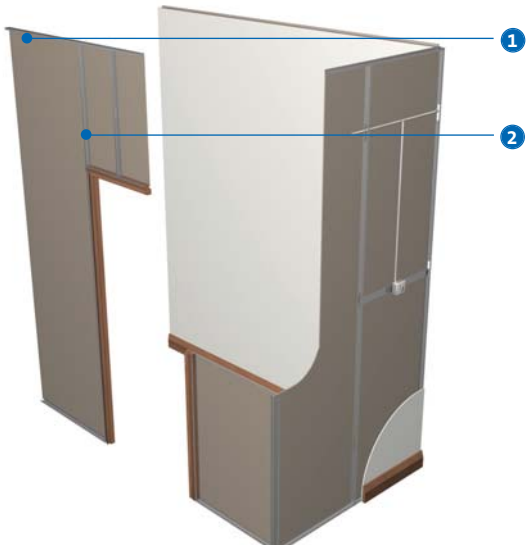
GypWall™ and GypWall™ ROBUST

The definitive metal stud and partition system

GypWall™ partitions are cost-effective, multi-purpose partitions, which have provided the industry standard for many years. They are suitable for all types of buildings, including residential, healthcare and commercial.

GypWall™ ROBUST is a high impact-resistant partition system for use where a more durable structure is required. It provides a lightweight, cost-effective, non-loadbearing partition suitable for all types of commercial, healthcare, institutional and industrial buildings.



1 **Gypframe Standard, Deep Flange (DC) or Extra Deep Flange (EDC) Floor & Ceiling Channel**
2 **Gypframe studs**

Key facts

- Range of stud options to match performance requirements
- Acoustic stud option for enhanced acoustic performance
- Can achieve high levels of sound insulation
- Can achieve up to 120 minutes fire resistance
- Satisfies BS 5234 strength and robustness requirements up to Severe Duty
- Easily accommodates services within stud cavity
- Can allow for deflection at the head
- Gypframe metal framework will not twist, warp or rot

Components

Gyproc board products

Gyproc WallBoard[1]

Thickness	12.5, 15mm
Width	1200mm

Gyproc FireLine[1]

Thickness	12.5, 15mm
Width	1200mm

Gyproc SoundBloc[1]

Thickness	12.5, 15mm
Width	1200mm

Gyproc Plank

Thickness	19mm
Width	600mm

Gyproc DuraLine[2]

Thickness	13.5, 15mm
Width	1200mm

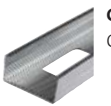
[1] Moisture resistant boards should be specifed in intermittent wet use areas e.g. shower areas, bathrooms and kitchens

Glasroc board products

Glasroc MultiBoard

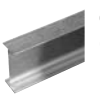
Thickness	10, 12.5mm
Width	1200mm

Gypframe metal products



Gypframe 'C' Studs

Codes 48 S 50, 60 S 50, 70 S 50, 70 S 60, 92 S 50, 92 S 60 and 146 S 50.

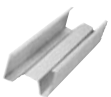


Gypframe 'I' Stud

Codes 48 I 50, 60 I 50, 60 I 70, 70 I 50, 70 I 70, 92 I 90 146 I 80 and 146 T I 90.

[2] Where single layer Gyproc DuraLine is being fixed to Gypframe 'C' Studs, these should be a minimum gauge of 0.6mm.

Gypframe metal products



Gypframe AcouStud
Codes 70 AS 50 and 146 AS 50

Gypframe Standard Floor & Ceiling Channels 50 C 50, 62 C 50, 72 C 50, 94 C 50, 148 C 50
Gypframe Deep Flange Floor & Ceiling Channels 50 DC 60, 62 DC 60, 72 DC 60, 94 DC 60, 148 DC 60
Gypframe Extra Deep Flange Floor & Ceiling Channels
50 EDC 70, 72 EDC 80, 94 EDC 70, 148 EDC 80

Gypframe metal products

Gypframe GFS1 Fixing Strap

Gypframe GFT1 Fixing 'T'

Gypframe 99 FC 50 Fixing Channel

Gypframe GA5 Internal Fixing Angle

Gypframe GA6 Splayed Angle

Fixing and finishing products

Gyproc Drywall Screws
For fixing boards to stud framing up to 0.79mm thick.

