

# *Fire Resistant Doorsets*



# Metal Doors series

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## Fire Doors :

Available with a variety of configuration and vision panel options. A maximum fire resistance of 4 hours can be achieved.



## Clean room Doors :

Flush door sets have no visible construction lines and therefore allow a totally clean surface which reduces particle contamination for clean room environments.



## Personnel Doors :

A complete range of single or double door sets designed to satisfy the varied requirements of general purpose internal and external applications.



## Insulated Doors :

Full range of insulated doors 30 & 60 min up to 2 hours fire rated. Designed to suit the power sub-stations, cold stores, heat transferred applications.



## Acoustic Doors :

A complete range of single and double door sets to suit performance requirements up to RW53dB and 120min fire integrity.

# Fire Doorsets FD & FI Ranges



**Fire...** The irreparable damage it causes costs GCC businesses millions of dirhams every year. It also costs lives.

The devastation caused by fire should never be underestimated. Similarly, the importance of adequate fire protection cannot be emphasised enough.

By choosing FD & FI Range Fire Resistant Steel Doorsets you can be assured of protection for up to 3 hours.

The FD & FI Ranges have been tested and certified by Warrington Fire Research Centre and the Underwriters Laboratories.

For further detailed technical information, please contact our sales team.



## Strong, Versatile, Distinctive...

For more than a century has been at the forefront of the design, manufacture and supply of architectural hardware and opening solutions.

As the world's largest manufacturer and provider of security and safety products and services, the company has achieved unrivalled success.

The stairways and corridors within a building can act like a chimney, allowing fire to spread quickly from one level to another. By isolating the fire and preventing it from reaching these areas, fire doors not only buy occupants valuable time but also protect people and property from fire damage and the harmful effects of smoke.

## A division of Technologies

C&B has achieved an enviable reputation in the design, manufacture and supply of high performance steel fire doors and frames. Our fire doors are fully tested and approved by leading authorities throughout the world.



# Fire Doorsets FD & FI Range

## Steel Doorset Characteristics

- Strong durable and impact resistant
- Unaffected by moisture; will not warp, swell or rot
- Excellent surface finish, smooth and durable
- Prepared & reinforced to receive a wide range of hardware
- Inherent hygienic properties
- Reduced maintenance and lower cost of ownership
- Enhanced security and acoustic characteristics
- Environmentally friendly - 100% recyclable
- Long life performance and improved life cycle costs

## Classifications

BS 476 Part 22: 1987 (Fire integrity)  
 BS 476 Part 22: 1987 Clause 6 (Full fire insulation)  
 BS EN 1634-1: 2000 (New European standard)  
 BS 5588-4: 1988 (Smoke passage)  
 Underwriters Laboratories Inc.  
 BS EN ISO 9001: 2000 (Quality Management System)  
 Tested to 1 million cycles in accordance with EN 1191

## Options

Single and double doorsets  
 Single and double swing  
 Side and overpanels  
 Banks of doorsets  
 Vision panels  
 Fully glazed option  
 Fire block louvres  
 Full range of premium hardware sets and accessories

## Finishes

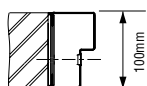
Comprehensive range of RAL polyester powder top coat finishes or primer coated.  
 Brushed, polished or patterned stainless steel to order.

## Specification information

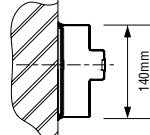
CAD drawings - DXF or DWG versions  
 NBS Specification (Document L20-Doors/ Shutters/ Hatches)

