## HQ 250

Also available in version:

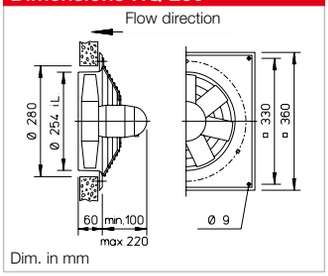
## HW 250

## HS 250

## HRF 250

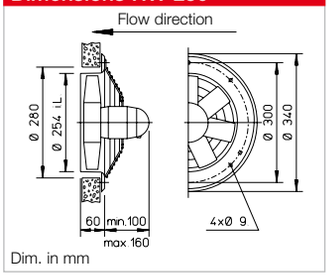
Also available in version:

## Dimensions HQ 250



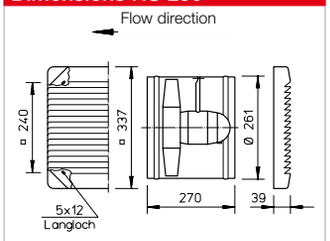

Dim. in mm

## Dimensions HW 250



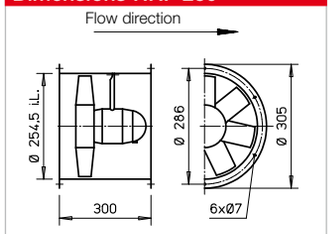

Dim. in mm

## Dimensions HS 250




Dim. in mm

## Dimensions HRF 250




Dim. in mm

## Description for all types

### Casing
Made of galvanised steel sheet, types HQ and HW have additional two layer lacquer coating in papyrus white. Explosion-proof types have no lacquer coating.

### Impeller
High performance characteristics with profiled blades made of plastic, dynamically balanced. Different for explosion-proof types.

### Drive
Closed die-cast aluminium casing. Protection category IP55 or IP54. Ball bearing mounted. Maintenance-free and radio interference-free. Winding with moisture proof coating. See type table for max. air flow temperature.
Different for explosion-proof types.

### Motor protection
All types (except for 3~ explosion-proof, see page 190) are equipped with thermal contacts or PTC thermistor. These should be wired with the motor protection circuit breaker (see type table) for effective motor protection. For types H..W 250/6, H..W 250/4 and all 1~ explosion-proof fans, the thermal contacts are wired in series with the winding, automatic deactivation and reactivation after cool down.

### Electrical connection
Standard terminal box (IP54/55) on back of motor. Additionally on outside of duct for HRF types. Different for explosion-proof types.

### Protection grille
Made of powder-coated steel for HQ/HW (HQ Ex galvanised), and plastic for HS. In accordance with DIN EN ISO 13857.

### Power control
The voltage-controllable types are identified in the "Current consumption max. with control" column with a value which must be observed when determining the controller (see speed controller column). Possible assignments of frequency inverters to fans are shown in the type table. The flow rates are shown in the performance diagram.

### Reverse operation
All types are reversible using a reverser switch. Performance reduction of approx. 1/3 in abnormal flow direction.

### Installation
Installation possible in any position, but be aware of any condensate drain holes depending on usage.

### Dimensions
Pole-changeable and explosion-proof types may differ from the above information.

### Noise levels
See performance diagram. The sound power and sound pressure at 4 m distance under free field conditions are specified for the average operating point on the inlet/outlet side. See page 14 f for noise emissions and room acoustics.
Different for explosion-proof types.

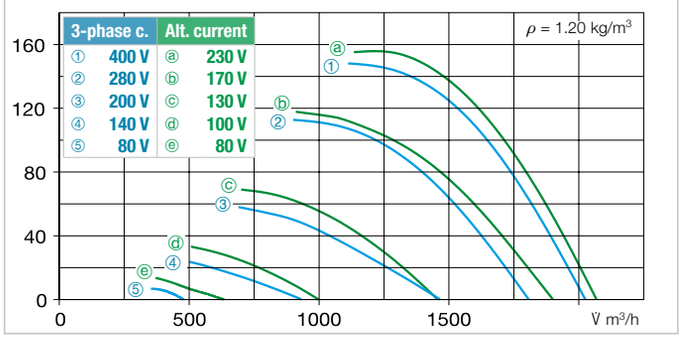

| Reference | Page |
|---|---|
| Techn. description | 190 |
| Selection table | 191 |
| Planning information | 14 ff. |


