MAXI-TEC®
HIGHTECH PROFILES

SYSTEMS FOR THE NEW GENERATION

PROTEKTOR®
PROFILES FOR MODERN BUILDING

MAXI-TEC® SYSTEMS USING REVOLUTIONARY FOLDING TECHNOLOGY

In today's world, concepts for tomorrow are in greater demand than ever before. Responsibility vis-à-vis nature and future generations is a high-priority issue – sustainability is the key word. Companies have to meet greater challenges when it is a question of providing solutions in these areas. Builder-owners are attaching increasing importance to aspects such as environmental compatibility and the protection of resources.

With the revolutionary MAXI-TEC® range of profiles, Protektor shows how ecology, economy and ergonomics can be ideally combined in dry wall construction systems. MAXI-TEC® profiles meet these requirements. The MAXI-TEC® range of profiles represents a further milestone on our way to offer modern and practical products for the construction industry.

- The MAXI-TEC® range of profiles is used in its system application in all areas of dry wall construction. A highly innovative production process, folding technology, in which only cutting and shaping processes are employed, opens up completely new perspectives.

- MAXI-TEC® profiles for sustainable connections:
  Maximum stability thanks to a highly technical, resource-friendly manufacturing process.
  There is practically no waste to dispose of.
  This means (with respect to the production of input material):
  • low raw material requirements
  • reduced energy consumption
  • less CO_2 emissions

- MAXI-TEC® profiles for efficient working:
  • the special design is the key to optimum processing-friendliness
  • lower weight compared with standard products
  • more fixing options
  • improved suitability for outdoor storage thanks to new profile design (profile openings)

- MAXI-TEC® profiles for ergonomic working:
  The low weight ensures a significant reduction in energy input required for installation, in particular for overhead work and for transportation.

- MAXI-TEC® profiles for economic working:
  Innovative technology, pioneering product design and efficient production processes guarantee the competitiveness of MAXI-TEC® systems.

- MAXI-TEC® profiles – working on a high quality level:
  The sophisticated profile enables a quick transfer of installations due to standard and special openings. Extended openings on the profile back are eaasy to produce in order to carry out even lead-throughs of large cables and tubes. The needed material withdrawel is very low while stability and high quality of profile and system persist.

MAXI-TEC® Systems meet or exceed the product and system requirements according to EN and DIN standards in terms of stability / structural strength, fire and sound insulation. Test certificates from internationally accredited institutes are available.

Institut Bauen und Umwelt e.V.

Baden-Württemberg
MINISTRY OF THE ENVIRONMENT, CLIMATE PROTECTION AND THE ENERGY SECTOR
Environmental Technology Award
Baden-Württemberg
2013
1st PRIZE
CATEGORY 2 – MATERIAL EFFICIENCY

DGNB®
Deutsche Gesellschaft für Nachhaltiges Bauen e.V.
German Sustainable Building Council

MAXI-TEC® C AND U PROFILES

- Fields of application for MAXI-TEC® C and U wall profiles are the creation of partition walls, wall linings and jamb walls.
- MAXI-TEC® C wall profiles can be set and installed in the familiar manner safely, easily and quickly in MAXI-TEC® U wall track profiles.
- Thanks to the specially structured web of the MAXI-TEC® U wall track profiles, precise positioning of the MAXI-TEC® C wall profiles is possible during installation and after positioning.

MAXI-TEC® U wall track profiles

Profile	Dimension	Weight	Material	Material thickness
5030	40 x 50 x 40	52,4 kg/ 100 linear meters	Galvanised sheet steel	0,6 mm
5033	40 x 75 x 40	59,2 kg/ 100 linear meters	Galvanised sheet steel	0,6 mm
5034	40 x 100 x 40	65,6 kg/ 100 linear meters	Galvanised sheet steel	0,6 mm

Profile lengths: 400 cm
Packaging: 8 profiles per package

MAXI-TEC® C wall profiles

Profile	Dimension	Weight	Material	Material thickness
5011	47 x 48,8 x 49	63,8 kg/ 100 linear meters	Galvanised sheet steel	0,6 mm
5015	47 x 73,8 x 49	70,6 kg/ 100 linear meters	Galvanised sheet steel	0,6 mm
5016	47 x 98,8 x 49	77,0 kg/ 100 linear meters	Galvanised sheet steel	0,6 mm

