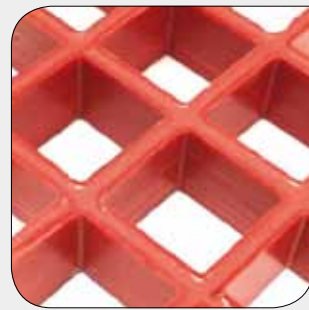


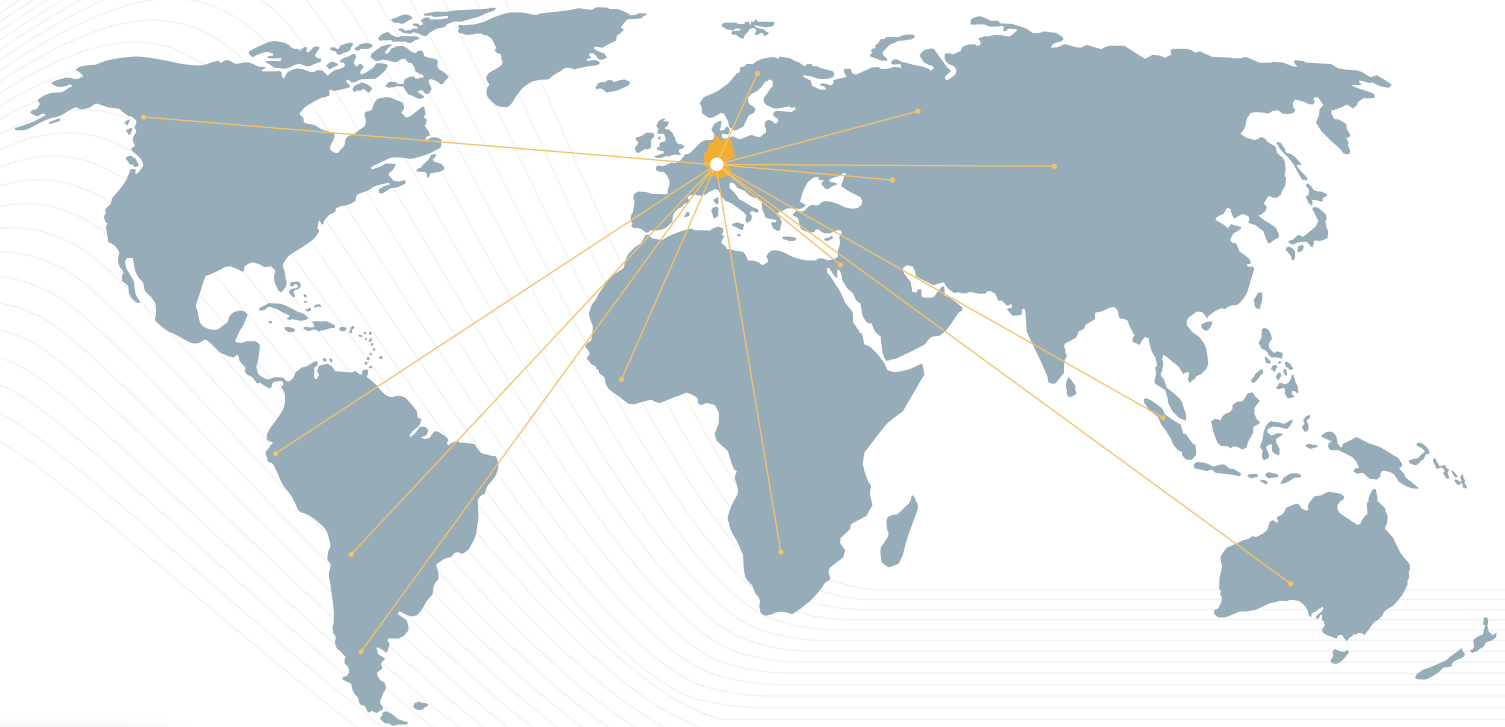


Introduction

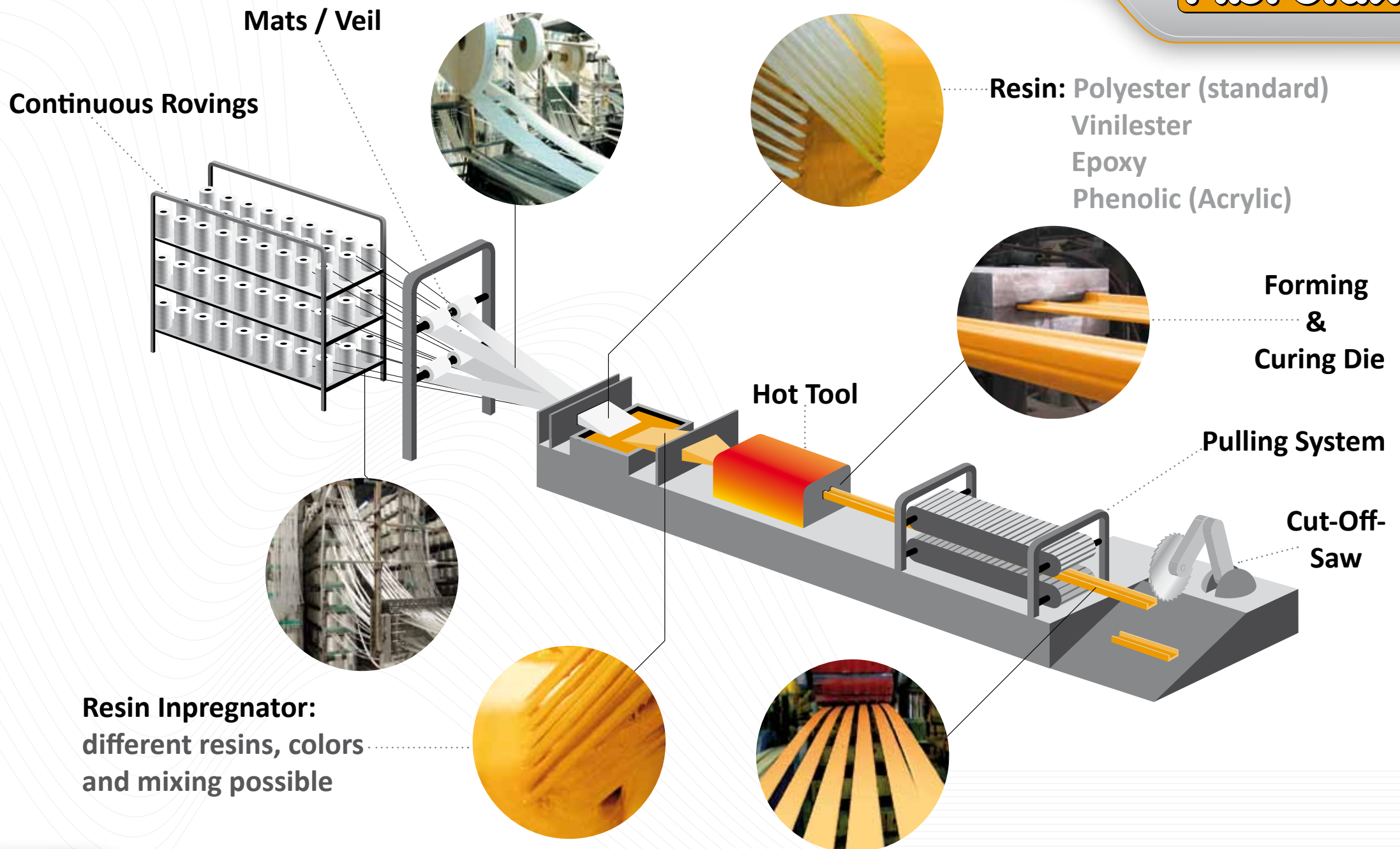
- Fibrolux has a large know-how and capacity of production
- The company was established in 1979 and today we have more than 260 employees
- The headquarters is located in Hofheim, 30 km from Frankfurt
- The company started first with sales of corrugated sheets and today, with more than 35 years of experience, we have become a leader in pultrusion of GRP profiles and gratings in Europe

Fibrolux Market

- 35% of the products are sold within Germany
- 55% are exported to the rest of Europe
- 10 % to the rest of the world