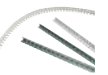
Gyproc Jack-Point Screws
For fixing boards to stud framing 0.8mm thick or greater and 'I' studs greater than 0.5mm thick.

Gyproc Wafer Head Drywall Screws
For metal-to-metal fixing up to 0.79mm thick.

Gyproc Wafer Head Jack-Point Screws
For metal-to-metal fixing 0.8mm thick or greater and 'I' studs greater than 0.55mm thick.

Fixing and finishing products

Gyproc Sealant
For sealing airpaths for optimum sound insulation.



Gyproc edge beads
Protecting and enhancing board edges.

Gyproc Control Joint
To accommodate structural movement.

Gyproc FireStrip
For sealing deflection heads.

Gyproc jointing materials
For a seamless finish.

Fixing and finishing products

Gyproc Skimcoat, Gyproc Carlite Finish, Gyproc Board Finish
To provide a plaster skim finish.

Moy Acoustic Roll
For enhanced acoustic performance.

Gyproc Drywall Primer
Used to prepare for painting.
Tub contents 10 litre

OR

Gyproc Drywall Sealer
Used to provide vapour control.
Tub contents 10 litre

Construction tips

- Estimated construction time 2m² - 3m² / man hour (single layer partition) or 1.5m² - 2m² / man hour (double layer partition) ready for finishing
- Use full height boards wherever possible - if horizontal joints are unavoidable, endeavour to position them above the suspended ceiling or below access floor level. Avoid eyeline and strong wall lighting areas
- Fixtures / fittings - additional framing will be required to support heavyweight items (e.g. sanitary ware)
- Support horizontal joints with Gypframe GFS1 Fixing Strap, Gypframe 99 FC 50 Fixing Channel, or Gypframe GFT1 Fixing 'T' (where specified)
- Where single layer Gyproc DuraLine (**GypWall™ ROBUST**) is being fixed to Gypframe 'C' Studs these should be a minimum gauge of 0.6mm - unless using Gypframe AcouStuds
- Install Gyproc Control Joints as required
- Incorporate deflection heads as required
- Consider skirting fixing - mechanical or using Gyproc Sealant
- If doorsets are fixed at a later stage allow a 10mm overall tolerance in width, 5mm in height
- Consider additional door detailing to *BS 5234* Parts 1 & 2: 1992

Installation

1

2

- Determine and mark the wall position and make allowance for openings.
- Fix 50mm, 62mm, and 72mm Gypframe Floor & Ceiling Channels along their centre line to the floor and ceiling at 600mm centres with suitable fixings (by others).
- 94mm and 148mm Gypframe Floor & Ceiling Channels require two rows of staggered fixings, each at 600mm centres. Each row staggered by 300mm.
- For **GypWall™ ROBUST** use Gypframe DC or EDC Floor & Ceiling Channels.
- For partition heights between 4200mm and 8000mm Gypframe Deep Flange Floor & Ceiling Channel (DC) should be used at head and base.
- For partitions above 8000mm Gypframe Extra Deep Flange Floor & Ceiling Channel (EDC) should be used at head and base.
- On uneven floors, a timber sole plate, 38mm deep x width of stud, may be required.
- On new concrete or screeding, consider installing a damp proof membrane to the full partition width before locating the floor channel or sole plate.

NB Channel depths at the partition head may need increasing where deflection head detailing is required.

• Cut stud lengths to a neat fit (maximum possible entry into head channel), unless deflection head detailing is required.

NB Cut studs to size using a chop saw, hacksaw or snips.

• Locate the first stud, twist into position and fix to the abutting wall with suitable fixings (by others).

• 48mm, 60mm, and 70mm studs require a single row of fixings along the centre line of the studs at 600mm centres.

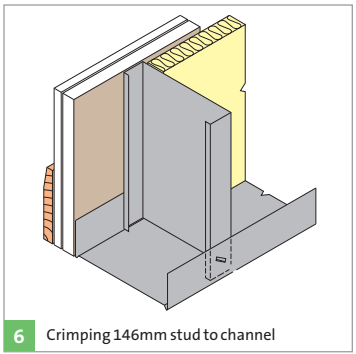
• 92mm and 146mm studs require two rows of staggered fixings each at 600mm centres. Each row staggered by 300mm.

• Locate further studs at required centres (typically 600mm) to a friction fit within the channel sections - this allows for adjustment during boarding.

