX/cm ³	Commercial weight kg/m
	h	b	s	t		
	mm	mm	mm	mm		
100	100	100	6	10	90	20,9
120	120	120	6,5	11	144	27,4
140	140	140	7	12	216	34.5
160	160	160	8	13	311	43.7
180	180	180	8.5	14	426	52.5
200	200	200	9	15	570	63
220	220	220	9.5	16	736	73
240	240	240	10	17	938	85
260	260	260	10	17.5	1150	95
280	280	280	10.5	18	1380	106
300	300	300	11	19	1680	120
320	320	300	11.5	20.5	1930	130
340	340	300	12	21.5	2160	137
360	360	300	12.5	22.5	2400	146
400	400	300	13.5	24	2880	159
450	450	300	14	26	3550	175
500	500	300	14.5	28	4290	192
550	550	300	15	29	4970	204
600	600	300	15.5	30	5700	217
650	650	300	16	31	6480	231
700	700	300	17	32	7340	247
800	800	300	17.5	33	8980	269
900	900	300	18.5	35	10980	298
1000	1000	300	19	36	12890	322

HEA-WIDE-FLANGED BEAMS

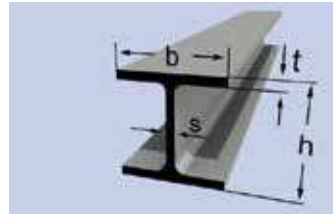
(DIN 1025-2/ EN 10 034)



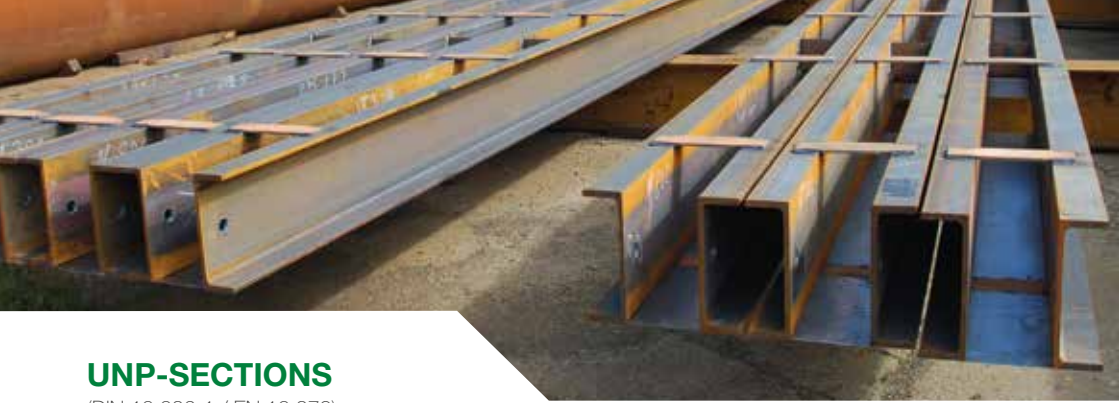
HEA	Height	Width	Web thickness	Flange thick-ness	Section modulus WX/cm ³	Commercial weight kg/m
	h	b	s	t		
	mm	mm	mm	mm		
100	96	100	5	8	73	17,1
120	114	120	5	8	106	20,4
140	133	140	5.5	8.5	155	25.3
160	152	160	6	9	220	31.2
180	171	180	6	9.5	294	36.4
200	190	200	6.5	10	389	43
220	210	220	7	11	515	52
240	230	240	7.5	12	675	62
260	250	260	7.5	12.5	836	70
280	270	280	8	13	1010	78
300	290	300	8.5	14	1260	90
320	310	300	9	15.5	1480	100
340	330	300	9.5	16.5	1680	108
360	350	300	10	17.5	1890	115
400	390	300	11	19	2310	128
450	440	300	11.5	21	2900	143
500	490	300	12	23	3550	159
550	540	300	12.5	24	4150	170
600	590	300	13	25	4790	182
650	640	300	13.5	26	5470	195
700	690	300	14.5	27	6240	209
800	790	300	15	28	7680	230
900	890	300	16	30	9480	258
1000	990	300	16.5	31	11190	279

HEM-WIDE-FLANGED BEAMS

(DIN 10 025-4 / EN 10 034)

