

Description for all types

- **Casing**
 Made of galvanised steel sheet.
- **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. 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 ..8/4 and explosion-proof types, 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. Motors without thermal contacts must be protected by means of on-site a motor protection circuit breaker.
- **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

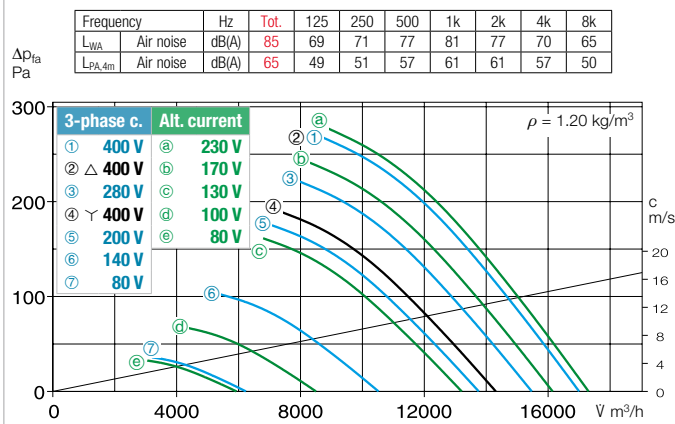
- table. The planned use of a frequency inverter without a sine filter should be indicated when placing the order. This requires a change of fan version and additional costs, if necessary. The flow rates are shown in the performance diagram.
- **Reverse operation**
 All types are reversible using a reverser 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. |
- 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.

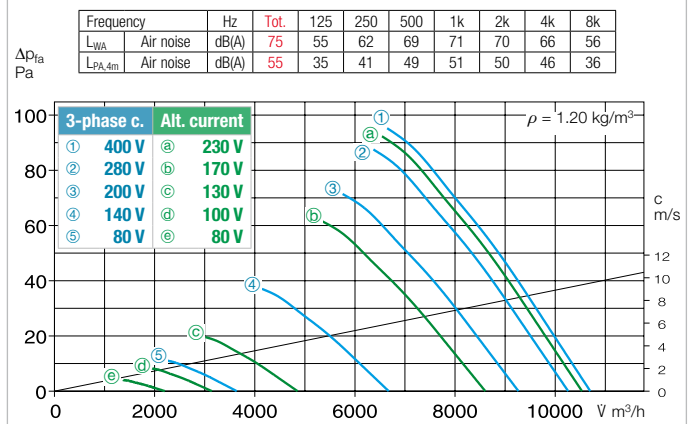
Speed	Flow rate free-blowing	Power consump.	Current consump.		Wiring diagram	Max. air flow temp.		Weight net appr.	Design type						
			at rated voltage	max. with control		at rated voltage	with control		HQ incl. protection grille	Ref. no.	HW incl. protection grille	Ref. no.	HRF	Ref. no.	Dim. B Motor protrusion in mm
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 IP55															
950	10530	0.44	2.16	3.20	475	60	40	28.0	HQW 630/6	05037	—	—	—	—	—
1325	16210	1.50*	8.40*	7.00	964	40	—	40.0	HQW 630/4	05056	—	—	HRFW 630/4	05057	30
Three-phase current, 400 Volt, 50 Hz, Squirrel-cage rotor, protection category IP55															
710	7810	0.20	0.66	0.70	469	40	40	27.0	HQD 630/8	05029	—	—	—	—	—
960	10560	0.44	1.22	—	469	60	40	30.5	HQD 630/6	05027	HWD 630/6	01032	HRFD 630/6	00244	—
Two-speed, three-phase current, 400 V, 50 Hz, ∇/Δ connection, protection category IP55															
1170/1390	14310/17000	0.90/1.57	2.3/3.8	—	520	40	—	37.5	HQD 630/4/4	05030	HWD 630/4/4	01033	HRFD 630/4/4	00245	—
Pole-changeable, 2 speeds, three-phase current, Dahlander winding, 400 Volt, 50 Hz, protection category IP55															
440/935	5290/10470	0.14/0.43	0.60/1.13	—	472	60	—	41.0	HQD 630/12/6	05031	—	—	HRFD 630/12/6	00410	—
690/1400	7990/15990	0.37/1.50*	1.33/3.70*	—	471	40	—	40.5	HQD 630/8/4	05032	—	—	HRFD 630/8/4	00411	—
 Ex Explosion-proof, II 2G Ex h IIB + H₂ T3 Gb, Motor Ex e, three-phase current 400 Volt, 50 Hz, protection category IP55															
910	10480	0.55*	1.75*	—	470	40	—	30.0	HQD 630/6 Ex	05035	—	—	HRFD 630/6 Ex	00494	—
1410	17730	1.35*	3.10*	—	470	40	—	35.0	HQD 630/4 Ex	05036	—	—	HRFD 630/4 Ex	00495	—

