



**HAVELLS**

IE2

# Smoke Extraction Motor



Firex Series



2023

## Firex Series

### Havells Smoke Extraction Motors



#### Overview

Havells making low-voltage squirrel-cage motors for smoke and heat exhaust ventilators. These motors are mainly designed for driving smoke extraction fans, they can also work under high ambient temperature atmosphere.

These smoke & exhaust ventilation systems create a smoke free layer above the floor by removing smoke and thus improve the conditions for the safe escape for people or protection of the property.

They are mainly used in buildings or structures in which smoke control is necessary due to their shape & arrangement.

British Standard EN 12101-3 sets the norms for smoke and ventilation systems. Havells offers below listed smoke extraction motors for ventilators. These motors have been classified based on temperature and time duration.

F 250 corresponds to 250 °C for 120 min

F 300 corresponds to 300 °C for 60 min

F 300 corresponds to 300 °C for 120 min

F 400 corresponds to 400 °C for 60 min

F 400 corresponds to 400 °C for 120 min

Havells manufactures above ranges of motors as per EN 12101 – 3 norms.

#### Testing & Test Certificates

Havells smoke extraction motors are tested as per BS12101-3:2015 Norms and Havells range of motors tested for F400 120 minutes of operation in Applus lab.

Also our motors have been tested and approved by TUV NORD, India Certification No. 8118853927 / 2021 / CM – HAVELLS - 01 Date: - 09.03.2021 and No: 10225819/HAVELLS/2020/8118146699/20200629-01R Date: - 22.07.2020

#### The Smoke-Extraction Motors offer the user a number of advantages

- The declared nameplate performance unchanged at elevated temperatures. This helps to design the smoke extraction systems in compact size.
- Radial-Flow & Axial-Flow fan drive are possible.
- Self-ventilated motors with a metal fan impeller can be used as radial-flow fan drives.
- Forced Air Cooled Motors can be used as axial-flow fan drives taking into account the required volumetric flow of motor cooling. In this case the driven fan performs the ventilation.



## Benefits

The Smoke-Extraction Motors operate as so-called “Dual-Function Motors”:

- Normal operation (no instance of fire): Incoming/ Outgoing air flow
- Fault operation (in case of fire):
- Removal of smoke from escape & access routes
- Supporting fire fighting by creating a smoke-free zone
- Protecting devices & equipment
- Reducing the heat stress of components during a fire
- Reducing secondary damage due to thermal bi-products & hot gases

## Technical Specification

### Standards & Regulation

In addition to relevant standards & regulations, EN 12101-3 applies for non-portable fire-fighting systems: Systems for controlling smoke & heat flows, part 3, specification for smoke & heat extraction units.

### Voltage & Frequency

#### Rated voltages according to IEC 60034-1

- Voltage range - 400 V to 480 V
- Frequency Range - 50 Hz & 60 Hz
- Connection - Star & Delta
- Poles - 2, 4 & 6

Other voltage, frequency ranges and other non- standard connections, higher poles & pole changing /dual speed motors are also available on request.

Havells standard paint shade is Smoke Gray.

## Non-standard voltages as well as 60 Hz are available on request

Disclaimer: In the event of fire, motor will deliver its function as per EN 12101-3 norms / agreed motor performance. If the motor undergone to fire incident, motor is unfit for normal duty. Either motor should be replaced or overhauled as per manufacture’s guidelines.

## Bearings, Grease

Special bearings are used that are matched to the respective temperature class (F250/F300/F400).

## Application

The smoke-extraction motors are designed for use in automatic smoke & heat extraction units to EN 12101-3.

Typical application examples include:

- Tunnels
- Single & multi-storey shopping centres
- Industrial buildings & warehouses
- Building complexes & atriums
- Theatres
- Indoor car parks
- Staircases



# More Power and Less energy Consumption with Havells IE2 & IE3 Motors



IE2 and IE3 Energy Efficient Motors available from 0.18 kW - 315 kW (0.25 HP - 425 HP)

### Features:

- 6 Lead Terminal Box
- Low weight-to-output ratio
- Better heat dissipation
- Cast iron motors from frame 80 to 355 with good aesthetics and surface finish

### Wide range of Motors



Smoke Extraction Motor



Foot Mounted Motor



Flange Motor



Foot cum Flange Motor



Crane Duty Motor



Inverter Duty Motor



Brake Duty Motor

PRIMA SERIES



HAVELLS-MOTORS

Although every effort has been made to ensure accuracy in the compilation of the technical detail within this publication. Specifications and performance data are constantly changing. Current details should therefore be checked with Havells Group.

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