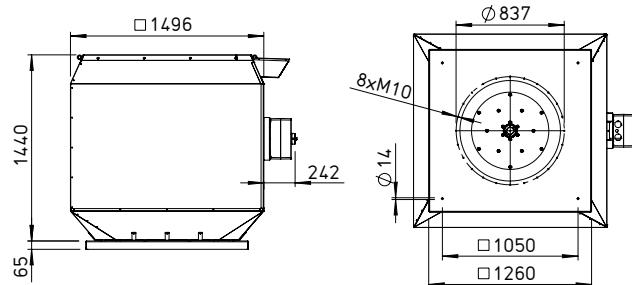


## B VD 800 F400/F600

## Dimensions B VD 800 F400/F600



Dim. in mm

## ■ Application

- In mechanical smoke extraction systems (MRA) for ensuring smoke extraction in special structures, such as sales locations, large garages, meeting locations or industrial buildings.
- Smoke extraction with temperature classes F400 and F600.
- Also suitable for ventilation operation (Dual-Use).
- For increased ventilation requirements with a continuous air flow temperature of up to 120 °C.

## ■ Features

- Smoke exhaust roof fan as a smoke extraction fan with dual-function (smoke extraction and ventilation).
- Robust design with efficiency-optimised casing for difficult operating conditions.
- High operational reliability due to minimal maintenance requirements.
- Ready-for-use delivery for easy installation.
- Base plate with threaded bolts for the easy mounting of inlet-side accessories.
- Standard PTC thermistor as motor protection for ventilation operation (motor protection devices must be automatically deactivated in case of fire for max. operating duration).

- Motor outside of air flow, enclosed in self-ventilated motor casing for optimal motor cooling.

- Comprehensive accessories enable perfect compliance with property-specific requirements.
- Isolator switch for electrical connection as standard.
- Perfectly tuned for operation with frequency inverter.

## ■ Casing

- Made of seawater-resistant aluminium for maximum weather protection.
- Base plate with inlet nozzle and motor support made of hot-dip galvanised steel sheet.
- Vertical air outlet prevents damage to adjacent parts of the building in case of fire.
- Outlet-side aluminium protection grille.
- Standard transport lugs for simple positioning.
- Attractive architectural design.

## ■ Impeller

- Directly driven high-performance centrifugal impeller, with eight backward curved blades.
- Design made of powder-coated steel sheet.
- Single-side inlet.
- Dynamically balanced, quality class 6.3.

- High efficiency for maximum output with low-noise operation.
- Direct mounting of hub to motor shaft.

## ■ Drive

- High-quality smoke exhaust motor for high environmental temperatures, perfectly tuned for use in smoke extraction fans.
- Enclosed motor design, protection category IP55.
- Winding in insulation class H.
- Motor outside of air flow, protected from this by thermal separation.
- Innovative motor cooling concept, perfectly tuned for smoke extraction with frequency inverter operation and reduced speed.
- Motor cooling airflow through intake duct. Automatic flow during fan operation.
- Motor bearings can be monitored with Helios bearing condition diagnostics system (Accessories).
- Optimal ventilation operation with speed control by means of frequency inverter.
- Smoke extraction possible with frequency inverter operation, elaborate bypass circuit can be omitted in case of fire.

- It must be ensured that operation takes place at the speed required for the smoke extraction flow rate for smoke extraction.

- Frequency inverter with all-pole sine filter and special operating mode for smoke ventilation operation is essential (Accessories).

## ■ Dual function (Dual-use)

- Approved for daily ventilation on demand and smoke extraction.
- Ventilation in continuous operation possible.
- High efficiency meets the ERP requirements for Dual-Use smoke extraction fans.

