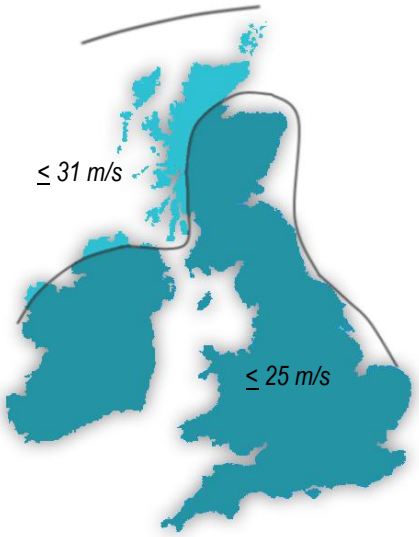
Technical Data Sheet

Wall Ties & Restraint Fixings

ACS Wall Ties are designed in line with the requirements of BS EN 845 and should be selected and installed in line with BS EN 1996, BS 5628 or BS 5268 as appropriate. For full details on the correct use, selection and installation of wall ties reference should be made to relevant standards.

Minimum Requirements for Wall Ties to BS 5628-1: 2005 and BS 5268-6.1: 1996

Tie Classification	Minimum Mortar Class & Designation	Tensile Load Capacity (N)	Tensile Load at 1mm Deflection (N)	Compressive Load Capacity (N)	Compressive Load at 1mm Deflection (N)
1	M12 (I)	5000	1667	5000	1667
1	M2 (iv)	2500	833	2500	833
2	M2 (iv)	1800	600	1300	433
3	M2 (iv)	1100	367	800	267
4	M2 (iv)	650	217	450	150
5	M4 (iii)	600	200	425	142
6	M4 (iii)	630	210	440	147



For further information see BS 6399-2: 1997 Code of Practice for Wind Loads.

Wall Tie Types to BS 5628-1: 2005 and BS 5268-6.1: 1996

Tie Type	Application	Density	Maximum Building Height	Geographical Location
Type 1	Suitable for most masonry cavity and cladding walls and most building sizes and types. Not very flexible and should not be specified where large adjustments are likely to be needed during construction.	2.5 ties/m² in main areas. 3-4 ties/m run at unbonded edges	Any Height	Suitable for use on most sites. However, for relatively tall buildings located in the north western fringes of the UK, particularly on coastal sites and for buildings of unusual shapes, the necessary tie provision should be calculated.
Type 2	Suitable for domestic dwellings and small commercial buildings of a height of up to 15 m above ground level	As Type 1	15m	Suitable for buildings on flat sites where the basic wind speed is up to 31 m/sec except areas where the site is at an altitude of 150 m or more above sea level. May be adequate for higher altitudes and sloping sites if proven by calculation.
Type 3	Basic Masonry Tie as Type 2	As Type 1	15m	As Type 2 but basic wind speed limited to 25 m/sec.
Type 4	Suitable only for masonry cavity walls in box-form domestic dwellings with leaves of similar thickness and stiffness	As Type 1	10m	Suitable for flat sites within towns and cities and any areas where the site is at an altitude of less than 150m above sea level.
Type 5	Timber frame tie suitable for tying masonry to softwood structural framework of residential and industrial/commercial buildings up to three storeys in height	4.4 ties/m² 3-4 ties/m run at unbonded edges.	15m	Suitable for sites where basic wind speed does not exceed 25 m/sec and the altitude is less than 150m
Type 6	As for Type 5, but suitable for four storey buildings	As Type 5	15m	As Type 5
Type 6	As for type 5, but suitable for five to seven storey buildings, being designed to accommodate the potential increased vertical differential movement	Calculated for actual performance required for each site location.	18m	Calculated for actual performance required for each site location.

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