

Komfire 100 Method of Build



Komfire 100 - a 100mm double boarded square edge trim system in a steel stud and plasterboard construction with pre-assembled window frames

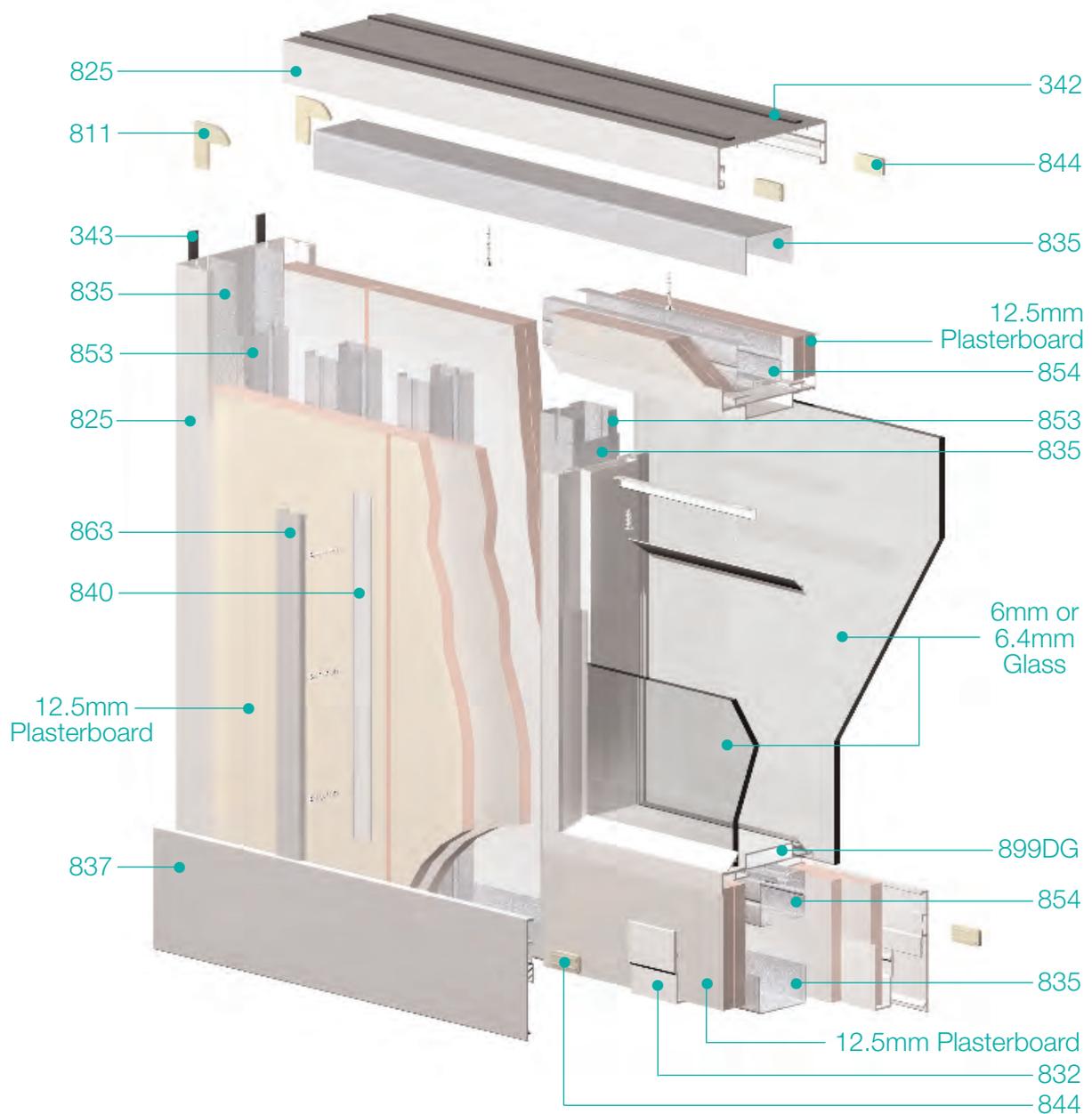
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Komfire-100 - partitioning system

Method of Build

Note:

