OPERATING AND MAINTENANCE MANUAL

Essentia

IKON DOORS QLD PTY LTD
Installation of Fire Rated Door Sets

ON BEHALF OF

MORRIS PROPERTY GROUP

PREPARED BY

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Introduction & Scope

1.0 Introduction

Scope of works

* Supply only of pressed metal door frames – as detailed on architectural door schedule
* Supply of non rated timber doors – as detailed on architectural door schedule
* Supply and installation for fire rated doors – as detailed on architectural door schedule.

Client:	Morris Property Group
Project Name:	Essentia
Project Location:	INSERT PROJECT ADDRESS
Contractor:	IKON DOORS (QLD) Pty. Ltd. 7/82 Hutchinson St Burleigh Heads Qld 4220 Telephone: (07) 3890 4187 Email Address: alan@ikondoors.conm.au
Key Personnel:	Alan Theodore

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System & Plant Description

2.0 System and Plant Description

2.1 Fire Rated Door Sets

Fire rated doors are located in fire separation walls enclosing most of the plant rooms and fire separation walls between fire stairs/escape passages and public occupied areas.

Fire doors and other doors can be identified by the door number allocated to each door on the floor plan drawings and cross reference to same number in the door schedule and hardware schedule.

A fire door is installed across an opening in a firewall to maintain the fire resistance rating of that firewall. Fire rated door must be self closing or close automatically on the operation of an approved sensing device or on the loss of power supply. Once released the fire door must close cleanly and fully, and be unimpaired in its operation. Each fire door must have a metal tag attached as required by AS 1905.1

2.2 Door Hardware

As part of a fire rated door assembly door hardware and closers have to comply with the statutory testing requirements. Fire resistance rating applies to the complete fire door assembly. As such, door hardware must provide safe and secure latching of fire doors when closed by the door closer.

Following are brief functional description of different types of locks:

Passage set – locks operated by lever handles from both sides of the door, not lockable. Usually used in passageways and high traffic areas.

Storeroom set – locks operated with lever and/or cylinder from external side and handle from internal side of the door. Usually used on rooms with restricted access, as well on the fire stairs to prevent unauthorised access from the fire stairwells to premises.

Rim night latch – locks for fire rated riser compartments operated by keyed cylinder from external side of the compartment and turn on the internal side.

NOTE: For additional information refer to Section 5.0

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Detail System Operation & Description

3.0 Detail System Operation & Description

Purpose

A fire door is installed across an opening in a fire wall to maintain the fire resistance rating of that wall.

Requirements

An approved fire resistant door set is one that is identical in assembly, construction and installation to a prototype of this door that has been submitted to the standard fire resistance test, and has fulfilled all the relevant test requirements.

A fire door must be self-closing or close automatically on the operation of an approved sensing device or on the loss of power supply.

In addition of above operation requirements, to comply with fire regulations fire door has to comply with following maximum clearances:

- top and both sides maximum 3mm gap between the door leaf and the frame.
- Clearance to floor with a combustible covering max 25mm to non combustible sill (see attached).
- Clearance to floor without a combustible covering max 10mm.

Method of Operation

Once released the fire door must close cleanly, and be un-impaired in its operation. It is essential that no unauthorised means is used to hold open a fire door.

Identification – Tagging of Fire Doors

Every fire door assembly should be clearly marked with frame and door certification tags. Tags are placed on the hinge side of the frame and door.

Frame tags contain the following information:

- Name of the certifier.
- Name of the manufacturer.
- Fire resistance level of the door frame in minutes.

Door leaf tag contain following information:

- Number of the standard.
- Fire resistance level in minutes (FRL).
- Name of the manufacture.
- Name of the sponsor.
- Name of the certifier.
- Year of manufacture
- Serial Number.

Serial number is used for allocation and identification of the door, and is also transferred into the fire door logbook, which is part of the Fire Certificate for the fire

doors on every building. After the inspection performed by authorised company this fire certificate is to be reissued yearly containing this number (refer to Section 8.0).