* For Ex types: Motor ratings see information on page 20. ¹⁾ Incl. motor protection circuit breaker. ²⁾ Flush-m. version see Switch product page.

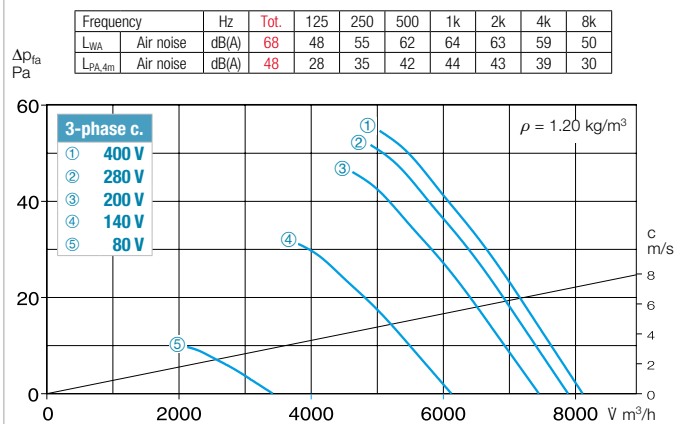
Performance curves 630/4



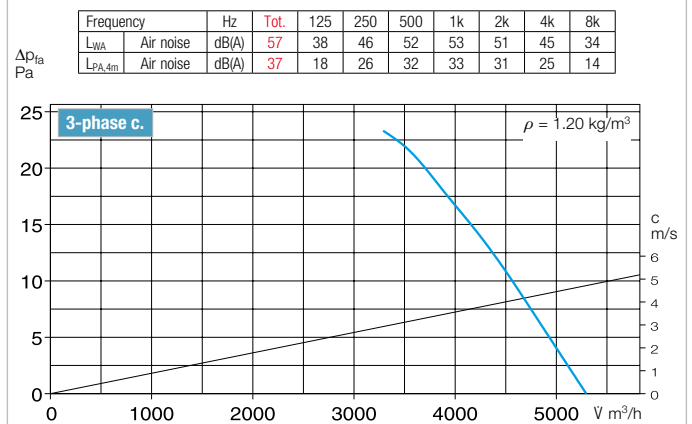
Performance curves 630/6



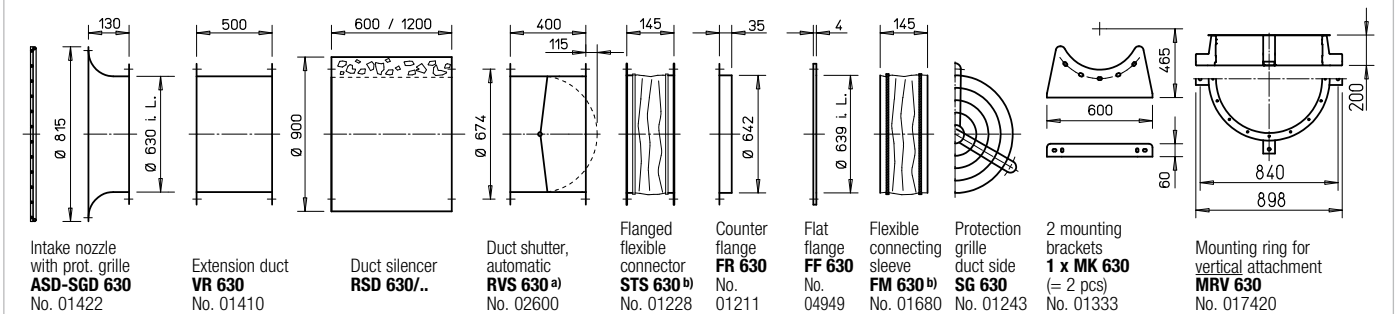
Performance curves 630/8



Performance curve 630/12



Accessories for HRF 630 Description see page 276 ff.



a) Shutter, motorised see Accessories product pages.

