

# DHS 400DS sileo

Centrifugal roof fan, horizontal discharge

Item Number: 36121

Variant: 400V 3~ 50Hz



- High efficiency
- Speed-controllable
- Integral thermal contacts
- Excellent sound level
- Extensive range of accessories
- Maintenance-free and reliable

The DVS/DHS/DVSI sileo is well suited for applications requiring high air volumes at medium pressure and very low noise levels. These models have 3D profiled impellers with backward curved blades and external rotor motors. All motors are speed controllable over the voltage. For speed controlling of the DVS/DHS/DVSI sileo roof fans with a frequency converter a type with all pole sine filter is needed! The motors are suspended on effective vibration dampers.

DVS/DHS/DVSI sileo ...E4 / E6 / EZ / EV: 1~ motor

DVS/DHS/DVSI sileo ...DV / DS: 3~ with Y/D-connection for 2-speeds

To protect the motors from overheating the sileo range motors up to size 311 are equipped with integrated thermal contacts with manual reset in acc. with EN 60335-2-80. From size 355 with external leads for connection to a motor protection device. The casing is made from aluminum and the base frame from galvanized steel. Suitable for coastal applications. The impellers of the sileo types are manufactured from high-performance composite material with highly efficient 3D fan blade profile technology.

DVS sileo with vertical outlet

DHS sileo with horizontal outlet

DVSI sileo has a 50 mm mineral wool insulation for lower noise levels.



## Technical parameters

| Nominal data                   |           |        |
|--------------------------------|-----------|--------|
| Voltage (Nominal)              | 400       | V      |
| Frequency                      | 50        | Hz     |
| Phase(s)                       | 3~        |        |
| Motor circuit connection       | D; Y      |        |
| Input power                    | 129       | W      |
| Input current                  | 0.261     | A      |
| Impeller speed                 | 781       | r.p.m. |
| Air flow                       | max 0.727 | m³/s   |
| Temperature of transported air | max 60    | °C     |

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|   |       |
|---|-------|
| Max temperature of transported air, when speed controlled | 60 °C |
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|-------------------|
| <b>Sound data</b> |
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|--|----------|
| Sound pressure level at 10m (free field) | 25 dB(A) |
| Sound pressure level at 4m (free field)  | 33 dB(A) |

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| <b>Protection/Classification</b> |
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|                        |      |
|------------------------|------|
| Enclosure class, motor | IP54 |
| Insulation class       | F    |

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| <b>Data according to ErP</b> |
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|           |                    |
|-----------|--------------------|
| ErP ready | ErP 2016; ErP 2018 |
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| <b>Dimensions and weights</b> |
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|        |       |
|--------|-------|
| Weight | 22 kg |
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| <b>Others</b> |
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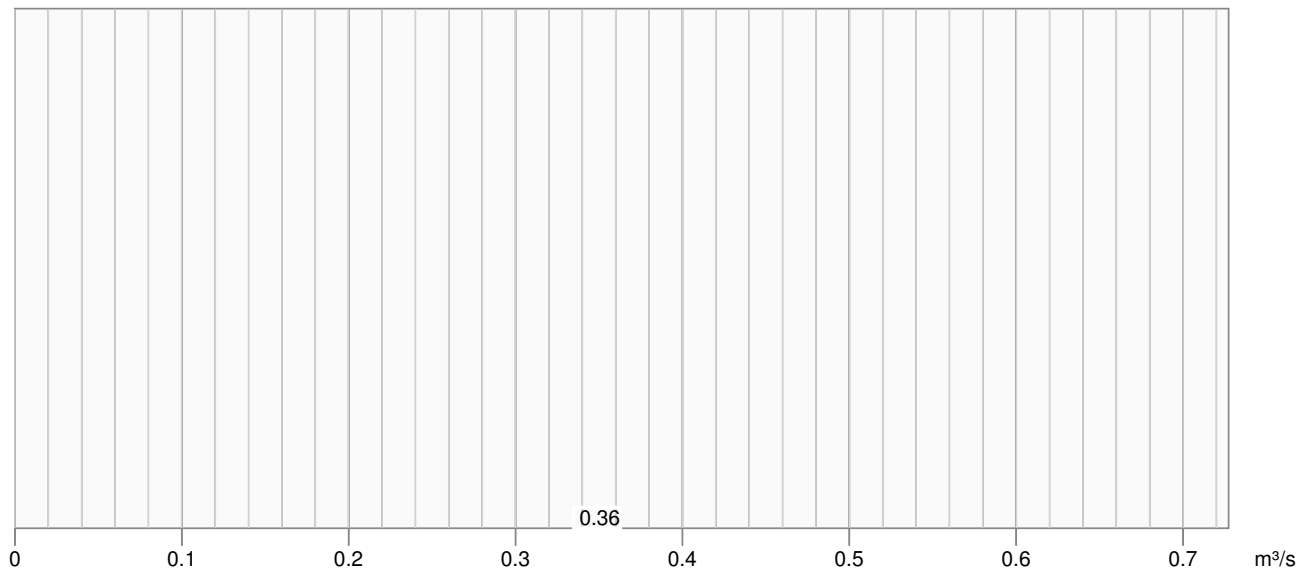
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|            |    |
|------------|----|
| Motor type | AC |
|------------|----|