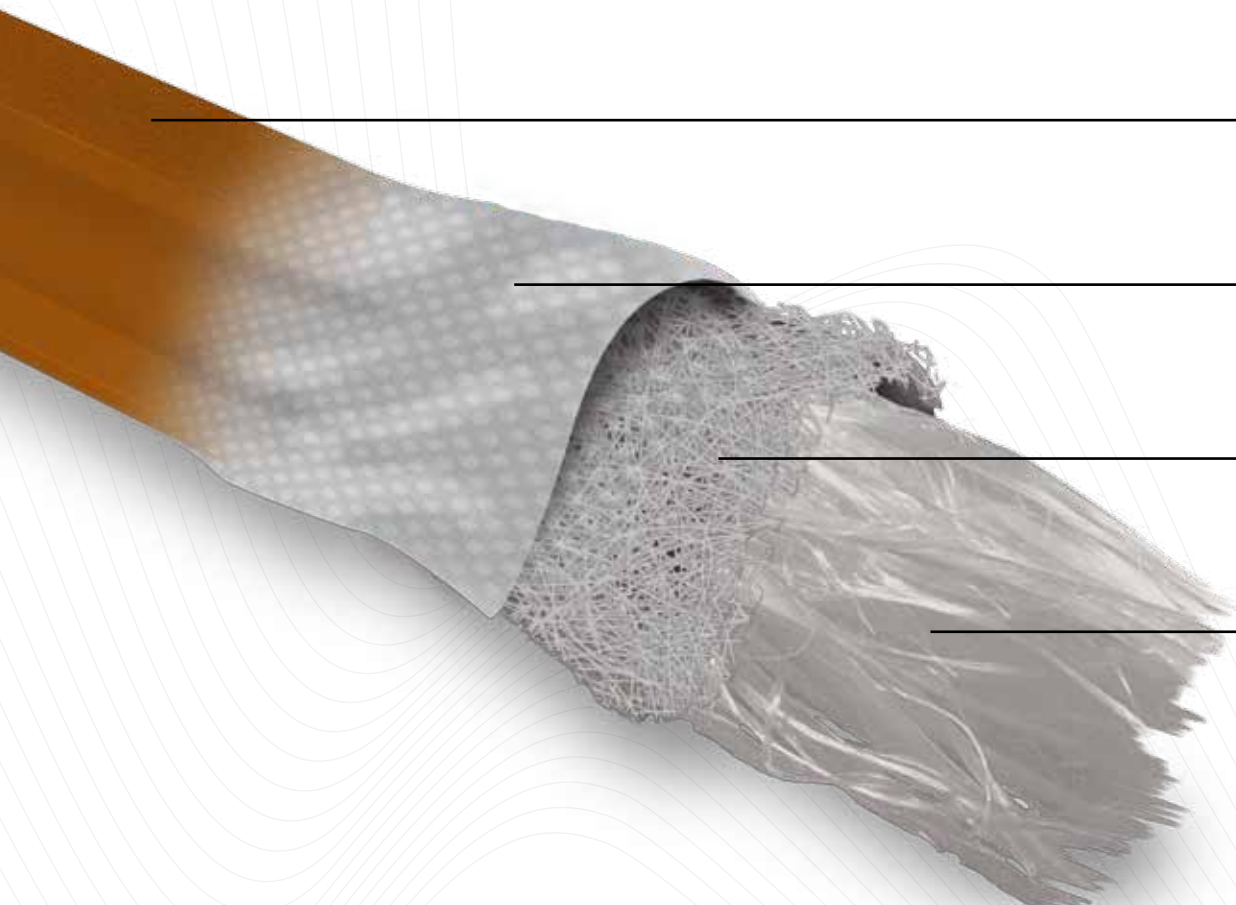






GRP Profiles

Glassfibre Reinforced Plastics



- Surface:
resin in RAL colour scheme
- Veil:
UV Protection
- Mats:
reinforcement in transverse direction
- Rovings:
reinforcement in longitudinal direction



· corrosion and chemical resistant



· low weight



· operating conditions
-100°C to +180°C



· electrical insulating



· UV and weather resistant



· linear elongation and tensile behaviour



· economic efficiency



· easy assembly, short construction period



· high strength



· self extinguishing
(V0 standard)

8. Certificates - Flamability



ÖNORM B 3800	B1-Test / Phenol	A	B1 Tr1 Q1
UNIFER E 10.02.977	UNI 9177	CH, I	2A
UNIFER E 10.02.977	UNI 9174 FT	CH, I	2A
UNIFER E 10.02.977	UNI 8457 KI FT	CH, I	2A
UNIFER E 10.02.977	ISO 5660-1	CH, I	 WWW
UNIFER E 10.02.977	EN ISO 1716	CH, I	7639 J/g
DIN 53 438, Teil 2	5 mm	D	K 1/5 mm
DIN 54837	DIN 55 10 T2	D	S4 SR2 ST2
DIN 5510-2 2009	DIN 5510-2 2009	D	FED < 1 15 + 30 min
DIN EN 13501 –1	DIN EN ISO 9239 -1	D	9,9 kW/m² / 195% min
DIN EN 13501 –1	DIN EN ISO 11925-2	D	
DIN EN 13501 –1	(=DIN 4102-B1)	D	Bfl –s1
NFF16 -101	NF X 70 -100	F	F1/I.T.C.- Wert: 2,3
NFF16 -101	NF X 10 -702	F	F1
NFF16 -101	NF P 92 -501	F	M 2
BS 476: Part 7: 1997	8 mm	GB	class 2
BS 476: Part 7: 1997	3 mm	GB	class 2
UIC 564-2	Anlage 4	H	 C  A
NFPA 130	ASTM E 662	USA	 WWW
NFPA 130	ASTM E 162	USA	Is = 9,7
NFPA 255	ASTM E- 84-98	USA	< 25, class A
95/28/EG: 1995	95/28/EG: 1995	EU	
EN ISO 11925-2: 2002	CEN/TS 45545-2: 2009	EU	
ISO 5660-1: 2002	CEN/TS 45545-2: 2009	EU	MAHRE 50,7 kW/m²
ISO 5658-2	CEN/TS 45545-2: 2009	EU	CFE > 24 kW/m² Qsb 13,4 MJ/m²
ISO 5659-2	CEN/TS 45545-2: 2009	EU	Ds (4) 89, VOF4 95 CIT 4 min 0,01/8min 0,02
ISO 4589-2	O ₂	EU	LOI 36,2%
DIN EN 60695-11-10	UL94 V	EU	V 0

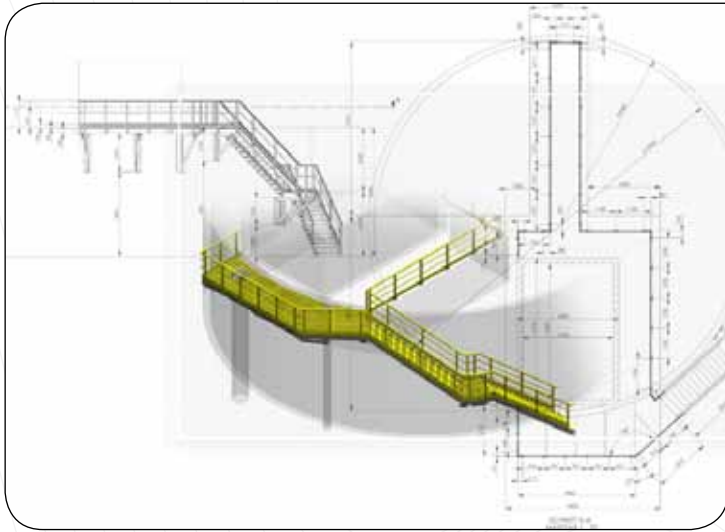
9. Certificates - Chemical Resistance

Fibrolux



	ISO		VE D411	
	20° C	50° C	20° C	50° C
AgNO ₃	●	●	●	●
AlCl ₃	●	●	●	●
Al(NO ₃) ₃	●	●	●	●
Al ₂ (SO ₄) ₃	●	●	●	●
BaCl ₂	●	●	●	●
BaCO ₃	●	●	●	●
Ba(OH) ₂	●	●	●	●
Ba(NO ₃) ₂	●	●	●	●
BaS	●	●	●	●
BaSO ₄	●	●	●	●
CaCl ₂	●	●	●	●
Ca(ClO) ₂ , 15%	●	●	●	●
Ca(OH) ₂ , 20%	●	●	●	●
Ca(NO ₃) ₂	●	●	●	●
CCl ₄ , 100%	●	●	●	●
CH ₃ -COOH, 5%	●	●	●	●
CH ₃ -COOH, 50%	●	●	●	●
CH ₃ -COOH, 75%	●	●	●	●
C ₄ H ₈ O MEK, 100%	●	●	●	●
CHOOH, 10%	●	●	●	●
C ₂ H ₅ OH, 10%	●	●	●	●
CH ₃ OH, 100%	●	●	●	●
CO ₂	●	●	●	●
CuCl, CuCl ₂	●	●	●	●
CuSO ₄	●	●	●	●
CS ₂ , 100%	●	●	●	●
FeCl ₂	●	●	●	●
Fe(NO ₃) ₃	●	●	●	●
FeSO ₄	●	●	●	●
HBr, 10%	●	●	●	●
HCN, 10%	●	●	●	●
HCl, 5%	●	●	●	●
HCl 20%	●	●	●	●
H ₂ CrO ₄ , 5%	●	●	●	●
H ₂ CrO ₄ , 10%	●	●	●	●
HNO ₃ , 5%	●	●	●	●
H ₂ O ₂ , 3%	●	●	●	●
H ₂ O+Cl ₂	●	●	●	●
H ₃ PO ₄ , 10%	●	●	●	●
H ₂ SO ₄ , 10%	●	●	●	●
H ₂ SO ₄ , 30%	●	●	●	●

	ISO		VE D411	
	20° C	50° C	20° C	50° C
KCl	●	●	●	●
KOH, 5%	●	●	●	●
KOH, 10%	●	●	●	●
KOH, 25%	●	●	●	●
KOH, 50%	●	●	●	●
K ₂ CO ₃ , 10%	●	●	●	●
KNO ₃	●	●	●	●
KMnO ₄	●	●	●	●
K ₂ SO ₄	●	●	●	●
MgCl ₂	●	●	●	●
MgCO ₃	●	●	●	●
Mg(NO ₃) ₂	●	●	●	●
MgSO ₄	●	●	●	●
NaBr	●	●	●	●
NaCl	●	●	●	●
NaCN	●	●	●	●
Na ₂ CO ₃ , 10%	●	●	●	●
NaHCO ₃ , 10%	●	●	●	●
NaHSO ₃	●	●	●	●
NaNO ₃	●	●	●	●
NaNO ₂	●	●	●	●
NaOH, 5%	●	●	●	●
NaOH, 10%	●	●	●	●
NaOH, 25%	●	●	●	●
NaOCl, 20%	●	●	●	●
Na ₂ SO ₄	●	●	●	●
Na ₂ SO ₃	●	●	●	●
Na ₂ S ₂ O ₃	●	●	●	●
NH ₃ , 1%	●	●	●	●
NH ₄ Br	●	●	●	●
NH ₄ Cl	●	●	●	●
NH ₄ F	●	●	●	●
(NH ₄) ₂ CO ₃	●	●	●	●
NH ₄ NO ₃	●	●	●	●
(NH ₄) ₃ PO ₄	●	●	●	●
(NH ₄) ₂ SO ₄	●	●	●	●
NiCl ₂	●	●	●	●
Ni(NO ₃) ₂	●	●	●	●
NiSO ₄	●	●	●	●
ZnCl ₂	●	●	●	●
ZnSO ₄	●	●	●	●



