

FLOWBAR - Type 11

Installation - Maintenance

Health & Safety

Symbols in this user manual

Warning/Caution! 

General

Please read this manual carefully in advance and make it accessible to all persons involved in a suitable and appropriate place. We point out that not observing the instructions in this document may affect the warranty.

It is not permissible to make changes or modify this product other than those specified in this document.

Personnel

Work should be carried out by a competent person.

PPE 

Appropriate personal protective equipment should be used. All operatives should follow guidance for the specific building site. We recommend the following: Safety shoes or boots, work gloves, eye protection, helmet, high viz clothing, hearing protection, face mask.

Handling and Storage

No special precautions are required. When handling air diffusers/grilles, but they should always be treated with care. The products do not fall within the scope of COSHH regulations.

Grilles/Diffusers should be stored in a dry ambient location and protected from dust & impact damage.

Maintenance

These are static units without moving parts therefore maintenance is confined to cleaning.

To remove significant amounts of lint etc from the unit a vacuum cleaner with a soft brush head may be used.

Powder coated surfaces should be washed with a warm water solution of mild detergent or suitable proprietary cleaning agent.

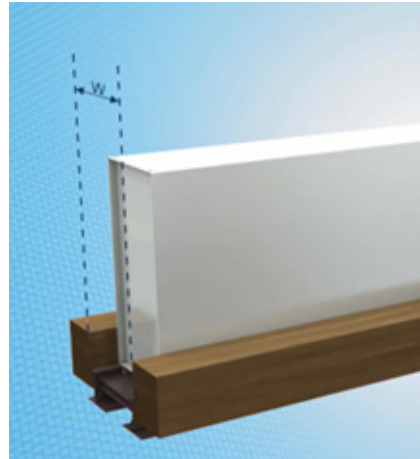
Abrasive cleaners or those containing ketones, esters, acids, alkali or alcohol should not be used.



Plasterboard ceiling Installation

Construct Ceiling FrameWork

- Before installing plasterboard, a framed opening must be constructed to support the FlowBar Diffuser.
- It is recommended that the framework be continuous to accommodate the Hard Ceiling Clip spacing requirements.
- The framing material must be suitable to hold the Diffuser in place when attached with screws through the FlowBar Mounting Clips. The width of the framed opening required depends on the model of FlowBar being installed. The frame opening width dimension, 'W', is listed in Table 1.



NOTE: If it appears that it will be difficult to install plenums after the opening is framed and FlowBar installed, then use wires to support the Plenums above the framework first.

Frame Opening Dimensions	
FlowBar Model	Frame opening 'W'
FL-10	83
FL-15	108
FL-20	133
FL-25	159
FL-30	184

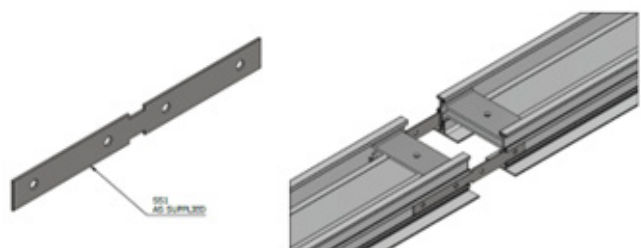
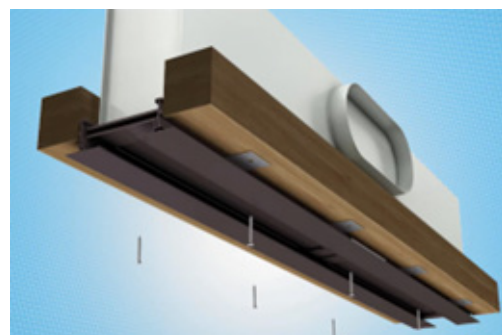
Attach Mounting Clips

- Hard Ceiling Clips are shipped loose for field attachment to the FlowBar Diffuser.
- Slide the Hard Ceiling Clips into either side keyway of each frame rail as per chosen installation method.
- Position the clips at a maximum of 300mm intervals along the Diffuser frame.
- The Hard Ceiling Clips must be secured to a framing member.