For clarity the cavity infill has not been shown



100mm Steel stud & double board system with square aluminium cover trims

1.0 Solid Module

- 1.1 Set out the partitioning run on the floor and mirror its length on the ceiling using a plumb and chalk lines. Alternatively, set out the partitioning run on the ceiling and mirror its length on the floor using the same method.
- 1.2 Locate a length of 835 steel track into the inside of an 825 head channel by drilling and using two pop rivets. Ensure that the rivet heads are on the outside of the head channel's abutment face. If more than one length of head channel is to be used in the partitioning run, position the internal 835 steel track inside the head channel so that it overlaps by a minimum of 200mm into the next length of head channel.
- 1.3 Along the length of the head channel abutment face apply two strips of 342 foam, 6mm in from each edge.
- 1.4 According to the requirement, fit the jointing cleats into the ends of the head channel (884 for a straight joint, 886 for a 135° corner joint, 885 for a 90° corner joint or an 811 for a horizontal to vertical joint).
- 1.5 Along the centre of the head channel, drill the fixing clearance holes (diameter 3.2mm), at 600mm centres through both the steel and the aluminium.
- 1.6 If required, acoustic sealant 924 may be applied to the abutment face of the head channel between the foam strips.
- 1.7 Fix the 825 head channel assembly, using suitable screws and plastic plugs (if required), at a maximum of 600mm centres to the ceiling. Fix in a similar fashion when used as the vertical abutment to walls, columns or mullions.
- 1.8 Fix the 835 steel track to the floor by using suitable screws and plastic plugs (if required), at a maximum of 600mm centres.
- 1.9 To obtain the height of each 853 vertical steel stud measure the distance between the floor and the ceiling at each proposed position and deduct 18mm.
- 1.10 Using the dimension obtained in stage 1.9, measure and cut the 853 studs to length, and ensure that all the studs are cut to size at the same end.
- 1.11 Insert the cut studs between the head channel and steel floor track at 600mm centres. Twist them into place making sure that all the studs have the cut end, to the bottom, and are facing in the same direction (except for the doorframe studs which are detailed in stage 3.6). Plumb in both vertical planes and adjust the setting out if necessary.
- 1.12 It is now possible, if desired, to fix the vertical steel studs to the floor track by using 298 pop rivets. Using tinsnips, nick and deform the flanges of the steel head track inwards to hold the stud into place.
- 1.13 To improve the acoustic performance, fit either the 880 60mm thick fibre glass quilt or, alternatively, the 887 40mm thick Rockwool R2/33 slab into the cavity. Please note that it is possible to enhance the acoustic performance of these materials by upgrading their density. The thickness, however, should not be increased.
- 1.14 The 880 fibre glass quilt is held in place by cutting three tabs, each 25mm wide, into the steel head track. Press them back to retain the insulation. Alternatively, use a Corman insulhold strip. 887 Rockwool slabs may just be stacked carefully into place. Care should be taken to ensure that all the acoustic materials are tucked into the open faces of the vertical studs to ensure all cavities are completely filled.
- 1.15 Measure the floor and ceiling height of the first and third studs and deduct 10mm to obtain the panel height.
- 1.16 The first layer of panels can now be fixed into position.

- 1.17 Offer the first prepared panel into the head cavity, then by lifting upwards swing the bottom of the panel against the steel framework.
- 1.18 Check that the first panel in each run is central and plumb to the outer studs. Then screw fix the board into the centre stud using 319 drywall screws at a maximum of 300mm centres. Fix the long edges of the panels to the outer studs positioning the screws approximately 6mm in from each edge and at a maximum of 300mm centres.
- 1.19 Upon the completion of the inner layer of panels, the outer layer can then be fixed. The height of the panels remains the same as the first layer.
- 1.20 If the 837 aluminium clip-on skirting is to be used, position three 832 skirting clips onto the bottom of the panel, two approximately 200mm in from each edge and one centrally.
- 1.21 Offer the prepared panel into the head cavity, then by lifting upwards swing the bottom of the panel against the first layer of panels previously installed. Please ensure that the board joints are staggered. The inner and outer layer of the board joints should not be in line.
- 1.22 (Repeat 1.18 but change screws to code 320 drywall screws.)
- 1.23 The butt joint between the panels may now be concealed with the 840 steel batten. Screw fix every fourth hole using the 308 pan head screws (do not use drywall screws). The batten is positioned to within 25mm of both the underside of the head channel and top of the proposed skirting.
- 1.23 Panels should now be decorated with the selected 1370mm wide vinyl or paper backed fabric, and trimmed to the panel butt joint (making sure manufacturer's hanging instructions are followed and all excess adhesive is wiped away).
- 1.24 Only after the selected skirting has been fitted (see appropriate section) should the 863 cover trims finally be installed.
- 1.25 Before fitting the 863 vertical cover trim, measure the distance between the head channel and the skirting. Add 25mm to its length and cut to size.
- 1.26 Carefully offer the preliminary length of cover trim into position against the panel and to one side of the 840 steel batten. With the top touching the underside of the head channel, mark lightly in pencil the point at which the trim intersects the top of skirting.
- 1.27 From the measurement obtained, cut the trim to the final length. To install push it over the steel batten starting from the head channel. Lightly tap it into place using either a rubber hammer or timber block and hammer. Finally wipe it clean of any working marks.

