October 2007

XPR® PREMIUM-SYSTEM

DATA SHEET

LOADING/FIXING DATA

LIGHT WEIGHT FIXINGS

FERMACELL boards in XPR Systems have a great hanging strength. Many items can be fixed directly to the boards without the need to fasten to the sub-structure.

The table below shows the load bearing capacity of a wide range of fittings. The stated loads are based on a safety factor of 2 for a permanent loading in a relative air humidity up to 85%. The total single loads for walls should not exceed 1.5kN/m and for free-standing dry lining and double stud walls not physically connected to one another 0.4kN/m.

Maximum permitted load in kg[1] per fitting type by FERMACELL board thickness[2]		
Wall loads fixed with toggle bolts or screws	**Toggle bolt**	**Screw with continuous thread 5mm**
		
10mm	40	20
12.5mm	50	30
15mm	55	30
18mm	55	35
12.5 + 10mm	60	35

[1] Conditions: Tested to DIN 4103, safety factor 2 (observe toggle bolt manufacturer's fixing instructions).

[2] Stud spacing to be 50 x board thickness max.

Maximum permitted load in kg[1] per fitting type by FERMACELL board thickness[2]			
	Picture hooks fixed with nails		
			
10mm	15	25	35
12.5mm	17	27	37
15mm	18	28	38
18mm	20	30	40
12.5 + 10mm	20	30	40

[1] Conditions: Maximum load depends on the hook. Fixing the hook directly into FERMACELL board.

[2] Safety factor 2 (permanent loading with relative air humidity up to 85%).

XPR Systems are also tested to BS 5234 Part:2 for loading capacity.

T 0870 803 0977 E info@xprsystems.co.uk W www.xprsystems.co.uk
01 403 8495 Republic of Ireland

DATA SHEET

LIGHT AND MEDIUM-HEAVY LOADS

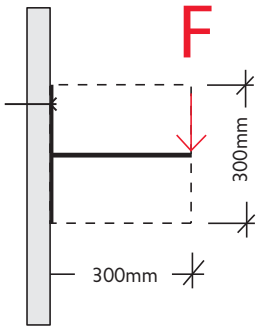
Light and medium-heavy loads, such as shelves, hanging cupboards, cabinets, boards etc. may be fastened directly to FERMACELL boards with screws or toggle bolt fixings, again no additional support fixtures are required. Toggle bolts should be of a splayed back fixing type which spreads the load over the back of the board. Toggle bolt sizes should be M6 or M8. The instructions of the toggle bolt manufacturer in regard to hole diameters and fixing usage should be followed.

The permissible loading per board sizes are given in the table on the previous page. The stated loads are based on a safety factor of 2. Where fixings are within 500mm of each other then the loading capacity per fixing must be halved.

Where 'live' or excessive loads (e.g. cantilever sanitation units, hand rails drop down bench units) are to be applied to the boards, then additional support structures may be needed. Alternatively the fixings may be located back into the studs.

Please contact our technical helpline for further information.

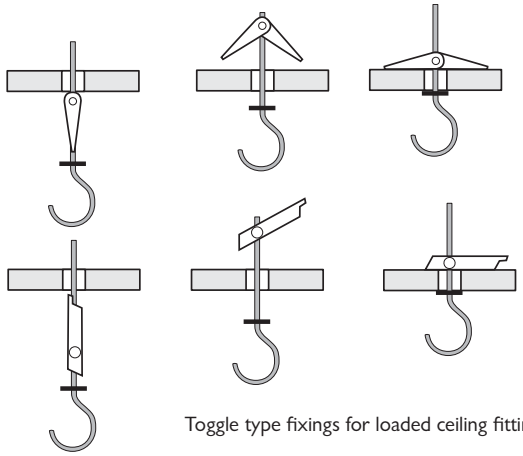
The stated load values on the wall fixing tables can be added up, if the fixing centres are ≥ 500mm. For lesser fixing centres 50% of the relevant permissible load per fixing should be used. The total single loads for walls should not exceed 1.5kN/m and for free-standing dry lining and double stud walls not physically connected to one another, 0.4kN/m. The stability of the wall or casing should be verified as described above according to BS 5234 and DIN 4 103 Part 1.



Permissible load F applied to a cantilevered arm at distance shown, using a single fixing directly into the board.

FIXING LOADS TO CEILING LININGS

Ceiling loads can easily be fixed to FERMACELL ceilings. Special steel cavity fixings can be used (see diagrams). Smaller loads may be fixed directly with fully threaded screws. The allowable loads per fixing are shown in the table opposite.



Toggle type fixings for loaded ceiling fittings

Maximum allowable load in kg[1] per FERMACELL board thickness in mm[2] – using cavity fixings	
FERMACELL Board Thickness (mm)	**Kg[3]**
10mm	25
12.5mm	30
15mm	35
18mm	40
12.5 +10mm	40

[1] Tested to DIN 4103, safety factor 2

[2] Support spacing of the sub-structure ≤ **35** x board thickness. Board fixed to the sub-structure with FERMACELL screws.

[3] Observe the manufacturer's operating and installation instructions.

Where additional loads are to be applied then the loading capability of the sub-structure should be checked.