

■ Specification

□ Casing

Manufactured in galvanised sheet steel with flanges on both sides to DIN 24155, Pt. 3, with fixed guide vanes and motor support.

□ Impeller

Optimised for high pressure and performance. Specially developed mixed-flow curved impeller manufactured from impact resistant polymers.

□ Motor

Direct driven, maintenance free flange motor, totally enclosed with an aluminium casing and cooling fins, protected to IP 54. Sealed for life ball bearings with tropicalized protection of windings and radio suppression. Optional drainage holes made to order (please state installation position).

□ Speed control

For all speed controllable models the current is given in the "speed controlled" column of the table below which must be used when selecting a controller (see controller column). The air flow volumes can be seen from the characteristic curves. If the fan is to be controlled by a frequency inverter without a sine filter, this must be stated when ordering. This requires a change of fan design and potential additional costs. Explosion proof fans are not controllable.

□ Electrical connection

Terminal box fitted externally on the casing as standard (IP 55).

□ Installation

Installation in any position. Ensure that motor drainage holes (where used) face downwards.

□ Motor protection

All models (3~ except ex proof) have thermal contacts as standard which must be connected to a full motor protection unit (see table below). With the 1 ph. ex-proof models thermal contacts are wired in series with the winding which automatically re-sets after cooling. Models without thermal contacts must be protected by a conventional circuit breaker.

□ Sound levels

Data shown within the performance curves refer to sound power levels. For determination of the lower sound pressure levels refer to diagram on "Technical information" page. Sound immission and acoustic information on page 10 on.

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Made to order designs

Alternative voltages, frequencies, protection classes, acid protection, high temperatures etc. are available on request.

For safety and correct use note the technical information on page 15 on.

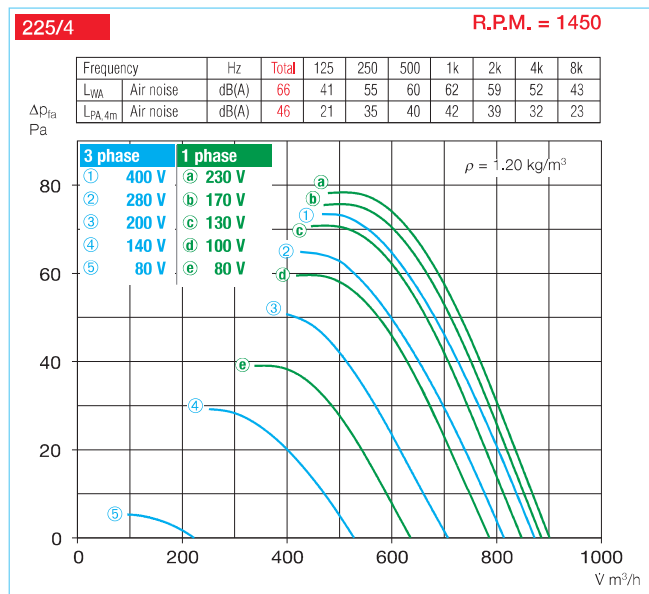
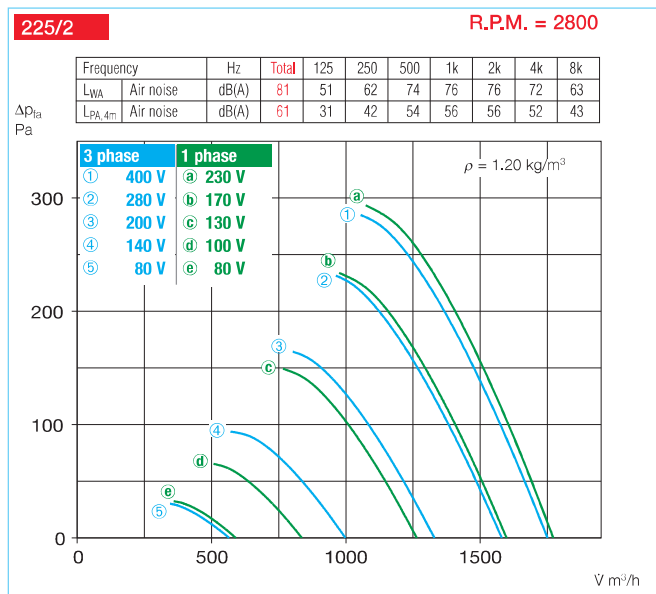
Type	Ref. no.	R.P.M.	Air flow volume (FID)	Motor power*	Voltage	Current* standard supply	Current* speed controlled	Wiring diagram	Maximum air flow temp. standard supply	Maximum air flow temp. speed controlled	Nominal weight (net)	5 step transformer controller Pole switch	Full motor protection starter using the motor thermal contacts	Anti vibration mounts	comp	susp
		min ⁻¹	m ³ /h	kW	V	A	A	No.	+°C	+°C	kg	Type Ref. no.	Type Ref. no.	Type	Type	Type
1 Phase motor, 1 ph. / 50 Hz, protection to IP 54																
VARW 225/4	6660	1450	900	0.10	230	0.50	0.55	966	60	40	10.5	MWS 1 ¹⁾ 1947	MW 1579	SDD 1	SDZ 1	
VARW 225/2	6661	2770	1778	0.35	230	1.90	2.50	966	60	40	10.5	MWS 3 ¹⁾ 1948	MW 1579	SDD 1	SDZ 1	
3 Phase motor, 50 Hz, protection to IP 54																
VARD 225/4	6662	1420	880	0.10	400Y	0.20	0.20	469	60	40	10.5	RDS 1 ^{1) 4)} 1314	MD 5849	SDD 1	SDZ 1	
VARD 225/2	6663	2720	1750	0.28	400Y	0.60	0.60	469	60	40	10.5	RDS 1 ^{1) 4)} 1314	MD 5849	SDD 1	SDZ 1	
Pole-switching, 2 speed motor (Dahlander windings Y/YY), 3 ph. / 50 Hz, protection to IP 54																
VARW 225/4/2	6771	1460/2800	880/1800	0.06/0.30	400	0.22/0.57	—	472	60	—	10.5	PDA 12 ³⁾ 5081	M 3 ²⁾ 1293	SDD 1	SDZ 1	
Explosion proof, E Ex de II B, 1 ph. / 50 Hz, temperature class T1-T3, protection to IP 55																
VARW 225/4 Ex	6733	1400	950	0.06	230	0.70	—	757	40	—	12.0	not permitted	—	SDD 1	SDZ 1	
VARW 225/2 Ex	6734	2650	1780	0.18	230	1.23	—	757	40	—	12.5	not permitted	—	SDD 1	SDZ 1	
Explosion proof, E Exe II, 3 ph. / 50 Hz, temperature class T1-T3, protected to IP 54																
VARD 225/4 Ex	6664	1400	940	0.12	400	0.41	—	470	40	—	12.5	not permitted	not permitted	SDD 1	SDZ 1	
VARD 225/2 Ex	6665	2850	1930	0.25	400	0.72	—	470	40	—	12.5	not permitted	not permitted	SDD 1	SDZ 1	

