High performance axial fans
Ø 250 mm

HQ 250

Also available in version:

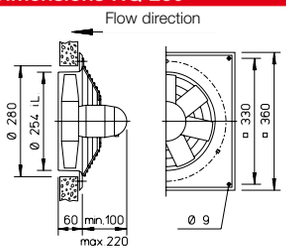
HW 250

HS 250

HRF 250

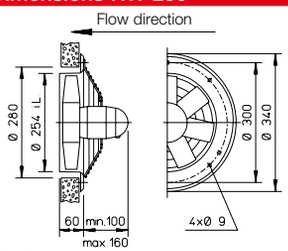
Also available in version:

Dimensions HQ 250



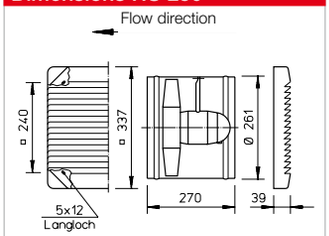
Dim. in mm

Dimensions HW 250



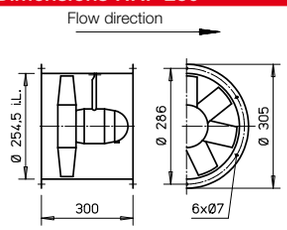
Dim. in mm

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) are equipped180th 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.

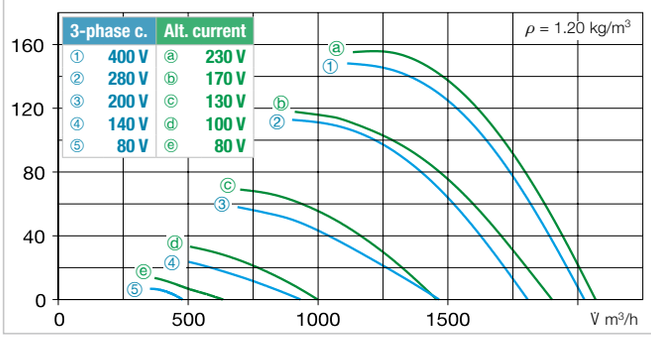
Reference	Page
Techn. description	180
Selection table	181
Planning information	14 ff.

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	2070	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	2000	169	0.31	0.33	469	60	40	6.5	**HQD 250/2**	01116	**HWD 250/2**	01017	—		**HRFD 250/2**	00221
Pole-changeable, 2 speeds, three-phase current, Dahlander winding, 400 Volt, 50 Hz, protection category IP55																
1430/2770	1030/2110	58/212	0.16/0.43		472	60	—	8.5	**HQD 250/4/2**	01128	—		—		**HRFD 250/4/2**	00390
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.

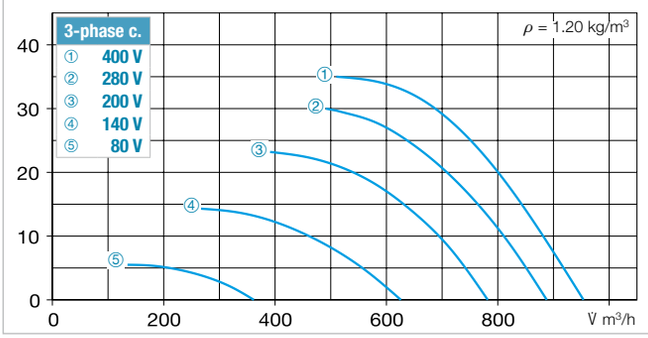
Performance curves 250/2

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



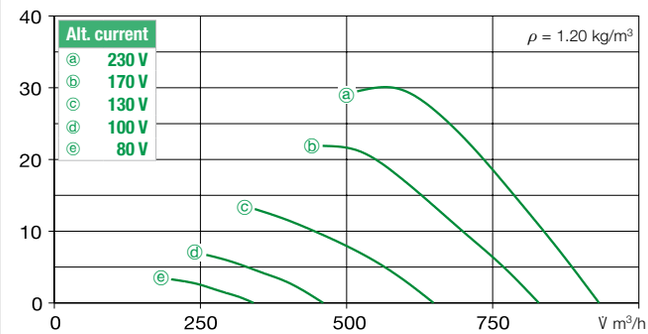
Performance curves 250/4 Three-phase current

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



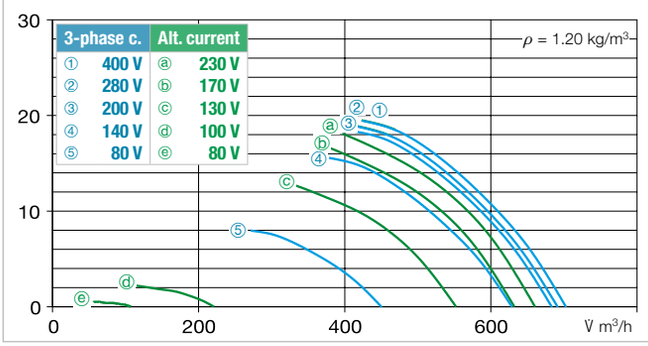
Performance curves 250/4 Alternating current

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

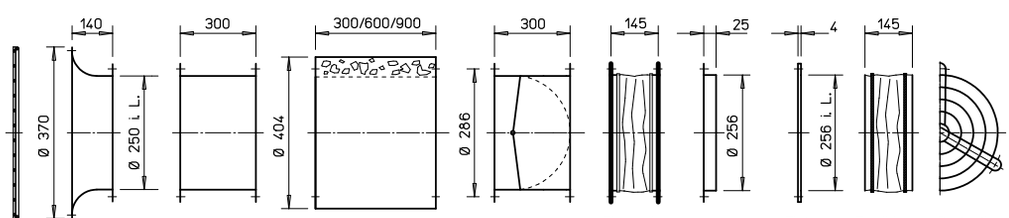


Performance curves 250/6

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 276 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 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 1.5**[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
		Pole changing switch							
—		**PDA 12**[6]	05081	—		**M 3**[5]	01293	**PWDA**	01282
—		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 481 ff.
Shutters and ventilation grilles 561 ff.
Speed controllers, controllers and switches 599 ff.