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TZ-40

ROOF PROFILED STEEL SHEETING

- High quality, cold-formed trapezoidal profiled steel sheeting, made of certified structural steel.
- Metal roof cladding for industrial, commercial and sports facilities buildings.
- CE marked product according to EN 14782 and EN 1090 standards.
- Useful width with overlap of 1.0 m and manufacturing lenghts up to 14.9m.
- Available with factory-applied condensation control coating in the inner side, which regulates moisture and prevents droplets from the inner side of the sheeting.
- Spans up to 3.0m and loads up to 1,871 daN/m^2 in single span.

CE

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DESCRIPTION AND APPLICATIONS

High-quality cold-formed trapezoidal steel profiled sheeting.

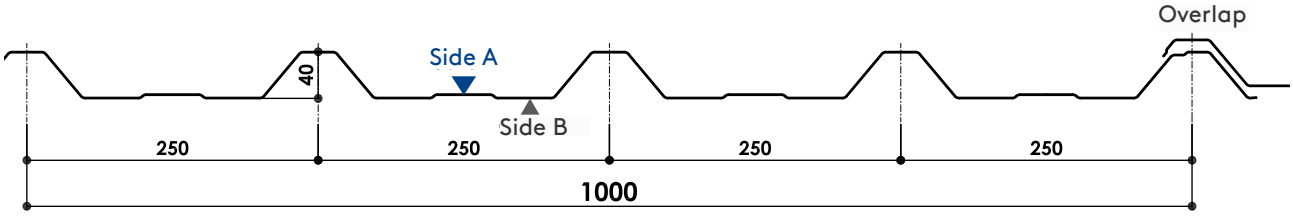
Manufacturing allowance for curved solutions.

Suitable for acoustic control systems, with several possibilities of perforation patterns.

Metallic roof enclosures for industrial, commercial and sports facilities buildings.

Depending on the configuration, spans beween supports up to 3.0 m, and loads up to 1,871 daN/m^2 can be attained in single span.

PRODUCT DATA



Useful width		1,000 mm
Maximum manufacturing lenght		14.9 m (>13.5 m requires special transport)
Steel grade		Standard S220GD (other steel grades available on demand)
Thicknesses		0.5 / 0.6 / 0.7 / 0.8 / 1.0 mm
Coatings	Standard	Galvanised Z275 Galvanised & 25 microns lacquered in silicone polyester
	Special	HD, HDS, HDX, PVDF, PET)

Steel sheet Certifications

Steel sheet to EN 10346 (galvanised) and to EN 10169 (organic coatings).

TZ-40 Profiled sheet Certifications

CE marking according to EN 14782:2006 and EN 1090-1:2009+A1:2011 standards.

CE

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PROFILED SHEET TECHNICAL DATA

THICKNESS	SELFWEIGHT		SECOND MOMENT OF AREA	RESISTANT MODULUS	MOMENTO FLECTOR
(mm)	(kg/ml)	(kg/m²)	I (cm⁴/m)	Wmin (cm³/m)	Mf (kgf·m)
0.5	4.90	4.90	11.912	4.218	67.48
0.6	5.88	5.88	14.558	5.170	82.72
0.7	6.86	6.86	16.976	6.016	136.56
0.8	7.85	7.85	19.396	6.860	155.72
1.0	9.81	9.81	24.228	8.536	193.77

MAXIMUM ALLOWABLE PRESSURE LOADS (daN/m²)

		SPAN BETWEEN SUPPORTS (m)								
thk (mm)	SUPPORTS	1.00	1.25	1.50	1.75	2.00	2.25	2.50	2.75	3.00
0.5		775	396	227	142	98	71	53	40	30
		1871	958	553	347	231	161	117	91	72
		1472	753	434	272	181	126	95	74	58
0.6		1026	524	301	188	126	90	66	49	37
		2473	1267	732	459	306	213	154	117	91
		1946	996	575	360	240	167	122	93	72
0.7		1293	661	380	237	157	110	79	58	44
		3115	1598	924	580	387	270	195	145	112
		2450	1256	725	455	303	211	152	114	87
0.8		1505	769	443	277	183	127	91	67	50
		3627	1860	1075	675	450	314	227	169	129
		2852	1462	844	530	353	246	177	132	100
1.0		1871	957	551	344	228	157	113	83	62
		4510	2312	1337	839	560	391	282	210	160
		3547	1818	1050	658	438	305	220	163	124