• Position studs so all face the same way.

• Studs should be orientated so that the open side of the 'C' section points in the intended direction of boarding (see figure 22).

NB Additional studs may be required to align with door and service openings.



6 Crimping 146mm stud to channel

• Where studs are used at heights greater than 4m, consider locking into the floor channels using a Gyproc Crimping Tool, or Gyproc Wafer Head Screws.

7

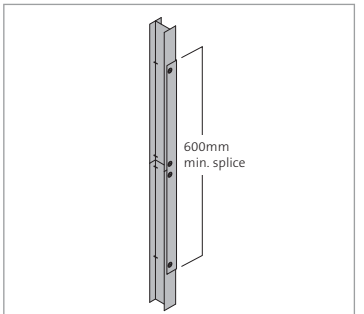
• Apply Gyproc Sealant to both sides of the frame perimeters to provide optimum acoustic performance.

8

Splicing 'C' studs

• To extend studs, if required, splice and lock together with a 600mm minimum nested overlap.

• Fix together using three evenly spaced Gyproc Wafer Head Screws through each flange.



9 Extending Gypframe 'I' Studs

NB Where the wall height exceeds the available length of Gypframe 'I' Stud extend 'I' studs by sleeving with a cut length (600mm minimum) of Gypframe Floor & Ceiling Channel over abutting ends of 'I' stud, twice fixed with Gyproc Wafer Head Screws to the top and bottom studs on both flanges of 'I' studs (8 No. fixings in total).

10

Light and Medium Duty door openings

NB Light and medium duty doors are tested to *BS5234*: Parts 1 & 2: 1992 at 35kg.

- Locate full height studs each side of the door opening.
- Fix full height studs to the Gypframe Floor & Ceiling Channel at head and base using Gyproc Wafer Head Drywall Screws or Gyproc Wafer Head Jack-Point Screws, or crimping tool (dependant on the stud type and gauge).

11

NB Only temporary fix the stud at the head if a deflection head detail is required.

- Form the door head using a length of Gypframe Floor & Ceiling Channel.
- Stud centres must be maintained above the door opening.

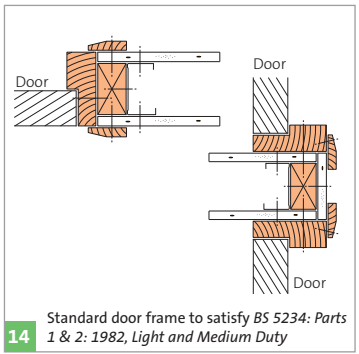
12

• At the head, cut and bend channel to extend 150mm down the face of the studs, and fix twice to each side of each stud.

13

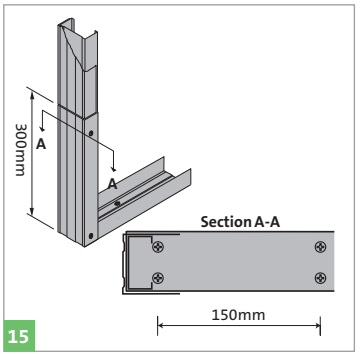
• Line the opening with timber - 38mm deep x width of stud, and fix through the metal frame into the timber.

NB It is also acceptable to insert timber, (38mm deep) inside the 'C' of the stud running full height head to base.



14 Standard door frame to satisfy *BS 5234: Parts 1 & 2: 1982, Light and Medium Duty*

• Fix the door casing to the timber ground.



15

Heavy and Severe Duty door openings

NB Heavy and severe duty doors are tested to *BS5234*: Parts 1 & 2: 1992 at 60kg.

- Locate full height studs each side of the door opening.
- Allow for extension of floor channel. This is then cut, bent, and interleaved as shown in section A-A.


16

- At the head, cut and bend channel to extend 150mm down the face of the studs, and fix twice to each side of each stud.
- Sleeve the studs either side of the door opening with an additional cut length of Gypframe Floor & Ceiling channel, stopping between upturned floor channel and downturned door head channel.

17

Fixtures

- Install Gypframe 99 FC 50 Fixing Channel to accommodate light and medium weight fixtures.

• Additional framing to provide suitable grounds for fixings and to transfer loadings, is required for heavier fixtures.

• Alternatively, Gypframe Service Support Plates may be used.