## Standard Frame Profile Options

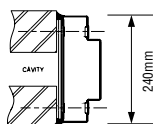
### Profile A2



### Profile B3

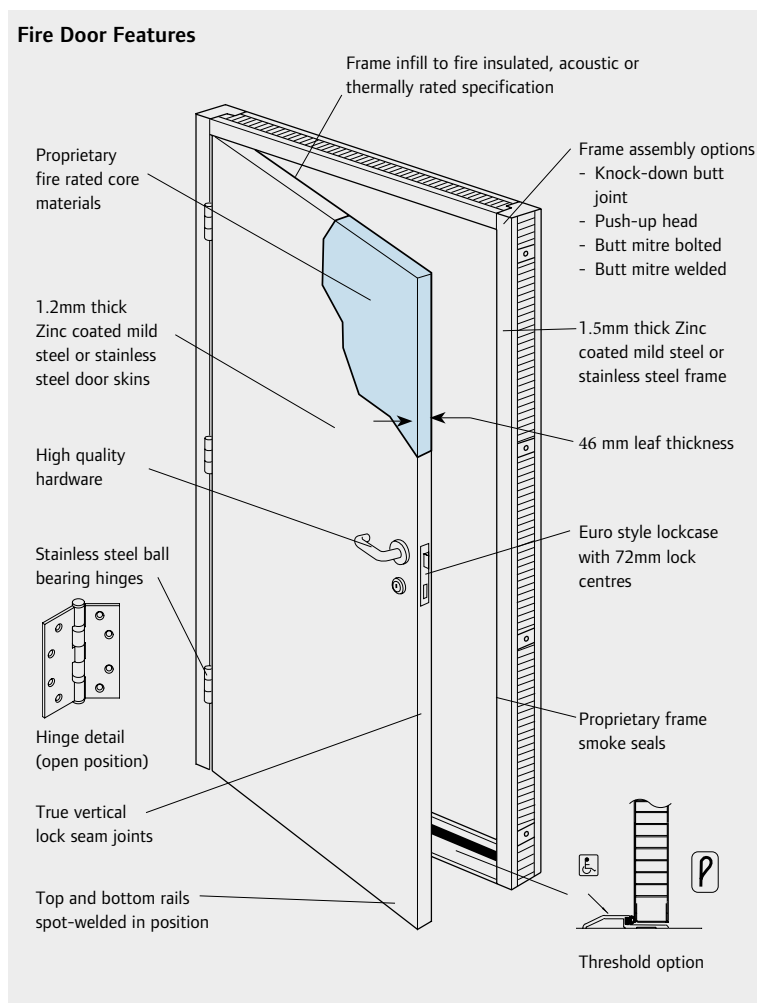


### Profile B5



Non-standard profiles also available to client specification

## Fire Door Features



## FD - Fire Door Range

Door Ref:	Fire Integrity Rating			Sound Reduction (Optional)
	BS	EN	UL	
FD1001	1 hr	1 hr	0.75 hr	30Rw dB
FD1002	2 hr	2 hr	1.5 hr	30Rw dB
FD1003	3 hr		3 hr	
FD1004	4 hr			

## FD - Fire Insulated Door Range

Door Ref:	Fire Integrity	Fire Insulation	Sound Reduction (Optional)
	BS	BS	
FI1001	1 hr	0.5 hr	40Rw dB
FI1002	1 hr	1 hr	40Rw dB
FI1003	2 hr	0.5 hr	40Rw dB
FI1004	2 hr	1 hr	40Rw dB

Note: When specifying, consideration should be given to sound transmission through surrounding building elements.

Rw dB: Weighted sound reduction index under laboratory conditions.

Fire doors are designed to protect property and life in the event of a fire. For this, the door must serve as a fire and smoke barrier. Studies have shown that more people have lost lives due to smoke asphyxiation than fire.

Fire Doors must serve four main functions

- serve as a regular door at all times
- provide ready egress from a fire area during a fire
- inhibit spreading of fire
- protect life and property by reducing smoke hazards.

When an opening requires strength, durability, or maximum fire resistance, steel doors and frames provide the qualities to meet these needs. Due to growing access control needs, fire doors have today evolved to accommodate the growing electrified functions a door must support.

Designed to meet the life-safety requirements in various types of buildings and structures, Shakti fire doors help compartmentalise and contain the spread of fire. These doors complement existing passive fire-fighting systems. These doors also meet all the stipulated international, national and regional fire safety standards.

These doors are available with honeycomb core as standard infill material with other optional cores. These doors are rated for 45, 60, 90, 100, 120, 180 and 240 minutes' fire withstanding ability. All fire doors are factory finished with polyester powder coated finish paint.

## APPLICATIONS

These doors can be used in high-rise buildings, metro railway stations, telecom centers, power plants, cellular network stations, garment processing units, shopping malls, industrial plants, multiplexes, hotels, auditoriums, software parks, restaurants, etc. The doors and frames are designed to perform and in the most demanding environment.