Attach Diffuser To Ceiling Frame

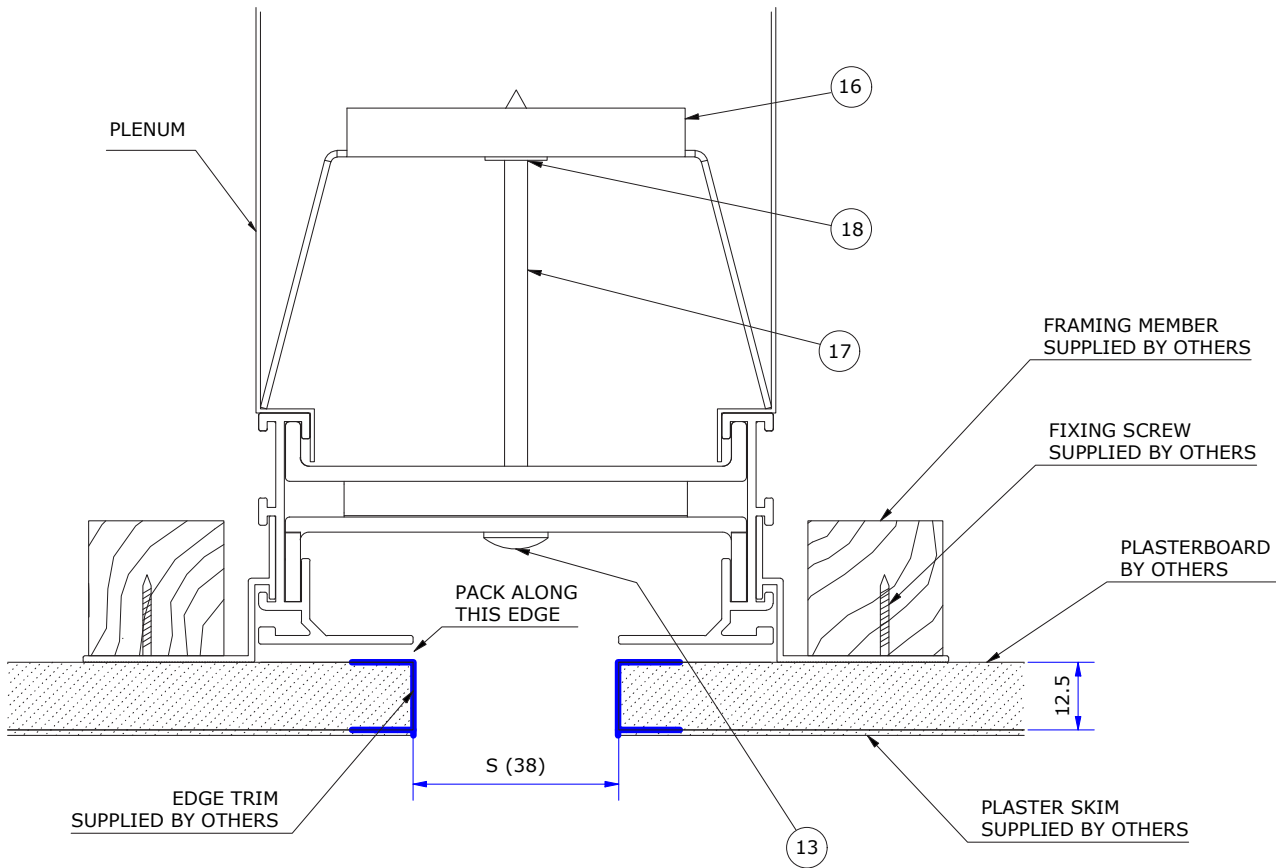
- Lift the FlowBar Diffuser into the framed opening and secure the Mounting Clips to the frame with screws as shown.
- If multiple sections of FlowBar are required, repeat previous step by lifting additional sections into the framed opening.
- Be sure to insert Spline Support Clips-SS1 into the FlowBar ends to ensure a tight and aligned connection as shown.



