Kalzip wall systems

product review

- **Built up wall construction**
- **A variety of external finishes**
- **Fully systemised approach**
- **ADL2 compliant**
- **Aluminium and steel applications**
- **Comprehensive design support**

Kalzip wall systems provide a cost effective solution suitable for a wide range of applications.

Two new profiles are illustrated. The MT33/1000R offer a unique half round and micro-ribbed finish. The TF37/800R provides an equally unique appearance.

Both products share a common support grid which can be easily adapted to give the required thermal performance. In addition, the use of mineral wool insulation in a wall build up, ensures a non-combustible building envelope solution.

Specifying a Kalzip wall system in addition to our standing seam roof constructions enables a co-ordinated approach to achieve a weather tight envelope.

Use of the Kalzip Teamkal contractor network ensures no division of responsibility between roof sheeting and wall cladding. A single source of materials and components installed by a dedicated trained installer ensures a safe, risk-free solution from Kalzip.

MT33/1000R
Profiled cladding

Applications

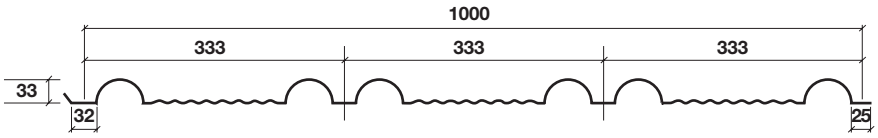
MT33/1000R is available in colour-coated aluminium or galvanised steel in gauges of 0.7mm, 0.8mm and 1.0mm. This profile can be assembled on masonry/blockwork or steel liner built-up systems. A variety of components and options are available to meet all requirements and applications.

Aluminium

Aluminium alloy to EN AW 3105 is available in sheet lengths of up 6000mm pre-painted using polyester or PVdF finish, in a wide range of colours.

Steel

Galvanised steel to EN 10142 is available in sheet lengths of up to 12000mm and can be provided in stucco embossed finish or pre-painted with polyester or PVdF coatings in a wide range of colours.



Profile geometry

Kalzip MT33/1000R aluminium - wind pressure (kN/m²)

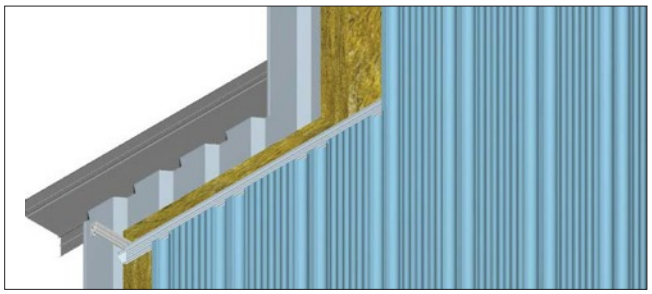
Gauge (mm)	Weight (kg/m²)	Span (m)					
		1.0	1.2	1.4	1.6	1.8	2.0
0.7	2.41	1.78	1.26	0.94	0.73	0.58	0.47
0.8	2.75	2.20	1.56	1.16	0.89	0.71	0.58
1.0	3.44	3.15	2.22	1.64	1.26	1.00	0.81

Kalzip MT33/1000R steel - wind pressure (kN/m²)

Gauge (mm)	Weight (kg/m²)	Span (m)					
		1.0	1.2	1.4	1.6	1.8	2.0
0.7	7.00	4.81	3.51	2.67	2.09	1.68	1.38
0.8	8.00	6.07	4.42	3.36	2.63	2.11	1.73
1.0	10.00	8.96	6.52	4.94	3.87	3.10	2.54

Notes to load span tables

Safe working uniformly distributed loads in kN/m²*	
Multiple span support condition	
Serviceability limit state	Span/150
Safety factor (wind)	1.5
Yield strength (aluminium)	165 N/mm²
Yield strength (steel)	320 N/mm²
*Self-weight of panel neglected in vertical wall application.	



A typical form of construction is illustrated with cladding supported by bracket and bar system.