| Speed | Flow rate free-blowing | Power consump. | Current consump. at rated voltage | Current consump. max. with control | Wiring diagram | Max. air flow temp. at rated voltage | Max. air flow temp. with control | Weight net aprx. | Design type: HQ incl. protection grille | Ref. no. | HW incl. protection grille | Ref. no. | HS incl. protection grille | Ref. no. | HRF | Ref. no. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| min⁻¹ | V̇ m³/h | W | A | A | No. | + °C | + °C | kg | | | | | | | | |
| **Single-phase alternating current.230 Volt, 50 Hz, Capacitor motor, protection category IP54/55** | | | | | | | | | | | | | | | | |
| 930 | 660 | 35 | 0.20 | 0.22 | 317 | 60 | 40 | 6.5 | **HQW 250/6** | 01102 | — | | **HSW 250/6** | 00139 | — | |
| 1300 | 930 | 36 | 0.15 | 0.15 | 439[1] | 60 | 40 | 7.5 | **HQW 250/4**[1] | 01103 | **HWW 250/4**[1] | 01001 | **HSW 250/4**[1] | 00140 | **HRFW 250/4**[1)2)] | 00200 |
| 2710 | 2100 | 187 | 0.81 | 0.9 | 317[1] | 60 | 40 | 6.5 | **HQW 250/2** | 01104 | **HWW 250/2** | 01002 | **HSW 250/2** | 00141 | **HRFW 250/2**[3] | 00201 |
| **Three-phase current, 400 Volt, 50 Hz, Squirrel-cage rotor, protection category IP55** | | | | | | | | | | | | | | | | |
| 980 | 700 | 61 | 0.27 | 0.33 | 469 | 60 | 40 | 6.5 | **HQD 250/6** | 01114 | — | | — | | — | |
| 1390 | 950 | 55 | 0.15 | 0.15 | 469 | 60 | 40 | 6.5 | **HQD 250/4**[1] | 01115 | **HWD 250/4**[1] | 01016 | **HSD 250/4**[1] | 00155 | **HRFD 250/4**[1] | 00220 |
| 2550 | 2050 | 169 | 0.31 | 0.33 | 469 | 60 | 40 | 6.5 | **HQD 250/2** | 01116 | **HWD 250/2** | 01017 | — | | **HRFD 250/2** | 00221 |
| Ex **Explosion-proof, II 2G Ex h IIB T3 Gb, Motor Ex d, alternating current 230 Volt, 50 Hz, protection category IP55** | | | | | | | | | | | | | | | | |
| 1400 | 1030 | 60* | 0.70* | | 757 | 40 | — | 12 | **HQW 250/4 Ex** | 00438 | — | | — | | **HRFW 250/4 Ex** | 00437 |
| 2690 | 1950 | 180* | 1.23* | | 757 | 40 | — | 13 | **HQW 250/2 Ex** | 01094 | — | | — | | **HRFW 250/2 Ex** | 01095 |
| Ex **Explosion-proof, II 2G Ex h IIB + $H_2$ T3 Gb, Motor Ex e, three-phase current 400 Volt, 50 Hz, protection category IP55** | | | | | | | | | | | | | | | | |
| 1355 | 1070 | 120* | 0.37* | | 470 | 40 | — | 12 | **HQD 250/4 Ex** | 01144 | — | | — | | **HRFD 250/4 Ex** | 00470 |
| 2800 | 2070 | 250* | 0.75* | | 470 | 40 | — | 11 | **HQD 250/2 Ex** | 01145 | — | | — | | **HRFD 250/2 Ex** | 00471 |

* Motor ratings, Ex see information on page 20. [1] Special design not possible. [2] Type HRFW../4: Connection according to wiring diagram no. 962. [3] Type HRFW../2: Connection according to wiring diagram no. 963.