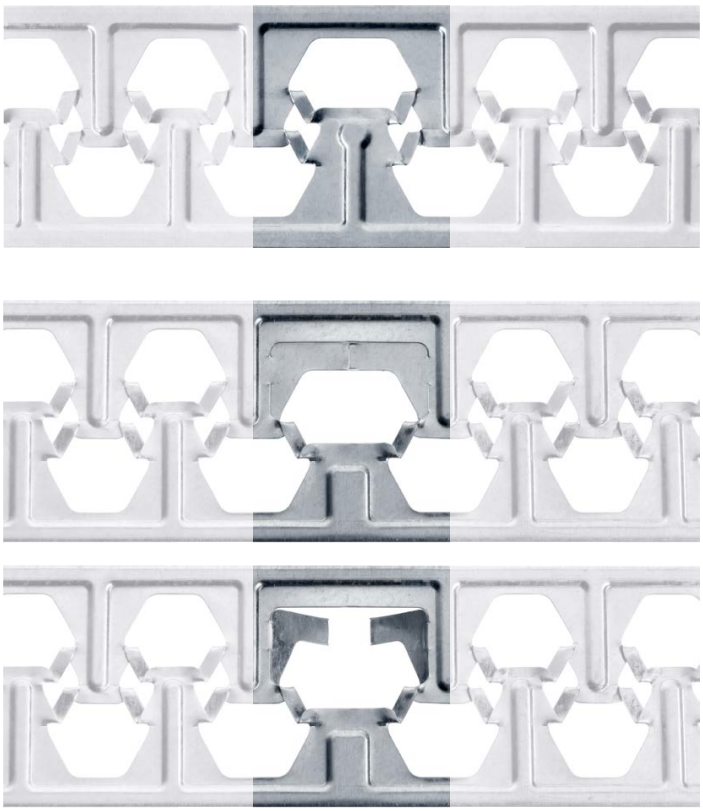
Profile lengths: 250, 260, 275, 300, 325, 350, 375, 400, 425, 450 cm (Fixed lengths upon request)
Packaging: 8 profiles per package

INSTALLATION INSTRUCTIONS:

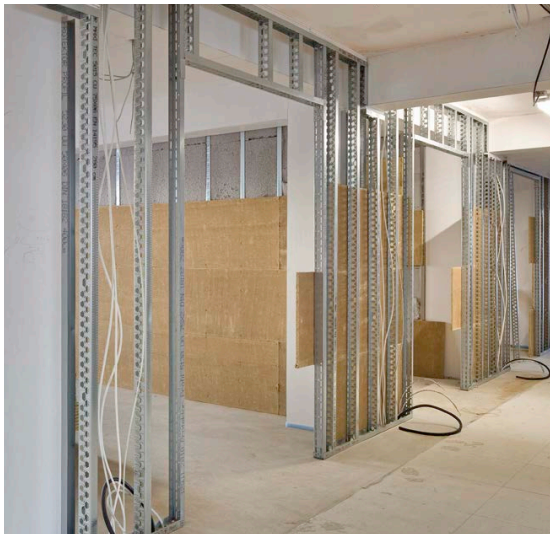
- The MAXI-TEC® U wall track profiles have a round deep punched hole every 500 mm for the positioning of drill holes in sub-structures. The drill bit is centred by the shape of the hole. When the hole is drilled through the sheet metal, a practical claw is created which grips the partition wall tape.

- The MAXI-TEC® C wall profiles have punched cable leadthrough openings 250 mm from the end of the profile and then every 500 mm; these can easily be opened on site by applying light pressure (e.g. by means of a screwdriver). After they have been folded out, the installations are supported on the fold-out straps. Thanks to the defined installation openings, installations can be fitted at a uniform height. In addition to the already mentioned special openings also standard openings located in the back of each profile can be used for installations. Expanded cut-outs are feasible as well, according to the instructions of Protektor.