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## Performance curve

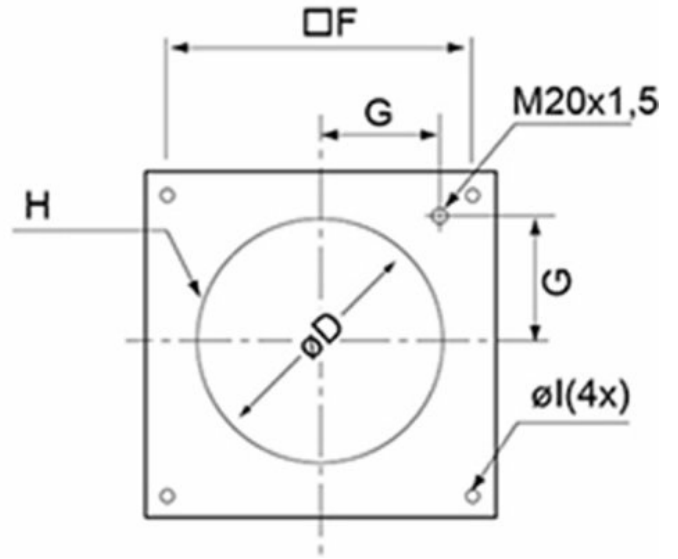
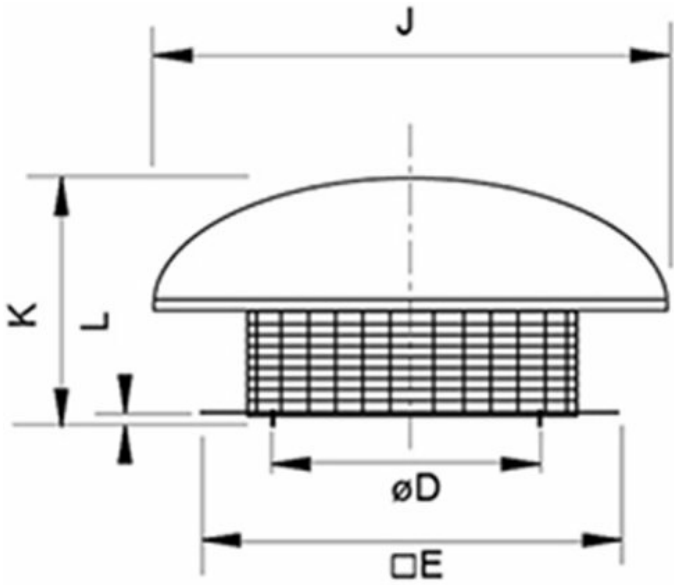
Pa



