

# The Plasterboard Problem

**Mirka Valovicova, technical manager at fischer fixings UK Ltd, considers sanitary fixing applications into this commonplace but problematic building material.**

The frequent use of plasterboard for dry lining applications, partitions and ceilings is one of the most notable features of the UK market. The versatility, ease of installation and economy of plasterboard make it a popular choice with builders, especially for domestic applications.

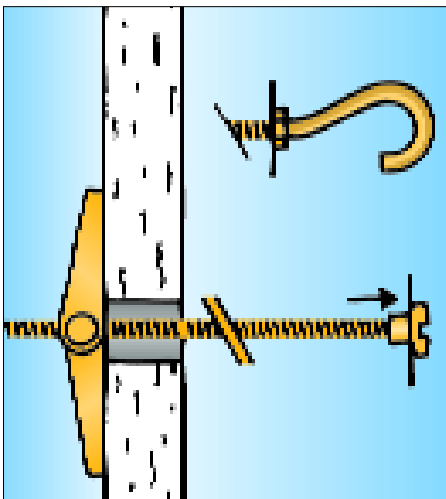
However, the builder's choice is often the plumber's nightmare. How do you fix heavy sanitary ware items to such a relatively thin and weak substrate?

At present there are only two satisfactory solutions for this problem. One is the installation of battens or noggins, to which washbasins, toilet cisterns and the like can be fixed directly through the plasterboard.

The other solution is the incorporation of a specialist metal frame into the wall. These are being developed in Europe principally to aid the installation of wall-hung sanitary ware, and they are likely to be seen increasingly in the UK, where wall-hung techniques are still at an embryonic stage. This area is one of the most exciting developments currently taking place in sanitary fixing, because it allows for the adoption of the latest consumer fashions in sanitary ware. Use of the appropriate fixing kits will allow the UK also, with its preference for plasterboard, to enjoy the benefits of these new fashions.

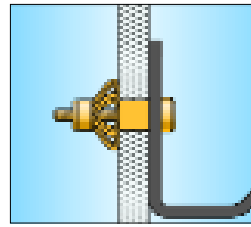
If, however, it is required to fix back lighter items such as pipework, mirrors, light switches, shelving, floor-supported radiators and small wall-mounted cupboards, then it is perfectly possible to fix directly into the plasterboard. There is a wide range of different fixings available, and generally speaking a purpose-designed plasterboard fixing

The KT fixing - a typical toggle anchor, which provides the best solution for plasterboard, but is not always the easiest to use.



should be used.

These vary in type, and the correct selection is based on board thickness, cavity depth, loading required, thickness of the fixture, ease of installation and whether demountability is required. The strongest fixings for use in plasterboard are spring and gravity



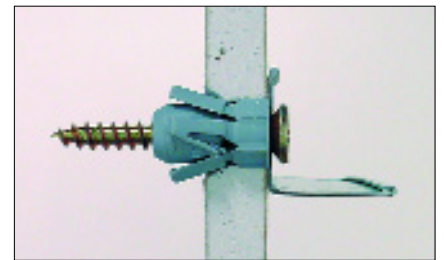
The fischer HM is an example of an expanding plasterboard anchor

toggle anchors, which can also be used in hollow block or any other type of cavity situation. They derive their strength from the broad splay of the toggle within the cavity, helping to spread the loading on the plasterboard. The drawback with these types of fixings is that they require a relatively large drill hole to accommodate the size of the toggle, they need to be

assembled to the fixture prior to installation and if the screw is withdrawn, the toggle falls down within the cavity. For heavier applications where demountability is not required, these are definitely worth considering.

The steel expanding "umbrella" type of fixing is almost as strong, limited only by the fact that it doesn't grip as large an area of the board as the toggle type.

It also has the advantage that it can be placed in the drill hole before offering up the fixture, making installation that much easier, and it can also be demounted without losing the fixing in the cavity.