NOTES:

1 daN/m² ≈ 1 kp/m²

- The values listed in the table are unfactored allowable loads, which should be compared with the sum of characteristic loads (without factoring) in each project.
- Tables calculated for a maximum deflection of L /200, where L is the span (distance between purlins).
- Tables valid for pre-design only. The designer must carry out the structural calculation according to the relevant standards in each country.
- For resistance verification according to EN 1993-1-3, or for other load cases, please contact our technical department. Kingspan | Teczone expressly declines any responsibility derived from the use of these tables.

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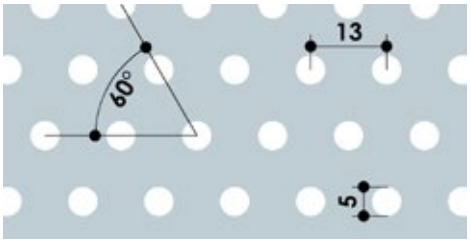
PERFORATIONS FOR ACOUSTIC CONTROL

Uniform perforation, for example type R5T13 pattern, with Ø5mm holes, 13mm between centres, staggered at 60°. Perforated area of 14% of total surface. Absortion coefficient α_w = 0.85 according to EN ISO 354:2004 for a in-situ sandwich system. Usual stock in 0.6mm White 1006. Request delivery term for other possibilities. Other types of uniform perforation are also available.

TZ Pattern, perforated-ripped with a 36% area embedded in the profile lower flange. Represents a reduction of 7% of allowable loads with respect to the unperforated profile.

Absortion coefficient α_w = 0.50 to EN ISO 354:2004 for in-situ sandwich system. Delivery time similar to that of the unperforated profile.



AVAILABLE COATINGS

Kingspan | Teczone has a wide range of high-performance, state-of-the-art coatings, selectable according to the type of installation environment, in order to guarantee the maximum durability of the TZ profiles:

	OUTDOOR ENVIRONMENT								INDOOR ENVIRONMENT			
	RURAL WITHOUT POLLUTION	URBAN / INDUSTRIAL		MARINE			RESISTANCE		NON-AGRESSIVE ENVIRONMENTS		AGGRESSIVE AND/OR VERY HUMID ENVIRON-MENTS	RESISTANCE
		Moderate	Severe	Between 3 - 20 km	< 3km (1)	Mixed	Outdoor Corrossion Category	UV	Low humidity	Medium humidity		Indoor Corrosion Category
Polyester 25µ	☑	☑	!	!	☒	☒	!	!	☑	☑	Ai3 (2)	CPI3
HDS 35µ	☑	☑	!	☑	!	!	RC4	RUV4	☑	☑	Ai3	CPI4
PVDF 35µ	☑	☑	!	☑	!	!	RC4	RUV4	☑	☑	Ai3	CPI4
HDX 55µ	☑	☑	☑	☑	☑	!	RC5	RUV4	☑	☑	Ai3	CPI4
PET 50µ	☒	☒	☒	☒	☒	☒	NA	NA	☑	☑	Ai5	CPI5

☑ Suitable coating ☒ Unsuitable coating NA Not applicable ! Check with Teczone

(1) Please contact us for distances <300m.
(2) Check conditions.

Not all coatings are available for all sheet thicknesses and colors. Consult Teczone if you need any coating not included in the table.

CONDENSATION CONTROL COATING

TZ-40 Roof profile is available with a factory-applied coating on the inner side of the cladding profile allowing condensation control. It prevents the formation of droplets when the dew point is reached in the roof inner surface. This coating retains the water until the conditions change from the dew point, and returns it to the air by evaporation. The coating is tear-proof, can be cleaned under pressure and it is resistant to bacterial and corrosive environments such as livestock facilities.

QUALITY AND SAFETY

Both steel and its metallic or organic coatings are free from SVHC ("Substances of Very High Concern"), in accordance with the requirements of European regulation REACH. Our Quality Management (ISO 9001), Environmental Management (ISO 14001) and Occupational Health and Safety (ISO 45001) systems are certified by AENOR and IQNet.

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DTC-013_EN | 23/10/23 | Rev: 4.0