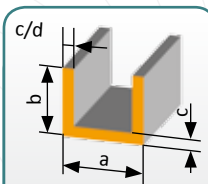
Engineering

- To realise custom solutions, five-engineers are working on 3D-CAD-Systems
- With the finite-element-method (FEM) structures are created and computed

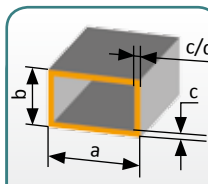


Stock

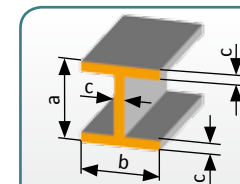
- biggest stock with largest variety of different shapes of GRP profiles in Europe enables quick supply also in small quantities



a	b	c	d	a	b	c	d	a	b	c
6	6	3,5	2	48	40	4		120	60	6
12	7,5	2,5		50	22	8	3	120	60	6
14	11	3,5		50	30	4		128	65	3
14	17	3		50	34	4	3	130	108	5
15	7,5	2,5		50	35	3,5		138	100	4
18	7,5	2,5		58	23	3		150	40	6
20	21	4		60	50	4		160	20	3
22,5	7,5	2,5		70	30	5		160	48	8
25	20	3		72	57	3		180	70	8
26	5	2,5		80	30	5		190	82	5
28	7,5	2,5		82	28	3		200	50	6
30	22	3		82	28	3	2,7	200	50	9
30	30	3		83	30	5		200	80	2,5
30	30	5		85	30	5		200	80	8
32	15	3		87	30	3		205	10,5	2,5
32,5	28,3	16	3	87	30	5	3	250	70	12
36,3	20	3	4,5	87	40	6		300	80	4
36,6	20	4,5	3	89	40	4		300	100	10
38	25	4		89	44,5	3,5		306	11	3
38	25	5	4	95	15	2,5		400	80	4
38	34	5		100	30	6		406	11	3
38,1	24	3		100	45	5				
40	20	4		100	50	6				
43	43	4		100	60	6				
45	7,5	2,5		100	80	2,2				
45	20	4		105	10,5	2,5				
45	28	3	2,5	110	53	3				
46	40	3		114	42	6				

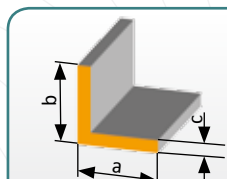


a	b	c	d	a	b	c	d	a	b	c	d
15	15	2,4		60	22	3,5		120	60	5	
15	15	2,5		60	22	3,5		125	125	6	
25	20	4		60	25	3		130	130	6	
25	25	2,5		60	30	2,5		130	130	7	
25,5	25,5	3		60	60	4		130	130	9	
30	10	2,5		60	60	5		160	70	3,5	
30	15	2,5		60	60	9		160	70	5	8
30	25	3		64	27	2	4	200	100	8	
30	30	2,5		70	26	3		500	200	12	
30	30	5		73	25	3					
35,5	35,5	5	3	73	25	3	6				
36,5	27	3		75	40	3					
38	24	2,5		75	75	6					
38	38	3		75	75	9					
38	38	4		80	33	3					
40	32	3		80	40	3					
40	36,5	3		83	28	3					
40	40	5		98	25	3					
42	40	3		98	25	3,5					
44	44	6		100	40	3					
50	30	3		100	70	5	7				
50	50	3		100	100	5					
50	50	4		100	100	6					
50	50	5		100	100	8					
50	50	6		107	18	3					
51	32	4		114	114	6					
58	25	3		114	114	8					
60	20	3		114	114	10					

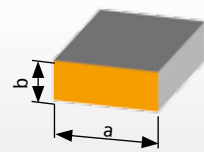


a	b	c
6,7	40	1,8
30	10	4
38	25	4
39	25	4
40	10	4 x 5
40	16	4
40	40	2,5
40	40	5
43	82	4
45	40	2,5
50	40	2,5
100	50	5
100	100	6
120	60	6
150	75	6
150	75	8
150	75	10
150	150	10
200	100	6
200	100	10
200	200	15
300	150	12
300	300	13
500	200	15

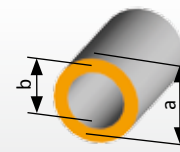




a	b	c	d	a	b	c	d
10	10	2,5		60	40	6	
15	15	2,5		60	60	3	
15	15	5		60	60	6	
19	16	2		75	75	6	
20	20	3		75	75	8	
25	15	4		80	45	6	
25,4	16	3		80	80	8	
25	25	3		90	90	3	R=40
30	20	4		95	25	2	R=25
30	25	8		100	50	8	
30	30	3		100	65	10	
30	30	5		100	80	8	
30	30	6		100	100	5	
34	29,5	4		100	100	6	
35	35	5		100	100	8	
40	20	2		100	100	10	
40	20	4		150	150	12	
40	26	6		250	30	3	
40	40	3		300	30	3	
40	40	4					
40	40	5					
40	40	8					
43	35	5					
50	20	3					
50	35	3					
50	50	3					
50	50	5					
50	50	6					

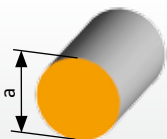


a	b	a	b	a	b	a	b
6	5	20	6	38	2	300	10
6	6	20	20	46	3	315	2,5
6,5	6	22,5	8	46	44	320	6
7	4	23	6	49	45	635	3,5 x 5
8	4	24	2,5	50	4		
8	6	25	2	50	10	800	6
9	2,5	25	8	50	24	800	8
9	3	25	9,5	50	40	800	10
10	3	25	25	60	2,5	800	12
10	4	26	26	63	60		
10	5	27,5	7,5	63	63		
10	10	30	3	68	6		
11	2	30	4	75	6		
11	8	30	5	75	9		
12	8	30	6	75	12		
12	10	30	10	80	8		
12,6	3,8	30	20	100	2,3		
14	5	30	30	100	4		
14	14	38	2	100	6		
15	3	40	3	100	8		
15	3,5	40	4	100	10		
15	4,5	40	5	115	3		
15	6	40	6	130	6		
16	3	40	10	150	10		
16,5	7	40	40	180	6		
18	2	42	4	200	12		
19,5	8	43	5	219	4		
20	3	45	33	300	3		

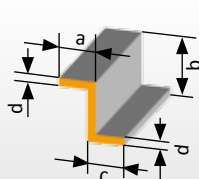


a	b	a	b	a	b
6	3	20	15	48	38
8	4	20	15,5	48	38
8	5	20	16,1	48	42
8	6	20	17	50	34
9	6	22	15	50	38
9,9	8,2	22	16,5	50	41
10	5	22	17	50	42
10	6	25	20	60	53
11	7	26	16	65	55
12	6	27	21	70	62
12	8	28	9	75	65
12	10	28	21	76	65
13	8	28	22	80	50
13	8,5	28	23	90	75
14	5,6	29,3	23,5	90	76
14	8	30	20	90	78
14	12	30	24	110	100
16	5	30	25	114	96
16	10	30	26	114	105
16	10,2	32	26	120	110
16	12	32	27	169	149
16	13	35	29	170	150
17,8	12,5	37	26		
18	12,7	37	28		
18	12,8	38	27		
19,9	13,9	38	33		
20	10,5	40	32		
20	14	43	37		

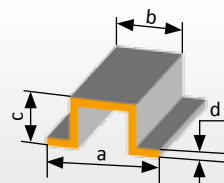




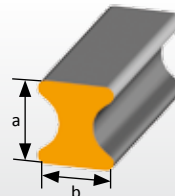
a	a
1,2	24
1,4	25
1,8	26
2	27
2,2	28
2,6	30
2,7	32
3	35
3,6	36
4	38
5	40
6	44
6,35	48
7	50
8	55
9	80
10	
11,7	
12	
12,7	
13	
14	
15	
16	
17,8	
18	
20	
20	



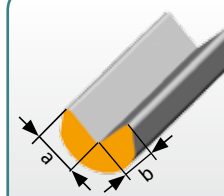
a	b	c	d
24	20	10	4
25	41	25	5
30	40	30	5
40	40	20	5



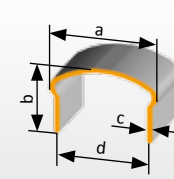
a	b	c	d
24,5	14,7	14	2,5
24,5	14,7	18	2,5
24,5	14,7	24	2,5
82	75	35	5
90	40	40	3,5
120	58	60	3,5



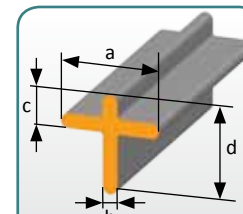
a	b
5,3	8
4,5	8
8	6
10	8
11	10
12	10
13	10
14	10
15	10
16	10
16	12
16	13
16	14
18	14
19	10
19	12
19	16
20	16
22	20
24	16
25	22