* Ex models: For nominal value of motor see information on page 16 ¹⁾ includes full motor protection unit

⁴⁾ Frequency inverter with integrated Sine filter, Type FU-BS 2,5, No. 5459, see product page FU.

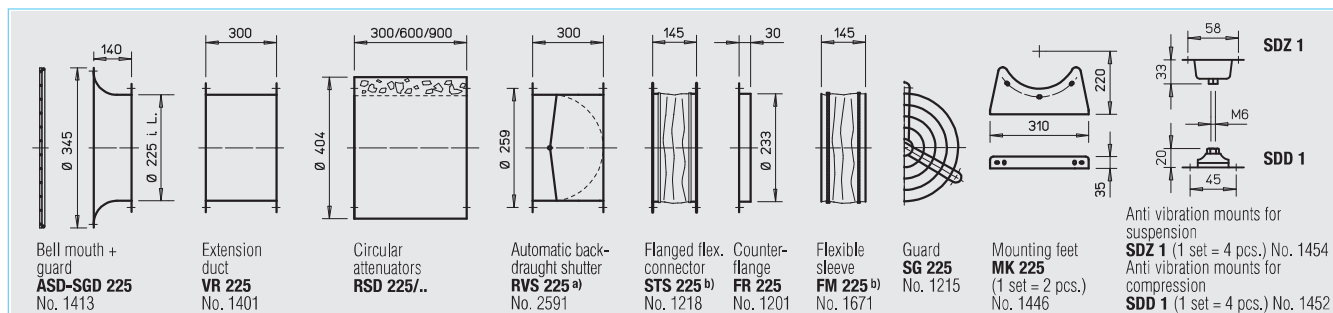
²⁾ includes operation and speed switch

³⁾ see product page for flush mounted version



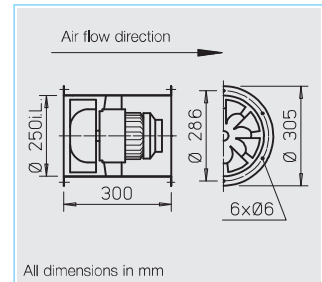
Other accessories	Page
Accessories for ex-proof fans	
Flanged flexible connector	
Type STS 225 Ex Ref. no. 2500	
Flexible sleeve	
Type FM 225 Ex Ref. no. 1687	
Attenuators	421 on
Shutters and grilles	487 on
Speed controllers and switches	525 on

Accessories Specification see page 231 on



a) For motorised shutters see accessory pages

b) Types for explosion proof fans see above



Specification

Casing

Manufactured in galvanised sheet steel with flanges on both sides to DIN 24155, Pt. 3, with fixed guide vanes and motor support.

Impeller

Optimised for high pressure and performance. Specially developed mixed-flow curved impeller manufactured from impact resistant polymers.

Motor

Direct driven, maintenance free flange motor, totally enclosed with an aluminium casing and cooling fins, protected to IP 54. Sealed for life ball bearings with tropicalized protection of windings and radio suppression. Optional drainage holes made to order (please state installation position).