2.0 Skirting

- 2.1 Measure, or preferably if the length of the partition run will allow, take a length of selected skirting and hold into the position required, mark lightly in pencil where the cut is required.
- 2.2 When clip-on skirting is being used, hold the cut length against the panel above the skirting clips (installed at stage 1.20), and then slide it downwards over the clips. Finally tap home using either a rubber hammer or timber block and hammer.
- 2.3 Always ensure that the straight butt joints of the clip-on skirting are in the centre of a single clip.

- 2.4 Always ensure that a skirting clip is positioned either side of the other 90° and 135° joints. For additional fixing locations insert the plastic joint cleats, used in the head channel, into the skirting.
- 2.5 Should an additional skirting clip be required once the panels have been fixed, then the 829 masonry fixing clip may be used. This is screw fixed onto the face of the panel ensuring that the screws enter the floor track through the panel.
- 2.6 If secret fix skirting is being applied (having cut it to length in stage 2.1) open up the skirting using the two inside horizontal parallel lines for guidance, drill the fixing clearance holes (diameter 3.2mm) into the pocket. The skirting is fixed through the plasterboard into the 853 steel studs.
- 2.7 Offer the skirting into position, check its fit and adjust if necessary. Then using the 296 flange head screws fix into place. Close up the skirting and wipe away any working marks.

3.0 Door frame

- 3.1 At the position where the door frame is required, measure the distance between the floor and the ceiling. Then cut two lengths of the 853 vertical steel stud to length (as in stages 1.9 and 1.10 for solid).
- 3.2 Cut the 835 floor track to the same length and push it over the open edge of the 853 studs to form a box section. Rivet these two sections together using the 298 pop rivets.
- 3.3 The 331 timber infill is then inserted over the total length of the stud and track box assembly.
- 3.4 From the site plan, establish the size of the door which is to be installed and select (if required) the correct size of 854 pre-bracketed door head transom.
- 3.5 To calculate the dimension, between the inside of the door opening's stud faces, measure the door leaf and add 18mm for both non fire rated and fire rated frames.

DIMENSION 'Z' = DOOR WIDTH
 + 18mm (non fire rated)
 + 18mm (fire rated)

- 3.6 With the dimension established, insert the prepared stud assemblies between the head and floor tracks and twist them into place. Ensure that the track faces of each boxed stud are facing each other.
- 3.7 Check they are accurately set out and plumb in both vertical planes. Rivet the bottom of the stud assembly to the floor track and, by using tinsnips, nick and deform inwards the flanges of the steel head track to hold the stud into place.
- 3.8 If an 854 transom is to be fitted, mark lightly in pencil the top position for the transom on the vertical studs, using dimension 'T'.

DIMENSION 'T' = DOOR HEIGHT + 51mm

(Remember that the setting out details leave a 2.5mm gap under the door. Some adjustment may be required to dimension 'T', to accommodate the different types/thickness of floor covering being laid, either prior to or after installation of the partition.)

- 3.9 Having marked the transom position on the vertical studs, take the selected 854 pre-bracketed transom. Box it with an 835 steel track and infill it with 331 timber. Then, with the brackets pointing upwards, screw fix or rivet the transom onto the vertical stud ensuring that it is level.