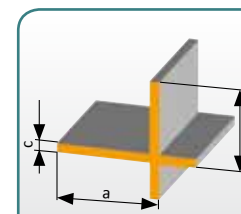
a	b	
4,9	4,9	
6	6	
7	7	
7	7	R 23
7,1	7,1	
8	8	
9	9	
10	10	
12	12	
16	16	
25	25	
39	39	



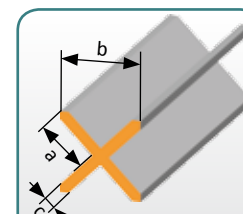
a	b	c	d
75	50	4	60
65	50	4	50



a	b	c	d
39	6	12	39
30	6	7,5	29



a	b	d
42	34	4

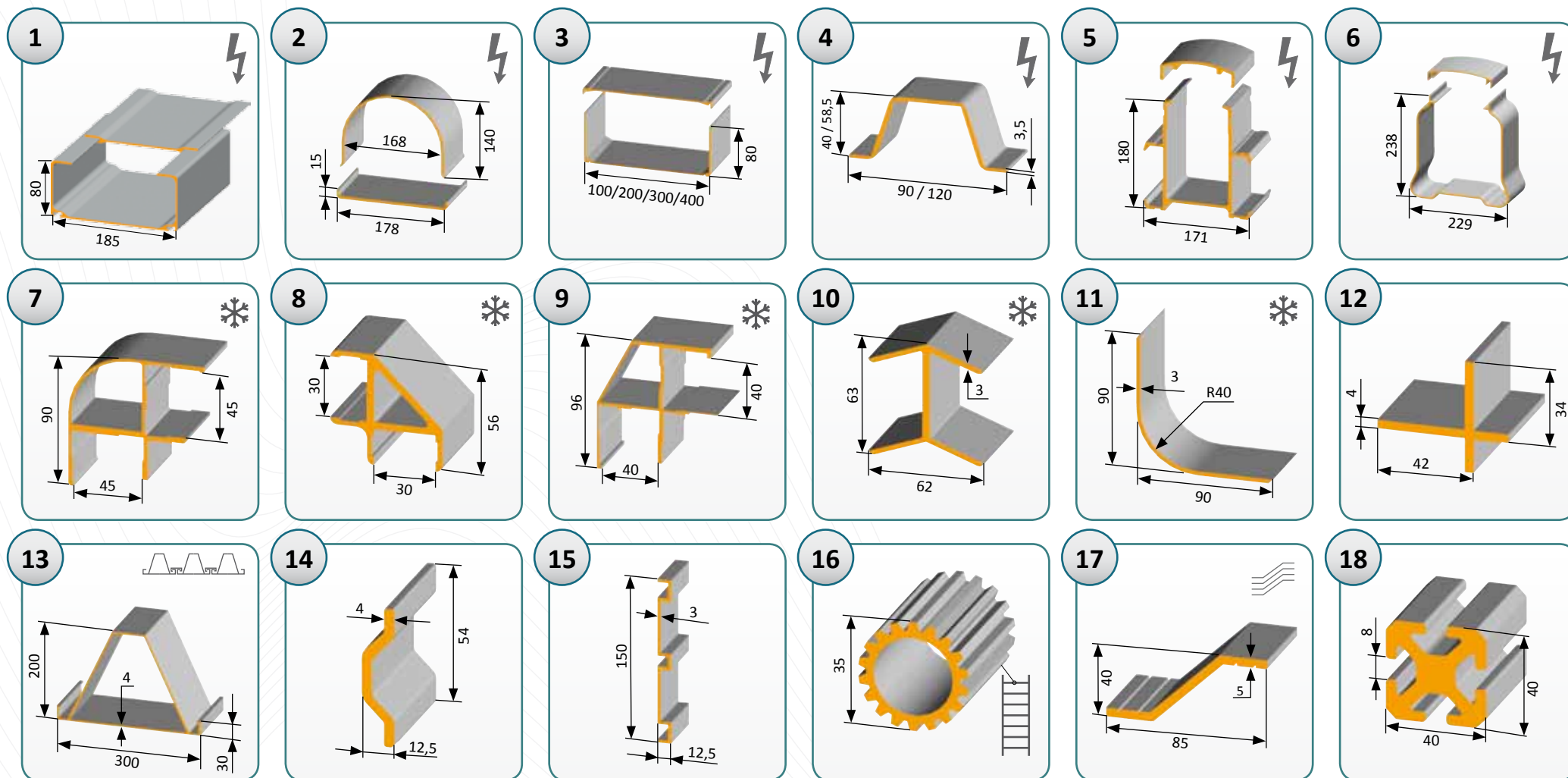


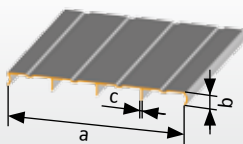
a	b	c
12,5	20	3



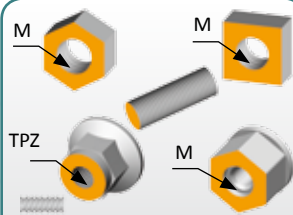
a	b	c
10	10	1

bold letters
=
in stock

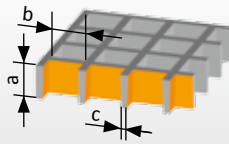




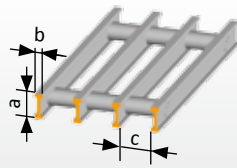
a	b	c
250	50	7
500	40	5
500	40	4
600	130	4



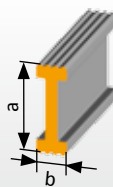
M	TPZ
8	20
10	25
12	
14	
16	
18	
20	
24	
27	
30	



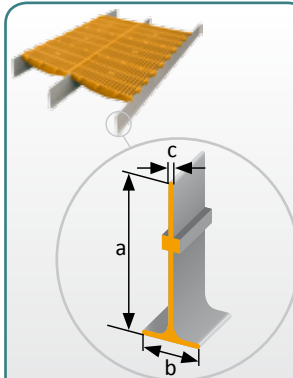
a	b	c
15	42 x 42	6
25	30 x 30	6
25	14 x 14	6
25	92 x 19	6
30	30 x 30	6
30	14 x 14	6
30	8 x 8	6
30	92 x 19	6
38	30 x 30	6
38	14 x 14	6
40	76 x 76	6
50	42 x 42	7
50	26 x 26	10
60	26 x 26	10



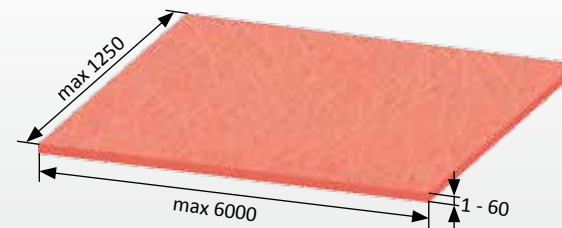
a	b	c
30	10	30
30	10	20
30	10	14,5
38	10	30
38	25	20
60	30	30



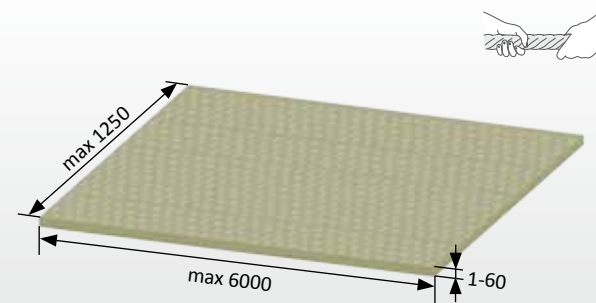
a	b
30	10
38	10
38	25
60	30



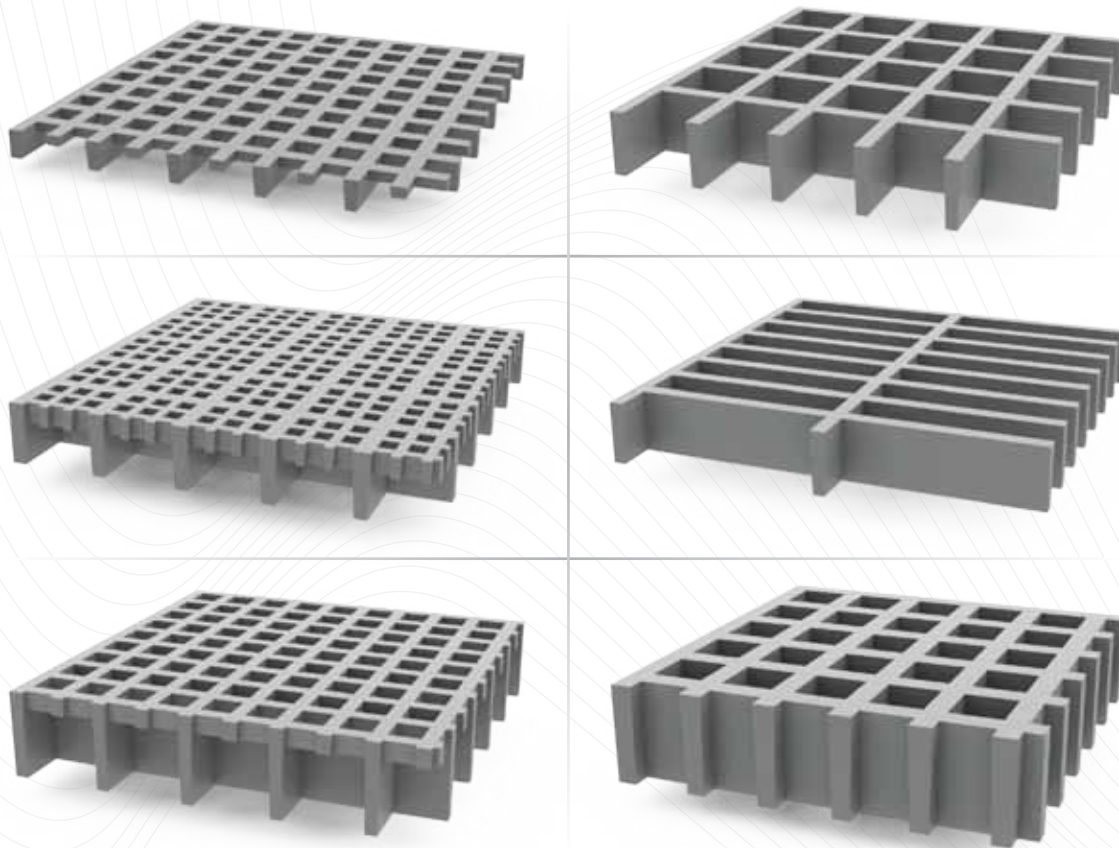
a	b	c
50	10,5	5
70	26	5
70	32	5,5
76	44	6,35
85	30	5
90	25	5,5
100	30	5,5
120	26	5,5
120	30	5
120	32	5,5
127	44,25	5,5
127	44,25	6,35
135	44	5,5
152	44	5,5