Speed control

For all speed controllable models the current is given in the "speed controlled" column of the table below which must be used when selecting a controller (see controller column). The air flow volumes can be seen from the characteristic curves. If the fan is to be controlled by a frequency inverter without a sine filter, this must be stated when ordering. This requires a change of fan design and potential additional costs. Explosion proof fans are not controllable.

Electrical connection

Terminal box fitted externally on the casing as standard (IP 55).

Installation

Installation in any position. Ensure that motor drainage holes (where used) face downwards.

Motor protection

All models (3~ except ex proof) have thermal contacts as standard which must be connected to a full motor protection unit (see table below). With the 1 ph. ex-proof models thermal contacts are wired in series with the winding which automatically re-sets after cooling. Models without thermal contacts must be protected by a conventional circuit breaker.

Sound levels

Data shown within the performance curves refer to sound power levels. For determination of the lower sound pressure levels refer to diagram on "Technical information" page. Sound immission and acoustic information on page 10 on.

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Made to order designs

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For safety and correct use note the technical information on page 15 on.

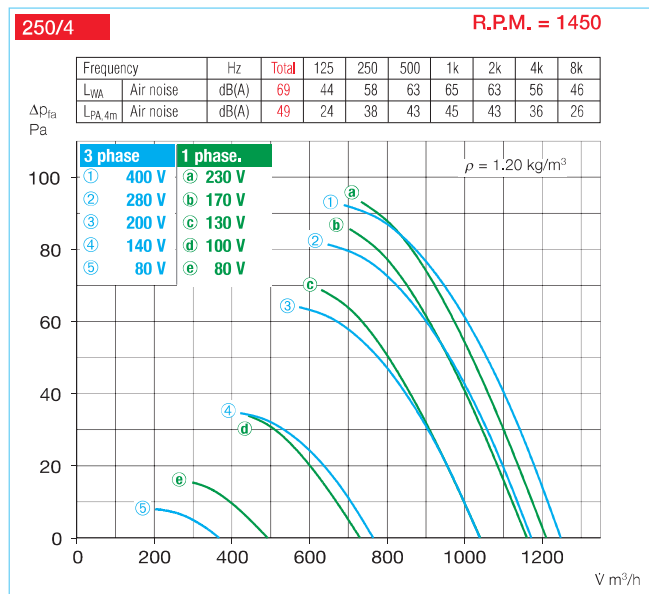
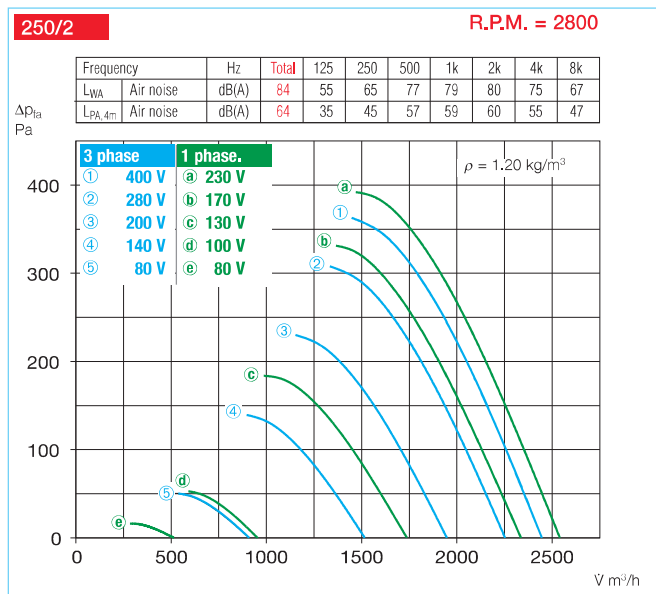
Type	Ref. no.	R.P.M.	Air flow volume (FID)	Motor power*	Voltage	Current* standard supply	Current* speed controlled	Wiring diagram	Maximum air flow temp. standard supply	Weight net	5 step transformer controller Pole switch	Full motor protection starter using the motor thermal contacts	Anti vibration mounts		
		min ⁻¹	l m ³ /h	kW	V	A	A	No.	+°C	+°C	kg	Type Ref. no.	Type Ref. no.	comp Type	susp Type
1 Phase motor, 1 ph. / 50 Hz, protection to IP 54															
VARW 250/4	6666	1420	1210	0.12	230	0.46	0.60	966	60	40	11.5	MWS 1,5 ¹⁾ 1947	MW 1579	SDD 1	SDZ 1
VARW 250/2	6667	2840	2540	0.55	230	2.60	3.90	966	60	40	13.0	MWS 5 ¹⁾ 1949	MW 1579	SDD 1	SDZ 1
3 Phase motor, 50 Hz, protection to IP 54															
VARD 250/4	6668	1410	1250	0.09	400	0.30	0.30	469	60	40	11.5	RDS 1 ^{1) 4)} 1314	MD 5849	SDD 1	SDZ 1
VARD 250/2	6669	2800	2450	0.47	400	1.10	1.10	469	60	40	11.5	RDS 2 ^{1) 4)} 1315	MD 5849	SDD 1	SDZ 1
Pole-switching, 2 speed motor (Dahlander windings Y/YY), 3 ph. / 50 Hz, protection to IP 54												Pole switch			
VARW 250/4/2	6773	1425/2750	1200/2400	0.75/0.49	400	0.24/0.94	—	472	60	—	13.0	PDA 12 ³⁾ 5081	M 3 ²⁾ 1293	SDD 1	SDZ 1
Explosion proof, E Ex de II B, 1 ph. / 50 Hz, temperature class T1-T3, protection to IP 55															
VARW 250/4 Ex	6735	1400	1290	0.06	230	0.70	—	757	40	—	13.0	not permitted	—	SDD 1	SDZ 1
Explosion proof, E Ex II, 3 ph. / 50 Hz, temperature class T1-T3, protected to IP 54															
VARD 250/4 Ex	6670	1400	1300	0.12	400	0.41	—	470	40	—	13.0	not permitted	not permitted	SDD 1	SDZ 1
VARD 250/2 Ex	6671	2825	2590	0.37	400	0.95	—	470	40	—	15.5	not permitted	not permitted	SDD 1	SDZ 1