Services

• Install services (by appropriate trades), normally after one side is boarded. Pass horizontal runs through cut-outs in the studs.

• Install Gypframe 99 FC 50 Fixing Channel or Gypframe Floor & Ceiling Channel between studs to provide support for recessed switch boxes, or use a high performance socket box detail.

• Additional detailing may be required for fire and sound performance.

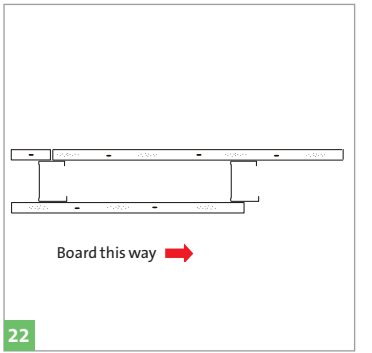
Board fixing - single layer

• Fix boards to all framing members at 300mm centres using the appropriate length Gyproc screws.

• Reduce centres to 200mm at external angles.

NB Select appropriate screw length to provide a nominal 10mm penetration into the Gypframe Steel framing.

• Lightly butt boards, inserting screws not closer than 10mm from bound edges and 13mm from cut edges.



• Adjust studs as boarding proceeds and stagger board joints relative to the opposite side.

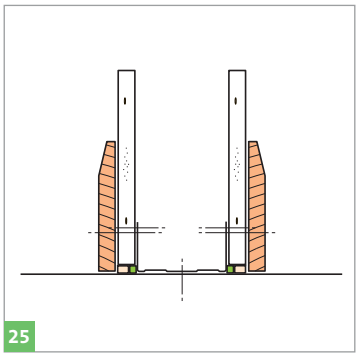
• Board partition in the direction of stud flanges as shown above.

• Install Moy Isover insulation or stone wool (as required) progressively as boarding proceeds.

• Moy Isover insulation can be hung within the partition by trapping at the partition head using Gypframe Steel Angle.

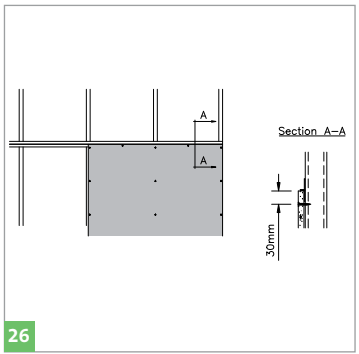
24

• Where door openings occur, cut boards around the opening to avoid a joint directly in line with door jambs.



25

• Seal any gaps at the base of linings to both sides with Gyproc Sealant (in conjunction with Gyproc Joint Filler) where the partition is required to meet its optimum acoustic performance.



26

Horizontal joint support - single layer

• Where the partition height exceeds the board length, install Gypframe GFS1 Fixing Strap or Gypframe GFT1 Fixing 'T' progressively between studs, to coincide with board end joints.

• Fix boards progressively to supports using Gyproc Screws of appropriate length.

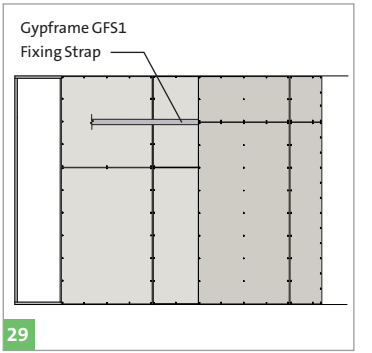
NB It is important that boards are levelled on their top edge. Position the top screw into the stud nominally 30mm down to allow the Gypframe GFS1 Fixing Strap or Gypframe GFT1 Fixing 'T' to be installed.

Board fixing - multi-layer

• Inner-layer boards do not require centre stud fixings.

• Cut and fix the initial second layer board as appropriate so that subsequent vertical board joints are staggered by a minimum of one stud centre.

NB Select appropriate screw length to provide a nominal 10mm penetration into the Gypframe steel framing.



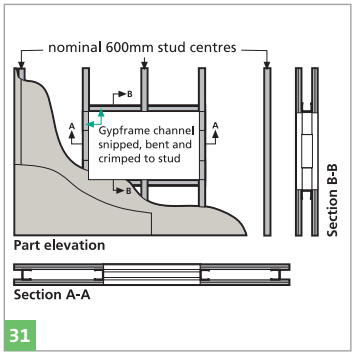
• Typical double layer board configuration is as above.