## FEATURES

- Available in galvanised or stainless steel
- UL labeled doors for 45, 60, 90, 120, 180 minutes
- Clear vision lite for up to 120 minutes' fire rating
- No welding joints and sharp edges, interlocking at the stiles
- Factory prepped to receive all types of hardware
- High aesthetics and robust structure
- Fully flush constructions
- Easy to install on a flush wall opening & dry wall partitions
- Factory finished for polyester powdercoated finishes.

## OPTIONAL FEATURES

- Wood Grain can be provided as an optional finish.

## STANDARDS & CERTIFICATIONS

- Tested to UL 10B & UL10C and confirming to NFPA 80



Underwriters Laboratory

- Fire doors are tested as per BS 476 Part 22 in Warrington



- Fire doors are tested to BS 476 Part 22

## WARRANTIES

All our products carry a warranty of 1 year against manufacturing defects.



## DOOR FRAMES

### MATERIAL - OPTIONS

Galvanised Steel	Stainless Steel
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### SHEET THICKNESS

Gauge	14	16	18
Millimeters	2.0	1.5	1.2

### TECHNICAL DATA FOR STANDARD FRAMES (D x H)

Size of double rebate frame	(143 x 57 mm)*		
Size of single rebate frame	(100 x 57 mm)	(100 x 70 mm)	
Frame assembly	Mitered	Butted	Welded

\*Other sizes are available. Max depth for Labelled doors can be 350 mm.

### STANDARD HEIGHTS (WALL OPENINGS)

Inches	6' 10 <sup>3</sup> / <sub>4</sub> "	7' 2 <sup>5</sup> / <sub>8</sub> "	7' 10 <sup>1</sup> / <sub>2</sub> "	8' 10 <sup>1</sup> / <sub>4</sub> "	9' 10 <sup>1</sup> / <sub>8</sub> "
Millimeters	2100	2200	2400	2700	3000

Note: For actual frame opening size please see the door data sheet for both labelled and BS doors.



## FRAMES

Available in mitered joint and butted assembly, our frames are supplied in knock down form for easy assembly at site. Welded frames are supplied on special request.

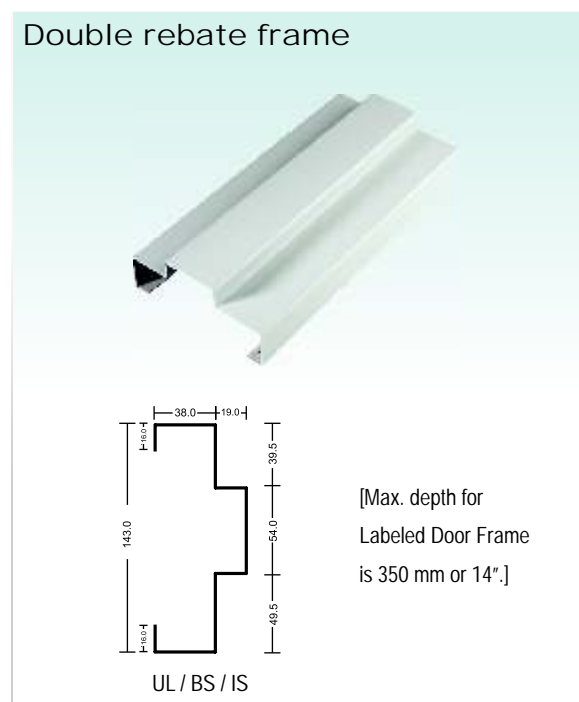
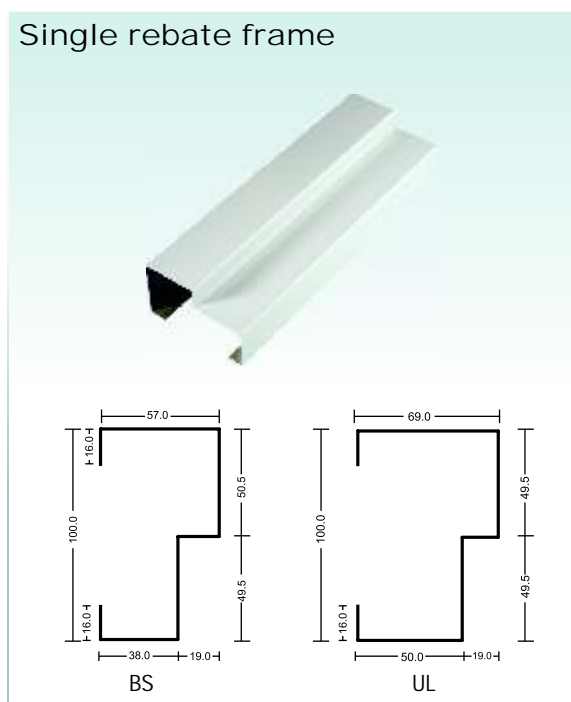
## FEATURES

- Available in galvanised and stainless steel
- Frames available in single and double rebate
- All frames are prepared for receiving hardware
- Frames can also be designed for flush fixing
- Primed and finish painted.

