Leviat
A CRH COMPANY

Ancon

Ancon 25/14 Restraint System

The Ancon 25/14 Restraint System fixes an outer leaf of brickwork to a light steel frame, through any type of insulation.

Self-drilling high-thread screws fix through the channel and the insulation, into the steel. Once the channel is installed, stainless steel SD25 or basalt fibre Teplo-BF-CT 25 wall ties can be positioned at any point along its length and are built into the bed joints of the outer leaf of brickwork.

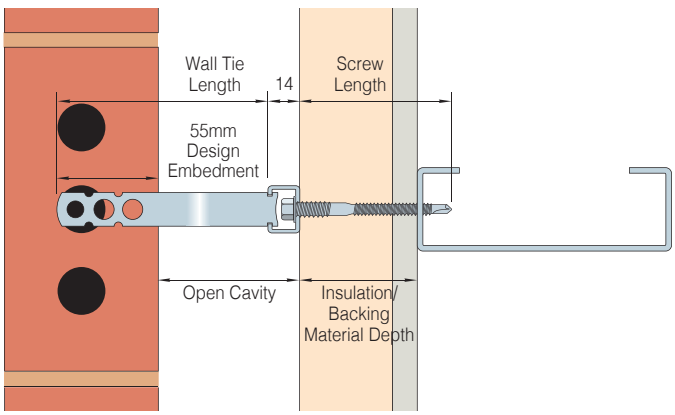
Self-drilling high-thread screws are available for use with a maximum combined insulation and backing board thickness of 220mm. When using any thickness of rigid insulation board or ROCKWOOL Rainscreen Duo Slab®, Isover Polterm Max Plus, Kingspan Facades K-Roc Rainscreen Slab, Knauf Insulation Rocksilk® Rainscreen Slab, Xtratherm Stonewool and ROCKWOOL Nyrock® Rainscreen 032 with a maximum thickness of 180mm, the screws can be installed directly through the insulation. When using other thicknesses of these insulations or other semi-rigid/flexible insulations, an Ancon Compression Sleeve (the same depth as the insulation) should be used around the fixing screws to provide the necessary support.

System Components

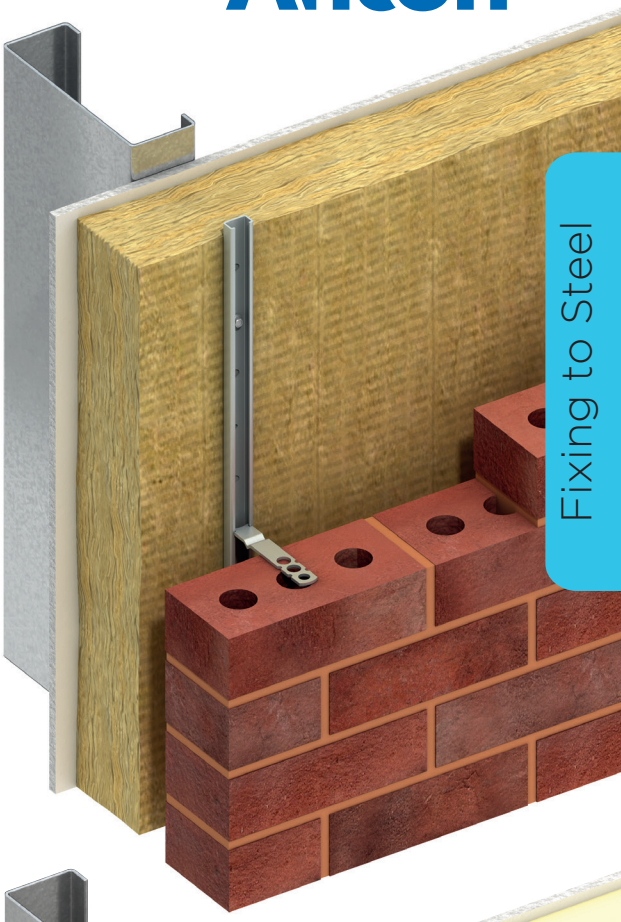
25/14 Channel
Lengths: 2700, 3000mm

High-thread Fixing Screws
Lengths: For an insulation depth up to 220mm

SD25 or Teplo-BF-CT 25 Wall Ties
Lengths: For open cavities up to 334mm*
**up to 259mm for SD25 ties*



Warranty
We provide a warranty on our stainless steel 25/14 system, guaranteeing the design performance for 60 years. When using our zinc plated fixing screws, a 25 year warranty is offered. Contact us for full details and conditions.



