

RFI/EMI SHIELDED CABINETS



This range of purpose built cabinets have been developed to meet the stringent requirements of RFI/EMI Shielding.

They can provide electromagnetic attenuation better than 80dB to signals between 10KHz and 1GHz.

FEATURES

All the doors are fitted with Shielding Gaskets incorporating water and dust sealing capability.

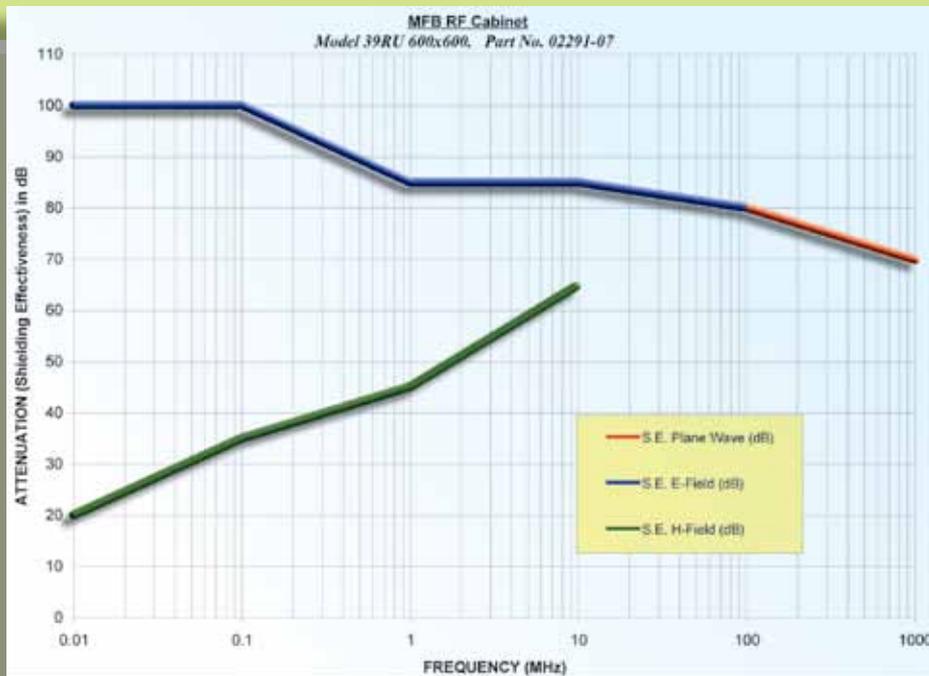
A filter housing in the base of the cabinet accommodates the AC mains RF filters, with access through an internal removable cover. A safety cover protects the mains terminal on the cabinet exterior. Venting is provided through fully gasketed honeycomb RF filters and additional airflow can be achieved by the addition of a fan unit, however the cabinet will no longer meet the IP55 dust and moisture standard.

- **Doors** are hung on multiple hinges and secured in the closed position by a multipoint locking system, activated by semi-flush fitting, "lift & swing" key lockable handle. The entire hinge and locking system is located outside the gasketed cabinet front, ie these lock rods do not encroach into the working area of the cabinet. Further as this complete hinge/lock system is symmetrical rehangng a left hand door to right hand can be accomplished "on site" with the aid of just a screwdriver. The 6RU and 12RU cabinets have a single point lock and provision to reverse hang the door.
- **Rack Mounting Angles** finished in black powder coat. Four are supplied as standard. These are fully adjustable within the cabinet and conform to IEC60297 practice.

OPTIONS

- **Line Entry** is through in-line filters, usually fitted with a shortened rear door option. This must be determined at time of ordering.
- **Fibre Optic Entry** is achieved by passing the fibre optic cables through a filter.
- **Acrylic Viewing Port** can be fitted to the cabinet doors, this port includes a black steel mesh shield, which becomes near invisible when back lit by a video monitor, indicator lamps, etc. However, some down grading of the shielding effectiveness may occur and the port should be made as small as possible to minimise this loss.
- **Gear Trays** can be fitted inside the rear of the

MFB ARE AUSTRALIA'S MOST EXPERIENCED MANUFACTURER, HAVING IN EXCESS OF 40YRS MANUFACTURING.



cabinet, either full height or partial, finished in either white or international orange baked enamel & fabricated from 3.0mm steel.