### Hydraulic data

|                          |               |
|--------------------------|---------------|
| Required air flow        | 0.36 m³/s     |
| Required static pressure | 103 Pa        |
| Working air flow         | 0.36 m³/s     |
| Working static pressure  | 103 Pa        |
| Air density              | 1.204 kg/m³   |
| Power                    | 128.5 W       |
| Fan control - RPM        | 783 rpm       |
| Current                  | 0.26 A        |
| SFP                      | 0.353 kW/m³/s |
| Control voltage          | 400.0 V       |
| Supply voltage           | 400 V         |

## Dimension

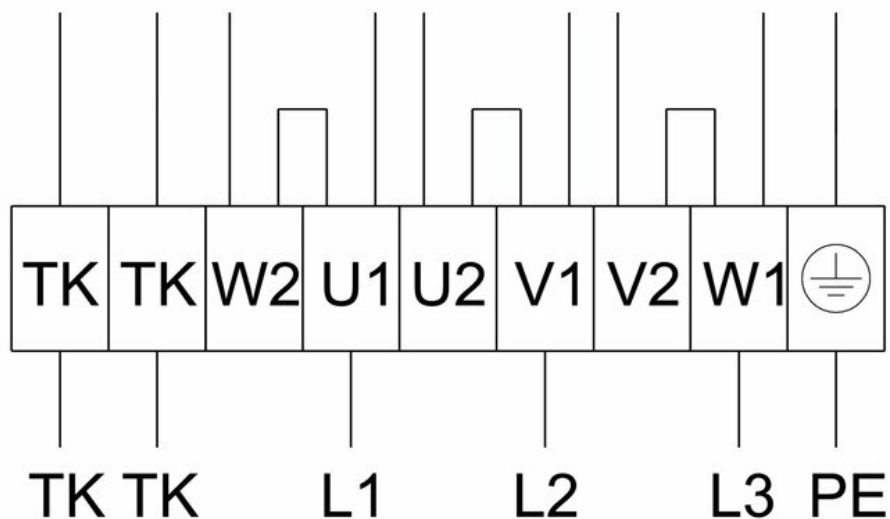


\* diameter D refers to screw-hole-circuit H

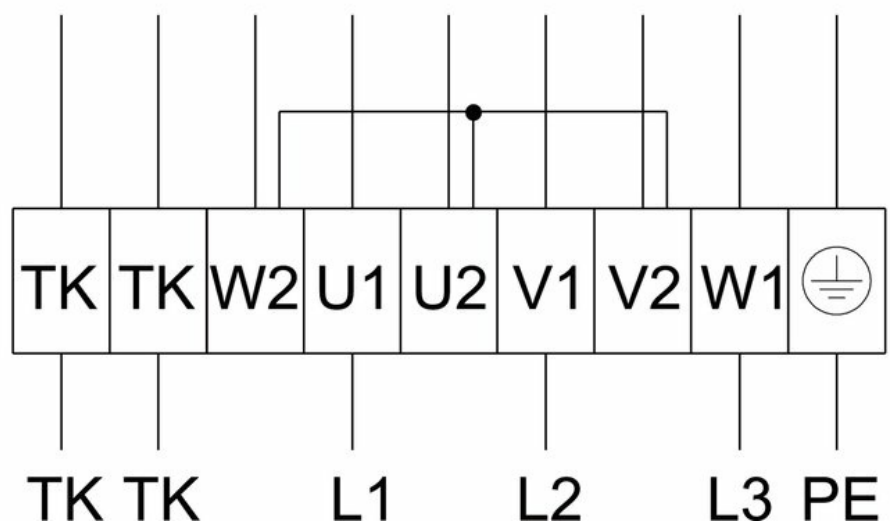
| DHS | $\varnothing D$ | $\square E$ | $\square F$ | G   | H    | $\varnothing l$ | J                 | K   | L  |
|-----|-----------------|-------------|-------------|-----|------|-----------------|-------------------|-----|----|
| 400 | 438             | 595         | 450         | 200 | 6xM8 | 12              | $\varnothing 720$ | 330 | 30 |

