

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. Prot. cat. IP55. 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 explosion-proof, see page 180) are equipped with thermal contacts. These should be wired with the motor protection circuit breaker (see type table) for effective motor protection.

Electrical connection
 Standard terminal box (IP55) 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 and HW (HQ Ex galvanised). 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 planned use of a frequency inverter without a sine filter should be indicated when placing the order. This requires a change of fan version and additional costs, if necessary. The flow rates are shown in the perform. 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.

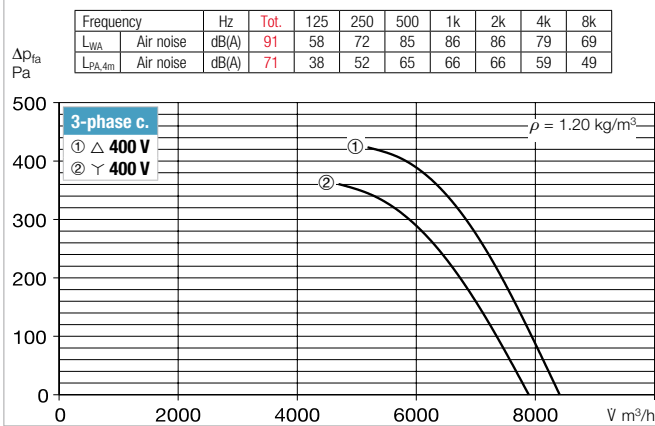
Noise levels
 See performance diagram. The sound power and sound pressure at 4 m distance under free field conditions are specified for the average operating point on the inlet/outlet side. See page 14 f for noise emissions and room acoustics. Different for explosion-proof types.

Reference	Page
Techn. description	180
Selection table	181
Planning information	14 ff.
Special design	
Different voltage, protection category, air flow direction, higher air flow temperature, acid protection and impeller in other materials upon request.	
The technical information on p. 19 ff. must be observed.	

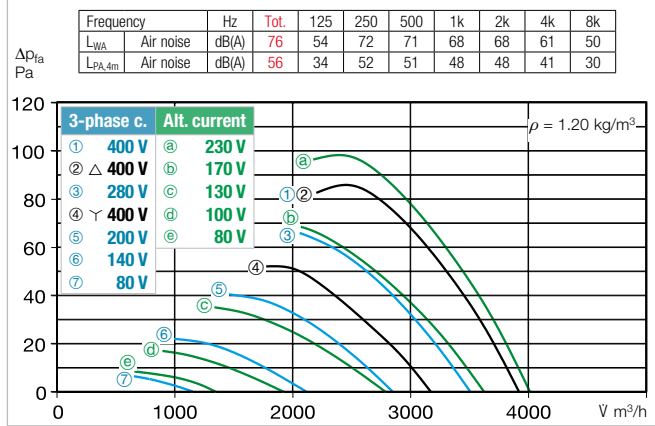
Speed min ⁻¹	Flow rate free-blowing V m ³ /h	Power consump. W	Current consump.		Wiring diagram No.	Max. air flow temp.		Weight net aprx. kg	Design type						
			at rated voltage A	max. with control A		at rated voltage + °C	with control + °C		HQ incl. protection grille	Ref. no.	HW incl. protection grille	Ref. no.	HRF	Ref. no.	Dim. B Motor protrusion in mm
Single-phase alternating current, 230 Volt, 50 Hz, Capacitor motor, protection category IP55															
930	2570	77	0.52	0.54	475 ¹⁾	60	40	13.0	HQW 400/6	01110	—	—	HRFW 400/6 ¹⁾	00206	—
1350	4010	235	1.00	1.10	475 ¹⁾	60	40	14.0	HQW 400/4	01111	HWW 400/4	01008	HRFW 400/4 ¹⁾	00207	10
Three-phase current, 400 Volt, 50 Hz, Squirrel-cage rotor, protection category IP55															
950	2620	89	0.28	0.30	469	60	40	13.0	HQD 400/6	01123	—	—	—	—	—
1330	3960	200	0.40	0.40	469	60	40	14.0	HQD 400/4	01124	HWD 400/4	01025	HRFD 400/4	00229	—
Two-speed, three-phase current, 400 V, 50 Hz, γ/Δ connection, protection category IP55															
1325/1085	3170/3920	135/205	0.25/0.45	0.45	520	60	40	20.0	HQD 400/4/4	01465	—	—	HRFD 400/4/4	01466	—
2890/2600	7890/8400	1300/2310*	3.00/5.60*	4.70	520	60	40	25.0	HQD 400/2/2	01475	—	—	HRFD 400/2/2	01474	120
Pole-changeable, 2 speeds, three-phase current, Dahlander winding, 400 Volt, 50 Hz, protection category IP55															
690/1390	2010/4100	70/250	0.25/0.60	—	472	60	—	13.0	HQD 400/8/4	01137	—	—	HRFD 400/8/4	00399	10
1480/2940	4180/8540	300/2310*	1.00/5.20*	—	472	40	—	24.0	HQD 400/4/2	01139	—	—	HRFD 400/4/2	00401	120
Ex Explosion-proof, II 2G Ex h IIB + H₂ T3 Gb, Motor Ex e, three-phase current 400 Volt, 50 Hz, protection category IP55															
920	2870	250*	0.97*	—	470	40	—	13.0	HQD 400/6 Ex	01109	—	—	—	—	—
1370	4380	370*	1.08*	—	470	40	—	16.0	HQD 400/4 Ex	01153	—	—	HRFD 400/4 Ex	00479	—

* Motor ratings, Ex see information on page 20. ¹⁾ Type HRFW: Connection according to wiring diagram no. 965 ²⁾ Incl. motor protection circuit breaker. ³⁾ Incl. speed pole changing switch.