- **Plinth** is 90mm high and incorporates levelling feet and bolt down brackets to secure to the floor. Finished in black powdercoat and is available either plain or vented. [Refer to page 84 for more details.](#)
- **Eye Bolt** provision is made on all cabinets. However, the eye bolts must be ordered if required.
- **Single Line Entry** is achieved by passing a single cable through a wave guide tube which is fitted at the time of manufacture. It is best suited to Fibre Optic cable. Any-current carrying conductors, including Data, penetrating the shield should be filtered. The position must be specified at the time of ordering.
- **Weather Hood** for cabinets used outdoors. This hood provides additional protection from the elements.

CONSTRUCTION

These cabinets are of continuous welded construction. Fabricated entirely from steel, resulting in both an aesthetically pleasing and extremely robust cabinet.

FINISH

The cabinets have a Galvaneal pre treatment, and are finished in a baked texture enamel. Our range of colors are on the inside rear cover. Corporate colours can be provided at an additional tinting charge. Doors are Nickel plated then masked and powder coated.

STANDARDS CONFORMANCE

All standard cabinets generally conform to IEC 60297 & IEEE299-2006 19" standard and IP55 dust and moisture specifications. The cabinets are -tested using the test procedure of MIL-STD-285 to ensure the specified RF attenuation requirements are achieved. The shielding effectiveness is illustrated above.

ACCESSORIES

The cabinets are so designed that the majority of MFB's standard rack accessories will fit without any modification. There is also a special range of fan units, air conditioners and air to water heat exchangers that can be incorporated into the cabinets.

These cabinets can be built to meet detailed specifications therefore many options are available. These may include: additional air filters, gland plates, shielded

windows, fibre optic entry ports, telecommunication RF filters, etc.

CUSTOM FEATURES

Special punching requirements, the inclusion of special brackets, etc, can be readily undertaken. However, they are best undertaken at the outset of a project rather than attempting to add later.

CUSTOM SIZES

Whilst the range is extensive, sometimes a-special size is required. These will be willingly included but may require a longer lead time.

Standard entry configurations are, front door entry only or front & rear door entry. For interconnecting between adjoining cabinets small cabling ports are suggested.

Individual testing and full certification can be provided at an additional cost on request.

RFI/EMI SHIELDING - SIMPLE RULES ASSURE PROPER SHIELDING

There is no magical formula assuring maximum protection in an enclosure. Every application is different, and an empty cabinet is not a system with all its idiosyncrasies.

The best approach is to choose a supplier who will take the time to understand and resolve the user's needs and guarantee that engineering support can be provided. Expectations must be understood, defined and met to ensure a satisfactory result.

The simplest approach for specifying enclosures is to establish the basic criteria for the required shielding - effectiveness levels, size of the cabinets, doors, air vents and connector panels.

Indicating the customer supplied items to be installed in the cabinet also is helpful.

It is also appropriate to require proof of manufacturing experience, with a list of past projects, written test data and customer references.

“The most important criteria for selecting a shielded cabinet are the material and the quality of the design, particularly the mechanical seaming techniques and the type of door.”

Shielding material with a thickness of a few millimetres provides adequate high frequency protection from E-field radiation. However, permeability and thickness are more significant to low frequency H-field properties.

Most attention should focus on seam quality, quantity and penetrations because they are the weak links in the system.”

“Specifications should be realistic and designed for the needs of the situation.”

Users should protect against being overzealous in their search for the perfect seal/cabinet, lest they spend too much for the enclosure.

For example, Tempest cabinets are required to meet the most rigorous standards and cost several times more than those designed for the military which, in turn, cost two to three times more than commercial products. The user must decide which standard is appropriate and select accordingly.