* Ex models: For nominal value of motor see information on page 16 ¹⁾ includes full motor protection unit

⁴⁾ Frequency inverter with integrated Sine filter, Type FU-BS 2.5, No. 5459, see product page FU.

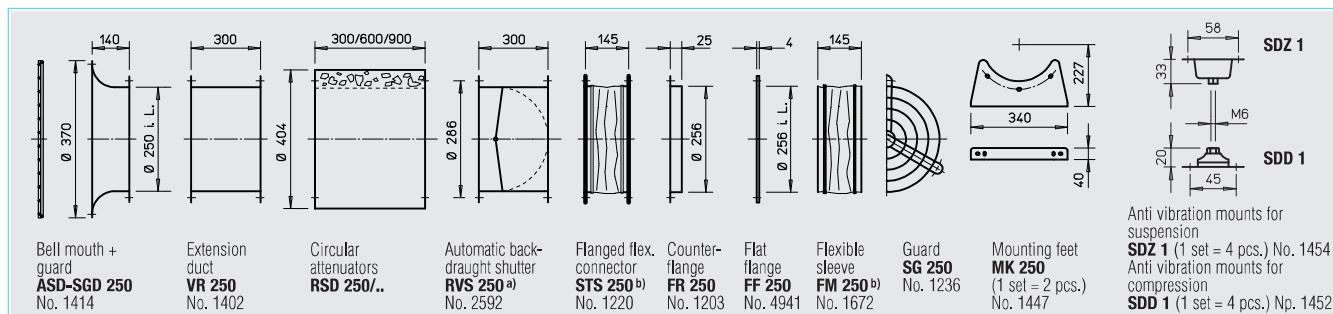
²⁾ includes operation and speed switch

³⁾ see product page for flush mounted version



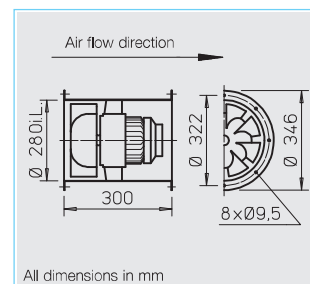
Other accessories	Page
b) Accessories for ex-proof fans	
Flanged flexible connector Type STS 250 Ex Ref. no. 2501	
Flexible sleeve Type FM 250 Ex Ref. no. 1688	
Attenuators	421 on
Shutters and grilles	487 on
Speed controllers and switches	525 on

Accessories Specification see page 231 on



a) For motorised shutters see accessory pages

b) Types for explosion proof fans see above



■ Specification

□ Casing

Manufactured in galvanised sheet steel with flanges on both sides to DIN 24155, Pt. 3, with fixed guide vanes and motor support.

□ Impeller

Optimised for high pressure and performance. Specially developed mixed-flow curved impeller manufactured from impact resistant polymers.

□ Motor

Direct driven, maintenance free flange motor, totally enclosed with an aluminium casing and cooling fins, protected to IP 54. Sealed for life ball bearings with tropicalized protection of windings and interference-free. Optional drainage holes made to order (please state installation position).

□ Speed control

For all speed controllable models the current is given in the "speed controlled" column of the table below which must be used when selecting a controller (see controller column). The air flow volumes can be seen from the characteristic curves. If the fan is to be controlled by a frequency inverter without a sine filter, this must be stated when ordering. This requires a change of fan design and potential additional costs. Explosion proof fans are not controllable.

□ Electrical connection

Terminal box fitted externally on the casing as standard (IP 55).

□ Installation

Installation in any position. Ensure that motor drainage holes (where used) face downwards.

□ Motor protection

All models (3~ except ex proof) have thermal contacts as standard which must be connected to a full motor protection unit (see table below). With the 1 ph. ex-proof models thermal contacts are wired in series with the winding which automatically re-sets after cooling. Models without thermal contacts must be protected by a conventional circuit breaker.