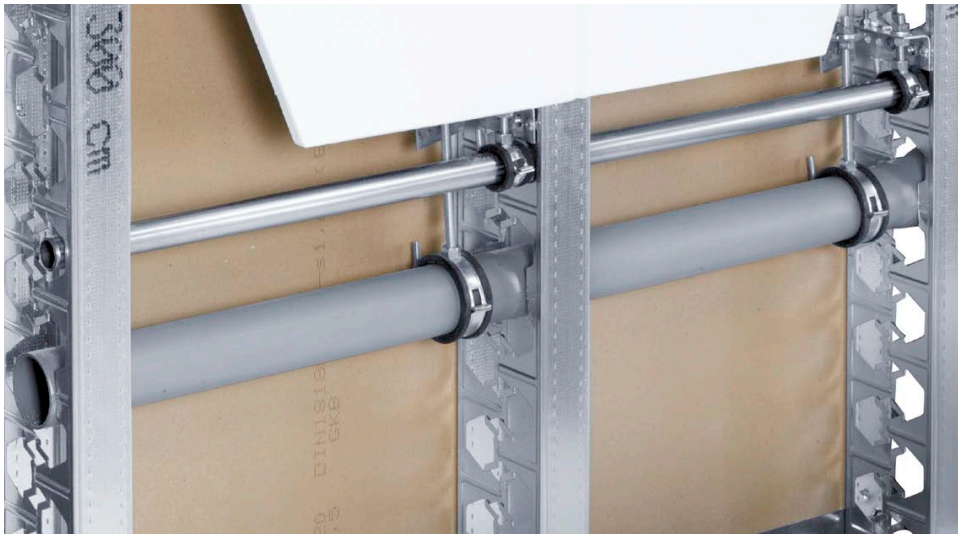
  This simplifies the work of the installations fitter significantly.



Ergonomic working and exact mounting due to an easy and flexible handling.

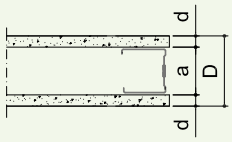
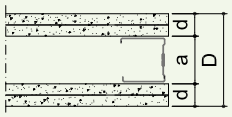
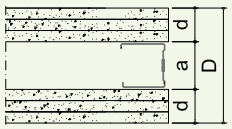
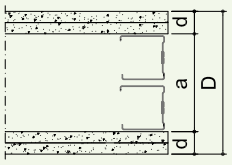
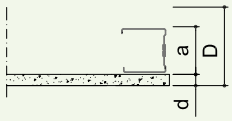
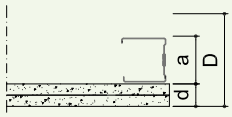
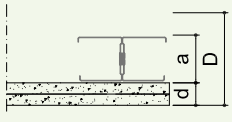


High-quality dry walls which are meeting individual requirements can be installed in a simple and fast way.



Always providing the right solution for all possible kinds of installation lead-throughs.