### OPTIONAL

- Frames with Architave
- Frames with inbuilt seals.

## STANDARD DESIGN



## HARDWARE PREPARATION

### Hinge Jamb

4 mm thick steel hinge reinforcement door and frame for receiving the hinge.

### Strike Jamb

3 mm thick steel lock strike reinforcement with tapped holes welded to the frames.

### Mortar Guard

1.2 mm thick steel plaster guard or mortar guard is provided at the back of all hardware cutouts in the frame.



**Hinge Jamb**



**Strike Jamb**



**Strike-Mortar Guard**



**Hinge-Mortar Guard**

## FRAME ASSEMBLY DETAILS



Mitered Joint (Double rebate)



Bolted Joint (Double rebate)



Welded Joint (Double rebate)

(Mitered and bolted joint frames are supplied in knock down form)

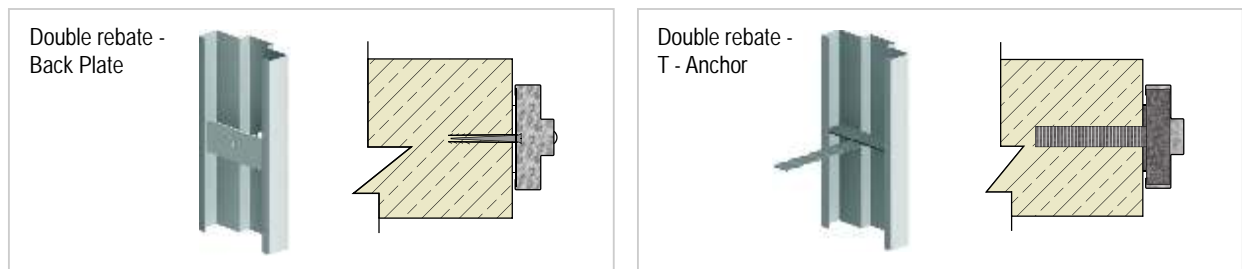
## ANCHORING AND FIXING DETAILS (OPTIONS)

Frames can be designed for fixing on typically plastered opening, masonry opening or dry wall partitions. We offers a wide range of unrivalled options in aesthetics and finishing.

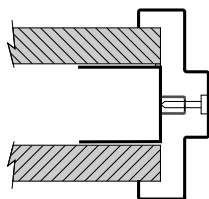
**Tee-Anchoring:** First fix provides maximum engagement into the constructed wall, with slip-on anchors made out of galvanised steel.

**Expansion Anchors:** Used in masonry openings or finished plastered openings. The frames are bolted to the clear opening with 8 mm expansion anchors. Screws are rested on the backplate.

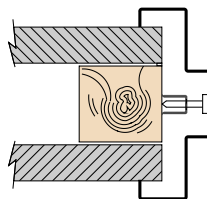
**Bolted Anchors:** Frames fixed on 'C' Channel are bolted directly on to the back plate.



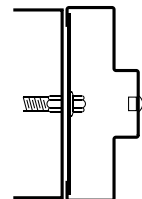
## DRY WALL FIXING



Frames installed with steel stud



Frames installed with wood stud



Frames installed on 'C' channel





## DOOR LEAF

### MATERIAL - OPTIONS

Galvanised Steel	Stainless Steel
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### SHEET THICKNESS

<b>Gauge</b>	16	18	22
<b>Millimeters</b>	1.5	1.2	0.8

### TECHNICAL DATA FOR DOOR LEAF

	Single Leaf	Pair of Leaf
<b>Non-temperature rise doors</b>		
Door thickness	46 mm (1 3/4")	-
Min. door opening width	357 mm (1' 2")	714 mm (2' 4")
Max. door opening width	1219 mm (4' 0")	2438 mm (8' 0")
Max. door opening height	3048 mm (10' 0")	3048 mm (10' 0")
<b>Temperature rise doors</b>		
Max. door opening width	1219 mm (4' 0")	-
Max. door opening height	2743 mm (9' 0")	-

Note: The sizes mentioned above are for the door leaf and does not include the frame.