Kalzip bracket and bar support grid - max. wind load (kN/m²)

Bracket spacing (m)	Side rail spacing (m)			
	1.2	1.4	1.6	1.8
0.6	4.17	3.57	3.13	2.78
0.8	3.13	2.68	2.34	2.08
1.0	2.50	2.14	1.88	1.67

Notes

Safe working uniformly distributed loads (pressure or suction, which ever the lower) in kN/m²	
Multiple span support conditions	
Vertically spanning cladding	
Serviceability limit state	Span/300
Safety factor (wind)	1.4

Thermal performance

U-value (W/m²/K)	Thermal conductivity of insulation (W/m/K)	Insulation thickness (mm)
	0.035	130
0.30	0.040	145
	0.035	155
0.25	0.040	175

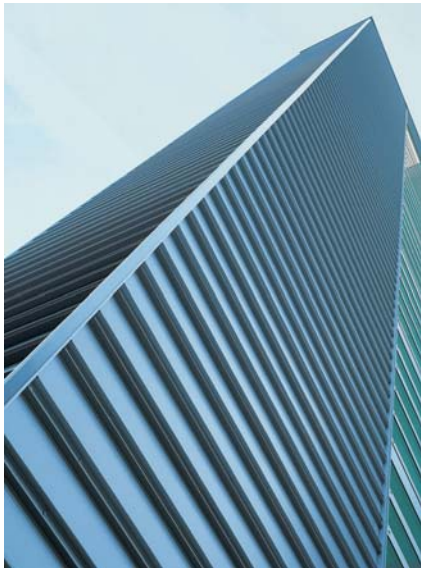
Assumptions

Bar spacing	1200mm
Bar dimensions	W40mm D40mm T1.2mm
Wall brackets	Insulated from liner by plastic thermal barrier pad
Cross-sectional area of brackets	50mm² - 60mm² per linear metre

The structural and thermal performance of a particular wall construction, should be verified prior to installation.

Kalzip offers a bespoke fabrications services, providing project-specific flashings to meet exact customer requirements. Please contact us for further information.

TF37/800R
Profiled cladding

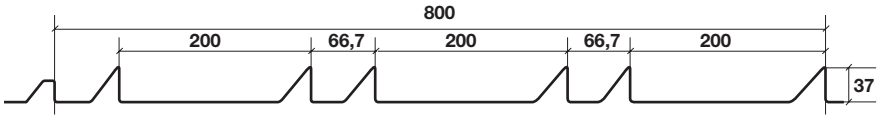


Applications

Fixed to bracket and bar support grid over liner and onto side rails, the insulation cavity can be fully sealed including a vapour control layer, or ventilated with a breather membrane over slab insulation.

Materials and finishes

The TF37/800R profile is available in PVdF painted-coated aluminium alloy EN AW 3004 in gauges of 1.0mm or 1.2mm. The unique twin triangular profile creates a distinctive wall element, especially when contrasted with other façade materials and finishes.



Profile geometry

Kalzip TF37/800R aluminium - wind pressure/suction (kN/m²) - multiple span

Gauge (mm)	Weight (kg/m²)	Span (m)						
		1.0	1.2	1.4	1.6	1.8	2.0	2.2
1.0	4.13	4.26 / 2.51	3.21 / 1.97	2.50 / 1.60	2.00 / 1.32	1.64 / 1.12	1.36 / 0.90	1.15 / 0.75
1.2	4.95	5.69 / 3.13	4.24 / 2.47	3.27 / 2.01	2.60 / 1.67	2.11 / 1.36	1.75 / 1.01	1.47 / 0.76

Notes to load span tables

Safe working uniformly distributed loads in kN/m²*	
Serviceability limit state	Span/120
Safety factor (wind)	1.4
*Self-weight of panel neglected in vertical application.	

Kalzip bracket and bar support grid - max. wind load (kN/m²)

Bar spacing Gauge (mm)	Side rail spacing (m)			
	1.2	1.4	1.6	1.8
0.6	2.76	2.02	1.55	1.22
0.8	2.07	1.52	1.16	0.92
1.0	1.65	1.21	0.93	0.73
1.2	1.38	1.01	0.78	0.61

Notes

Safe working uniformly distributed loads in kN/m²	
Horizontally spanning, vertical wall application	
Serviceability limit state	Span/300
Safety factor (fasteners)	2.0

Vertical bar support

Using the bracket and bar grid to support horizontally spanning cladding, requires the dead weight of the system to be communicated to a load bearing part of the wall structure.

This can be achieved by supporting the base of the bar either on a dwarf wall or primary structural steel member and fixing the bars to the side rail with independent additional brackets at a suitable frequency.

A range of high quality aluminium extrusions are available to interface with other façade elements.

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