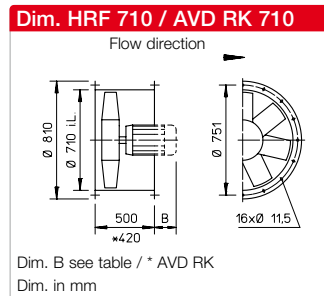
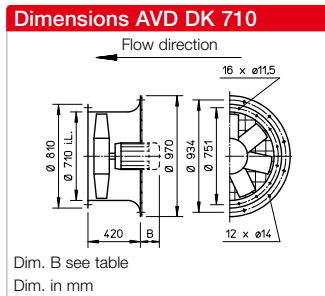
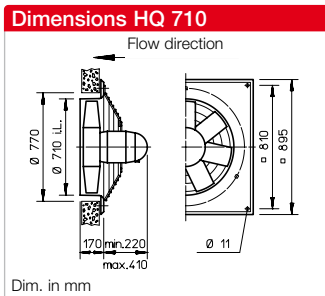
b) See below for types for explosion-proof fans.

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 3 ¹⁾	01948	ESU 5/ESA 5	01296/01299	MW	01579	WS	01271
—	—	MWS 7.5 ¹⁾	01950	—	—	MW	01579	WS	01271
FU-BS 2.5 ¹⁾	05459	RDS 2 ¹⁾	01315	ESD 5 ¹⁾	00501	MD	05849	WS	01271
FU-BS 2.5 ¹⁾	05459	RDS 2 ¹⁾	01315	ESD 5 ¹⁾	00501	MD	05849	WS	01271
FU-BS 5.0 ¹⁾	05460	RDS 4 ¹⁾	01316	ESD 5 ¹⁾	00501	M 4 ³⁾	01571	WS	01271
—	—	Pole changing switch		—	—	M 3 ³⁾	01293	PWDA	01282
—	—	PDA 12 ²⁾	05081	—	—	M 3 ³⁾	01293	PWDA	01282
—	—	PDA 12 ²⁾	05081	—	—	—	—	—	—
—	—	not permitted	—	not permitted	—	—	—	—	—
—	—	not permitted	—	not permitted	—	—	—	—	—

³⁾ Incl. speed pole changing switch.

Other accessories Page

^{b)} Access. for expl.-proof fans	
Flanged flexible connector STS 630 Ex	Ref. no. 02509
Silencers	494 ff.
Shutters and ventilation grilles	561 ff.
Speed controllers, controllers and switches	599 ff.
Flexible connecting sleeve FM 630 Ex	Ref. no. 01696



Description for all types

- Casing**
With motor mount made of galvanised steel sheet.
- Impeller**
High performance characteristics with profiled blades made of plastic, dynamically balanced. Different for explosion-proof types.
- Angle of attack**
The impeller blades can be adjusted for optimal operating point coverage (except for explosion-proof types and type HQW 710/6). The angle of attack is adjusted (according to the order) and fixed at the factory.

- The motor is assigned using the maximum power according to the information in the table below. The specified angle of attack must not be exceeded.
- Drive**
Closed design type IP55 or IP54. Maintenance-free and radio interference-free. Tropicalised winding with moisture proof coating. Different for explosion-proof types.
- Motor protection**
All types (except for pole-changeable and explosion-proof types, see page 180) are equipped with thermal contacts or PTC thermistors and must be protected by means of the following

- motor protection devices according to the footnotes the table:
¹MW/MD, Ref. no. 01579/05849
²MSA, Ref. no. 01289 (for PTC thermistor temperature sensor)
³M 4, Ref. no. 01571
 All other types must be protected by means of on-site a motor protection circuit breaker.
- Protection grille**
Hot-dip galvanised or powder-coated for HQ and AVD DK as standard in accordance with DIN EN ISO 13857.
- Electrical connection**
Terminal box in protection category IP54 mounted on motor. Additionally on outside of duct