□ Sound levels

Data shown within the performance curves refer to sound power levels. For determination of the lower sound pressure levels refer to diagram on "Technical information" page. Sound emission and acoustic information on page 10 on.

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Made to order designs

Alternative voltages, frequencies, protection classes, acid protection, high temperatures etc. are available on request.

For safety and correct use note the technical information on page 15 on.

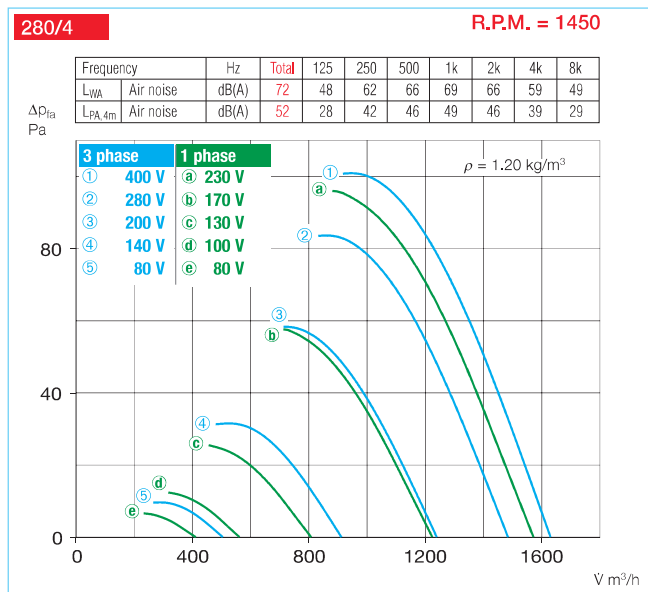
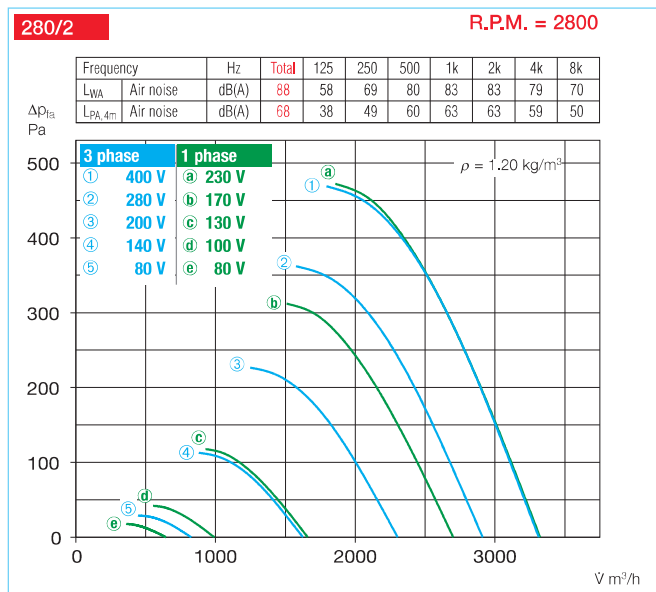
Type	Ref. no.	R.P.M.	Air flow volume (FD)	Motor power*	Voltage	Current*		Wiring diagram	Maximum air flow temp.		Nominal weight (net)	5 step transformer controller Pole switch	Full motor protection starter using the motor thermal contacts	Anti vibration mounts			
		min ⁻¹	ℓ m ³ /h	kW	V	A	A	No.	+°C	+°C	kg	Type	Ref. no.	Type	Ref. no.	Type	Type
1 Phase motor, 1 ph. / 50 Hz, protection to IP 54																	
VARW 280/4	6672	1330	1600	0.11	230	0.50	0.60	966	60	40	12.0	MWS 1,5 ¹⁾	1947	MW	1579	SDD 1	SDZ 1
VARW 280/2	6659	2715	3350	0.79	230	3.70	4.90	967	60	40	14.0	MWS 7,5 ¹⁾	1950	MW	1579	SDD 1	SDZ 1
3 Phase motor, 50 Hz, protection to IP 54																	
VARD 280/4	6673	1370	1650	0.12	400	0.35	0.35	469	60	40	12.0	RDS 1 ^{1) 4)}	1314	MD	5849	SDD 1	SDZ 1
VARD 280/2	6674	2705	3315	0.80	400	1.52	1.64	469	60	40	13.5	RDS 2 ^{1) 4)}	1315	MD	5849	SDD 1	SDZ 1
Pole-switching, 2 speed motor (Dahlander windings Y/YY), 3 ph. / 50 Hz, protection to IP 54												Pole switch					
VARD 280/4/2	6775	1405/2810	1760/3500	0.14/0.91	400	0.44/1.78	—	472	60	—	16.0	PDA 12 ³⁾	5081	M 3 ²⁾	1293	SDD 1	SDZ 1
Explosion proof, E Ex de II B, 1 ph. / 50 Hz, temperature class T1-T3, protection to IP 55																	
VARW 280/4 Ex	6737	1330	1720	0.18	230	1.25	—	757	40	—	14.0	not permitted	—	—	—	SDD 1	SDZ 1
Explosion proof, E Ex II, 3 ph. / 50 Hz, temperature class T1-T3, protected to IP 54																	
VARD 280/4 Ex	6675	1400	1820	0.12	400	0.41	—	470	40	—	16.0	not permitted	—	not permitted	—	SDD 1	SDZ 1
VARD 280/2 Ex	6676	1860	3720	0.75	400	1.65	—	470	40	—	18.0	not permitted	—	not permitted	—	SDD 1	SDZ 1