MAXI-TEC® PARTITION WALLS AND WALL LININGS

Technical data[11]										
Wall type on the basis of MAXI-TEC® profiles	Wall code	Dimensions in mm			Maximum sound reduction index $R_{w,R}$ in dB (tested acc. to DIN 4109)			Maximum fire resistance class (classified acc. to DIN 4102 and EN 13501)[6]		
		D	a	d	with plasterb.[3] panelling ≥8,5 kg/m²	with plasterb.[3] panelling ≥10,5 kg/m²	Insulation type[21]/thickness in mm	Values	Plasterboard panelling	Insulating material
Single partition, single boarded 	CW 50/75	75	50	12,5	40	43	Mineral wool/40	F30-A/EI 30	DF[4] [14]	without/with mineral wool[18]
								F60-A/EI 60	DF[4]	with mineral wool[22]
	CW 75/100	100	75	12,5	42	–	Mineral wool/40	F30-A/EI 30	DF[4] [14]	without/with mineral wool[18]
					42	46	Mineral wool/60	F60-A/EI 60	DF[4]	with mineral wool[22]
	CW 100/125	125	100	12,5	46	47	Mineral wool/80	F30-A/EI 30	DF[4] [14]	without/with mineral wool[18]
								F60-A/EI 60	DF[4]	with mineral wool[22]
Single partition, double boarded 	CW 50/100	100	50	2x12,5	48	52	Mineral wool/40	F90-A/EI 90	DF[4] [19]	without/with mineral wool[18]
	CW 75/125	125	75	2x12,5	51	–	Mineral wool/40	F90-A/EI 90	DF[4] [19]	without/with mineral wool[18]
					51	51	Mineral wool/60			
	CW 100/150	150	100	2x12,5	50	53	Mineral wool/80	F90-A/EI 90	DF[4] [19]	without/with mineral wool[18]
Single partition, three-fold boarding 	CW 50/125	125	50	3x12,5	51	–	Mineral wool/40	F90-A/EI 90	DF[4]	without/with mineral wool[18]
	CW 75/150	150	75	3x12,5	–	–	–	F90-A/EI 90	DF[4]	without/with mineral wool[18]
	CW 100/175	175	100	3x12,5	54	–	Mineral wool/80	F90-A/EI 90	DF[4]	without/with mineral wool[18]
Double partition, double boarded 	CW 50 + 50/155	155	105	2x12,5	–	58	Mineral wool/80	F90-A/EI 90	DF[4] [19]	without/with mineral wool[18]
	CW 75 + 75/205	205	155	2x12,5	–	–	–	F90-A/EI 90	DF[4] [19]	without/with mineral wool[18]
	CW 100 + 100/255	255	205	2x12,5	–	–	–	F90-A/EI 90	DF[4] [19]	without/with mineral wool[18]
	CW 50 + 50/160[20]	≥ 160	110	2x12,5	–	–	–	F90-A/EI 90	DF[4] [19]	without/with mineral wool[18]
	CW 75 + 75/210[20]	≥ 210	160	2x12,5	–	–	–	F90-A/EI 90	DF[4] [19]	without/with mineral wool[18]
Linings / shaft walls single boarded 	V-CW 50/62,5	≥ 62,5	50	12,5	–	–	–	–	–	–
	V-CW 75/87,5	≥ 87,5	75	12,5	–	–	–	–	–	–
	V-CW 100/112,5	≥ 112,5	100	12,5	–	–	–	–	–	–
	V-CW 50/75	≥ 75	50	2x12,5	–	–	–	F30-A/EI 30	DF[4]	without/with mineral wool[18]
	V-CW 75/100	≥ 100	75	2x12,5	–	–	–	F30-A/EI 30	DF[4]	without/with mineral wool[18]
	V-CW 100/125	≥ 125	100	2x12,5	–	–	–	F30-A/EI 30	DF[4]	without/with mineral wool[18]
	V-CW 50/90[16]	≥ 90	50	2x20	–	–	–	F60-A/EI 60	DF[4]	without/with mineral wool[18]
Linings / shaft walls double boarded – twin frame 	V-2x CW50/90[13] [16]	≥ 90	50	2x20	–	–	–	F90-A/EI 90	DF[4]	without/with mineral wool[18]

For each building component the corresponding cladding panels and insulating material of the respective manufacturer must be homogenously built in, in accordance to their technical specifications and standards.

1) Areas with small gatherings of persons, as can be assumed e.g. in apartments, hotels, offices, hospital rooms and similarly used rooms, including the corridors.

2) Areas with large gatherings of persons, as can be assumed e.g. in larger meeting rooms, school rooms, lecture halls, exhibition and salesrooms and similarly used rooms. Additionally also included in this classification are partitions between rooms with floor height differences ≥ 1m.

3) Plasterboard (acc. to DIN 18180 and DIN EN 520, Type A)

4) Firecheck plasterboard (acc. to DIN 18180 and DIN EN 520, Type DF)