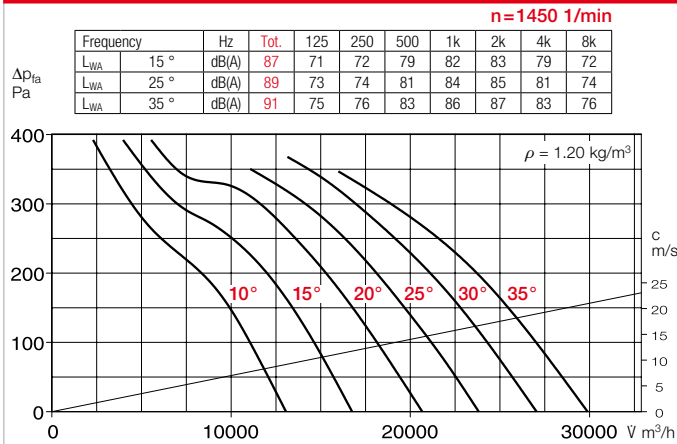
for HRF types. Different for explosion-proof types.

- Power control**
Partly through voltage reduction, see "Transformer speed controller" column. Regulated performance curve upon request.
Frequency inverter possible for all types (except for pole-changeable and explosion-proof types). 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.
- 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. Motor lengths may vary. Take note of dim. B protrusion.
- Noise levels**
The sound power values over the frequency and as total levels are indicated above the performance diagrams. Different for explosion-proof types.