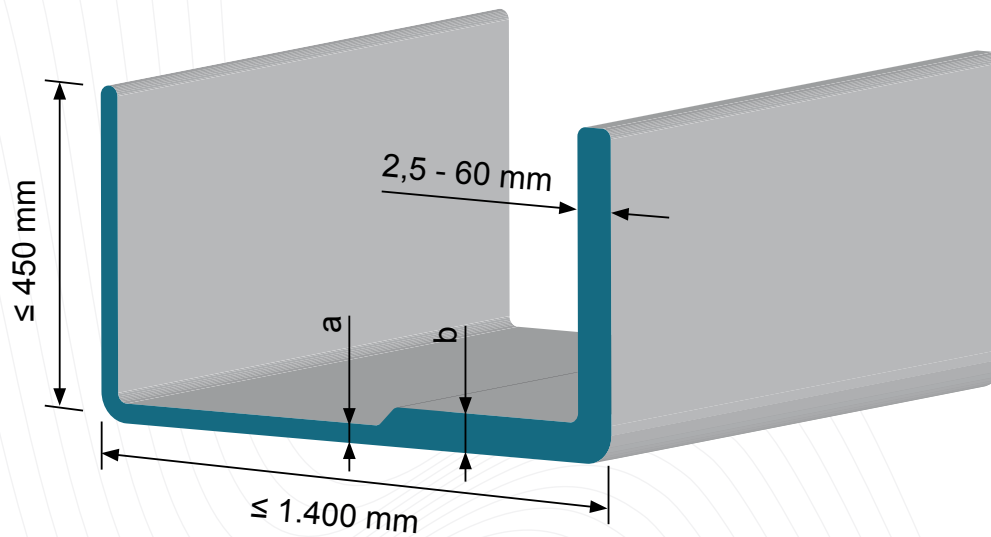


DIN	ISO	NEMA
Hm 2471	UPGM 201-3	GPO 3

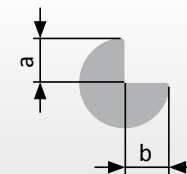


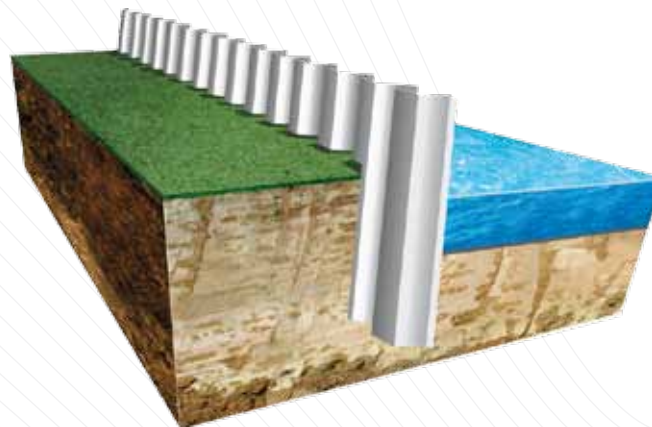
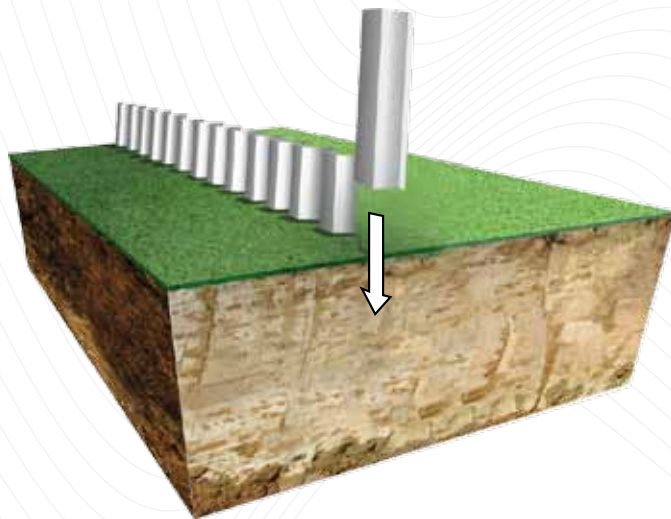
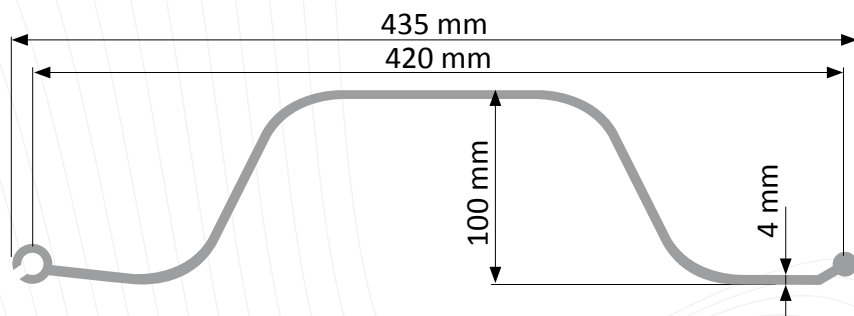
- large variety of different shapes and sizes
- colours according to the RAL scheme
- anti slip surfaces





- own tool production
- different wall thicknesses possible

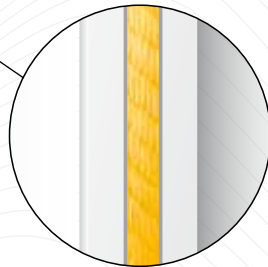
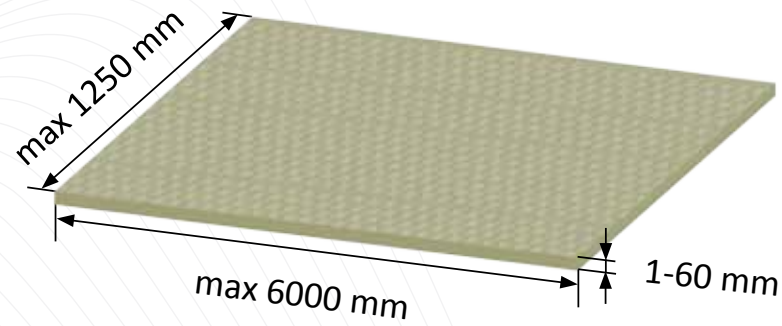
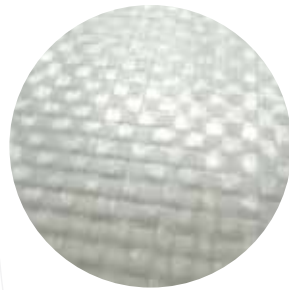
[illegible]