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Equipment Schedule

4.0 Equipment Schedule

As per door schedule	
A900 and A901	

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Suppliers

5.0 Equipment Suppliers and Subcontractors

5.1 Non Rated and Fire Rated Door Frames

Pro Industries

Phone – (02) 9609 2994

5.2 Non Rated and Fire Rated timber doors

Pro Industries

Phone – (02) 9609 2994

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Maintenance Instructions

6.0 General Maintenance Procedures

6.1 Doors

Doors in general do not require special maintenance if the following guidelines are followed:

- It is essential that no unauthorised means is used to hold open a fire door.
- External doors and doors in wet areas are sealed/painted on top and bottom every three years.
- There is no excessive movement in the building structure or dry walls where doors are installed.
- Doors and door hardware sets are not dismantled or disassembled, and non-original parts are used for replacement. Door closer arms are not disconnected, locks and handles are not forced or tampered.
- Doors are not abused or misused and are not kept open by unauthorised means.
- Door hardware (hinges, handles lock tongues) sets are properly maintained and lubricated occasionally to provide smooth action.
- All hardware is installed and maintained as per the hardware maintenance manual in the following section.

Regular monthly and yearly maintenance/inspection checks are required for fire doors as per AS 1851.12-2012.

To ensure a proper history of each fire door is retained, the following records must be available and maintained.

- Log book identifying each fire rated doors set, and showing its identification number, type of door, size and fire resistance level (refer to Section 8.0 for information).
- A numbered Certificate of Compliance giving written evidence that door set complies with AS 1905.1 (refer to Section 8.0 for information).

6.2 Door Frames

Regular cleaning of steel door frames is essential to prevent the accumulation of dust. In specific situations, the presence of dust may attract moisture, which, if left unaddressed, can lead to the gradual development of rust on the steel. Using a soft cloth wipe away any dust as it accumulates.

6.3 Hardware

Cleaning Technique: Door Furniture

Initially, wash down the surface using soapy water or a mild water or a mild detergent. Always thoroughly rinse the cleaning agent away with clean water. To complete the cleaning procedure dry/polish the item with a soft, dry cloth.

Cylinders

During cleaning care should be taken to prevent cleaning solution from entering the cylinder keyway. Never use oil, grease or graphite to lubricate the cylinder; this may result in a malfunction of the mechanism.

Hinges
All hinges should be checked for tightness and lubricated on a regular basis. Where hinges are fixed on the exterior of a building it may be necessary to lubricate more often.

Pull Handles

Templates are provided to give accurate fixing positions for all standard pull handles. It is important that boltholes of the correct size, at right angles to the door face and the necessary centres, are drilled accurately.

Each fixing should be tightened to ensure the pull handle is firm and stable and use the fixings supplied including washers and nylon liner sleaves when fitted to glass doors.

Pull handles should be inspected to ensure that the fixings are appropriate with grub screws, where used, firmly in position. Any movement of the handle will damage the door surface and cause the handle to become unstable and fail when used.

Door Closers

After filling in accordance with the fixing instruction and template, the door closer must be adjusted to provide a smooth closing action so that the door closes correctly. Occasional lubrication of the latch bolt, using an aerosol spray, will ensure a smooth action.

Each door closer should be inspected for oil leakage, tightness of fixings and correct operation.

Locks, Latches & Panic Equipment

Each item should be fitted in accordance with the fixing instruction using the fixings provided.

All locks and latches should be inspected to ensure that they are operating correctly, with the strike plate correctly bent to ensure smooth action of the latch bolt so that the door closes correctly. Occasional lubrication of the latch bolt, using an aerosol spray, will ensure a smooth action.

Lever and Knob Handles

On installation, where the correct procedure, as per the instructions, has been carried out, the lever and knob handles will not require adjustment. However, all fixings should be checked for tightness at the annual control. Any loose fixings should be adjusted. Badly fitted furniture can cause interference with the operation of the lock and, at the same time, damage the bearing surface of the furniture.