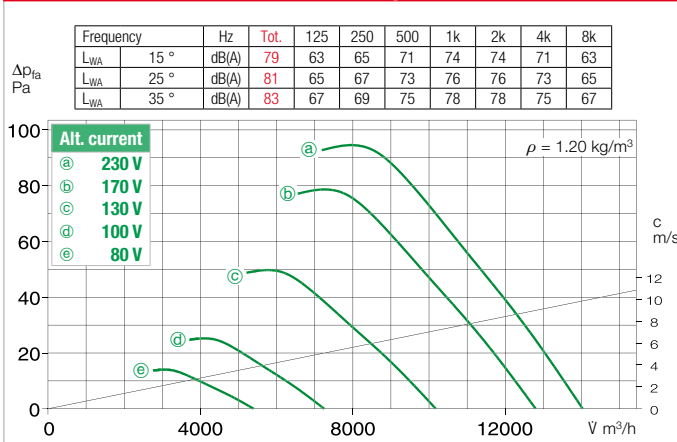
Speed min ⁻¹	Flow rate free blowing V m ³ /h	Rated motor power (output)* kW	Voltage V	Current consump. Rat. volt./ (control)* A	Max. position ° deg.	Wiring dia- gram No.	Max. air flow temp. + °C	Wgt net appr.** kg	Design type				Transformer speed controller 5-step, pole changing switch					
									HQ incl. protection grille	Ref. no.	AVD DK incl. protection grille	Ref. no. Dim. B Motor protr. in mm	HRFD AVD RK	Ref. no. Dim. B Motor protr. in mm	Type	Ref. no.		
Single-phase alternating current, 230 Volt, 50 Hz, Capacitor motor, protection category IP55																		
910	14200	0.60	230	2.6	25	965	40	40.0	HQW 710/6 ¹⁾	05047	—	—	—	MWS 5 ⁴⁾	01949			
Three-phase current, 400 Volt, 50 Hz, Squirrel-cage rotor, protection category IP45																		
690	13330	0.29	400	0.9	20	469	40	57.0	HQD 710/8 ¹⁾	05599	AVD DK 710/8 ¹⁾	05251	—	HRFD 710/8 ¹⁾	06930	RDS 2 ⁴⁾	01315	
940	15660/19170	1.1*	230/400	5.1*	35	776	40	60.0	HQD 710/6 ¹⁾	05603	AVD DK 710/6 ¹⁾	05255	145	HRFD 710/6 ¹⁾	06934	10	TSD 7	01504
1445	26420	3.00*	400/690	6.2*	30	776	40	88.0	HQD 710/4 ²⁾	05606	AVD DK 710/4 ²⁾	05258	175	HRFD 710/4 ²⁾	06937	35	TSD 11	01513
Two-speed, three-phase current, 400 V, 50 Hz, protection category IP55																		
730/890	13550/16090	0.4/0.75*	400/400	1.1/2.3*	25	520	40	55.0	HQD 710/6/6 ³⁾	05602	AVD DK 710/6/6 ³⁾	05254	120	HRFD 710/6/6 ³⁾	06933	5	RDS 4 ⁴⁾	01316
1120/1360	16140/19670	0.95/1.55*	400/400	2.4/4.2*	20	520	40	60.0	HQD 710/4/4 ³⁾	05604	AVD DK 710/4/4 ³⁾	05256	145	HRFD 710/4/4 ³⁾	06935	—	RDS 7 ⁴⁾	01578
1030/1340	19370/23280	1.5/2.2*	400/400	3.0/5.2*	26	520	40	75.0	HQD 710/4/4 ³⁾	05605	AVD DK 710/4/4 ³⁾	05257	170	HRFD 710/4/4 ³⁾	06936	35	RDS 7 ⁴⁾	01578
Pole-changeable, 2 speeds, three-phase current, Dahlander winding, 400 Volt, 50 Hz, protection category IP45																		
685/1430	10810/22090	0.5/2.0*	400/400	2.0/4.7	23	471	40	82.0	HQD 710/8/4/..	05611	AVD DK 710/8/4/..	05263	160	HRFD 710/8/4/..	06942	20	PDA 12 ⁵⁾	05081
720/1440	14155/26200	0.9/3.6*	400/400	2.9/8.3	30	471	40	108.0	HQD 710/8/4/..	05612	AVD DK 710/8/4/..	05264	175	AVD RK 710/8/4/..	06943	90	PDA 12 ⁵⁾	05081
Explosion-proof, II 2G Ex h IIB + H₂ T3 Gb, Motor Ex e, three-phase current 400 Volt, 50 Hz, protection category IP55																		
700	13270	0.55*	400	2.2*	35	470	40	68.0	HQD 710/8 Ex	05618	AVD DK 710/8 Ex	05270	105	HRFD 710/8 Ex	06948	—	not permitted	
930	13480	0.55*	400	1.8*	25	470	40	67.0	HQD 710/6 Ex	05620	AVD DK 710/6 Ex	05272	105	HRFD 710/6 Ex	06949	—	not permitted	
930	16770	0.95*	400	2.7*	35	470	40	77.0	HQD 710/6 Ex	05621	AVD DK 710/6 Ex	05273	105	HRFD 710/6 Ex	06950	—	not permitted	
1420	20540	2.00*	400	4.7*	25	470	40	82.0	HQD 710/4 Ex	05623	AVD DK 710/4 Ex	05275	130	AVD RK 710/4 Ex	06951	45	not permitted	
1420	26160	3.60*	400/690	8.1*	35	498	40	102.0	HQD 710/4 Ex	05624	AVD DK 710/4 Ex	05276	190	AVD RK 710/4 Ex	06952	105	not permitted	

* Motor ratings, Ex see information p. 20. ¹⁾ up to ³⁾ Motor protection devices, see description "Motor protection". ** Weights apply for type ..DK and ..RK, HRF and HQ minus approx. 15 kg. ⁴⁾ Incl. motor protection circuit breaker 1.2/2.2 kW.