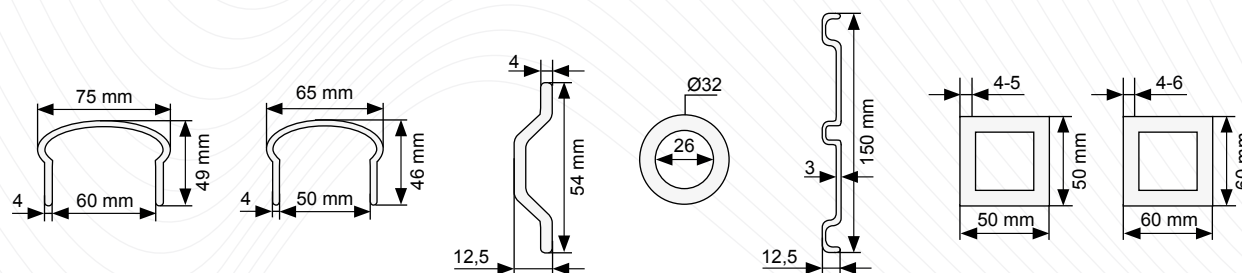
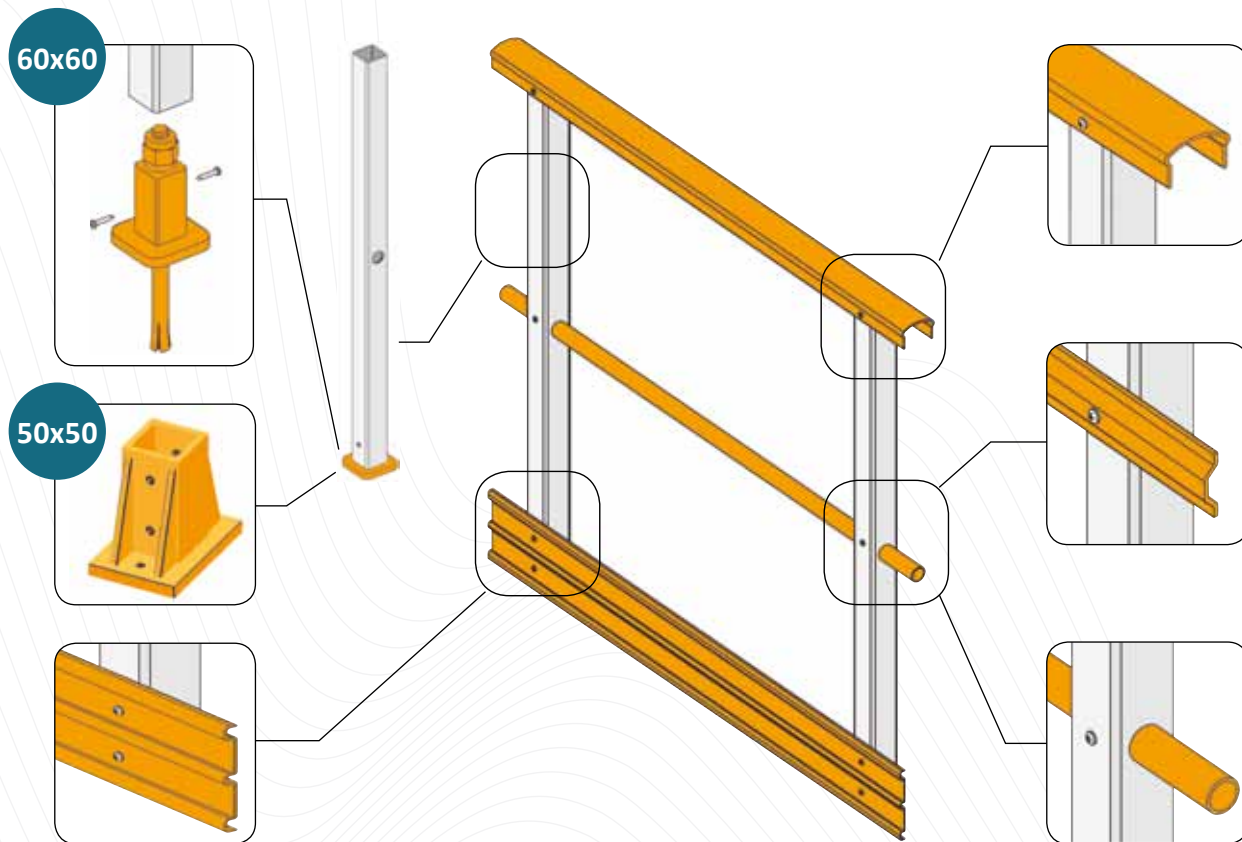


Sheet Piles made of Steel

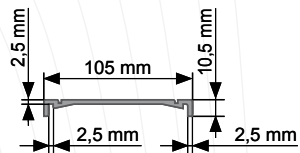


GRP Sheet Piles

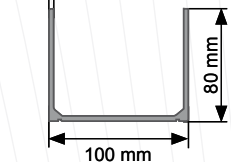




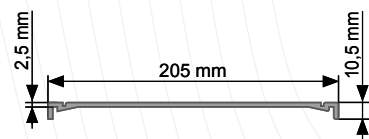
KKD
100



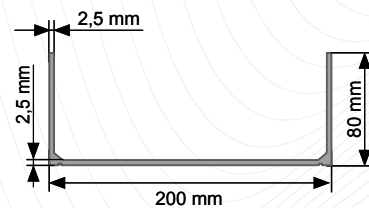
KK
100



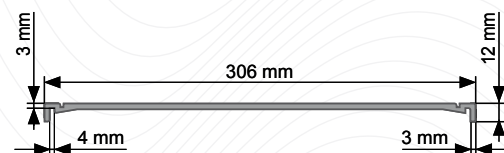
KKD
200



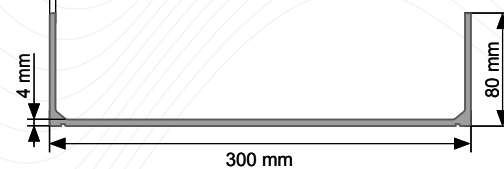
KK
200



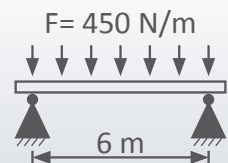
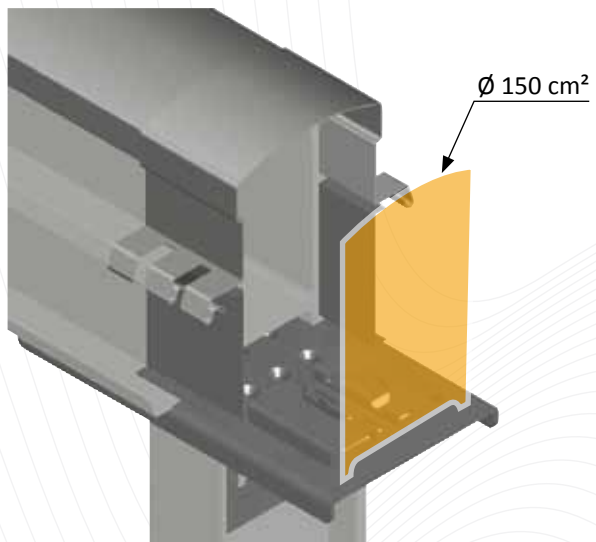
KKD
300



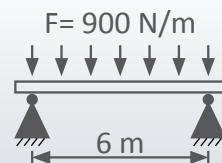
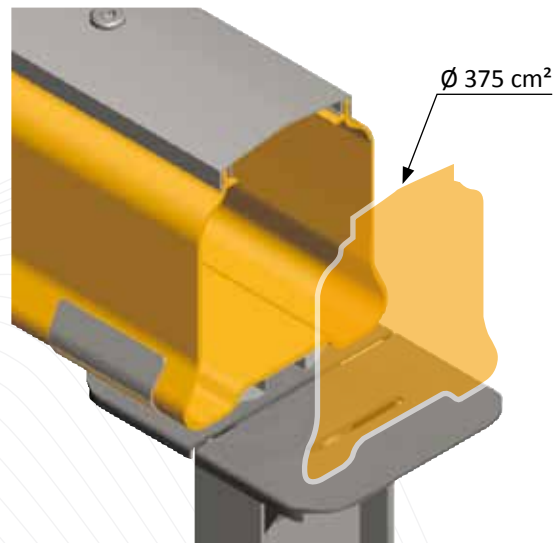
KK
300