Fixing to Steel

UK CA CE

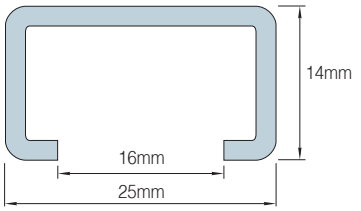
This system has been independently tested by Lucideon and Declarations of Performance are available to download from www.ancon.co.uk/approvals

Ancon Compression Sleeves may be required around the fixing screws with some insulations

July 2023

Ancon 25/14 Channel

25/14 channel is available in lengths of 2700mm and 3000mm. It features pre-punched holes at close centres to ensure a fixing position is always located near the end, even when it is cut on site. The channel has a 16mm opening to easily accommodate a drive socket and washer for the fixing screws.



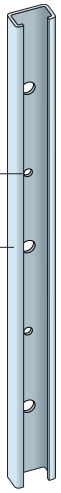
Ancon 25/14 Channel Profile

Ancon 25/14 channel features alternate 5.3mm and 9.5mm diameter holes to accept different fixings.

The smaller diameter holes should be used when fixing to steel or timber with Ancon High-Thread Screws.

The larger diameter holes are to accommodate fixings for concrete.

Note: Using the incorrect hole and fixing screw combination invalidates the system performance



Ancon High-Thread Fixing Screws

Screws are available to accommodate a combined backing board and insulation thickness of up to 220mm and a steel thickness from 1.2mm to 3mm. Ancon Fixing Screws feature a shaped drill tip of hardened steel that allows installation without pre-drilling. Drive sockets are available. See tables for correct screw reference and fixing centres.

Stainless Steel Fixing Screws

Insulation/Backing Material Thickness (mm)	Ancon Screw Reference	Screw Length (mm)
30-46	HTSS-65-2PT-W	65
35-61	HTSS-82-2PT-W	82
43-79	HTSS-100-2PT-W	100
60-94	HTSS-115-2PT-W	115
65-114	HTSS-135-2PT-W	135
80-129	HTSS-150-2PT-W	150
110-159	HTSS-180-2PT-W	180
165-220	HTSS-240-2PT-W	240

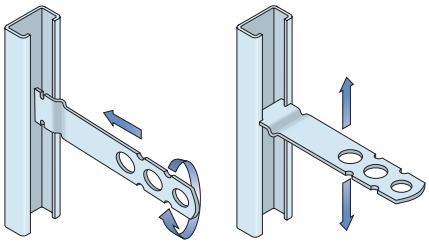
Notes: Suitable for use without an Ancon Compression Sleeve when using rigid insulations up to 220mm or ROCKWOOL Rainscreen Duo Slab®, Isover Polterm Max Plus, Kingspan Facades K-Roc Rainscreen Slab, Knauf Insulation Rocksilk® Rainscreen Slab, Xtratherm Stonewool and ROCKWOOL Nyrock® Rainscreen 032 up to 180mm. The Ancon 25/14 system is also suitable for fixing to timber and concrete. Contact us for more details.

Ancon SD25 and Teplo-BF-CT 25 Wall Ties

Ancon wall ties are available in various lengths to suit open cavities from 35mm to 334mm. They are located in the channel by rotating through 90° and can be easily moved to the required position where they are built into the masonry bed joint. See tables for wall tie references and fixing centres.

Wall Tie Lengths/References

Open Cavity (mm)	Tie Length (mm)	Ancon Tie Reference	
		SD25	Teplo-BF-CT 25
35-59	100	SD25/100	-
60-84	125	SD25/125	-
85-109	150	SD25/150	Teplo-BF-CT - 150
110-134	175	SD25/175	Teplo-BF-CT - 175
135-159	200	SD25/200	Teplo-BF-CT - 200
160-184	225	SD25/225	Teplo-BF-CT - 225
185-209	250	SD25/250	Teplo-BF-CT - 250
210-234	275	SD25/275	Teplo-BF-CT - 275
235-259	300	SD25/300	Teplo-BF-CT - 300
260-284	325	-	Teplo-BF-CT - 325
285-309	350	-	Teplo-BF-CT - 350
310-334	375	-	Teplo-BF-CT - 375