- 3.10 If a solid panel is required above the door this should now be measured. Make sure that the width is equal to the door frame's vertical stud centres and that the height is equal to the distance between the ceiling and the bottom edge of the transom minus 5mm.
- 3.11 Once the acoustic infill has been installed (as at stage 1.14), the cut panel should be pushed as far as possible into the head channel so that the panel is positioned back from the bottom edge of the transom. Fix it into place using 319 drywall screws. The second layer of panels should be fixed with 320 drywall screws.
- 3.12 The full height panel, adjacent to the door frame, should be fitted onto the door frame studs. so that they are positioned back from the edge of the studs opening by 3 to 5mm.
- 3.13 If glazing adjacent to a door frame please see the appropriate instructions.
- 3.14 After the panels or the glazing is installed, unwrap the 826 door frame kit. All three parts should be laid flat, in a safe area, until required.
- 3.15 Pick up the door head (without the rubber seal) and offer it up to the transom. Ensure that the doorstop is in the correct direction and screw-fix it into position using the 311 door frame screws. Take care so that the drill and screwdriver chucks do not damage the door frame stop.
- 3.16 To obtain the length of the door frame legs place a piece of packing material (1 mm thick maximum) onto the floor next to the door frame's vertical stud. Invert the door frame leg so that the mitre is carefully placed on the packer and against the upright stud. Now mark lightly in pencil, the bottom of the door frame leg where it intersects the top of the door head mitre.
- 3.17 From the measurement obtained, trim the bottom of the door frame leg to size (fire rated door frames do not require internal steel liner).
- 3.18 Offer the trimmed door frame leg, at an angle of approximately 30°, to the mitre cleat which protrudes from the door head. By pushing upwards swing it towards and over the vertical stud.
- 3.19 Check that the door frame leg is positioned against and central to the vertical stud.
- 3.20 Using a bolster chisel, wedge the doorframe leg upwards to close the mitre. Before removing the wedge screw, fix the door frame leg into place using the 311 door frame screws.
- 3.21 Take the short length of the 868 rubber seal and square cut it to suit the door head size. Then press fit it into place so that the longest soft leg is positioned on the doorstop side.
- 3.22 The longer lengths of the 868 rubber seal should then be square cut at the bottom and beak cut at the top to suit the length of the door frame the leg. Pressing them into place.
- 3.23 The door frame is now ready for the chosen door to be hung (do not forget to remove pencil markings).

Note: Should the installed partitioning be erected directly onto a carpet or raised floor, with a construction of doors hung either side of an office dividing wall, the resulting compression may require the use of additional shims, at the junction, to maintain the partitioning's horizontal level.

4.0 Glazing

- 4.1 In the same way as for a solid partitioning module (stages 1.1 to 1.8) install the head channel, abutments and floor track.

- 4.2 Carefully measure and cut the 853 vertical studs to length (as stages 1.9 and 1.10). Insert the first stud into place making sure it is the correct way up and plumb in both vertical planes.
- 4.3 Now fix the stud into the floor track by using the 298 pop rivets. Using tinsnips, nick and deform the flanges of the steel head track inwards, to hold the stud into place.
- 4.4 Ascertain from the site plan and by checking the pre-assembled windows supplied, the actual glazed elevation to be installed.
- 4.5 Unwrap the selected pre-assembled window frame carefully removing the screws and glazing cover trims. These have been pre-cut to size and packaged inside the frame ready for insertion after the glazing.
- 4.6 The pre-cut glazing trims and screws should now be laid flat in a safe area until required (if more than one window frame is being installed it is recommended that the glazing beads are kept and identified in sets).
- 4.7 To obtain the dimension between the studs' inside upright faces, select the window frame and measure the horizontal internal frame size and add 18mm.
- 4.8 Once the distance between the stud faces has been established and by referring to the setting out details, select the correct size of 854 pre-bracketed transom.
- 4.9 The second vertical stud may now be positioned, but not fixed into place.
- 4.10 Establish the vertical size of the frame, and refer to the setting out details to determine the correct position for the bottom transom.
- 4.11 On the first vertical stud, mark the position of the top of this lower transom. Then by using a suitable level transfer the mark to the second stud.
- 4.12 Having determined the position of the transom, cut a piece of 835 floor track section equal in length to the internal height of the window frame. Position this over the open edge of the 853 stud to form a box section to the window aperture. Rivet it into place using the 298 pop rivets.
- 4.13 Take the selected 854 pre-bracketed transom. With brackets pointing downwards, place it inside the floor track between vertical studs. This is for safe-keeping and ease of assembly later.
- 4.14 If erecting full height, half or top glazed elevations, install a suitable length of 853 stud into the head track and between the vertical studs.
- 4.15 Where a mid glazed or glazed to door head elevation is required, take the selected 854 pre-bracketed transom stored in the floor track (stage 4.13). Using 302 pan head screws, loosely fix it at the marked positions (stage 4.11) between the vertical studs.
- 4.16 Take the unwrapped pre-assembled window frame, ensuring that the factory fixed glazing beads on the single offset and centre glazed frames are to the inside of the office being constructed. Offer the assembly between the vertical studs and, if required, slide it upwards into the head channel.
- 4.17 On full height, half or mid glazed elevations hold the frame into position, pick up the transom stored inside the floor track and butt it to the underside of the window frame assembly. Screw fix it into place using the 302 pan head screws. If mid glazed or glazed to door head are required the transom security screws should be fully tightened.
- 4.18 The second vertical stud should now be pushed tightly onto the window frame and locked into place in the same manner as the first stud (stage 4.3). Make sure it is also plumb in both vertical planes.