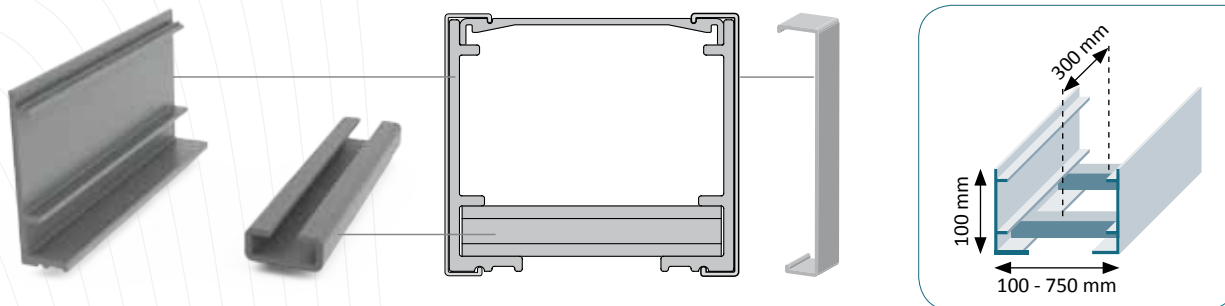


FT1



FT2




KLD

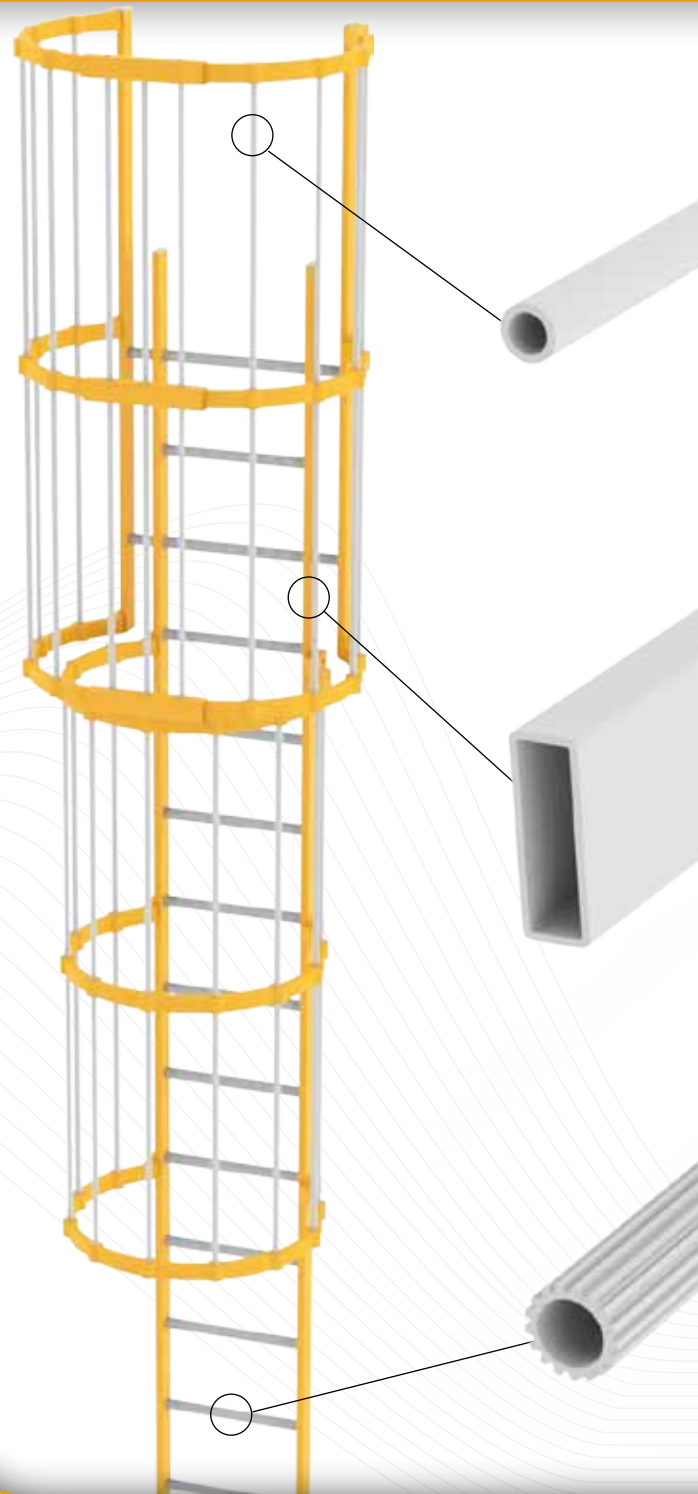
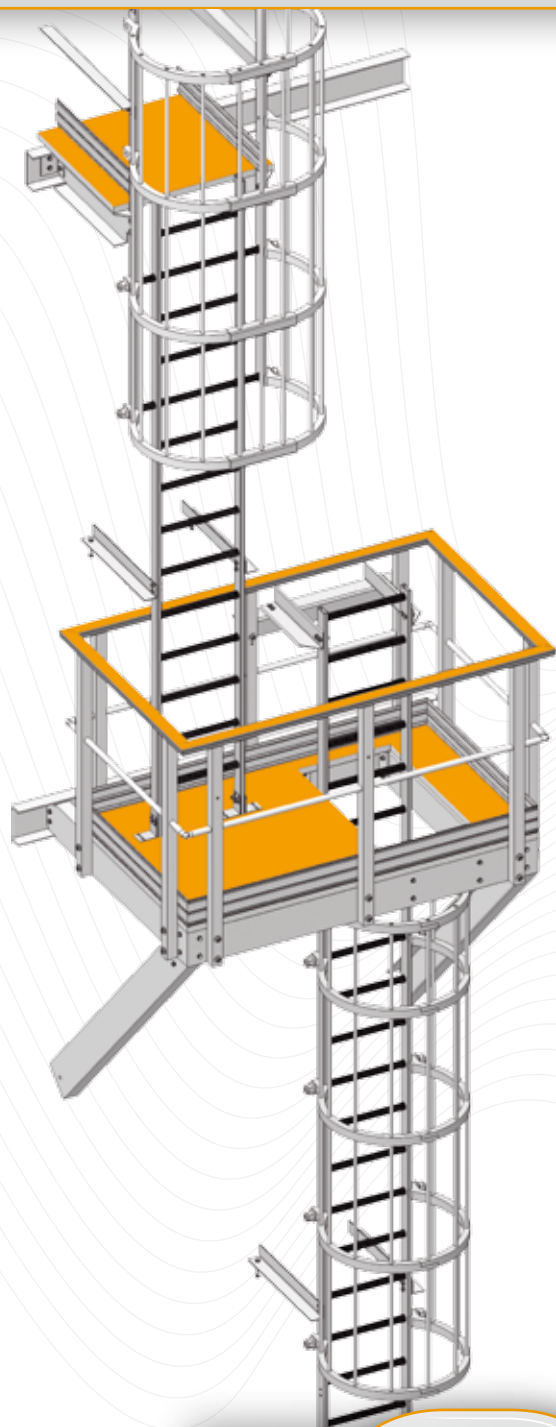

↔	kg
105 mm	0,7 kg/m
205 mm	1,2 kg/m
306 mm	2,1 kg/m
406 mm	2,7 kg/m

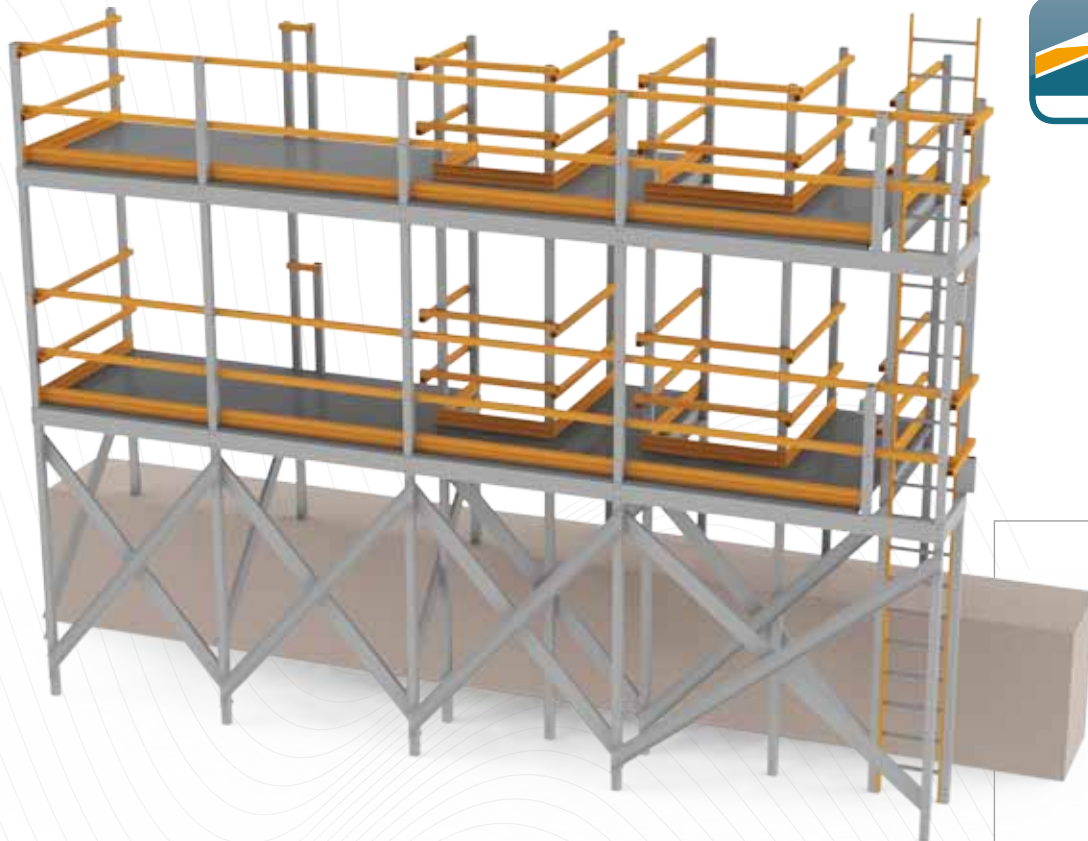
KL


↔	kg
100 mm	2,8 kg/m
200 mm	3,0 kg/m
300 mm	3,3 kg/m
400 mm	3,5 kg/m
500 mm	3,8 kg/m