Recommended Wall Tie and Fixing Screw Vertical Centres, based on 25/14 Channel at 600mm Horizontal Centres

Tie Type	Insulation Thickness[1] (mm)	Vertical Tie Spacing (mm)	Vertical Fixing Spacing (mm)
1	Max 220	300**	225
2	Max 220	450	337.5
3	Max 220	450	337.5/450*
4	Max 220	450	337.5/450*

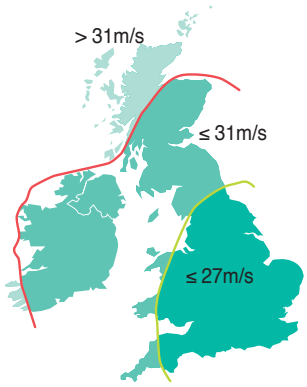
*Notes: Centres shown achieve equivalent tie type performances to PD 6697 6.2.2.5 Table 12 (M2 Mortar). *337.5mm centres for insulation thicknesses greater than 114mm **225mm vertical tie spacing for Teplo-Channel Ties 300mm and longer.*

Self-drilling high-thread screws are available for use with a maximum combined insulation and backing board thickness of 220mm. When using any thickness of rigid insulation board or ROCKWOOL Rainscreen Duo Slab®, Isover Polterm Max Plus, Kingspan Facades K-Roc Rainscreen Slab, Knauf Insulation Rocksilk® Rainscreen Slab, Xtratherm Stonewool and ROCKWOOL Nyrock® Rainscreen 032 with a maximum thickness of 180mm, the screws can be installed directly through the insulation. When using other thicknesses of these insulations or other semi-rigid/flexible insulations, an Ancon Compression Sleeve (the same depth as the insulation) should be used around the fixing screws to provide the necessary support.

Wall Tie Types

Required Wall Tie Type	Application	Maximum Building Height (m)	Geographical Location
Type 1	Heavy duty tie, suitable for most building types	Any height	Suitable for most sites. However, for relatively tall or unusually shaped buildings in vulnerable areas, tie provision should be calculated
Type 2	General purpose tie, suitable for residential and small commercial buildings	15	Suitable for flat (less than 1 in 20) open sites where the fundamental basic wind velocity does not exceed 31m/s and altitude is not more than 150m above sea level.
Type 3	Basic wall ties, suitable for residential and small commercial buildings	15	As Type 2 but fundamental basic wind velocity limited to 27m/s.
Type 4	Light duty tie, suitable for box-form domestic dwellings	10	Suitable for flat sites (less than 1 in 20) in towns and cities where the fundamental basic wind velocity does not exceed 27m/s and altitude is not more than 150m above sea level.

Notes: Fundamental basic wind velocity must be calculated for the specific altitude of the site, refer to Clause NA.2.4 in NA to BS EN 1991-1-4:2005. The table above provides only a brief summary of information. Refer to PD 6697:2019 and NA to BS EN 1991-1-4:2005 for complete information. For information on the certified management systems and standards see Ancon.co.uk



Information adapted from NA to BS EN 1991-1-4:2005 for use with PD 6697:2019, calculating c_{alt} for an altitude of 150m above sea level. For some projects this may be conservative. Contact Leviat for further details.

Leviat
President Way, President Park, Sheffield, S4 7UR
Tel: +44 (0) 114 275 5224, Email: info.uk@leviat.com

Imagine. Model. Make.

Leviat.com

Leviat
A CRH COMPANY

Ancon

Ancon 25/14 Restraint System

The Ancon 25/14 Restraint System ties an outer leaf of brickwork to a concrete frame.

Screws fix through the channel and a stainless steel compression sleeve, located in the insulation, and into a pilot hole in the concrete. Stainless steel SD25 or basalt fibre Teplo-BF-CT 25 wall ties are located in the channel and built into the bed joints of the outer leaf of brickwork.

This system has been independently tested by Lucideon and Declarations of Performance are available to download from www.ancon.co.uk/approvals. It is suitable for use with all insulation types.