- 4.19 Subject to the glazing elevation selected, fix the securing transom on top of the window assembly with both brackets pointing upwards.
- 4.20 Repeat this window insertion process progressively along the partitioning run. Insert the 836 plasterboard packing strips vertically between stud and the window frame. At the same time cut and insert suitable size plasterboard strips between the steel head track and the window frames as shown in the details.
- 4.21 Where required, cut and fit all the intermediate studs above and below the window frames.
- 4.22 To improve the acoustic performance above and below the glazing, fit either the 880 60mm thick fibreglass quilt or the 887 40mm thick Rockwool R2/33 slab (as at stage 1.14).
- 4.23 When glazing at dado height, establish the size of the plasterboards for fitting below the window frames. This is calculated by measuring the distance between the floor and the dado level and deducting 5mm.
- DIMENSION 'W' = DADO HEIGHT -5mm
- 4.24 To establish the size of panels above the glazing, measure the distance between the top of the window frame and the ceiling and deduct 5mm.
- 4.25 If the 837 clip on skirting is being used, the bottom panels should be fitted with 832 skirting clips (as at stage 1.20).
- 4.26 Install panels using the same method as for solid partitioning modules (see stages 1.18 to 1.27).
- 4.27 The skirting should now be fitted (see stages 2.1 to 2.7).
- 4.28 Unscrew and remove the loose fixed steel glazing retainer from the window frame ready to insert the glass. For non-fire rated applications the system will accept 6mm toughened or 6.4mm laminated glass. For fire rated applications 6mm Pyroshield (Georgian wire), Komfort fire glass, Pyran or Pyrocet may be used. All applications of glazing must conform to British Standard 6262:1982 and be installed in accordance with Document 'N' of the Building Regulations.
- 4.29 Offer the bottom edge of the sheet of glass into the window frame against the factory pre-fitted steel glazing retaining bead. Ensure that the bottom edge of the glass remains hard against the pre-fitted bead whilst pushing the glass into place.
- 4.30 With assistance, hold the glass in place and using suitable glazing packing shims, adjust the glass vertically and horizontally so that it is equally positioned within the window frame aperture.
- 4.31 Take the steel glazing retaining bead removed at stage 4.28 and replace it into the liner to retain the glass. It is important that the steel retaining bead is sitting square into the location groove. Each length must be secured using 301 No.6 x 8mm self tapping screws, with one screw in every fourth hole plus one at each end.
- 4.32 The plastic glazing cover bead removed at stage 4.5 should now be retrieved from safe storage. Select the required pre-cut length and place the edge of the bead in the pre-moulded slot of the window frame. Allow the bead to fall at an angle onto the steel glazing retainer. Starting from one corner push the plastic glazing bead pip into the steel retaining bead to secure.
- 4.33 Finally, clean all the partition metal work by wiping down using a damp cloth with a solution of washing up liquid and warm water. Make sure that all pencil marks are removed. (Please do not use abrasive cleaning creams, papers or alkaline substances).

5.0 Other Installation Instructions

The following additional installation instructions are available on www.komfort.com

KF2/HT GUIDE.2 - Height Performance Specification.

KF1 EXP FR/INST.1 - Expandable Door Frame 150mm - 290mm

KF1 EXP FR/INST.2 - Expandable Door Frame 120mm - 160mm

Document M Guidance Note M4a - Colour Contrast.

Document M Guidance Note M13 - Glazed Screen Manifestation.

Document M Guidance Note M28b - Doorset Effective Clear Opening.

Document M Guidance Note M32 - Colour Contrast for Door Leading Edge.