• If Gyproc Plank forms the base layer, fix horizontally with two 32mm Gyproc Drywall Screws to each stud position, including each cut end. Half stagger end joints in alternate layers.

30

Horizontal joint support - multi-layer

- Where the partition height exceeds the board length, install Gypframe GFS1 Fixing Strap progressively between board layers, to coincide with outer layer horizontal board end joints, to maintain board alignment.
- Fix boards progressively to supports using Gyproc Drywall Screws of appropriate length.

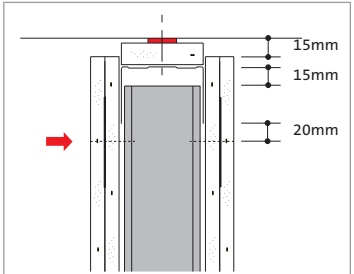


31

Large service openings

- Construct a framed opening, as shown above.

NB In fire-rated partitions, the service penetration should be fire-stopped, as required.



32 15mm deflection head detail (downward deflection) providing up to 60 minutes fire resistance

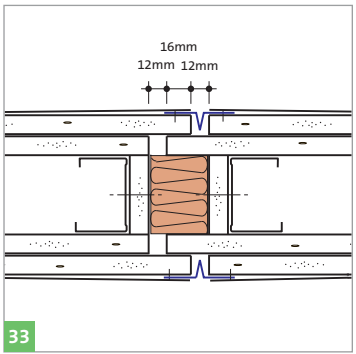
Deflection head - 15mm downwards movement

• Form the firestop at the head using Gyproc Coreboard with continuous line of Gyproc FireStrip. Gypframe Deep Flange Floor & Ceiling Channel is fixed through firestop to soffit at 600mm centres using suitable fixings (by others).

• No fixings should be made through the boards into the flanges of the head channel. The arrow (➡) denotes the position of the uppermost board fixing, which should be made into Gypframe GFS1 Fixing Strap or Gypframe stud nogging, ensuring the downward movement of the head channel is not impaired.

• Deflection head requirements should be determined by a structural engineer.

• Alternative deflection head details are available. Contact Gypsum Industries Ltd. Technical Sales Department.



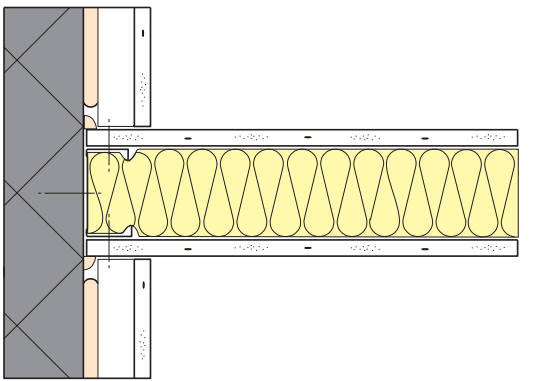
Control joints

• Install as specified to relieve stress / movement and to coincide with movement joints in the external structure.

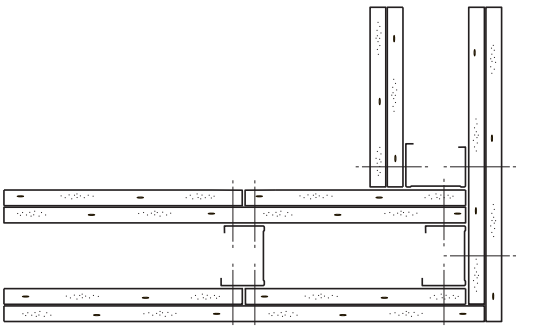
• Gyproc Control Joint may be cut with a fine-tooth saw. Butt-end joints should be aligned accurately to provide a neat fit. Place the Gyproc Control Joint into position and secure to the Gyproc plasterboard with 13mm corrosion resistant staples at 150mm maximum centres through both flanges.

Ensure the Gyproc Control Joint is cut to a neat fit at the structural floor and soffit or ceiling perimeters and the ends sealed with Gyproc Sealant.