HT

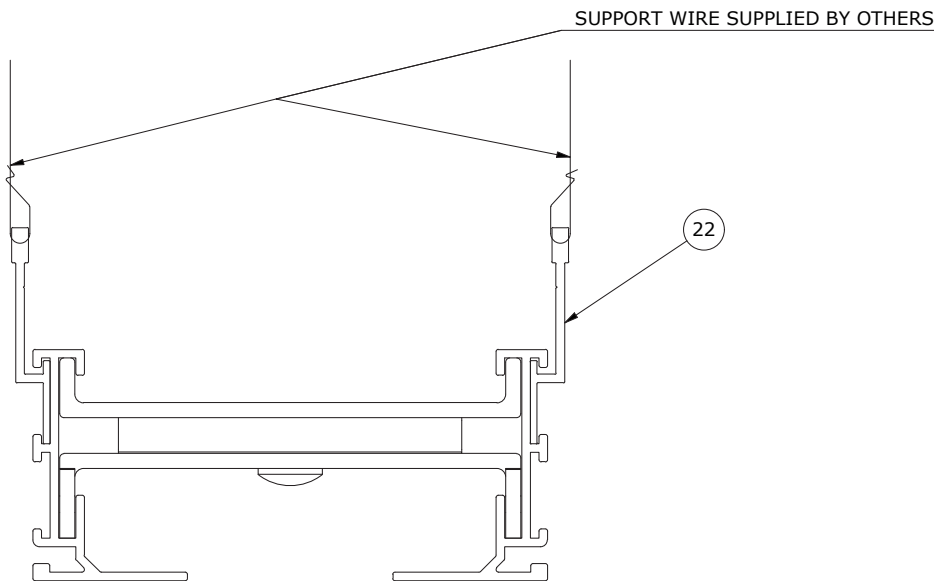
Installation Behind formed Joinery/plasterboard opening

HT ceiling mounted diffuser using H3 Hard ceiling clip & PLS plenum with F6 U-bracket



Installation in an exposed/open ceiling

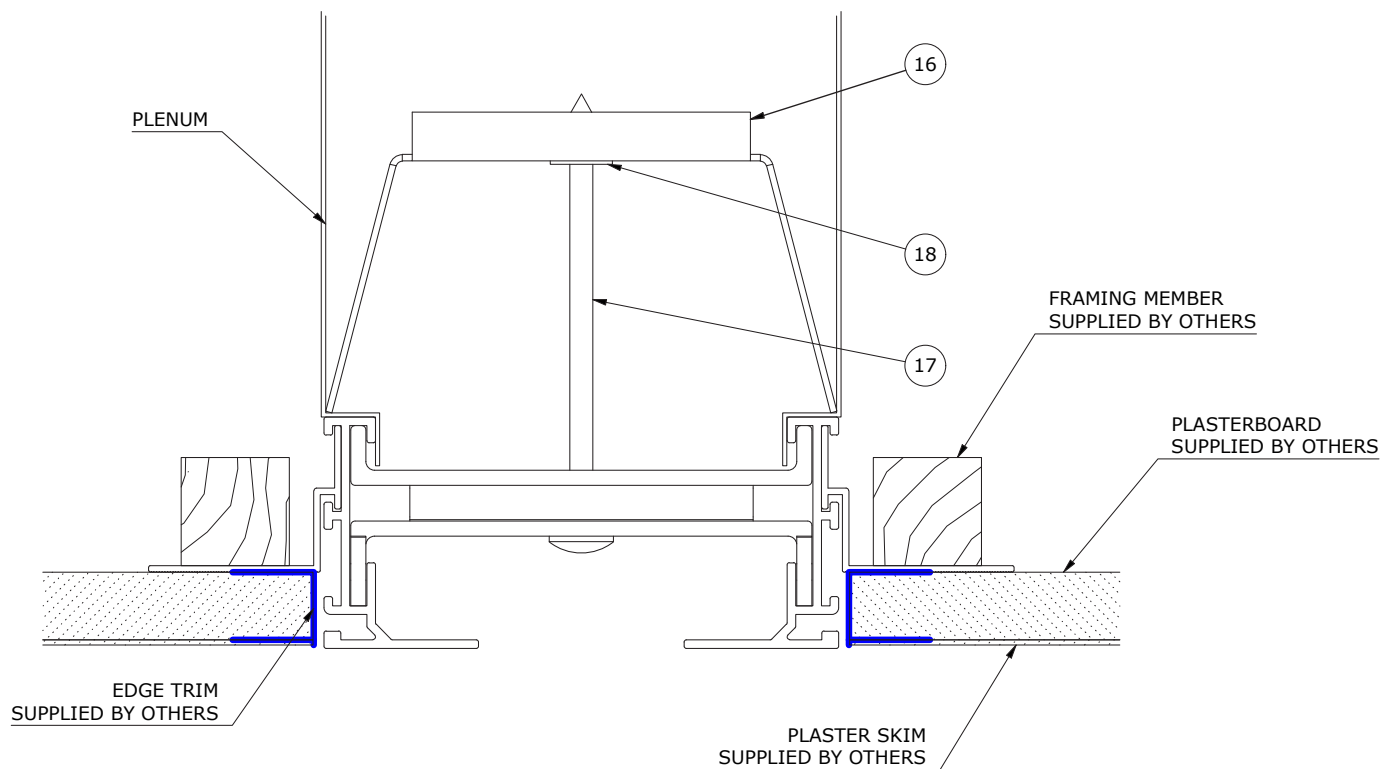
Installation using USH (upper support hanger) for installation where no suspended ceiling is present. e.g alongside acoustic ceiling rafts



