

Subject: SOP – Standards for doors, door frames, fire doors. Hardware, etc.

Key words: door frame size, door shutter size, door, frames, fire doors.

1. Old internal memo is made into a circular with several changes. These guidelines to be strictly followed.
2. A standardised list of door frames and door shutters is given in annexure -A herein.
3. Following types of doors and door frames are to be used.
 - 3.1. WPC or wooden door frame. This is to be installed at time of civil work. Door shutters to be installed after completion of civil work.
 - 3.2. The density of WPC should be greater than 1000kgs per cum or more. A simply way to test it is to place a piece of WPC in a bucket of water. It should either sink or be fully submerged. If part of the piece is above water then the density less than 1000kgs per cum.
 - 3.3. Purchase shall deliver straight pieces of required length to respective sites.
 - 3.4. Doors to be fabricated at site. Hardware required for fabrication has following SKUS:
 - 3.4.1. Screws- **HARD5223-Hardware-Wood screws-CSK-10x100mm-pkts**
 - 3.4.2. Favicol- **CHEM2282-Chemical- Adhesive-Fevicol SR 998 synthetic rubber adhesive-1ltr-Nos**
 - 3.4.3. Holdfast - **HARD6478-Hardware-Hold fast--100mm-Kgs.**
 - 3.5. The method to join the door at the edges is given in standard drawing Fig. No. 034. The drawing is to be revised shortly.
4. Fire door – these are typically 2 hour rated fire doors.
 - 4.1. The general specifications of the fire doors is as under.
 - 4.1.1. Door thickness- **46mm.**
 - 4.1.2. Frame size- **95x50mm**
 - 4.1.3. Thickness of metal sheet - **1.2mm**
 - 4.1.4. Vision panel size - **200x300mm.**
 - 4.1.5. No. of hinges - **2100mm door height – 3 hinges and 2400mm door height -4 hinges.**
 - 4.1.6. Filling inside door – Galss wool is preferred. However, homey comb paper filling is acceptable as long as the door is certified by statutory authority.
 - 4.1.7. Door closure details- **80Kgs.**
 - 4.1.8. Hardware details - D handles to be provided on each door/leaf on both the sides. SS push plate to be provided inside. Avoid push bar. Provide door stopper for all doors (frame mounted – avoid floor mounted). Provide deadlock or locking mechanism for all doors – master key preferred. Door stopper and lock are required at the time of construction/fit-outs – they must be disabled when building is occupied.
 - 4.1.9. All doors must be either grey or off white having colour codes **RAC 7035** or **RAC 9002** respectiely. Doors to fire pump room must be red in colour - **RAC 3020/RAC 3016.**
 - 4.2. Typically fire doors have the following sizes:
 - 4.2.1. For housing projects including clubhouse therein:
 - 4.2.1.1. Entrance to staircases – 2100 x 900 – single leaf doors. If required 2100 x 1000 may be used.
 - 4.2.1.2. Entrance to lift lobby area /fire tower – 2100 x 1500 – double door. In some cases 2100 x 1800 may be used.

- 4.2.2. For lab spaces /hospital/commercial complexes:
 - 4.2.2.1. Entrance to staircases – 2100 x 1200 – double leaf doors. The leaf should asymmetric with the leaf sizes of 1:2 or 1:3. The ratio may be determined by vendor. Door closure must be provided (if possible use 2400 x 1200).
 - 4.2.2.2. Entrance to lift lobby/fire tower – 2400 x 1800 – double door. (on stilt or basement floors 2100 x 1800 may be used).
 - 4.2.2.3. At other places like fire panel room, fire pump room, etc., 2400/2100 x 1200 may be used.
 - 4.2.2.4. All fire doors must have vision panel, D-handles, deadlock and door stopper. Push bars to be provided only in rare occasions.
- 4.3. Direction of fire door opening:
 - 4.3.1. On the ground and terrace floor doors must open towards open to sky areas i.e., direction of movement of people from staircase, office space, corridors, flats, etc., must be towards open space.
 - 4.3.2. All floors including basement – direction of movement of people must be towards fire tower/lift and staircases.
 - 4.3.3. The staircases from basement to ground floor must be split from staircase to upper floors.
 - 4.3.4. In case refuge areas are provided – all doors must open towards refuge areas.
 - 4.3.5. All fire doors must have granite jamb. Jamb should be made using 18 to 32mm granite so that there is a step built into the jamb. In case there is a gap between the door and jamb it should be filled with fire retardant silicone.
- 4.4. Gaps in between jamb and fire doors/fire hose cabinet or other similar MS doors provided for ducts must be sealed with fire retardant silicone. SKU no. **FIRE5663-Fire & Safety-Fire retardant foam sealant---Nos..**
- 4.5. UPVC French windows – here opening to be left in civil work of larger size. After completion of civil work granite soffit /jamb to be fixed on all 4 sides to exact dimension + 6mm margin for easy fit.
- 4.6. Toughened glass doors – here opening to be left in civil work of larger size. After completion of civil work granite soffit to be fixed on all 4 sides. Vendor to consider dimension after fitting granite soffit.
- 4.7. MS fire hose cabinet or fire shaft door – opening to be left in civil work. Cabinet to be fixed after completion of civil work. This is to be primarily used for commercial projects. Preferably provide granite jamb – 100mm width. For fire shafts colour should be red and for other doors grey or off white. Here too use fire retardant silicone.
5. For all new projects dimensions will be specified in mm. Accordingly this circular to be modified (eg.: 7ft x 3ft door frame would be resized to 2150 x 900mm).
6. Hereafter all requisitions to be made as per code given herein.
7. All new working drawings must use this code.
8. Door shutter details
 - 8.1. Flush doors – use for storerooms and doors for ducts.
 - 8.2. Panel doors – use for all doors of flats and villas.
 - 8.3. Pre-laminated flush doors – use for toilets and other doors in lab space projects/ commercial buildings.
 - 8.4. Consider bathrooms doors for commercial projects – pre-laminated flush doors – with WPC frame + honey comb filling. Ventilation /diffusion grill to be added at top or bottom of the door as per instructions of MEP.