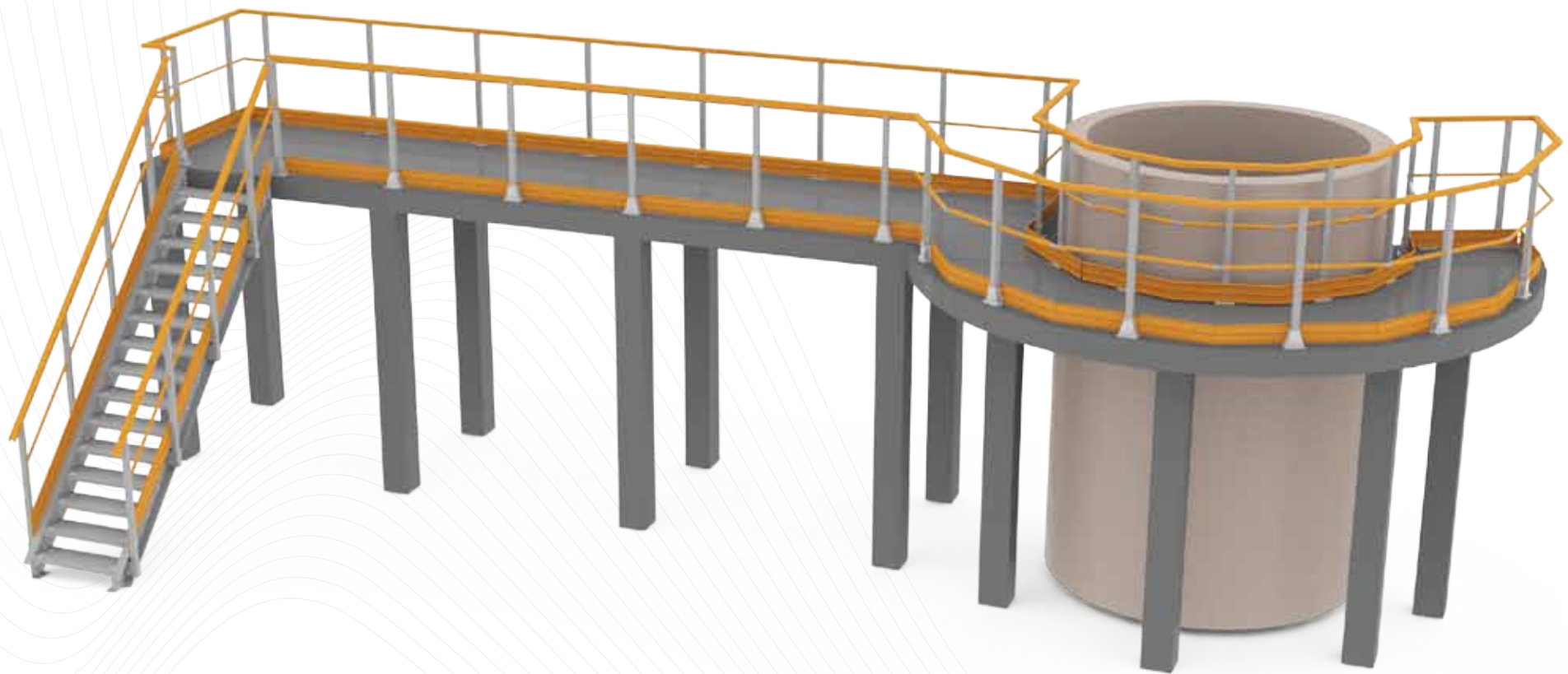
BH90

BV90x

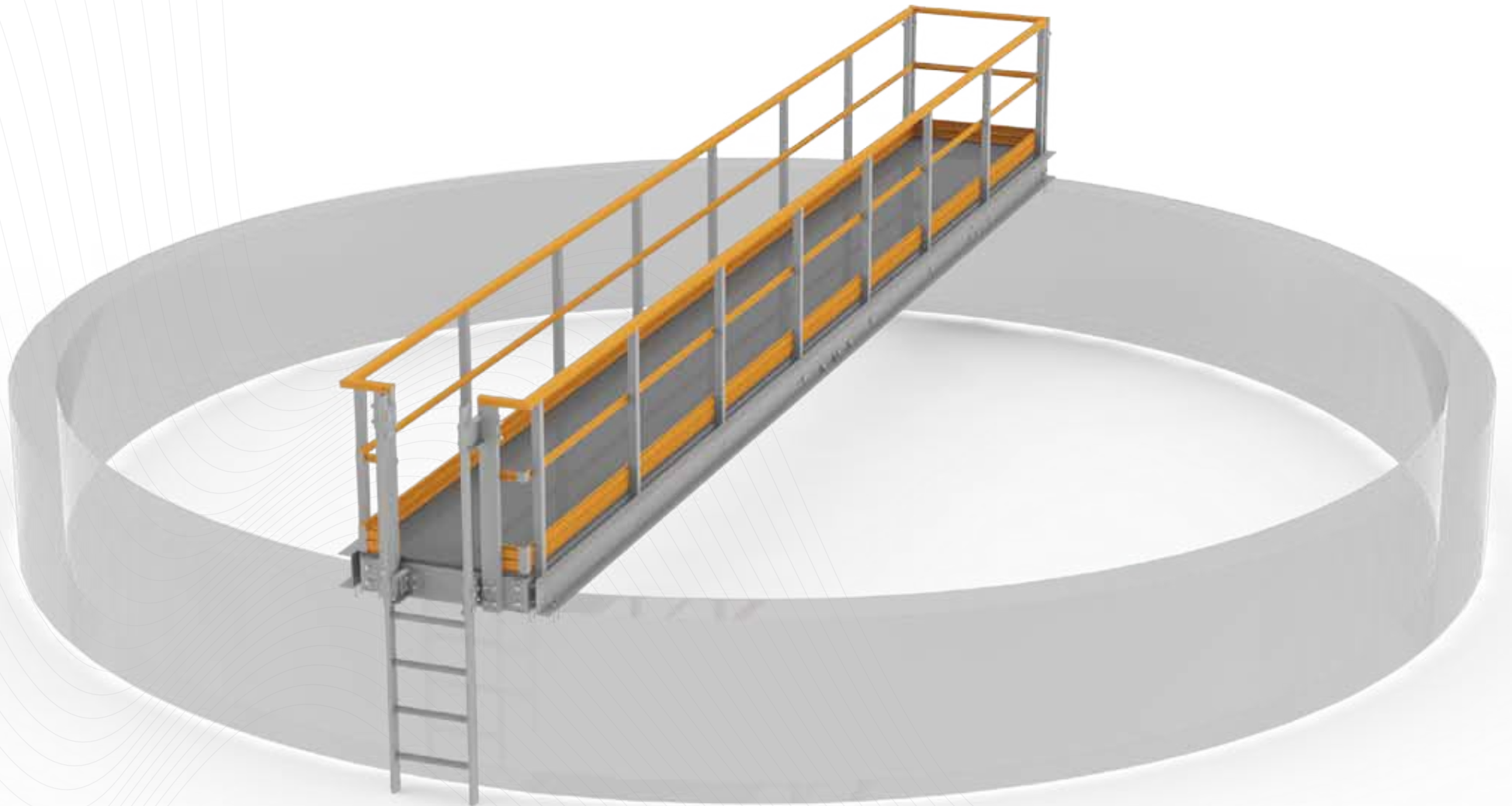



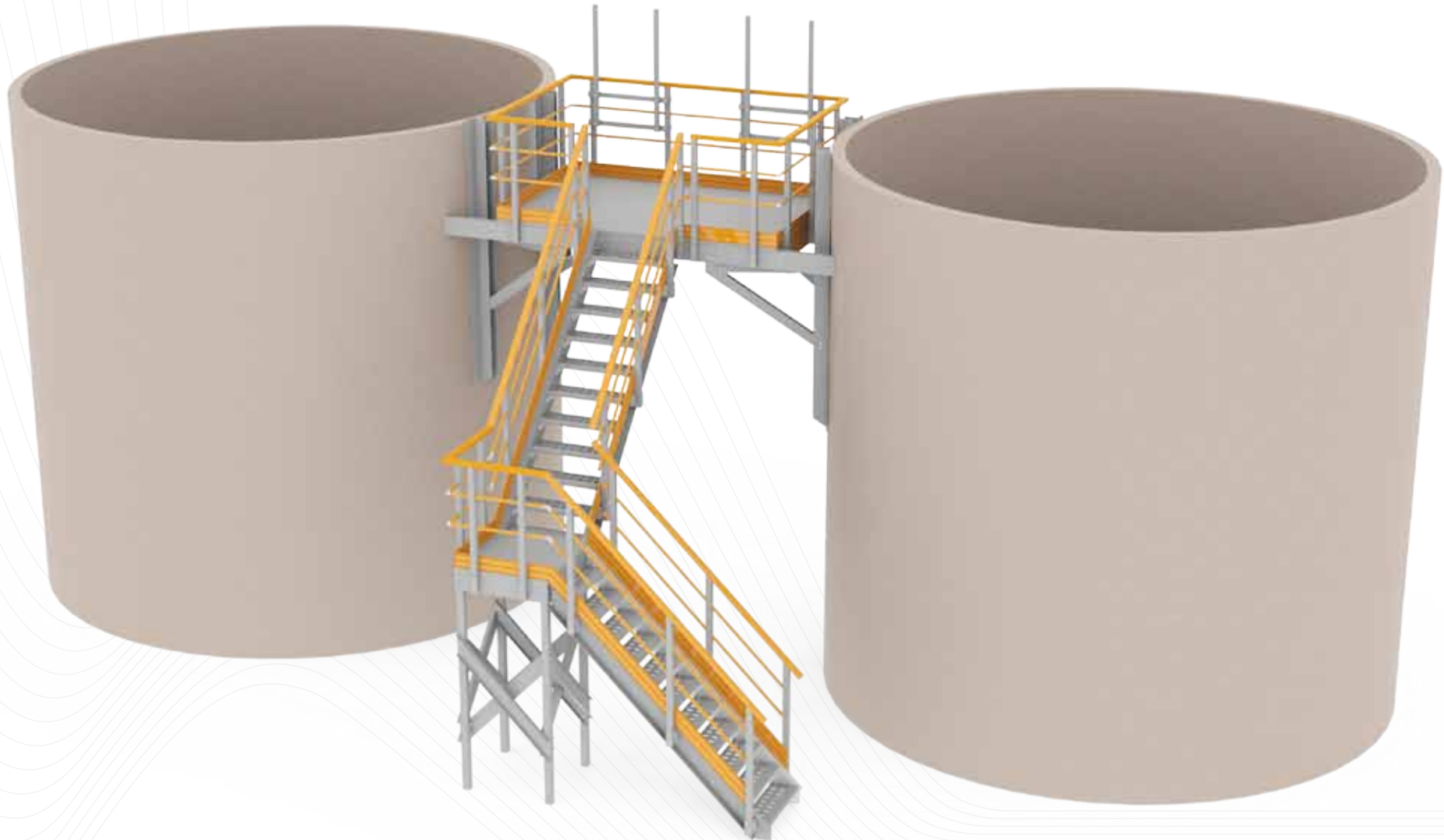














Cooling Towers



Salt Mines



Electrical Industry



Offshore



Water Reservoirs



Raised Floors



Fish Pools



Indoor Swimming Pools



Coverings



Panelings for Trams, Busses and Trains



Cooling Cars



Cable Systems



Extreme Weather Conditions 1



Extreme Weather Conditions 2



Supporting Constructions



Docks



Isolation for Overhead Wires



Architecture

Thank you for your attention!