FlowBar Type 11 IO&M

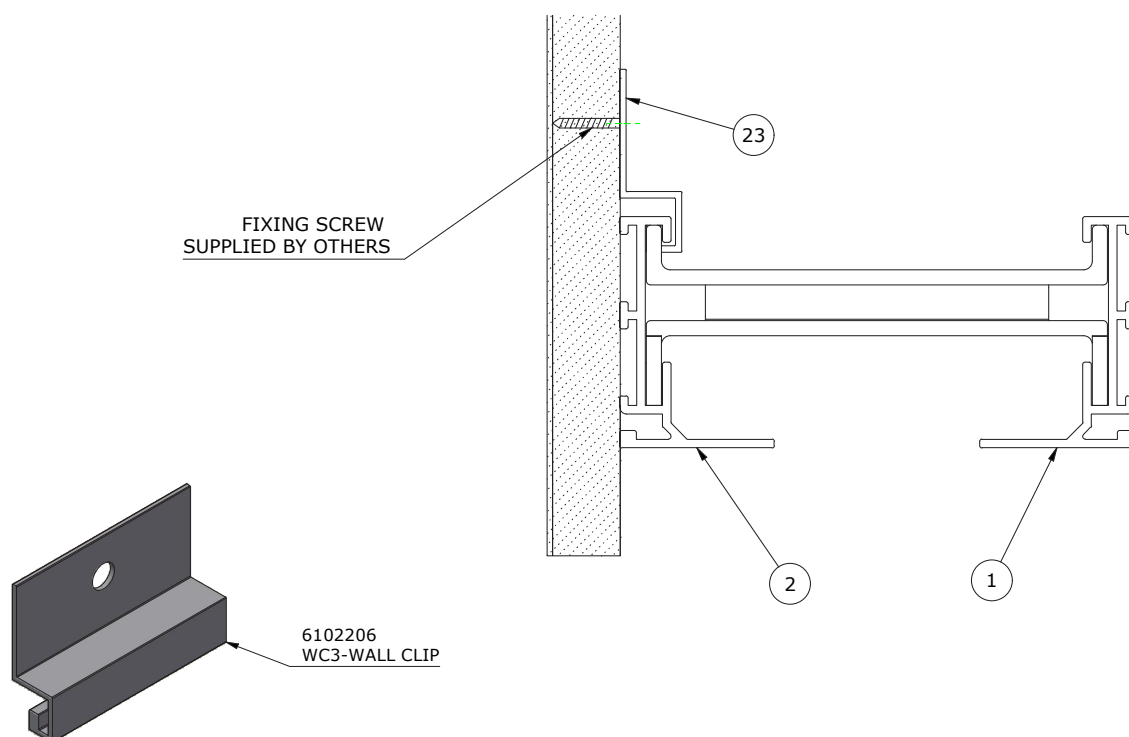
Installation between plasterboard / floating rafts

HT ceiling mounted diffuser using H3 Hard ceiling clip & PLS plenum with F6 U-bracket