Junction details

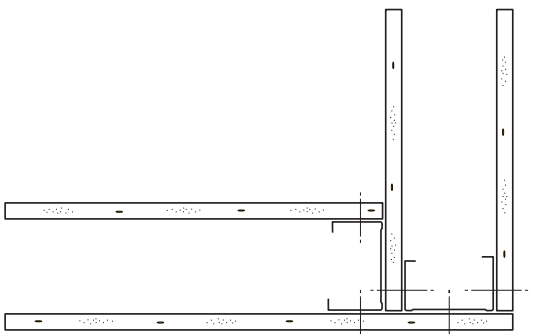


34 Abutment to external wall lined with Gyproc Thermal boards

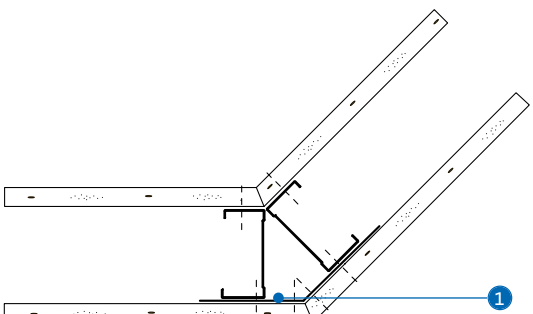


35 Corner detail - double layer

Junction details

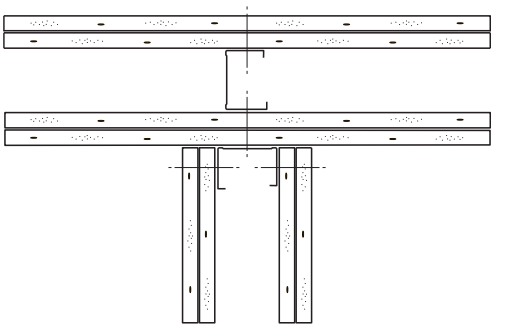


36 Corner detail - single layer

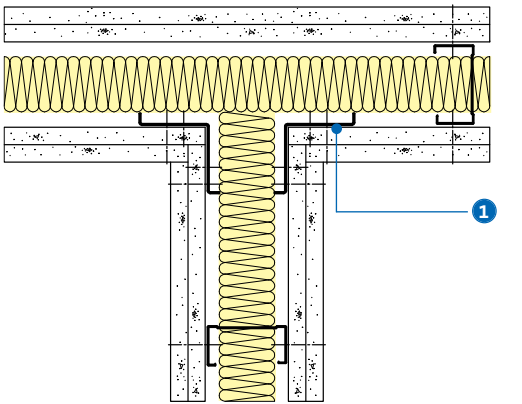


37 Splayed corner detail (Gypframe GA6 Splayed Angle also required on the inside corner for fire-rated partitions)

1 Gypframe GA6 Splayed Angle

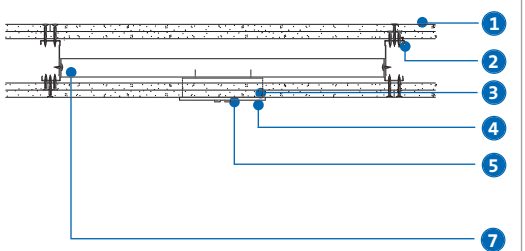


38 'T' junction - standard double layer

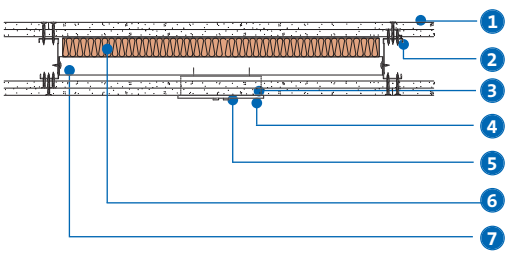


39 'T' junction - where acoustic performance is a key consideration

1 Gypframe GA5 Internal Fixing Angle



40 Socket box installation - up to 60 minutes fire resistance



41 Socket box installation - up to 120 minutes fire resistance

1. Gyproc plasterboard
2. Gypframe 70 S 50 'C' Studs at 600mm centres
3. Plasterboard cut to allow a close fitting entry for the socket box
4. Gyproc Sealant at switch box perimeter for improved acoustics
5. Electrical socket with metal back box
6. Stone mineral wool (minimum 80kg/m³) backing to socket
7. Gypframe 72 C 50 Standard Floor & Ceiling Channel receiving fixing of socket box - channel legs tabbed, bent and fixed to metal studs with Gyproc Wafer Head Drywall Screws

May 2008