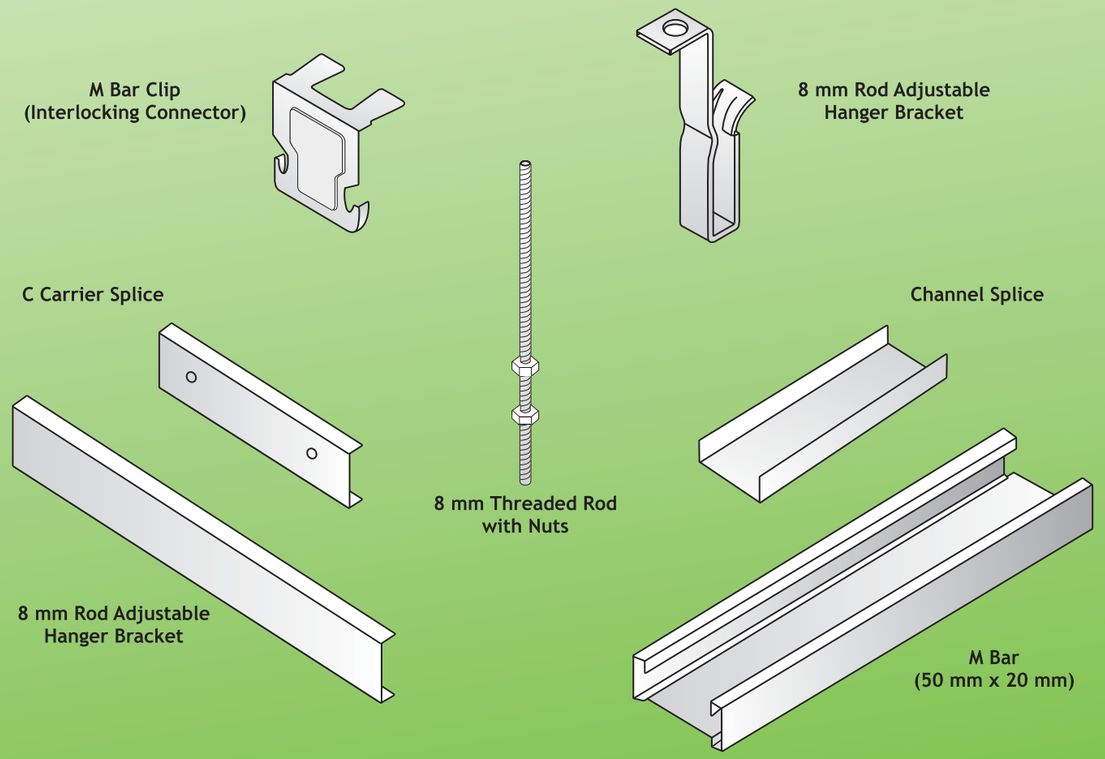
Framework Ceiling Grid Systems

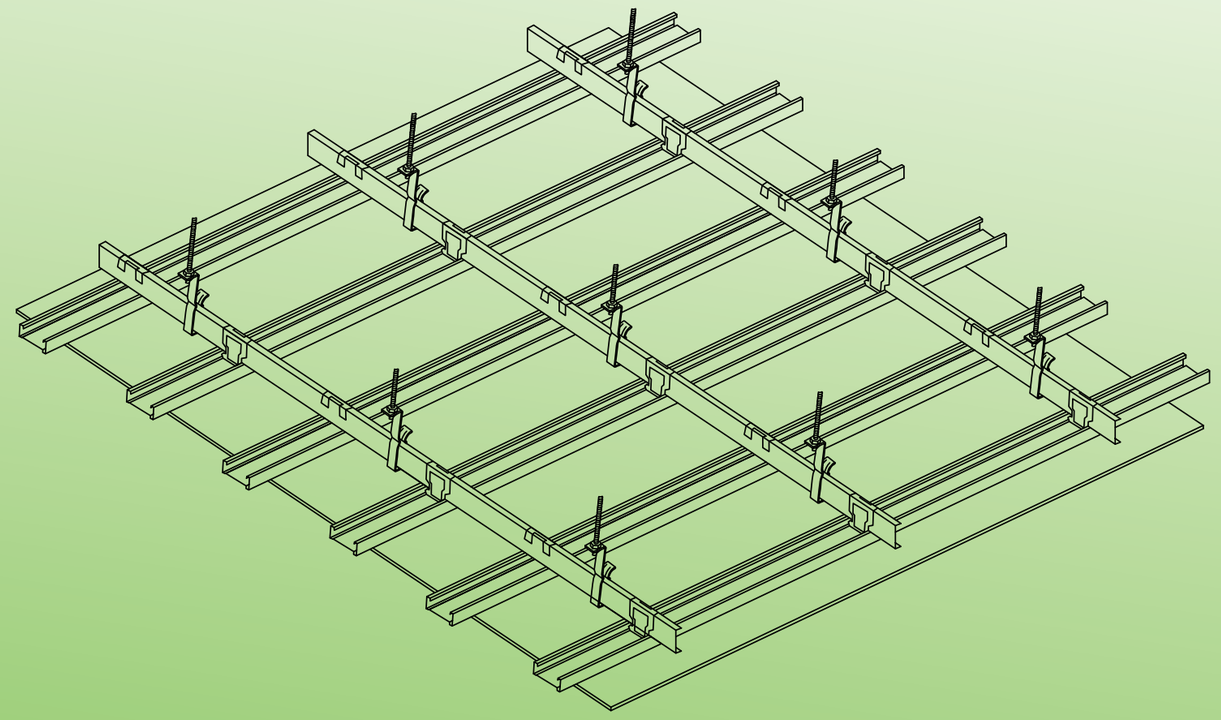
M BAR FRAME

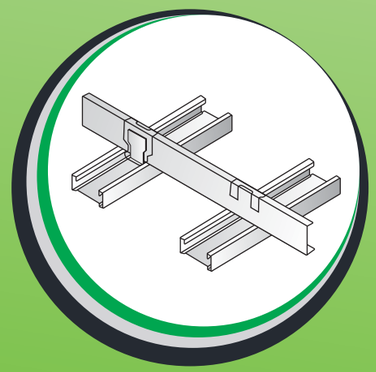
Heavy Duty Variable Module Metal M Bar System

Component Specification

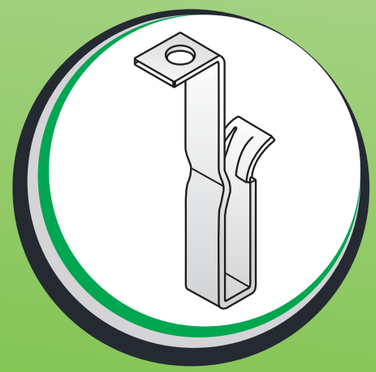
Product	Dimension	Thickness	Length	Qty / Bundle	Weight
C Carrier	38 mm x 12 mm	0.8 mm	3.0 m	20	20
M Bar	50 mm x 20 mm	0.5 mm	3.6 m	10	15.6
M Bar Clip Interlocking Connector	50 mm x 50 mm	0.5 mm	-	500	8
C Carrier Splice	35 mm x 10 mm	1.0 mm	30 cm	20	2.5
M Bar Channel Splice	48 mm x 18 mm	0.5 mm	30 cm	20	2.0
8 mm Rod Adjustable Hanger Bracket	130 mm x 22 mm	1.5 mm	-	300	14
8 mm Threaded Rod with nuts	8 mm Diameter	8 mm	2.0 m	25	15







C Carrier &
M Bar



8 mm Rod
Adjustable Hanger Bracket

M Bar Clip
(Interlocking Connector)

FRAMEWORK

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FRAMEWORK

Framework Ceiling Grid Systems

Components

- C-Carrier in 3.0m section
- Furring Channels in 3.6m section
- M Bar Clip
- Hanger Brackets
- Connecting Splices
- Threaded Rods or Adjustable Hanger Rods of various length
- Wall Moulding
- Type of Hanger Rod System – 8mm Hanger Bracket

Physical Properties

The System is manufactured from a prime quality hot dipped galvanized steel coil to BS 2989 and JIS 3302 standards or AZ 100 coils.

Tensile Strength of Metal - 270 N / mm2
Zinc Coating (both sides) - Z10 (100g / m2) or AZ 100