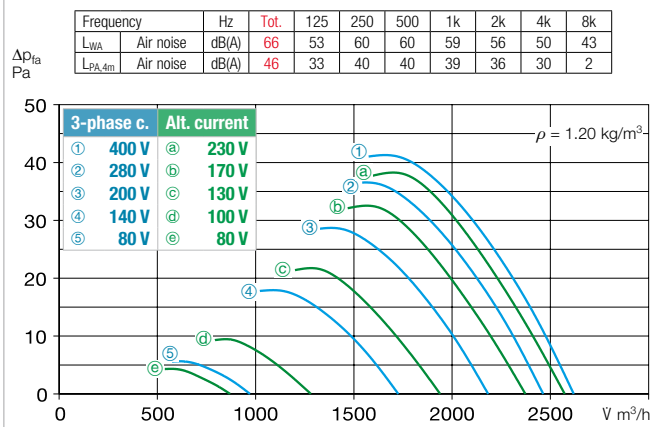
Performance curves 400/2



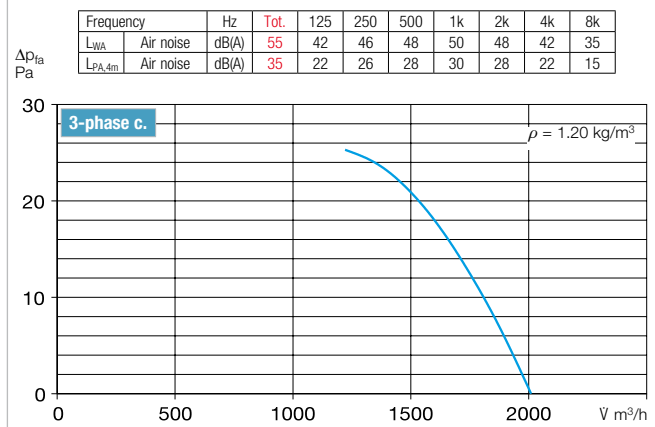
Performance curves 400/4



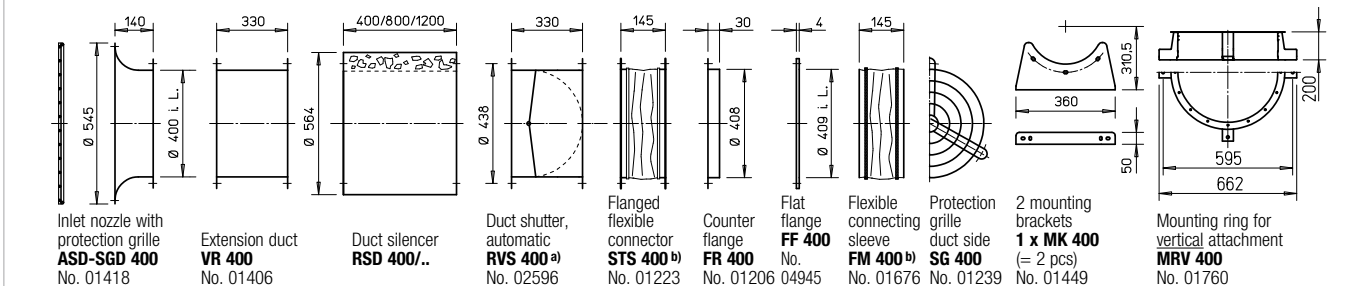
Performance curves 400/6



Performance curve 400/8



Accessories for HRF 400 Description see page 276 ff.



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 for connecting built-in thermal contacts		Reverser switch	
Type	Ref. no.	Type	Ref. no.	Type	Ref. no.	Type	Ref. no.	Type	Ref. no.
—	—	MWS 1.5 ²⁾	01947	ESU 1/ESA 1	00236/00238	MW	01579	WS	01271
—	—	MWS 1.5 ²⁾	01947	ESU 1/ESA 1	00236/00238	MW	01579	WS	01271
FU-BS 2.5 ²⁾	05459	RDS 1 ²⁾	01314	—	—	MD	05849	WS	01271
FU-BS 2.5 ²⁾	05459	RDS 1 ²⁾	01314	—	—	MD	05849	WS	01271
Speed changeover switch									
FU-BS 2.5 ²⁾	05459	RDS 1 ²⁾	01314	—	—	M 4 ³⁾ /MD	01571/05849	WS	01271
FU-BS 5.0 ²⁾	05460	DS 2	01351	ESD 5 ²⁾	00501	M 4 ³⁾ /MD	01571/05849	WS	01271
Pole changing switch									
—	—	PDA 12 ⁴⁾	05081	—	—	M 3 ³⁾	01293	PWDA	01282
—	—	PDA 12 ⁴⁾	05081	—	—	M 3 ³⁾	01293	PWDA	01282
—	—	not permitted	—	not permitted	—	—	—	—	—
—	—	not permitted	—	not permitted	—	—	—	—	—

4) Flush-m. version see Switch product page.

Other accessories Page

- Access. for expl.-proof fans
- Flanged flexible connector STS 400 Ex Ref. no. 02505
- Flexible connecting sleeve FM 400 Ex Ref. no. 01692
- Extension sleeve for HS VH 400 Ref. no. 01346
- Cylindrical pipe section, galvanised steel, 15 cm long.
- Filter and silencers 481 ff.
- Shutters and ventilation grilles 561 ff.
- Speed controllers, controllers and switches 599 ff.