

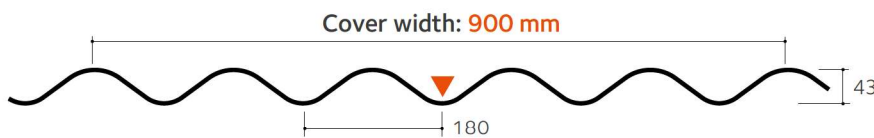
# Frequency® range

## Frequency® 5.43T

Corrugated roof profile



ArcelorMittal



Length of profile:

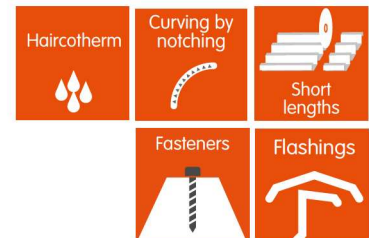
Minimum 1800 mm / Maximum 11,000 mm

Minimum thickness: 0.75 mm

A polyethylene foam adhesive seal (30 kg/m<sup>3</sup>) must be installed on the support

Dimensions of seal (thickness 5 mm): width of support + 10 mm

Minimum slope 10 % or 15 % depending on the roof configuration



### Experimental features

According to Véritas report no. DME 7 92 273/01

				Thickness (mm)				
				0.75	0.88	1.00		
Surface weight (kg/m <sup>2</sup> )				7.75	9.10	10.34		
Effect of downward loads	Moment of inertia (cm <sup>4</sup> /lm)	Single span	I2	21.89	25.68	29.18		
		Two equal spans	I3	19.35	22.71	25.80		
		Continuity	Im	20.62	24.19	27.49		
	Moment of flexion (m.daN/lm)	By the span	Elastic system	Md2T	295.71	346.97	394.28	
			Elasto-plastic system	Md3T	333.56	391.38	444.75	
		On support	Md3A	244.82	287.26	326.43		
Under concentrated load			Mc	199.99	234.65	266.65		
Reaction at the support (daN/lm)			Rd	794.56	932.29	1,059.20		
Effect of upward loads	Complete fastening at top of rib	Moment of flexion (m.daN/lm)	By the span	Elastic system	Ma2T	265.99	312.10	354.66
				Elasto-plastic system	Ma3T	349.81	410.45	466.42
		On support		Ma3A	162.70	190.90	216.94	
		Lift-off force on support (daN/lm)			Sa	471.77	553.5	629.03

### Loads table under the climatic load effect for equal spans

Frequency® 5.43T	Unweighted operating loads (daN/m <sup>2</sup> )	2 supports			3 supports			4 supports			
		0.75	0.88	1.00	0.75	0.88	1.00	0.75	0.88	1.00	
Downward loads	45	3.35	3.50	3.60	3.50	3.70	3.90	3.50	3.70	3.90	
	55	3.15	3.30	3.45	3.50	3.70	3.90	3.50	3.70	3.90	
	65	3.00	3.15	3.25	3.50	3.70	3.90	3.50	3.70	3.90	
	75	2.90	3.00	3.15	3.50	3.70	3.90	3.50	3.70	3.80	
	90	2.70	2.85	2.95	3.50	3.70	3.85	3.30	3.50	3.60	
	100	2.65	2.75	2.90	3.45	3.60	3.75	3.20	3.35	3.50	
	125	2.45	2.60	2.70	3.20	3.35	3.50	3.00	3.15	3.30	
	150	2.30	2.45	2.55	3.00	3.15	3.30	2.85	2.95	3.10	
	175	2.20	2.30	2.40	2.85	3.00	3.15	2.70	2.85	2.95	
	200	2.10	2.25	2.30	2.55	2.90	3.00	2.60	2.70	2.85	
	225	2.05	2.15	2.25	2.30	2.65	2.90	2.50	2.60	2.70	
	250	1.95	2.05	2.15	2.05	2.40	2.70	2.25	2.55	2.65	
Upward loads	Complete fastening at top of rib	75	3.35	3.50	3.60	3.50	3.70	3.90	3.50	3.70	3.90
		100	3.30	3.50	3.60	3.35	3.70	3.90	3.50	3.70	3.90
		125	2.60	3.10	3.55	2.65	3.15	3.50	2.90	3.45	3.80
		150	2.15	2.55	2.95	2.20	2.60	2.95	2.40	2.85	3.25
		200	1.60	1.90	2.15	1.60	1.90	2.20	1.80	2.10	2.40