5) tested acc. to DIN 4103-1

6) tested acc. to EN 1364

7) Selection of screw length acc. to panelling type and thickness

8) Depending on specifications of plasterboard industry

MATERIAL REQUIREMENTS TABLE **MAXI-TEC®**

				Material requirements table per m² (excluding waste)[12]										
maximum weight in kg/m²	max. installation height acc. to defined installation area in m (acc. to DIN 18183-1)[5]		max. build height in m in the event of fire [17]	Profiles		Panelling in m²		SB screws[7] pcs	Joint tape[8] in linear meters	Joint filler in kg	Felt strip/ partition tape[9] in linear meter	Impact anchors pcs	Mineral wool insulating material[10] in m²	Tapping screw [15]
	EB I[1]	EB II[2]		C in linear meters	U in linear meters	12,5 mm	20 mm							
24	3,00	2,75	5,00 3,00	1,8	0,8	2,0	–	26	3,3	0,5	1,3	1,6	1,0	–
24	4,50	3,75	5,00 3,00	1,8	0,8	2,0	–	26	3,3	0,5	1,3	1,6	1,0	–
24	5,00	4,25	5,00 3,00	1,8	0,8	2,0	–	26	3,3	0,5	1,3	1,6	1,0	–
45	4,00	3,50	5,00	1,8	0,8	4,0	–	9+26	3,3	0,65	1,3	1,6	1,0	–
45	5,50	5,00	5,00	1,8	0,8	4,0	–	9+26	3,3	0,65	1,3	1,6	1,0	–
45	6,50	5,75	5,00	1,8	0,8	4,0	–	9+26	3,3	0,65	1,3	1,6	1,0	–
68	4,00	3,50	5,00	1,8	0,8	6,0	–	9+9+26	3,3	0,8	1,3	1,6	1,0	–
68	5,50	5,00	5,00	1,8	0,8	6,0	–	9+9+26	3,3	0,8	1,3	1,6	1,0	–
68	6,50	5,75	5,00	1,8	0,8	6,0	–	9+9+26	3,3	0,8	1,3	1,6	1,0	–
48	4,50	4,00	5,00	3,6	1,6	4,0	–	9+26	3,3	0,65	5,4	3,2	1,0	–
48	6,00	5,50	5,00	3,6	1,6	4,0	–	9+26	3,3	0,65	5,4	3,2	1,0	–
48	6,50	6,00	5,00	3,6	1,6	4,0	–	9+26	3,3	0,65	5,4	3,2	1,0	–
48	4,50	4,00	5,00	3,6	1,6	4,0	–	18+26	3,3	0,65	5,4	3,2	1,0	–
48	6,00	5,50	5,00	3,6	1,6	4,0	–	18+26	3,3	0,65	5,4	3,2	1,0	–
14	–	–	–	1,8	0,8	1,0	–	13	1,65	0,25	1,3	1,6	1,0	–
14	3,00	2,50	–	1,8	0,8	1,0	–	13	1,65	0,25	1,3	1,6	1,0	–
14	4,00	3,00	–	1,8	0,8	1,0	–	13	1,65	0,25	1,3	1,6	1,0	–
24	2,60	–	3,00	1,8	0,8	2,0	–	5+13	1,65	0,5	1,3	1,6	1,0	–
24	3,50	2,75	3,00	1,8	0,8	2,0	–	5+13	1,65	0,5	1,3	1,6	1,0	–
24	4,25	3,50	3,00	1,8	0,8	2,0	–	5+13	1,65	0,5	1,3	1,6	1,0	–
40	3,00	3,00	3,00	1,8	0,8	–	2,0	8+16	1,65	0,5	1,3	1,6	1,0	–
43	3,00	3,00	3,00	3,6	0,8	–	2,0	16+32	1,65	0,5	1,3	1,6	1,0	2,2

9) Alternatives, depending on system requirements
10) Choice and thickness of insulating material acc. to requirements
11) System data sheets available
12) Calculation basis: Wall area 4.00 m x 2.50 m = 10 m²
13) Metal stud screwed together as double profile
14) Alternative cladding 2 x gypsum plasterboard 12,5 mm, (according to DIN 18180 or DIN EN 520 type A)
15) Dimension ≥ 3,5 x 13 mm
16) Alternative substructure with MAXI-TEC® CW/UW 75 and 100
17) Demands from other standards / guidelines (e.g. DIN 18183) must be considered
18) The insulating materials utilised must be at least of the building material class - flame retardant
19) Alternative cladding 1 x gypsum fire plasterboard 25 mm, (according to DIN 18180 or DIN EN 520 type DF)
20) Studs braced as double frame according to DIN 18183
21) Length related flow resistance $\Xi \geq 5$ kN · s/m⁴
22) Mineral wool, D ≥ 40 mm, Building material fire class A1 according to EN 13501-1, Melting-Point › 1000 °C

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