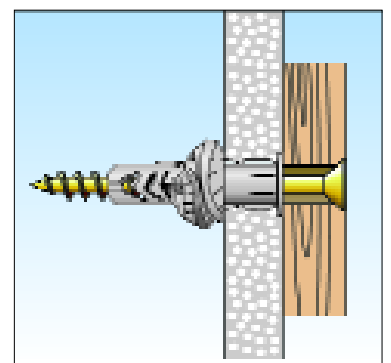


The PD fixing - a purpose-designed nylon fixing for plasterboard applications

Self-drilling fixings are probably the easiest to install. These cut their own hole and the resultant thread grips the board. These are available either in metal or nylon and come with plasterboard screws of various types. Apart from ease of installation, the main appeal of these types of fixings is the limited cavity space which is required. They are therefore particularly suitable for drylining applications where cavity space can be at a premium. They can be used for lighter applications, such as fixing lamps, switches and cable clamps. Of course when installing these into tiled surface, the tiles would have to be removed around the hole so that self-drilling fixing can be inserted directly to the plasterboard.

Also worth considering is the new generation of specialist nylon plasterboard fixings, such as the fischer PD. These are technically-sophisticated fixings which are designed to form-lock within the plasterboard substrate. Due to their sophisticated design, including built-in flange and guide ribs to prevent turning, they offer higher weight-loadings than the self-drilling type, while also sharing their space-saving nature.

The fischer UX universal nylon fixing is an example of a knot-forming anchor, which can achieve good results in plasterboard.



These types of fixings can be used for all the same types of application as self-drilling fixings, but can additionally be used for higher load applications, such as fixing coat hooks or smaller wall cupboards.

Despite the focus on specialist plasterboard fixings, there are nonetheless certain universal nylon fixings which, due to their design, are suitable for use in almost any materials including plasterboard. This can be a great benefit for general builders who might find it difficult to predict the type of substrate they would have to fix into. Universal nylon fixings need to be of the type that 'knot-form' in the cavity and which have twist-stops to prevent turning in even loose materials. Because of the nature of the material, those types of fixings which provide maximum feedback to the installer are best-suited. The fischer UX is a good example. Even though these are not specialist plasterboard fixings, they still offer quite impressive performance and can be used as an alternative to the PD for many applications.

Remember: any fixing is only as good as its drill hole! Use wood drill bits, HSS steel bits or rotary-only masonry bits, with a rotary-only drilling action. Don't use a screwdriver to force a hole in the plasterboard, as this will most likely damage the surface of the substrate and make it impossible to obtain a secure fix, whichever fixing product is used.

### **fischer Training Courses**

All the subjects discussed in this article, relating to fixing into plasterboard – and much more - are covered under fischer's training programme, which runs ongoing throughout the year at various locations throughout the country. The company now has the reputation of the industry's premier training provider with regard to fixings specification and installation.

Although its training activities take many forms, its CPD seminars are a key feature. Individual seminars can be tailored for particular requirements, covering specific areas of interest. fischer's recent development of a range of sanitary fixings, which are unique on the market, gives the company particular expertise in this area.

Delivered either at fischer's UK headquarters in Oxfordshire or at the customer's premises, the seminars include a number of topics which are relevant to plumbing installers. These include:

- An introduction to fixings
- The design of fixings
- Corrosion of fixings
- Behaviour of fixings in fire

Other training options include RIBA-approved seminars covering specific subjects such as:

- Basic knowledge of fixings
- Undercut anchors
- Corrosion of fixings

Held at locations around the country, fischer also offers a series of one day seminars designed to introduce fixings concept and techniques to both distributors and

end-users. The training covers aspects of both theoretical and practical hands-on training.

Finally more informal training opportunities should not be overlooked. fischer has a technical support vehicle which is fully-equipped with product and demonstration equipment to support installers with a range of on-site training and services. The technical support vehicle is used at events such as trade shows, and also visits customers' premises, enabling site tests and demonstrations.

If you are training for a career in the plumbing and heating industry and wish to know more about membership of the CIPHE, please phone the Membership Department on 01708 463108 or email [membership@ciphe.org.uk](mailto:membership@ciphe.org.uk).