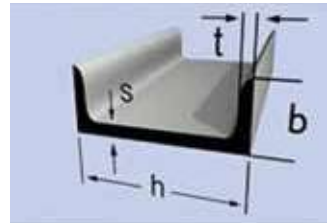


HEM	Height	Width	Web thickness	Flange thickness	Section modulus	Commercial weight
	h	b	s	t		
	mm	mm	mm	mm	WX/cm ³	kg/m
100	120	106	12	20	190	42,8
120	140	126	12,5	21	288	53,4
140	160	146	13	22	411	64,8
160	180	166	14	23	566	78,1
180	200	186	14,5	24	748	91,1
200	220	206	15	25	967	106
220	240	226	15,5	26	1220	120
240	270	248	18	32	1800	161
260	290	268	18	32,5	2160	176
280	310	288	18,5	33	2550	194
300	340	310	21	39	3480	244
320	359	309	21	40	3800	251
340	377	309	21	40	4050	254
360	395	308	21	40	4300	256
400	432	307	21	40	4820	262
450	478	307	21	40	5500	270
500	524	306	21	40	6180	277
550	572	306	21	40	6920	285
600	620	305	21	40	7660	292
650	668	305	21	40	8430	300
700	716	304	21	40	9200	309
800	814	303	21	40	10870	325
900	910	302	21	40	12540	341
1000	1008	302	21	40	14330	358



UNP-SECTIONS

(DIN 10 026-1 / EN 10 279)



UNP	Height	Width	Web thickness	Flange thickness	Section modulus	Single-U Commercial weight	Double-U Commercial weight
	h	b	s	t			
	mm	mm	mm	mm			
200	200	75	8,5	11,5	191	26	54,6
220	220	80	9	12,5	245	30	63
240	240	85	9.5	13	300	34	71.4
260	260	90	10	14	371	39	81.9
280	280	95	10	15	448	43	90.3
300	300	100	10	16	535	48	100.8
320	320	100	14	17.5	679	61	128.1
350	350	100	14	16	734	62	130.2
380	380	102	13.5	16	829	65	136.5
400	400	110	14	18	1020	74	155.4

Double-UNP 200 to 400:

- › **Standard design with 150 mm spread**
- › **Spreader size: 100 x 10 x 300 mm**
- › **Spreader placement: 0.55 m from the head of the beam**
- › **Spreader distance: 1.50 m**



25x2000x3000

25x2000x3000

25x2000x3000

STEEL SHEETS

STEEL SHEETS

Thickness	Weight	1000 x 2000 mm	1250 x 2500 mm	1500 x 3000 mm	2000 x 4000 mm	2000 x 6000 mm
mm	kg/m ²	kg/board	kg/board	kg/board	kg/board	kg/board
5	40	80	125	180	320	480
6	48	96	150	216	384	576
8	64	128	200	288	512	768
10	80	160	250	360	640	960
12	96	192	300	432	768	1152
15	120	240	375	540	960	1440
20	160	320	500	720	1280	1920
25	200	400	625	900	1600	2400
30	240	480	750	1080	1920	2880
40	320	640	1000	1440	2560	3840
50	400	800	1250	1800	3200	4800



STEEL PIPES

STEEL PIPES

SEAMLESS AND WELDED

Outer diameter mm	Wall thickness mm	4	4,5	5	5,6	6,3	7,1	8	8,8	10	11	12,5	14,2	16
		Weight (kg/m)												
159		15,3	17,1	19	21,2	23,7	26,6	29,8	32,6	36,7	40,1	45,2	50,7	
165		15,9	17,8	19,7	22	24,7	27,7	31	33,9	38,2	41,8	47	52,8	
168		16,2	18,2	20,1	22,5	25,2	28,2	31,6	34,6	39	42,7	48	54	
177		17,1	19,2	21,3	23,8	26,6	29,9	33,5	36,7	41,4	45,2	51	57,3	
193		18,7	21	23,3	26	29,1	32,7	36,6	40,1	45,3	49,6	55,9	62,9	
219		21,1	23,8	26,4	29,5	33,1	37,1	41,6	45,6	51,6	56,4	63,7	71,8	
244		23,7	26,6	29,5	33	37	41,6	46,7	51,2	57,8	63,3	71,5	80,6	
273		26,5	29,8	33	36,9	41,4	46,6	52,3	57,3	64,9	71,1	80,3	90,6	
323		31,6	35,4	39,3	44	49,3	55,5	62,3	68,4	77,4	84,9	96	108,4	
355		34,7	39	43,2	48,3	54,3	61	68,6	75,3	85,2	93,5	106	120	
406		39,7	44,6	49,5	55,4	62,2	69,9	78,6	86,3	97,8	107	121	137	154
457		44,7	50,2	55,7	62,3	70	78,8	88,6	97,3	110	121	137	155	174
508		49,5	55,9	62	69,4	77,9	87,7	98,6	108	123	135	153	173	194
559			61,5	68,3	76,4	85,9	96,6	109	119	135	149	168	191	214
610			67,2	74,6	83,5	93,8	106	119	130	148	162	184	209	234
660			72,7	80,8	90,4	102	114	129	141	160	176	200	226	254
711			78,4	87,1	97,4	109	123	139	152	173	190	215	244	274
762			84,1	93,3	104	117	132	149	163	185	204	231	262	294
813			89,7	99,6	112	125	141	159	175	198	218	247	280	314
864			95,4	106	119	133	150	169	186	211	231	262	298	335
914			101	112	125	141	159	179	196	223	245	278	315	354
1016			112	125	140	157	177	199	219	248	273	309	351	395
1220					168	189	221	239	263	298	328	374	422	475
1420						220	247	279	306	348	382	434	492	554