Surface Finish - Zero Spangle,

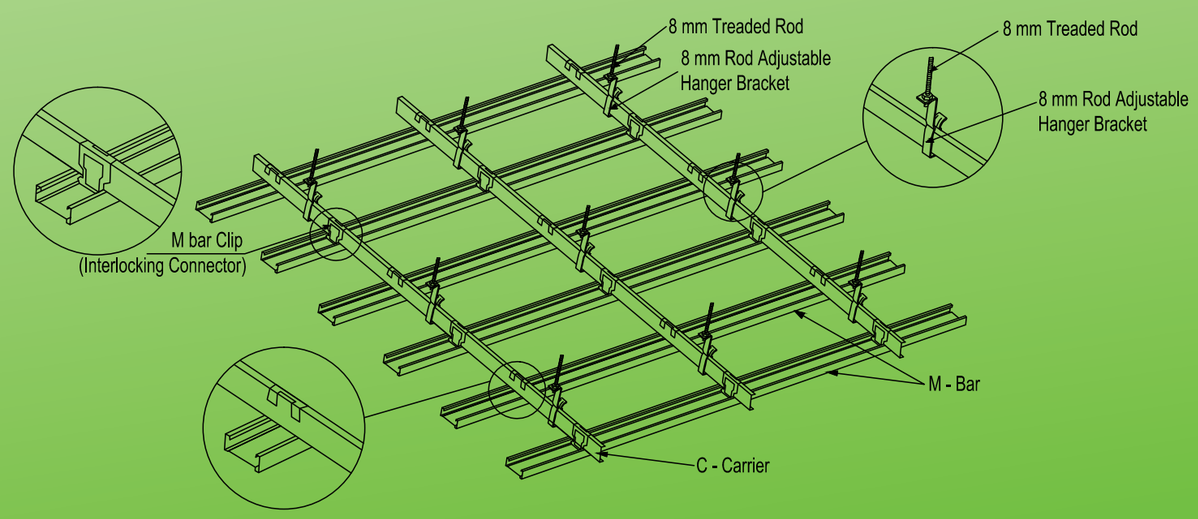
M Bar Framework System

Heavy Duty Variable Module
Metal Furring System

Heavy Duty M Bar System is a pre-engineered variable module metal furring system specially developed as an alternative to conventional timber and metal stud frames for concealed ceilings.

The system is designed for use with all types of building boards made from Gypsum, Calcium Silicate and Fiber Cement materials to achieve an absolutely flat ceiling with no visible joints. It is also suitable for use as a suspension system for GRG (Glass Reinforced Gypsum) and Fibrous Plaster Ceilings.

Being Flexible, the system can be installed in modules to suit different weight and thickness of the selected building board for all kind of project requirement.



Fire Protection

M Bar framework Components are non-combustible according to BS 476 Part 20.

When used with an approved building board, the composite ceiling system is capable of achieve in a fire rating between 30 – 120 minutes according to BS476 Part 23.

The Following fire rating of ceiling systems are listed for information only.

Materials	Thickness	Fire Rating
Regular Gypsum Board	2 layers 25 mm 2 layers 30 mm	30 Minutes 40 Minutes
Fire Rated Gypsum Board	1 layer 15 mm 2 layers 30 mm	30 Minutes 40 Minutes
Calcium Silicate Board	1 layer 6 mm 1 layer 9 mm 1 layer 12 mm 2 layers 25 mm	30 Minutes 45 Minutes 60 Minutes 120 Minutes
Fiber Cement Board	1 layer 9 mm 1 layer 12 mm	30 Minutes 45 Minutes

Different type of boards and products manufactured by different manufacturers vary in fire performance. Please consult the respective manufacturer for technical information and recommendation.

Structural performance

M bar Framework has been tested as a Heavy Duty System with a certified load of 23.8kg/m according to ASTM C635 classification.

PERMISSABLE DISTRIBUTED LAODS (PDL) Kg/m²

Suspension centre: 1200mm using 8mmThreaded Rod System

C Carrier \ M Bar	300 mm	450 mm	600 mm
600 mm	78	62	38
900 mm	52	36	25
1200 mm	38	32	21

Recommended Module for Different Type of Board

Gypsum Based Building Boards

Board	Thickness (mm)	Approx weight Kg/m²	Main Carrier Distance	Furring Channel Distance	Load Factor (PDL/w)
Gypsum Plaster Board	10 12.5 15	9 12 14	1200 1200 1200	600 450 450	2.33 2.66 2.28
Fibrous Plaster Board	9 12	9 10	1200 1200	600 600	2.33 2.10
Glasroc GRG Board	6 10 12.5	6 10 13	1200 1200 1200	600 600 450	3.50 2.10 2.46

Other Buildings Boards

Board	Thickness (mm)	Approx weight Kg/m²	Main Carrier Distance	Furring Channel Distance	Load Factor (PDL/w)
Calcium Silicate Board	6 9 12	7 10 13	1200 1200 1200	600 600 450	3.00 2.10 2.46
Fiber Cement Board	6 10 12	12 17 22	1200 1200 600	450 300 450	2.66 2.23 2.81

The load factor is the number of times that the M Bar Framework system is able to carry the weight of the selected building board without the mid span deflection of the module exceeding L / 360 according to ASTM C635 standard. It is simply obtained by dividing the permissible distributed load (PDL/W) of the selected module with the weight of the selected building board.

A minimum Load Factor (PDL/W) of 2 is recommended for all furring system installation.
A safety factor of one time is necessary due to different weights of materials, variation of steel strength, labour imperfection and other constrains at job site that may affect the overall job performance.

To ensure a perfect installation, contractors are advised to check the weight of the selected building board accurately and tailor this weight to the selection of M Bar Frame variable module with a load factor always exceeding 2.00.

FRAMEWORK