System Components

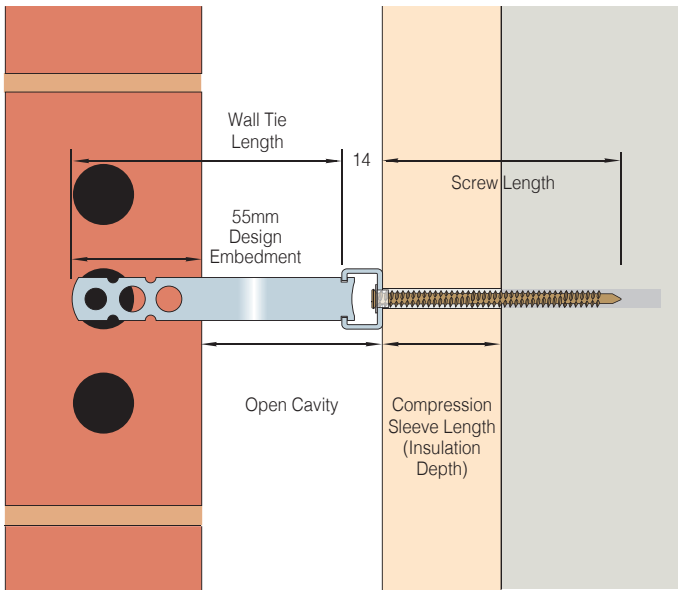
25/14 Channel
Lengths: 2700, 3000mm

Fixing Screws
Lengths: For an insulation depth up to 270mm

Compression Sleeve
Lengths: To suit insulation depth

SD25 or Teplo-BF-CT 25 Wall Ties
Lengths: For open cavities up to 334mm*

**up to 259mm for SD25 ties*



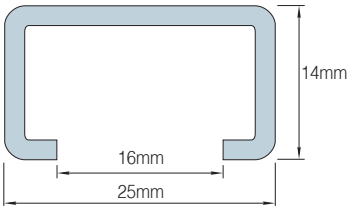
Fixing to Concrete

UK CA CE

July 2023

Ancon 25/14 Channel

25/14 channel is available in lengths of 2700mm and 3000mm. It features pre-punched holes at close centres to ensure a fixing position is always located near the end, even when it is cut on site. The channel has a 16mm opening to easily accommodate a drive socket and washer for the fixing screws.



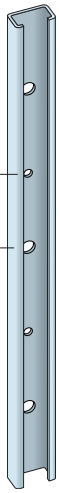
Ancon 25/14 Channel Profile

Ancon 25/14 channel features alternate 5.3mm and 9.5mm diameter holes to accept different fixings.

The smaller diameter holes should be used when fixing to steel/timber.

The larger diameter holes are to accommodate fixings for concrete.

Note: Using the incorrect hole and fixing screw combination invalidates the system performance



Ancon Concrete Fixing Screws

Screws are available to accommodate a combined backing board and insulation thickness of up to 270mm. A Ø6mm pilot hole and an Ancon Stainless Steel Compression Sleeve, the same depth as the insulation, are required. CFS screws are also available for fixing the channel directly back to concrete where no insulation is present. See tables for screw references, technical specifications and fixing centres.

Note: Concrete screws are not recommended for use with concrete grades greater than C35/45. Concrete strength increases with age and care should be taken when fixing CFS screws into older concrete. For further information and additional guidance on embedment depths and torque settings, please refer to our installation guide.

Concrete Fixing Screw Selection Table

Insulation Thickness (mm)	CFS Reference	Screw Length (mm)	Recommended Pilot Hole Dia. x Depth (mm)
0	CFS060*	60	Ø6 x required embedment** +15
30-45	CFS100	100	
46-55	CFS110	110	
56-65	CFS120	120	
66-75	CFS130	130	
76-95	CFS150	150	
96-125	CFS180	180	
126-145	CFS200	200	
146-180	CFS212	212	
181-220	CFS252	252	
221-270	CFS302	320	

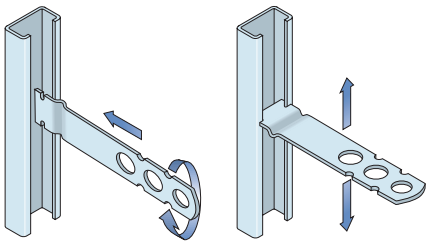
Notes: Zinc plated carbon steel screws. Supplied with nylon shoulder washers. For use with Ancon stainless steel compression sleeves as part of the 25/14 restraint system when fixing to concrete.
** For fixing channel directly back to concrete where no insulation is present. Shoulder washer & compression sleeve not required, standard M8 nylon washer supplied to be used between screw and channel.*
***Required embedment can be calculated as follows: Screw Length - Insulation Thickness.*