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10	DOOR6170-Doors-Door frame with threshold-WPC-600Wx1500Hmm-Nos.	DFT24	Yes	inches	1	24	60	20	56	Yes	Yes	No	NA	Electrical duct/other duct	
11	DOOR1252-Doors-Door frame with threshold-WPC-1525Wx2150Hmm-Nos.	DFT60	No	inches	2	60	84	28	80	Yes	Yes	No	NA	Clubhouse/Double shutter with groove	
12	DOOR3177-Doors-Door frames without threshold-WPC-1525Wx2150Hmm-Nos.	DF60	No	inches	2	60	84	28	82	No	Yes	No	NA	Clubhouse/Double shutter with groove	
13	DOOR1639-Doors-Panel door-2Panel - 675Wx2025Hmmx32mm-Nos.	26D80	Yes	inches	1	NA	NA	26	80	NA	No	No	NA	Bed room purpose	
14	DOOR8917-Doors-Panel door-2Panel - 825Wx2075Hmmx32mm-Nos.	32D82	Yes	inches	1	NA	NA	32	82	NA	No	No	NA	Bed room purpose	
15	DOOR9498-Doors-Panel door-2Panel - 975Wx2025Hmmx32mm-Nos.	38D80	Yes	inches	1	NA	NA	38	80	NA	No	No	NA	Main door purpose	
16	DOOR8464-Doors-Door frame with threshold--Misc-Nos.														
17	DOOR7971-Doors-Door frame without threshold--Misc-Nos.														
18	DOOR2152-Doors-Fire Rated Door-Single leaf-900X2100mm-Nos.	21FD09	No	mm	1	900	2100	NA	NA	NA	No	Yes	1000x2200	Special use	
19	DOOR2820-Doors-Fire Rated Door-Single Leaf-1000X2100mm-Nos.	21FD10	Yes	mm	1	1000	2100	NA	NA	NA	No	Yes	1100x2200	General purpose	
20	DOOR6233-Doors-Fire Rated Door-Single leaf-1000X2400mm-Nos.	24FD10	Yes	mm	1	1000	2400	NA	NA	NA	No	Yes	1100x2500	General purpose	
21	DOOR3512-Doors-Fire Rated Door-Double Leaf-1800X2100mm-Nos.	21FD18	Yes	mm	2	1800	2100	NA	NA	NA	No	Yes	1900x2200	General purpose	

22	DOOR2913-Doors-Fire Rated Door-Fire door double leaf-1800X2400mm-Nos.	24FD18	Yes	mm	2	1800	2400	NA	NA	NA	No	Yes	1900x2500	General purpose	
23	DOOR9003-Doors-Fire rated door Double leaf--1500X2100mm-Nos.	21FD15	Yes	mm	2	1500	2100	NA	NA	NA	No	Yes	1600x2200	General purpose	
24	DOOR5708-Doors-Fire Rated Door-Double leaf-1500X2400mm-Nos.	24FD15	Yes	mm	2	1500	2400	NA	NA	NA	No	Yes	1600x2500	General purpose	
25	DOOR8870-Doors-Fire Rated Door-Single Leaf-1200X2100mm-Nos.	21FD12	Yes	mm	1	1200	2100	NA	NA	NA	No	Yes	1300x2200	General purpose	
26	DOOR5411-Doors-Fire Rated Door-single leaf-1200X2400mm-Nos.	24FD12	Yes	mm	1	1200	2400	NA	NA	NA	No	Yes	1300x2500	General purpose	
27	DOOR8528-Doors-Fire rated door Single leaf--900X1000mm-Nos.	09FD10	Yes	mm	1	900	1000	NA	NA	NA	No	Yes	1000x1100	General purpose	
28	DOOR1715-Doors-Fire rated door Double leaf--1500X1800mm-Nos.	15FD18	Yes	mm	2	1500	1800	NA	NA	NA	No	Yes	1600x1600	General purpose	
29	FIRE7509-Fire & Safety-Fire hose cabinet-Single leaf-900x1500mm-Nos.	HC90S	Yes	mm	1	900	1500	NA	NA	NA	No	No	925x1525	Fire shaft	
30	FIRE4003-Fire & Safety-Fire hose cabinet-Double leaf-900x1500mm-Nos.	HC90D	Yes	mm	2	900	1500	NA	NA	NA	No	No	925x1525	Fire shaft	
31	UPVC french window - sliding + mosquito mesh	FW72	Yes	inches	2	72	84	NA	NA	NA	No	Yes	75x85	Balcony	
32	UPVC french window- sliding + mosquito mesh	FW96	Yes	inches	2	96	84	NA	NA	NA	No	Yes	99x85	Balcony	
1	For doors opening height should be from FFL.														