## ■ Assembly/Installation

- Outdoors on horizontal roof (vertical motor shaft) or flat roof base. Flat roof base, see Accessories.
- Snow load class 0 pursuant to DIN EN 12101-3, installation on roofs above heated rooms. For snow load class SL 2000 und SL 3000: Outlet-side deflector, see Accessories.
- Standard transport lug for simple positioning.
- Inlet-side connectable accessories can be attached to the threaded bolts in the base plate (hole pattern according to DIN 24155).

| Type | Ref. no. | Speed             | Output free-blowing | Sound pres. casing-radiated | Sound power level casing-radiated | Nominal motor output | Nominal motor current | Starting current | Wiring diagram | Net weight approx. | Frequency inverter | Smoke ventilation fan control system |
|------|----------|-------------------|---------------------|-----------------------------|-----------------------------------|----------------------|-----------------------|------------------|----------------|--------------------|--------------------|--------------------------------------|
|      |          | min <sup>-1</sup> | Vm <sup>3</sup> /h  | dB(A) in 4 m                | dB(A)                             | kW                   | A                     | A                | No.            | kg                 | Type               | Ref. no.                             |

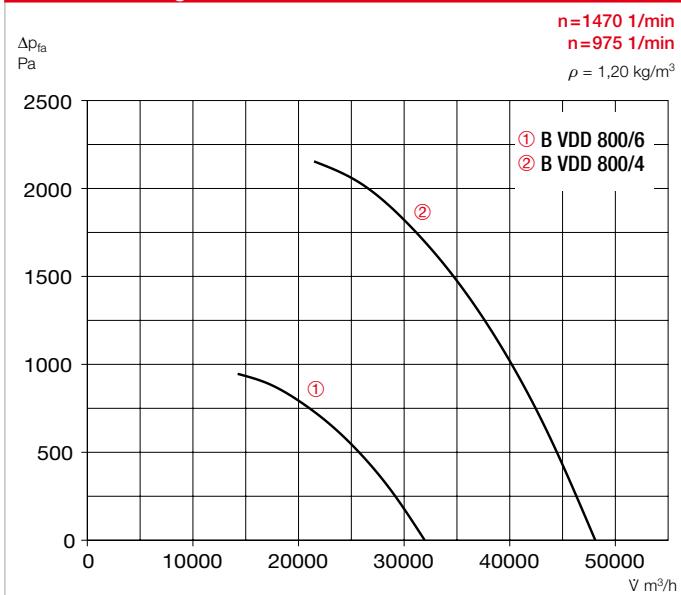
## F400 Single speed, three phase motor 400 V, 50 Hz, protection category IP55

|                  |       |       |        |    |     |       |       |     |      |     |          |       |            |       |
|------------------|-------|-------|--------|----|-----|-------|-------|-----|------|-----|----------|-------|------------|-------|
| B VDD 800/4 F400 | 01699 | 1.470 | 47.800 | 83 | 103 | 22.00 | 41.00 | 299 | 1307 | 568 | FU-CS 50 | 05473 | EVS-SD 007 | 04580 |
| B VDD 800/6 F400 | 01709 | 975   | 31.500 | 79 | 99  | 7.50  | 14.80 | 93  | 1261 | 501 | FU-CS 18 | 05469 | EVS-SD 003 | 04584 |

## F600 Single speed, three phase motor 400 V, 50 Hz, protection category IP55

|                  |       |       |        |    |     |       |       |     |      |     |          |       |            |       |
|------------------|-------|-------|--------|----|-----|-------|-------|-----|------|-----|----------|-------|------------|-------|
| B VDD 800/4 F600 | 01715 | 1.470 | 47.800 | 83 | 103 | 22.00 | 41.00 | 299 | 1307 | 568 | FU-CS 50 | 05473 | EVS-SD 007 | 04580 |
| B VDD 800/6 F600 | 01716 | 975   | 31.500 | 79 | 99  | 7.50  | 14.80 | 93  | 1261 | 501 | FU-CS 18 | 05469 | EVS-SD 003 | 04584 |

## Performance diagram B VD 800 F400/F600


**Air flow temperature**

- Temperature classes F400 and F600.
- Smoke extraction 400 °C/120 minutes, or 600 °C/120 minutes.
- 120 °C continuous air flow temperature.
- For ambient temperatures from -20 °C to +60 °C.