PIRALLY WELDED STEEL PIPES

Diameter (mm)	Wall thickness (mm)	Available steel grades:
219 - 3200	3.5 - 26	According to EN-Norm, Ghost-Norm, API5L and ASTM, available with or without certification.

LONGITUDINALLY WELDED STEEL PIPES

Diameter (mm)	Wall thickness (mm)	Available steel grades:
219 - 3200	2.0 - 45	According to EN-Norm, Ghost-Norm, API5L and ASTM, available with or without certification.

SEAMLESS STEEL PIPES

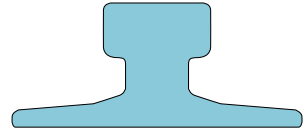
Diameter (mm)	Wall thickness (mm)	Available steel grades:
21.3 - 711	2.5 - 120	According to GB-Norm, EN-Norm, DIN-Norm, and ASTM, all pipes are certified according to EN10204/3.1



RAILS

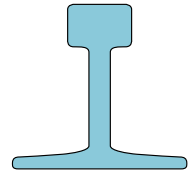
RAILS

CRANE RAILS



Type	Head width K	Total height H	Foot width F	Weight kg/m
A45	45	55	125	22.1
A55	55	65	150	31.8
A65	65	75	175	43.1
A75	75	85	200	56.2
A100	100	95	200	74.3
A120	120	105	220	100

VIGNOL RAILS



Type	Head width K	Total height H	Foot width F	Weight kg/m
S7	25	65	50	6.75
S24	53	115	90	24.43
XXIVa	53	110	95	26.15
S33	58	134	105	33.47
Xa	58	125	110	35.78
S49	67	149	125	49.43
S54	70	154	125	54.54
UIC54E	70	161	125	53.81
UIC60	74	172	150	60.34



TREATMENT / PROCESSING

TREATMENT

Treatment of used sheet piles after rent or repurchase:

The sheets are individually laid out, profile and length are determined and the dimensional accuracy is checked. If necessary, flawed sheet pile heads are cut off conformal and handling holes are burnt. Existing welds and attachments are removed, anchor holes are welded shut. Soiled sheet piles and interlocks are cleaned as required. This work is logged and the sheet piles are subsequently stored according to profile and length and saved in our warehouse management system.

PROCESSING

Processing of sheet piles:

- › Structural piles such as corner-, junction and closure piles
- › Sealing of interlocks with Melavill SP
- › Coating

Processing of steel beams:

- › Production of double u-beams fastened according to requirements

Processing of steel pipes:

- › Chamfering of pipe ends
- › Dolphins incl. accessories (bollards etc.)

Other products and services:

- › Diaphragm wall joints
- › Drilling templates for the production of bored piles
- › Support systems for shoring systems
- › Excavation reinforcement
- › Sheaths for pile reinforcement
- › Steel constructions according to customer requirements

Qualities:

S235JR / J0 / J2 + AR / M / N

S355JR / J0 / J2 + AR / M / N

S240GP / S270GP / S355GP / S430GP

Approvals:

WZ 2.2 / APZ 3.1 / APZ 3.2

Qualification / Certificate:

The production is based on the qualification DIN 18800 part 7 class E / DIN FB 103 / Ril 804 and the European standard EN 1090 - EXC 3.

The construction components are mainly supplied to construction sites in special civil engineering along with civil, hydraulic and traffic engineering.



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