

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) are equipped 190th thermal contacts. 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.		Wiring diagram	Max. air flow temp.		Weight net appr.	Design type							
			at rated voltage	max. with control		at rated voltage	with control		HQ incl. protection grille	Ref. no.	HW incl. protection grille	Ref. no.	HS incl. protection grille	Ref. no.	HRF	Ref. no.
min ⁻¹	V m ³ /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	HW 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	HW 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.

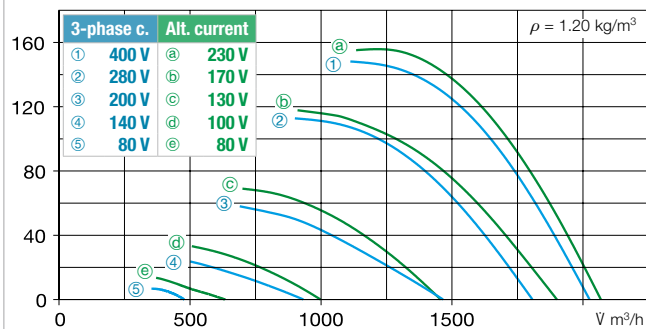
¹⁾ Special design not possible. ²⁾ Type HRFW../4: Connection according to wiring diagram no. 962.

³⁾ Type HRFW../2: Connection according to wiring diagram no. 963.

Performance curves 250/2

Δp_{Pa}

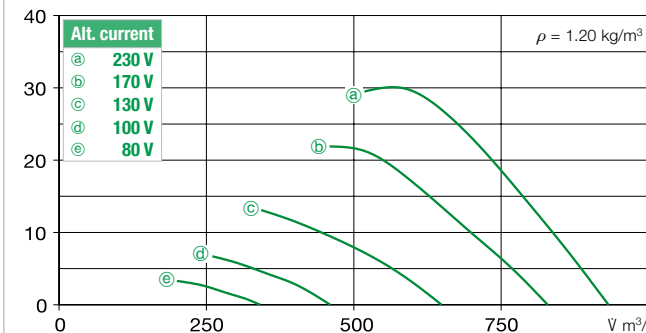
Frequency	Hz	Tot.	125	250	500	1k	2k	4k	8k	
L _{WA}	Air noise	dB(A)	75	38	53	66	68	70	69	62
L _{PA,4m}	Air noise	dB(A)	55	18	33	46	48	49	48	42



Performance curves 250/4 Alternating current

Δp_{fa}
Pa

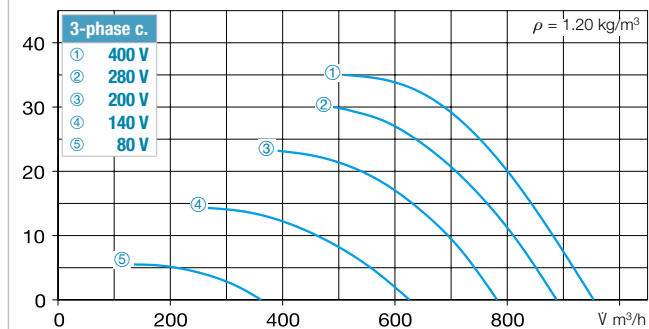
Frequency		Hz	Tot.	125	250	500	1k	2k	4k	8k
L _{WA}	Air noise	dB(A)	58	41	52	53	51	49	43	29
L _{PA,4m}	Air noise	dB(A)	38	21	32	33	31	29	23	9



Performance curves 250/4 Three-phase current

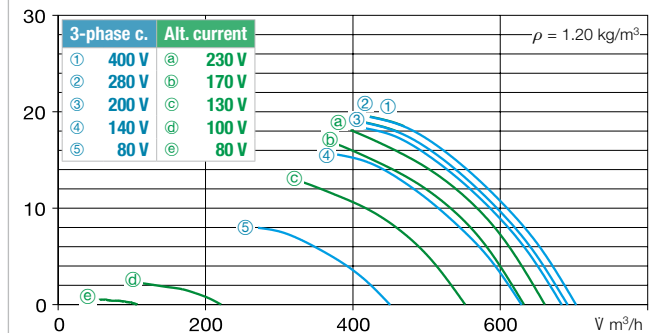
Δp_{fa}

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 250/6

Δp_{fa} p_a	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/..
No. 02592

Duct shutter,
automatic
RVS 250 a)
No. 01220

Flanged
flexible
connector
STS 250 b)
No. 01203

Counter
flange
FR 250
No. 04941

Flat
flange
FF 250
No. 01672

Flexible
connecting
sleeve
FM 250 b)
No. 01236

Protection
grille
duct side
SG 250
No. 01447

2 mounting
brackets
1 x MK 250
(= 2 pcs)
No. 01452

4 vibration dampers
for tensile load
1 x SDZ 1
(= 4 Pcs) No. 01452

4 vibration dampers
for compression load
1 x SDD 1
(= 4 Pcs) 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 for connecting built-in thermal contacts		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 1.5⁴⁾	01947	ESU 3/ESA 3	00237/00239	—	—	WS	01271
FU-BS 2.5⁴⁾	05459	RDS 1⁴⁾	01314	—	—	MD	05849	WS	01271
FU-BS 2.5⁴⁾	05459	RDS 1⁴⁾	01314	—	—	MD	05849	WS	01271
FU-BS 2.5⁴⁾	05459	RDS 1⁴⁾	01314	—	—	MD	05849	WS	01271
—	—	not permitted	not permitted	not permitted	not permitted	—	—	—	—
—	—	not permitted	not permitted	not permitted	not permitted	—	—	—	—
—	—	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.