## DOOR LEAF

### Door Leaf Design Feature

Fire Doors are designed to be fully flush without any joints on the surface of the door. Steel reinforcements are provided for structural stability and integrity. The doors are available in both galvanised steel and stainless steel. Doors are factory finished in all aspects for receiving hardware and etched primed to take final coat of paint.

Stainless steel doors are available in No. 2B or No. 4 finishes.

### Options:

#### Fully flush

This design does not have any provision for fixing of the options like glass or louvers. It is fully flush on both sides.

#### With vision lite

Door leaf can be provided with vision lite for visibility.

Vision Lite sizes in (mm) - W x H	
V	250 x 250
N	125 x 500
C	380 $\phi$
R	200 x 300

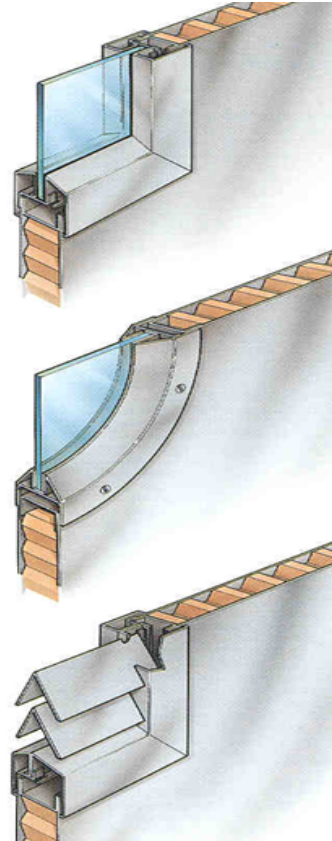
- The sizes mentioned above are for 1½ hrs. and 2 hrs. labeled doors except C type
- Labeled doors with 3/4 hr. rating can have glass of 1296 sq. inches / vision lite
- Max width / height is 54" for vision lite of size 1296 sq. inches
- Max width for 100 sq. inches is 12" and max height in 33".

## FEATURES

- Interlocking construction at stiles
- Fully flush and flat surface
- Optional insulated infill material
- Factory prepped to take any hardware
- Rounded edges for safety in use
- High aesthetics and robust structure
- Maintenance-free doors.

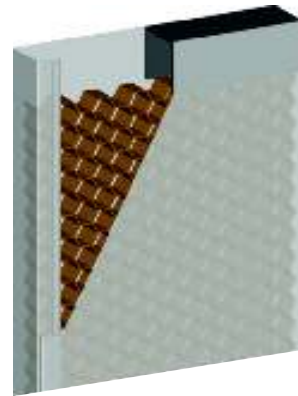
### Louvers

Labeled doors can be provided with optional louvers with fusible link for a maximum size of 24" x 24" in 1½ hrs. rated doors. Not applicable on BS doors.

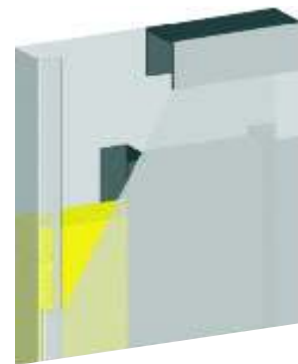


INFILL

Honeycomb Kraft paper with its unique properties enhances the structural integrity of the doors with minimal additional weight to the door. The final finish on the door is predominantly dependent on the quality of the honeycomb kraft and the glue which is used to get the flat surface. This infill material invariably has high crushing strength leading to impact resistance. The quality and consistent flat surface achieved because of the infill material is exceptional to the material and design of the doors.



Steel Stiffened Doors: Used for exterior applications, these doors are known for their rigidity and are available in varying strength and quality. While the thickness of the stiffeners can vary, we offer stiffeners of 20 gauge galvanised steel. Spacing between stiffeners may vary from 4" to 6". They are welded to each other at the top and bottom and to the inside door skin. The cavities are filled with special core. For temperature rise doors, all cavities are filled with mineral rock wool.



DOOR ELEVATIONS