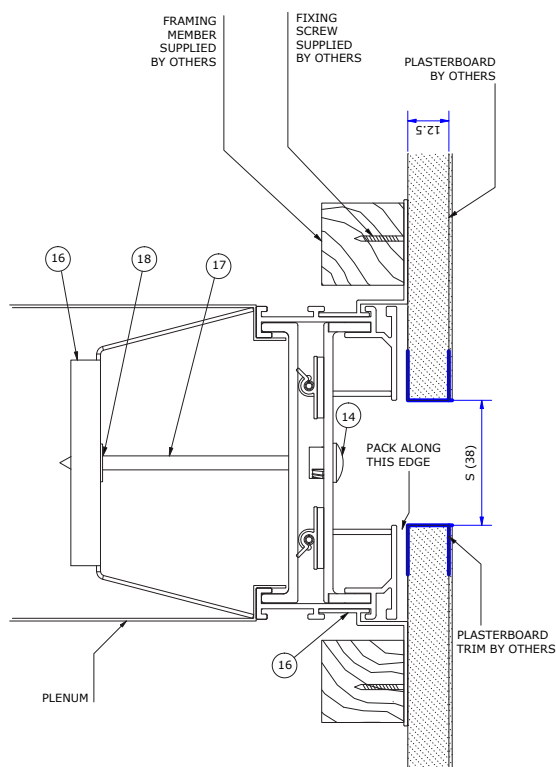


Installation direct to wall

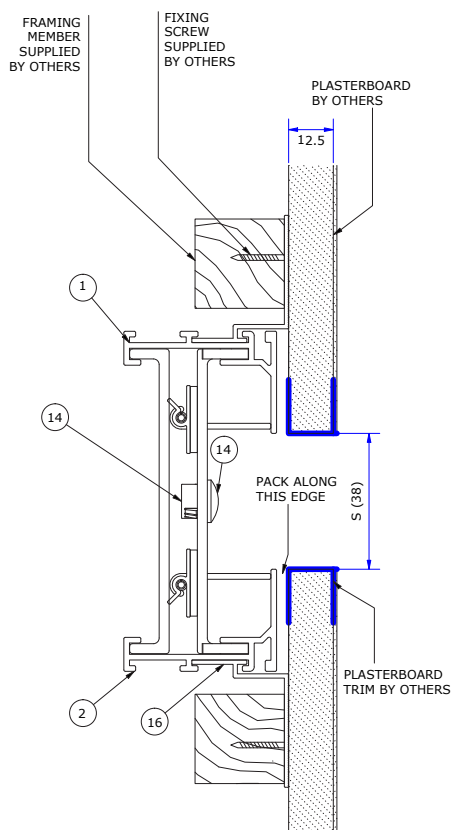
HT ceiling mounted diffuser fixed to a vertical structure using WC3 wall clip. Allow 50mm plenum spacing to accommodate clip



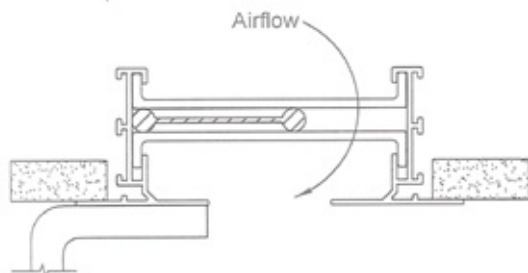
JT wall mounted diffuser using H3 Hard ceiling clip & PBSWLS plenum with F6 U-bracket.
Installation is also possible without H3 clip if plenum box is solid fixed via Drop rod/Unistrut to ceiling slab



JT wall mounted diffuser using H3 Hard ceiling clip & PBSWLS plenum with F6 U-bracket.
Installation is also possible without H3 clip if plenum box is solid fixed via Drop rod/Unistrut to ceiling slab

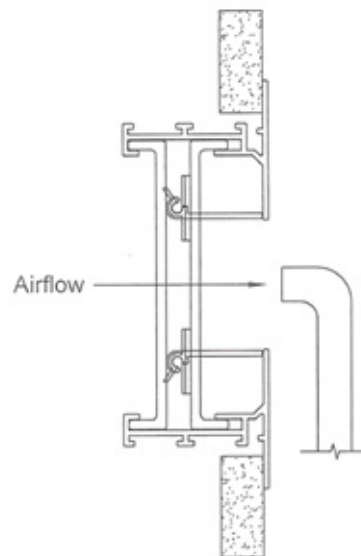


Commissioning



Alnor 6070, 6000, 2220-A, or 2220 Velometer

Slot Opening	A_{eff}
FL10	0.019
FL15	0.023
FL20	0.028
FL25	0.038
FL30	0.041



Alnor 6070, 6000, 2220-A, or 2220 Velometer

Slot Opening	A_{eff}
FL10	0.025
FL15	0.038
FL20	0.051
FL25	0.064
FL30	0.076

- Ensure pattern controllers are set in the correct position
- Place velometer in the airflow path as shown in detail
- Apply the free area figures per metre presented in the table to the active plenum length on site
(eg. 1.8m active JT FL10 $0.025 \times 1.8 = 0.045\text{m}^2$)
- Calculate flow rate by using the equation below:

$$\text{Volume (m}^3/\text{s)} = \text{Face velocity (m/s)} \times \text{Area (m}^2\text{)}$$