* Ex models: For nominal value of motor see information on page 16 ¹⁾ includes full motor protection unit

⁴⁾ Frequency inverter with integrated Sine filter, Type FU-BS 2,5, No. 5459, see product page FU.

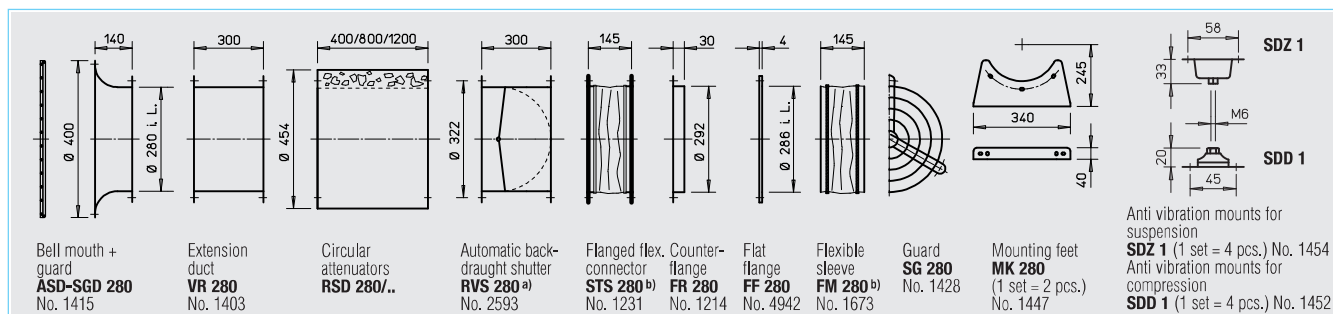
²⁾ includes operation and speed switch

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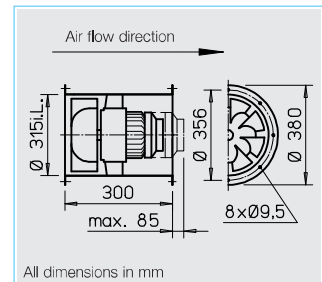
Other accessories	Page
b) Accessories for ex-proof fans	
Flanged flexible connector	
Type STS 280 Ex	Ref. no. 2502
Flexible sleeve	
Type FM 280 Ex	Ref. no. 1689
Attenuators	421 on
Shutters and grilles	487 on
Speed controllers and switches	525 on

Accessories Specification see page 231 on



a) For motorised shutters see accessory pages

b) Types for explosion proof fans see above



■ Specification

□ Casing

Manufactured in galvanised sheet steel with flanges on both sides to DIN 24155, Pt. 3, with fixed guide vanes and motor support.

□ Impeller

Optimised for high pressure and performance. Specially developed mixed-flow curved impeller manufactured from impact resistant polymers.

□ Motor

Direct driven, maintenance free flange motor, totally enclosed with an aluminium casing and cooling fins, protected to IP 54. Sealed for life ball bearings with tropicalized protection of windings and interference-free. Optional drainage holes made to order (please state installation position).

□ Speed control

For all speed controllable models the current is given in the "speed controlled" column of the table below which must be used when selecting a controller (see controller column). The air flow volumes can be seen from the characteristic curves. If the fan is to be controlled by a frequency inverter without a sine filter, this must be stated when ordering. This requires a change of fan design and potential additional costs. Explosion proof fans are not controllable.

□ Electrical connection

Terminal box fitted externally on the casing as standard (IP 55).

□ Installation

Installation in any position. Ensure that motor drainage holes (where used) face downwards.

□ Motor protection

All models (3~ except ex proof) have thermal contacts as standard which must be connected to a full motor protection unit (see table below). With the 1 ph. ex-proof models thermal contacts are wired in series with the winding which automatically re-sets after cooling. Models without thermal contacts must be protected by a conventional circuit breaker.