Today's environment exerts immense pressures on product material requirements. Products must withstand a diversification of atmospheric conditions, such as high pollution, marine locations, high humidity climates. Additionally, products must be protected against cleaning agents/solutions and ideally the product should offer hypo-allergenic properties.

Stainless Steel

Stainless steel is renowned for the following tow properties; resistance to corrosion and low maintenance requirements.

Performance Characteristics of Stainless Steel

Today's environment exerts immense pressures on product material requirements. Products must withstand a diversification of atmospheric conditions, such as, high pollution, marine locations, high humidity climates. Additionally, one must protect the product against cleaning agents/solutions and ideally the product should offer hypo-allergenic properties.

Stainless steel is "a general description for a group of steel products that consist of a minimum of 12% chrome in conjunction with varying quantities of nickel, molybdenum, titanium and carbon"

Stainless steel is renowned for the following two properties; resistance to corrosion and low maintenance requirements.

Stainless steel corrosion resistance is attributable to the presence of a thin, durable film of passive, but stable, chromium oxide. Being inert, invisible, extremely adherent and self-repairing, this film provides an unrivalled protection for the steel; should the film be damage or removed it will reform independently, provided that oxygen is present to allow the reaction to occur with the chromium content of the steel. Thus the necessity to ensure regular cleaning maintenance.

There are several types of stainless steel, all of which are corrosion resistant to differing degrees. The most common and important type within the stainless steel family is known as austenitic and contains nominally 18% chromium and *% nickel, 18/8, resulting in improved corrosion resistance. The advantages of this particular type are twofold: temperatures of – 160 deg. C up to melting point of the steel (approximately 1450deg. C) can be withstood and offering the best protection corrosion-wise.

Within the austerity group two particular grades are of particular interest, known as AISI:304, possesses the property of corrosion resistance in natural atmospheric environments, however, only non-acid based cleaning solutions can be used. 316 (an addition of an extra 2 – 3% molybdenum and nickel), has enhanced corrosion resistance suitable for more aggressive atmospheric environments, of low maintenance and suitable for all cleaning solutions including acid based (except hydrochloric acid), as long as thoroughly rinsed with clean water afterwards.

Aggressive environmental conditions can cause the following effects on stainless steel; rusting, unsightly staining and, in some cases, permanent damage.

However, the degree of damage has been proven to be reduced by using higher grade stainless steels.

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Maintenance Schedule

7.0 Maintenance Schedule

Maintenance Checks

It is recommended that a fire door and hardware be inspected monthly by the owner. The owner may delegate this function to another person or body where necessary or appropriate.

Under AS 1851.7 Two Levels of Inspections are required:

Monthly – Type 1 Inspection

A visual and physical inspection of the door and its function. This inspection must be carried out by the owner or occupier or by a suitably qualified representative (i.e maintenance manager).

Yearly – Type 2 Inspection

The routine required for the monthly inspections.

Comparison of each fire door set with the appropriate specification in the installation log book supplied with the door.

The inspection items specified in Appendix A of AS 1851.7 pages 6-8. This inspection shall be carried out or supervised by a person acceptable to the regulatory authority (building surveyor) as being competent and experienced in the field of fire doors.

It is recommenced that where any corrective action involves repairs to the door leaf, such repairs should be carried out by the original manufacturer.

It is essential all fire doors are maintained in operational condition at all times.

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Fire Door Log Book

8.0 Fire Door Log Book

Fire door log book is provided by the fire door supplier showing:

a) Identification of your building and its owner.
b) The supplier of the door sets.
c) The date of commissioning of the fire door sets in your building.
d) Identification number of each door set.
e) Type of door, dimensions and fire resistance level.

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Manufacturers Literature

9.0 Manufacturers Literature

9.1 Non Rated and Fire Rated Doors

https://www.proindustries.com.au/about-pro-industries/

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Commissioning Results

10. Commissioning/Test Data

Fire Doors Commissioning/Certificate

- Compliance Certificate – Appendix A
- Fire Door Schedule of Evidence #430

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Warranties

11. Warranties and Guarantees

- General Subcontractors Warranty – Ikon Doors Pty Ltd