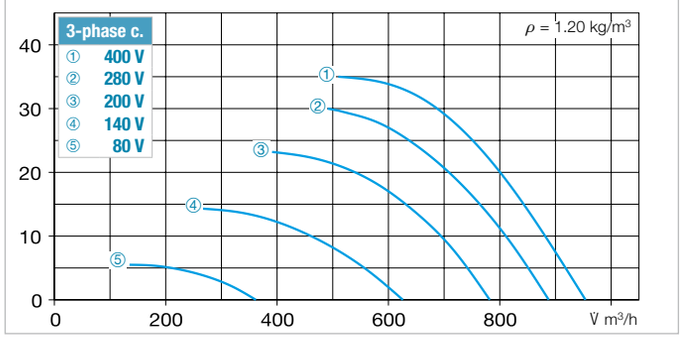
## Performance curves 250/2

| Frequency | | Hz | Tot. | 125 | 250 | 500 | 1k | 2k | 4k | 8k |
|---|---|---|---|---|---|---|---|---|---|---|
| $L_{WA}$ | Air noise | dB(A) | 75 | 38 | 53 | 66 | 68 | 70 | 69 | 62 |
| $L_{PA,4m}$ | Air noise | dB(A) | 55 | 18 | 33 | 46 | 48 | 49 | 48 | 42 |



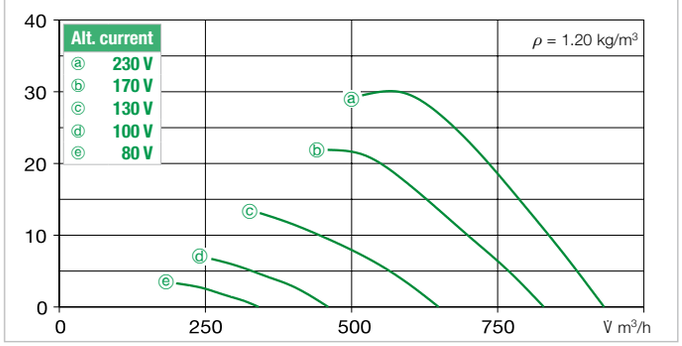

## Performance curves 250/4 Three-phase current

| Frequency | | Hz | Tot. | 125 | 250 | 500 | 1k | 2k | 4k | 8k |
|---|---|---|---|---|---|---|---|---|---|---|
| $L_{WA}$ | Air noise | dB(A) | 60 | 34 | 49 | 53 | 53 | 54 | 50 | 38 |
| $L_{PA,4m}$ | Air noise | dB(A) | 40 | 14 | 29 | 33 | 33 | 34 | 30 | 18 |



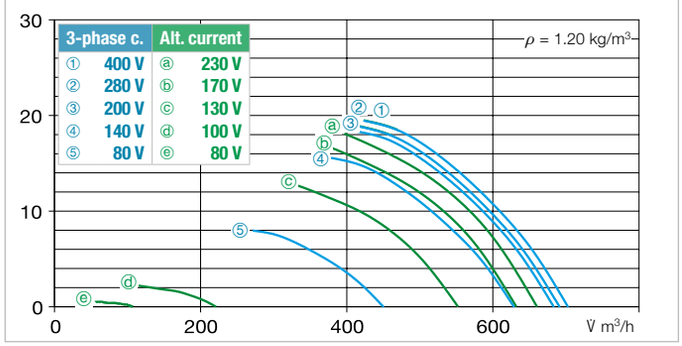

## Performance curves 250/4 Alternating current

| Frequency | | Hz | Tot. | 125 | 250 | 500 | 1k | 2k | 4k | 8k |
|---|---|---|---|---|---|---|---|---|---|---|
| $L_{WA}$ | Air noise | dB(A) | 58 | 41 | 52 | 53 | 51 | 49 | 43 | 29 |
| $L_{PA,4m}$ | Air noise | dB(A) | 38 | 21 | 32 | 33 | 31 | 29 | 23 | 9 |