□ Sound levels

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Made to order designs

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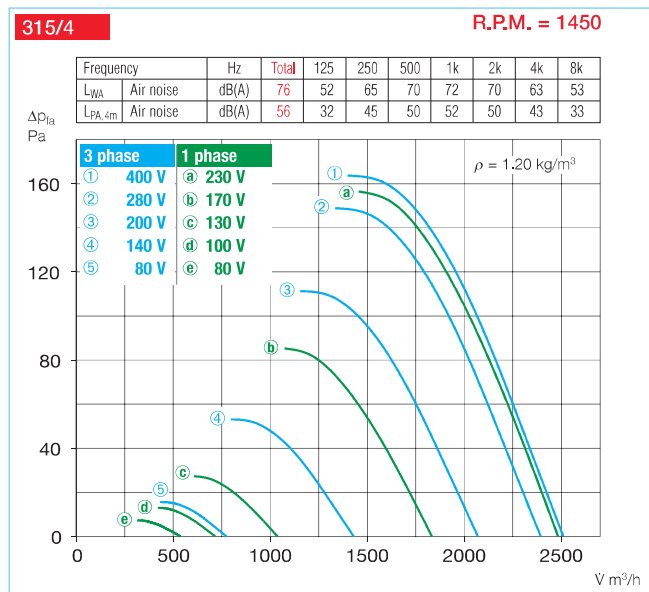
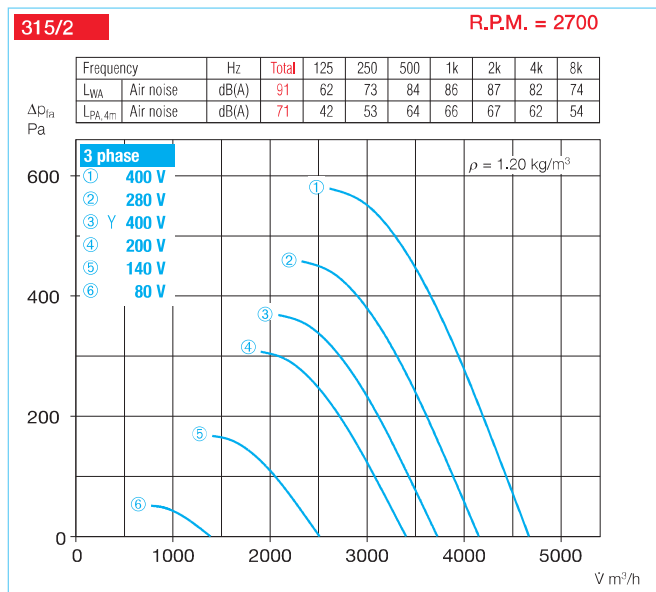
Type	Ref. no.	R.P.M.	Air flow volume (FID)	Motor power*	Voltage	Current* standard supply	Current* speed controlled	Wiring diagram	Maximum air flow temp. standard supply	Maximum air flow temp. speed controlled	Nominal weight (net)	5 step transformer controller Pole switch	Full motor protection starter using the motor thermal contacts	Anti vibration mounts comp	Anti vibration mounts susp
		min ⁻¹	l/s	kW	V	A	A	No.	+°C	+°C	kg	Type Ref. no.	Type Ref. no.	Type	Type
1 Phase motor, 1 ph. / 50 Hz, protection to IP 54															
VARW 315/4	6677	1440	2480	0.23	230	1.10	1.17	966	60	40	13.0	MWS 3 ¹⁾ 1948	MW 1579	SDD 1	SDZ 1
3 Phase motor, 50 Hz, protection to IP 54															
VARD 315/4	6678	1450	2510	0.22	400	0.60	0.70	469	60	40	13.0	RDS 1 ^{1) 4)} 1314	MD 5849	SDD 1	SDZ 1
Two-speed, 3 ph., 50 Hz, Y/Δ switch, protection to IP 54															
VARD 315/2/2	6679	1520/2650	2921/4670	1.29/1.35	400Y/Δ	1.5/2.75	2.8	520	60	40	20.5	RDS 4 ¹⁾ 1316	M 4 ²⁾ 1571	SDD 1	SDZ 1
Pole-switching, 2 speed motor (Dahlander windings Y/YY), 3 ph. / 50 Hz, protection to IP 54															
VARD 315/4/2	6777	1480/2890	2730/5340	0.42/1.83	400	1.2/3.3	—	472	60	—	20.5	PDA 12 ³⁾ 5081	M 3 ²⁾ 1293	SDD 1	SDZ 1
Explosion proof, E Ex de II B, 1 ph. / 50 Hz, temperature class T1-T3, protection to IP 55															
VARW 315/4 Ex	6738	1450	2680	0.18	230	1.25	—	757	40	—	15.0	not permitted	—	SDD 1	SDZ 1
Explosion proof, E Exe II, 3 ph. / 50 Hz, temperature class T1-T3, protected to IP 54															
VARD 315/4 Ex	6680	1420	2610	0.37	400	1.14	—	470	40	—	17.0	not permitted	not permitted	SDD 1	SDZ 1
VARD 315/2 Ex	6681	2860	5260	1.50	400	3.15	—	470	40	—	23.0	not permitted	not permitted	SDD 1	SDZ 1

* Ex models: For nominal value of motor see information on page 16 ¹⁾ includes full motor protection unit

⁴⁾ Frequency inverter with integrated Sine filter, Type FU-BS 2,5, No. 5459, see product page FU.