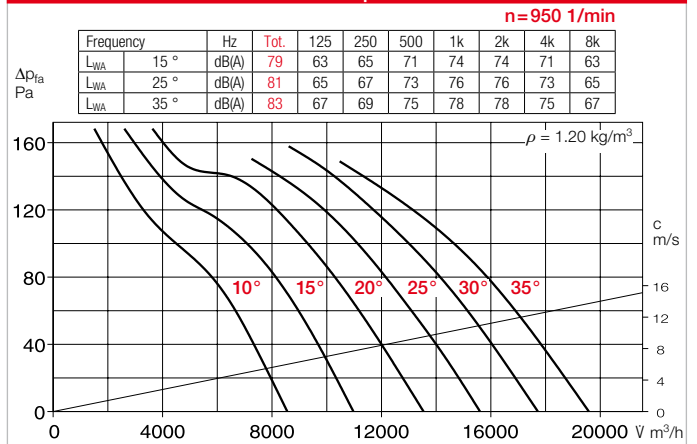
Performance curves 710/4



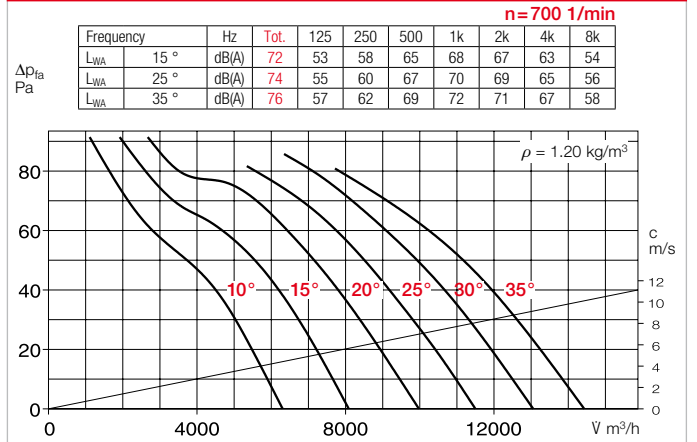
Performance curves 710/6 – Alternating current



Performance curves 710/6 – Three-phase current



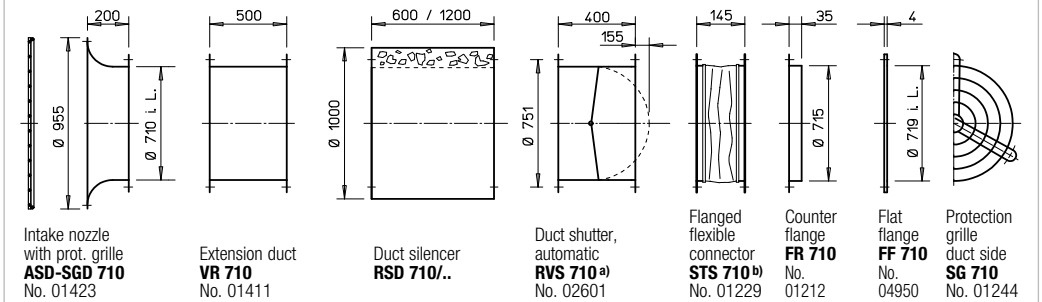
Performance curves 710/8



Axial and VAR fans

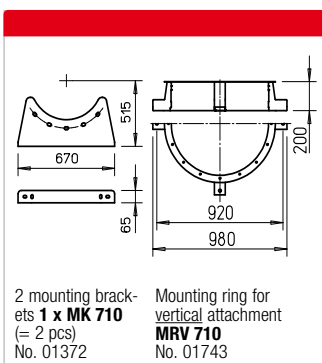
Accessories for HRF 710 / AVD RK 710 Description see page 276 ff.

Elec. speed controller, continuously variable Frequency inverter with sine filter		Vibration damper Nominal size	
Type	Ref. no.	Type	Ref. no.
—	—	..1/.1	01452/01454
EDS 5 ⁴⁾	00501	..1/.1	01452/01454
FU-BS 8.0 ⁴⁾	05461	..1/.1	01452/01454
FU-BS 8.0 ⁴⁾	05461	..2/.2	01453/01455
EDS 5 ⁴⁾	00501	..1/.1	01452/01454
EDS 5 ⁴⁾	00501	..1/.1	01452/01454
EDS 11.5 ⁴⁾	00502	..2/.2	01453/01455
—	—	..2/.2	01453/01455
—	—	..2/.2	01453/01455
not permitted	..1/.2	01452/01455	
not permitted	..1/.2	01452/01455	
not permitted	..1/.2	01452/01455	
not permitted	..2/.2	01453/01455	
not permitted	..2/.2	01453/01455	



^{a)} Shutter, motorised see Accessories product pages.

^{b)} See below for types for explosion-proof fans.



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

Special design

Different voltage, protection category, air flow temperature, acid protection and impeller made of cast aluminium upon request.

Other accessories	Page
^{b)} Access. for expl.-proof fans	
Flanged flexible connector STS 710 Ex	Ref. no. 02510
Silencers	494 ff.
Shutters and ventilation grilles	561 ff.
Speed controllers, controllers and switches	599 ff.

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