RFI/EMI CABINET WITH DOORS - 600MM WIDE

OVERALL			1 DOOR		2 DOORS	
RU	HEIGHT	DEPTH	CODE	WEIGHT	CODE	WEIGHT
6	477	450	02290-13	39	02291-13	44
		600	02290-14	45	02291-14	50
		800	02290-15	54	02291-15	59
12	743	450	02290-16	50	02291-16	56
		600	02290-17	65	02291-17	71
		800	02290-18	65	02291-18	73
18	1010	450	02290-01	65	02291-01	73
		600	02290-05	73	02291-05	81
		800	02290-09	84	02291-09	92
27	1410	450	02290-02	86	02291-02	97
		600	02290-06	97	02291-06	108
		800	02290-10	111	02291-10	122
39	1944	450	02290-03	114	02291-03	129
		600	02290-07	128	02291-07	143
		800	02290-11	146	02291-11	161
45	2210	450	02290-04	128	02291-04	144
		600	02290-08	143	02291-08	159
		800	02290-12	163	02291-12	179

RFI/EMI CABINET WITH DOORS - 800MM WIDE

OVERALL			1 DOOR		2 DOORS	
RU	HEIGHT	DEPTH	CODE	WEIGHT	CODE	WEIGHT
6	477	450	02292-01	42	02293-01	45
		600	02292-07	48	02293-07	51
		800	02292-13	57	02293-13	59
12	743	450	02292-02	54	02293-02	58
		600	02292-08	69	02293-08	77
		800	02292-14	71	02293-14	74
18	1010	450	02292-03	70	02293-03	77
		600	02292-09	78	02293-09	77
		800	02292-15	89	02293-15	94
27	1410	450	02292-04	93	02293-04	100
		600	02292-10	104	02293-10	110
		800	02292-16	118	02293-16	123
39	1944	450	02292-05	124	02293-05	134
		600	02292-11	138	02293-11	147
		800	02292-17	156	02293-17	164
45	2210	450	02292-06	139	02293-06	150
		600	02292-12	154	02293-12	164
		800	02292-18	174	02293-18	183





AIR VENTS

Honeycomb air filters are usually fitted to top and base of rack. Other locations include doors and sides.

AIR VENTS

TYPE	CODE
100X300 HONEYCOMB	03298-01



FIBRE OPTIC PORT

60 way x 7.0mm diameter Fibre Optic Wave Guide Ports. Various ports are available to suit larger diameter cables, small quantity of cables, etc...

FIBRE OPTIC PORTS

DEPTH	CODE
100 DIA. FIBRE OPTIC (7MM DIA. HOLES*)	03299-01
100 DIA. BLANKING PLATE	03299-02

* Other diameter holes may be specified.



GLAND PLATES

To suit opening 200 x 50mm

GLAND PLATES

TYPE	CODE
NICKEL PLATED	12189-03



SECURITY / LOCKING

Low profile lift and swing handles are fitted standard to all larger cabinets, this handle is coupled to a roller type multipoint lock. The entire lock system is external to the shielded area.



MAINS FILTER ASSEMBLY

A.C. mains RF filters are enclosed in a protective housing mounted in the cabinet base and provided with an external wiring cover.

MAINS FILTER ASSEMBLY

TYPE	CODE
5 AMP	02294-04
10 AMP	02294-05
20 AMP	02294-06



EXTERNAL ROOF FAN UNIT

Shielded fan unit allowing greatly improved airflow within the rack. Can be fully operated from outside.

EXTERNAL ROOF FAN UNIT

DEPTH	CODE
450	02043-05
600	02043-06
800	02043-07



VIEWING PORT

Blackened stainless steel mesh laminated between acrylic sheets allowing viewing of componentry. Customised for individual requirements. (Minimum size required to maintain RFI integrity.)



PLINTH

An optional plinth designed to raise the cabinet 90mm is available, in plain or vented styles, they also provide bolt down and levelling provisions. [Please refer to page 84 for part numbers.](#)