## Wiring

Delta connection



Star connection



## Acoustic

### Mid-frequency band, Hz

|                  | Hz    | Tot | 63 | 125 | 250 | 500 | 1k | 2k | 4k | 8k |
|------------------|-------|-----|----|-----|-----|-----|----|----|----|----|
| LwA Inlet        | dB(A) | 55  | 48 | 48  | 49  | 47  | 43 | 42 | 43 | 28 |
| LwA Surrounding  | dB(A) | 56  | 40 | 46  | 50  | 51  | 49 | 42 | 41 | 28 |
| With SSD 355/400 |       |     |    |     |     |     |    |    |    |    |
| LwA Inlet        | dB(A) | 44  | 34 | 38  | 37  | 39  | 36 | 31 | 31 | 16 |

Measuring point:  $qv = 0,36 \text{ m}^3/\text{s}$ ,  $Ps = 103 \text{ Pa}$

## Ecodesign

| Product                 |                          |
|-------------------------|--------------------------|
| Trade name              | Systemair                |
| Product name            | DHS 400DS sileo roof fan |
| Ecodesign               |                          |
| ErP compliance          | 2016/2018                |
| Unit category           | NRVU                     |
| Drive                   | External MSD or VSD      |
| Unit type               | UVU                      |
| Heat recovery type      | None                     |
| Temperature ratio (UVU) | Not applicable           |
| qv nom                  | 0.364 m <sup>3</sup> /s  |
| P nom                   | 0.128 kW                 |
| Ps nom                  | 103 Pa                   |
| Fan efficiency          | 29 %                     |
| External Leakage        | 0 %                      |
| Sound power level LWA   | 56 dB(A)                 |

## Accessories

- ASF 355-500 inlet flange DVS (9569)
- ASS 355-500 flex. con. DVS (9576)
- FRQ5S-4A+LED V2 (36233)
- REV-5POL/07 ON/OFF (33980)
- RTRD 2 Speed Cont. Systemair (5941)
- S-DT2SKT Two speed switch Y/D (2697)
- TDA DV 355/400 Adapter (301393)
- VKS 355-500 Back draft damper (9544)
- FRQS-4A V2 (36231)
- SSS 355 slant. socket silencer (30077)
- STDT 16 Motor Protection (5152)
- ASK 355/400 inflow box SSD (300905)
- FDS 355/400 flat roof socket (9550)
- FTG 355/400 Tilting device (30508)
- REV-9POL/12 ON/OFF (33981)
- RTRDU 2 Speed contr. Systemair (5945)
- SSD 355/400 socket silencer (9562)
- VKM 355-500 Back draft damper (9556)
- FDS-L 355/400 flat roof socket (95281)
- SDS 355/400 slant. roof socket (3785)
- SSD 355/400 ZM socket sil (95061)

## Documents

- [MANUAL\\_ROOF\\_FANS\\_EN\\_006\\_.PDF](#)
- [IMO\\_DV\\_140429\\_\\_DE,GB,SE\\_V1.0\\_314480.PDF](#)
- [EU DECLARATION OF CONFORMITY\\_ROOF FANS\\_EN\\_002.PDF](#)

## Specification

The box blows out horizontal. The box is made out of saltwater- proofed aluminium with grill. The underframe is made up of electroplated, powder-coated steel- plate. Freewheeling radial impeller consists of polyamide PA6 with backward- curved impeller vanes. The actuation is carried out by a maintenance- free extern rotor motor tension- controlled by a thyristor or transformer. At the 400V- Construction a D/Y- Connection allows an two-stepped operation. For protecting the motor, thermal contacts with completed lines to a motor protection device are built into the winding. For annealing the engine is designed inside the air flow. Impeller according to VDI 2060, quality category Q6,3 and dynamically weigh heavy in two levels.