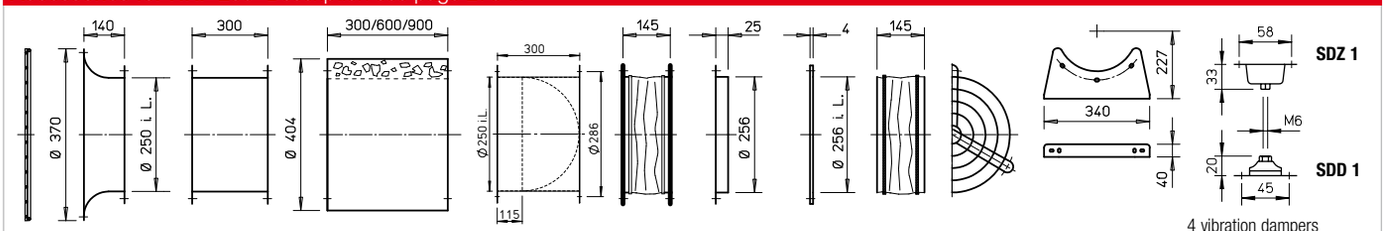



## Performance curves 250/6

| Frequency | | Hz | Tot. | 125 | 250 | 500 | 1k | 2k | 4k | 8k |
|---|---|---|---|---|---|---|---|---|---|---|
| $L_{WA}$ | Air noise | dB(A) | 53 | 40 | 47 | 47 | 46 | 43 | 37 | 30 |
| $L_{PA,4m}$ | Air noise | dB(A) | 33 | 20 | 27 | 27 | 26 | 23 | 17 | 10 |




## Accessories for HRF 250 Description see page 278 ff.




Intake nozzle with prot. grille **ASD-SGD 250** No. 01414

Extension duct **VR 250** No. 01402

Duct silencer **RSD 250/..**

Duct shutter, automatic **RVS 250** a) No. 02592

Flanged flexible connector **STS 250** b) No. 01220

Counter flange **FR 250** No. 01203

Flat flange **FF 250** No. 04941

Flexible connecting sleeve **FM 250** b) No. 01672

Protection grille duct side **SG 250** No. 01236

2 mounting brackets **1 x MK 250** (= 2 pcs) No. 01447

4 vibration dampers for tensile load **1 x SDZ 1** (= 4 Pc) No. 01454
4 vibration dampers for compression load **1 x SDD 1** (= 4 Pc) No. 01452

a) Shutter, motorised see Accessories product pages.

b) See below for types for explosion-proof fans.

| Frequency inverter with integrated sine filter | | Transformer speed controller 5-step, pole changing switch | | Electronic speed controller, continuously variable flush-m./surface-m. | | Motor protection circuit breaker | | Reverser switch | |
|---|---|---|---|---|---|---|---|---|---|
| **Type** | Ref. no. | **Type** | Ref. no. | **Type** | Ref. no. | **Type** | Ref. no. | **Type** | Ref. no. |
| | | | | | | | | | |
| — | | **TSW 0.3** | 03608 | **ESU 1 / ESA 1** | 00236/00238 | — | | **WS** | 01271 |
| — | | **TSW 0.3** | 03608 | **ESU 1 / ESA 1** | 00236/00238 | — | | **DSEL 2** | 01306 |
| — | | **MWS 1.5** 4) | 01947 | **ESU 3 / ESA 3** | 00237/00239 | — | | **WS** | 01271 |
| | | | | | | | | | |
| **FU-BS 2.5** 4) | 05459 | **RDS 1** 4) | 01314 | — | | **MD** | 05849 | **WS** | 01271 |
| **FU-BS 2.5** 4) | 05459 | **RDS 1** 4) | 01314 | — | | **MD** | 05849 | **WS** | 01271 |
| **FU-BS 2.5** 4) | 05459 | **RDS 1** 4) | 01314 | — | | **MD** | 05849 | **WS** | 01271 |
| | | | | | | | | | |
| — | | not permitted | | not permitted | | — | | — | |
| — | | not permitted | | not permitted | | — | | — | |
| | | | | | | | | | |
| — | | not permitted | | not permitted | | — | | — | |
| — | | not permitted | | not permitted | | — | | — | |

4) Incl. motor protection circuit breaker. 5) Incl. speed pole changing switch. 6) Flush-m. version see Switch product page.

### Other accessories — Page

b) **Access. for expl.-proof fans**

**Flanged flexible connector STS 250 Ex** Ref. no. 02501

**Flexible connecting sleeve FM 250 Ex** Ref. no. 01688

**Extension sleeve for HS VH 250** Ref. no. 01343
Cylindrical pipe section, galvanised steel, 15 cm long.

Filter and silencers 483 ff.
Shutters and ventilation grilles 563 ff.
Speed controllers, controllers and switches 601 ff.