



EMPLOYER'S REQUIREMENT (ER)

Project – Purchase of Fire-Rated Doors

Subject – Apartment Main Door (fire-rated & weatherproofed) Replacement

1. Background:

Due to damage observed in existing apartment main entrance doors, it is necessary to replace them with new fire-rated doors to maintain compliance with local fire safety standards and durability under tropical conditions.

2. Scope of Work:

Procurement and delivery of fire-rated apartment main doors, including door leaf, frame, trims, and ironmongery, as per provided specifications.

3. Engineer's Requirements

A. Fire Rating & Certification

- Doors must have a minimum **30-minute fire resistance rating**
- Fire doors must be tested and certified to **internationally recognized standards** by accredited third-party laboratories
- In addition to fire resistance, doors must provide certified **smoke control performance** to prevent smoke migration to adjacent units or spaces during a fire event
- The contractor or supplier must submit full supporting documentation and test reports, which shall include (but are not limited to):
 - Fire resistance performance
 - Smoke control performance
 - Water tightness test results
 - Load-bearing capacity test results
 - Thermal transmission performance, considering the potential for heat or smoke transfer to adjacent apartments
 - Air permeability test results
 - Durability testing, including successful performance under repeated opening and closing cycles

- The door assembly must demonstrate:
 - Resistance to **static load pressure**, ensuring it withstands sustained force without deformation or loss of structural integrity
 - Resistance to **dynamic impact**, proving ability to handle repeated or sudden mechanical forces such as slamming or rapid pressure changes
 - Resistance to **manual forced entry**, confirming strength and security against attempted break-in or tampering
- All certifications and test reports must be valid, current, and issued by recognized international testing authorities
- All technical documents and certification reports must be submitted to the **HDC technical team** for review and approval prior to procurement

B. Door Construction: Finish to be matched with the colour **Nippon Ultra Smooth NP OW 1020 P or equivalent**

- Door Leaf:

- Constructed using **high-quality materials** suitable for internal use
- Core composition must include **fire-resistant and structurally stable components** (e.g., engineered cores with thermal insulation and fire-retardant properties)
- Surface finish should be **durable, weather-resistant**, and appropriate for long-term indoor performance

- Door Frame:

- Manufactured from moisture-resistant and fire-rated materials
- Surface to be finished with a durable, easy-to-clean, and weather-resistant coating

- Architrave/Trim:

- 2" architrave on both sides

C. Dimensions: Existing Door - All dimensions in millimeters (mm)

- Door Leaf: 903 mm (W) x 2025 mm (H)

- Leaf Thickness: 45 mm
- Frame: 65+50 mm (side elevation) and 50+10 mm (front elevation)

D. Weatherproofing:

- All materials to be treated for resistance against moisture, UV, and corrosion
- Melamine surfaces (if applicable) must prevent swelling or warping in tropical climate

E. Ironmongery: shall be **manufactured from stainless steel.**

- Fire-rated hinges, door stoppers, locks, handles, etc.
- Hardware to be included in the package or installed before delivery

F. Required Quantity:

- Door: 100 Nos.
- Door Lock: 100 Nos.
- Door Stopper: 100 Nos.
- Hinge: 400 Nos.

4. Vendor Requirements:

- Propose fire-rated & weatherproofed doors matching above specs
- Provide all required certifications and test reports
- Include detailed specifications for all ironmongery items and ensure door design allows easy installation with minimal structural modification

6. Compliance Standards:

Compliance must be supported by valid certification and test reports issued by an accredited third-party testing authority:

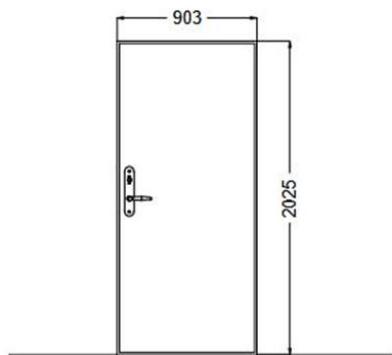
Doors may comply with any of the listed standards, if test results and certificates are valid and issued by recognized, accredited laboratories or certification bodies.

7. Closing Notes:

All doors and accessories must be inspected and approved in accordance with fire and safety standards. The product must be tested and certified to internationally recognized standards by accredited third-party laboratories. All documentation (fire resistance certificate and other test reports that include specifications mentioned under 3.A.) should be submitted to HDC. Furthermore, all selected specification documents, including technical data, certifications, and installation requirements, must be submitted to the Technical Team for review and formal approval **prior to awarding the job to any supplier or issuing a purchase order.**

Please note: The drawing attached below shows the existing door frame details and is provided for reference only. While wall thickness is not specified in the drawing, the new door must be suitable for installation within a **5-inch wall thickness**, regardless of the frame dimensions shown.

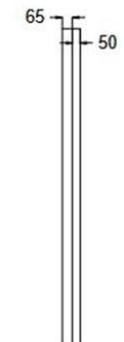
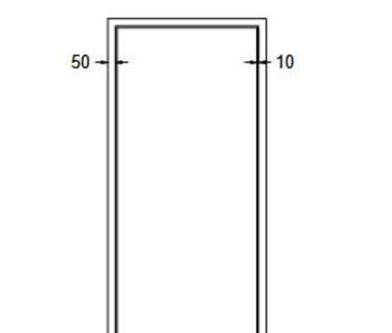
8. Appendix: Existing Door Drawing



DOOR LEAF



DOOR THICKNESS





EMPLOYER'S REQUIREMENT

Doc ID:	
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Classification:	
Effective Date:	