Ancon SD25 and Teplo-BF-CT 25 Wall Ties

Ancon wall ties are available in various lengths to suit open cavities from 35mm to 334mm. (see selection table). They are located in the channel by rotating through 90° and can be easily moved to the required position where they are built into the masonry bed joint. See tables for correct tie references and fixing centres.

Wall Tie Selection Table

Open Cavity (mm)	Tie Length (mm)	Ancon Tie Reference	
		SD25	Teplo-BF-CT 25
35-59	100	SD25/100	-
60-84	125	SD25/125	-
85-109	150	SD25/150	Teplo-BF-CT - 150
110-134	175	SD25/175	Teplo-BF-CT - 175
135-159	200	SD25/200	Teplo-BF-CT - 200
160-184	225	SD25/225	Teplo-BF-CT - 225
185-209	250	SD25/250	Teplo-BF-CT - 250
210-234	275	SD25/275	Teplo-BF-CT - 275
235-259	300	SD25/300	Teplo-BF-CT - 300
260-284	325	-	Teplo-BF-CT - 325
285-309	350	-	Teplo-BF-CT - 350
310-334	375	-	Teplo-BF-CT - 375



Recommended Wall Tie and Fixing Screw Vertical Centres, based on 25/14 Channel at 600mm Horizontal Centres

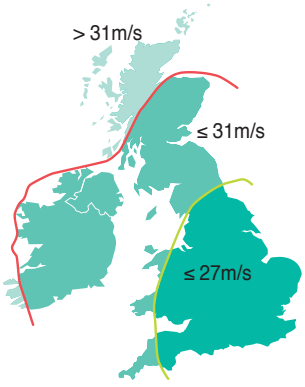
Tie Type	Insulation Thickness (mm)	Vertical Tie Spacing (mm)	Vertical Screw Spacing (mm)
1	Max 270	300**	225
2	Max 270	450	337.5
3	Max 270	450	337.5/450*
4	Max 270	450	337.5/450*

*Notes: Centres shown achieve equivalent tie performances to PD 6697 6.2.2.5 Table 12 (M2 Mortar). Min C20/25 Concrete. Ancon Compression Sleeves to be used with fixings. *337.5mm centres for insulation thicknesses greater than 114mm. **225mm vertical tie spacing for Teplo-Channel Ties 300mm and longer.*

Wall Tie Types

Required Wall Tie Type	Application	Maximum Building Height (m)	Geographical Location
Type 1	Heavy duty tie, suitable for most building types	Any height	Suitable for most sites. However, for relatively tall or unusually shaped buildings in vulnerable areas, tie provision should be calculated
Type 2	General purpose tie, suitable for residential and small commercial buildings	15	Suitable for flat (less than 1 in 20) open sites where the fundamental basic wind velocity does not exceed 31m/s and altitude is not more than 150m above sea level.
Type 3	Basic wall ties, suitable for residential and small commercial buildings	15	As Type 2 but fundamental basic wind velocity limited to 27m/s.
Type 4	Light duty tie, suitable for box-form domestic dwellings	10	Suitable for flat sites (less than 1 in 20) in towns and cities where the fundamental basic wind velocity does not exceed 27m/s and altitude is not more than 150m above sea level

Notes: Fundamental basic wind velocity must be calculated for the specific altitude of the site, refer to Clause NA.2.4 in NA to BS EN 1991-1-4:2005. The table above provides only a brief summary of information. Refer to PD 6697:2019 and NA to BS EN 1991-1-4:2005 for complete information. For information on the certified management systems and standards see Ancon.co.uk



Information adapted from NA to BS EN 1991-1-4:2005 for use with PD 6697:2019, calculating c_{alt} for an altitude of 150m above sea level. For some projects this may be conservative. Contact Leviat for further details.

Leviat
President Way, President Park, Sheffield, S4 7UR
Tel: +44 (0) 114 275 5224, Email: info.uk@leviat.com

Imagine. Model. Make.

Leviat.com