**Noise levels**

- The horizontally radiated noise is specified as sound pressure level in 4 m (freefield conditions) in the type table.
- Different installation situations or disturbed flows can lead to increased noise levels.
- Hood silencer and silencer insert for flat roof base, see Accessories.

**Motor protection**

- All types have PTC thermistors in the motor winding as standard.
- PTC thermistor assessment with suitable full motor protection device, EVS or frequency inverter (Accessories).
- The motor protection must be automatically bridged/bypassed in case of smoke extraction (deactivation) to ensure the maximum function duration.

**Voltages and frequencies**

- Nominal voltage and frequency are specified in the table. These also form the basis for the performance data.

**Electrical connection**

- To external isolator switch in protection category IP65.
- Isolator switch can be locked in position "0 OFF" and "I ON" using on-site padlock.
- Fans with a nominal motor output up to 2.20 kW can be directly activated, with star-delta start-up for 3.00 kW and above.

**Delivery information**

- Ready-to-use units, completely pre-assembled.
- Simple positioning with standard transport lug.

**Safety information**

- Outlet-side with aluminium protection grille as standard. Prevents penetration of leaves and solids and provides contact protection.

**Fire test**

- Successfully tested according to DIN EN 12101-3: 2015-12.

**Certification**

The smoke extraction fans BK have been tested according to DIN EN 12101-3. Certificate of performance reliability:  
 F400: 0761-CPR-1052  
 F600: 0761-CPR-1053

**Accessories**
**Flat roof base**
**B FDS 800/300** Ref. no. 01868

**B FDS 800/500** Ref. no. 01869

Flat roof base for B VD F400 and F600 in heights 300 mm and 500 mm for mounting on flat roof.


**Silencer insert**
**B SSD 800** Ref. no. 03523

Silencer insert with connectors for flat roof base for inlet-side noise reduction. Flat roof base B FDS required.


**Hood silencer**
**B HSDV 800** Ref. no. 03370

Hood silencer with inner core for outlet-side noise reduction.


**Deflector**
**B DEF 800/2000** Ref. no. 40085

**B DEF 800/3000** Ref. no. 03471
 Deflector with snow load class SL 2000 and SL 3000 for mounting on B VD F400 and F600.

**Inlet nozzle with protection grille**
**ASD-SGD 800** Ref. no. 01424

**Flexible connector**
**STSB 800 F400** Ref. no. 01919

**STSB 800 F600** Ref. no. 02007

**Extension duct**
**VR 800** Ref. no. 01412

**Duct shutter**
**RVS 800** Ref. no. 02602

In case of a direct fan connection, an additional extension duct (VR 800 Ref. no. 01412) must be placed in between.


**Smoke exhaust fan control system**
**EVS-SD 007 (22 kW)** no. 04580

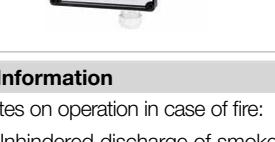
**EVS-SD 003 (7,5 kW)** no. 04584

Smoke exhaust fan control system for the operation of B VD F400/F600.


**Bearing condition diagnostics system**
**LZD-Basic** Ref. no. 27495

**LZD-Comfort** Ref. no. 27497

For ensuring the functionality of motor bearings. Factory-mounted to fan.


**Information**

Notes on operation in case of fire:

- Unhindered discharge of smoke gases at all times.
- Motor protection devices must be automatically bridged.
- Secure electrical power supply (safety power supply) required.

The relevant regulations apply for the maintaining the functionality of electrical circuit systems.

Planning information p. 10 ff.

**Accessories**

Mounting accessories 167 ff.

Control devices, switches 174 ff.