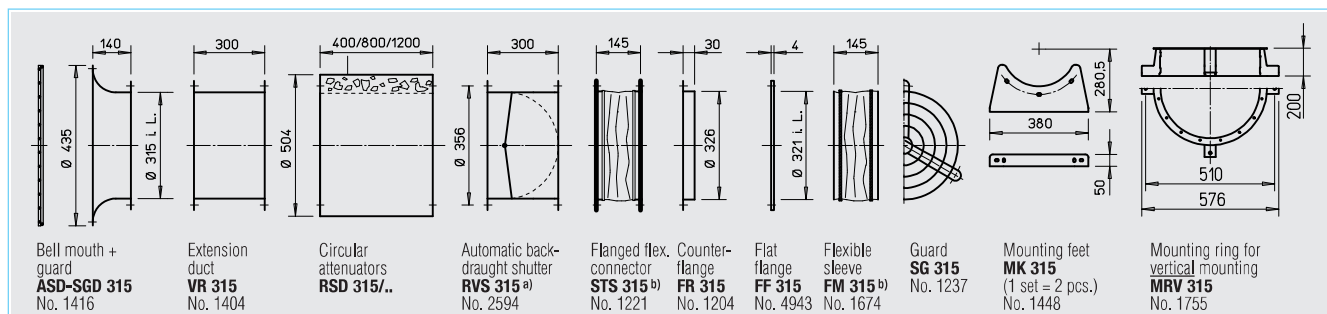
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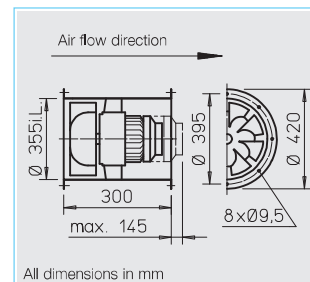
Other accessories	Page
b) Accessories for ex-proof fans	
Flanged flexible connector	
Type STS 315 Ex	Ref. no. 2503
Flexible sleeve	
Type FM 315 Ex	Ref. no. 1690
Attenuators	421 on
Shutters and grilles	487 on
Speed controllers and switches	525 on

Accessories Specification see page 231 on



a) For motorised shutters see accessory pages

b) Types for explosion proof fans see above



■ Specification

□ Casing

Manufactured in galvanised sheet steel with flanges on both sides to DIN 24155, Pt. 3, with fixed guide vanes and motor support.

□ Impeller

Optimised for high pressure and performance. Specially developed mixed-flow curved impeller manufactured from impact resistant polymers (models with R.P.M. = 2800 from hot dipped galvanised steel).

□ Motor

Direct driven, maintenance free flange motor, totally enclosed with an aluminium casing and cooling fins, protected to IP 54. Sealed for life ball bearings with tropicalized protection of windings and interference-free. Optional drainage holes made to order (please state installation position).

□ Speed control

For all speed controllable models the current is given in the "speed controlled" column of the table below which must be used when selecting a controller (see controller column). The air flow volumes can be seen from the characteristic curves. If the fan is to be controlled by a frequency inverter without a sine filter, this must be stated when ordering. This requires a change of fan design and potential additional costs. Explosion proof fans are not controllable.

□ Electrical connection

Terminal box fitted externally on the casing as standard (IP 55).

□ Installation

Installation in any position. Ensure that motor drainage holes (where used) face downwards.

□ Motor protection

All models (excluding ex-proof models and model VARD 355/4/2) have thermal contacts as standard which must be connected to a full motor protection unit (see table below) for effective motor protection. Models without thermal contacts must be protected by a conventional circuit breaker.

□ Sound levels

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Type	Ref. no.	R.P.M.	Air flow volume (FID)	Motor power*	Voltage	Current*		Wiring diagram	Maximum air flow temp. standard supply	Maximum air flow temp. speed controlled	Nominal weight (net)	5 step transformer controller Pole switch	Full motor protection starter using the motor thermal contacts	Anti vibration mounts			
		min ⁻¹	∇ m³/h	kW	V	A	A	No.	+°C	+°C	kg	Type	Ref. no.	Type	Ref. no.	comp	susp
1 Phase motor, 1 ph. / 50 Hz, protection to IP 54																	
VARW 355/4	6682	1380	3470	0.37	230	3.30	2.35	966	60	40	21.0	MWS 3 ¹⁾	1948	MW	1579	SDD 1	SDZ 1
3 Phase motor, 50 Hz, protection to IP 54																	
VARD 355/4	6683	1440	3550	0.40	400	0.87	1.20	469	60	40	15.5	RDS 1 ^{1) 5)}	1314	MD	5849	SDD 1	SDZ 1
Two-speed, 3 ph., 50 Hz, Y/Δ switch, protection to IP 54																	
VARD 355/2/2	6684	2415/2790	6040/7220	2.06/2.81	400Y/Δ	3.40/5.40	—	520	60	30	21.5	RDS 7 ¹⁾	1578	M 4 ²⁾	1571	SDD 1	SDZ 1
Pole-switching, 2 speed motor (Dahlander windings Y/YY), 3 ph. / 50 Hz, protection to IP 54												Pole switch					
VARD 355/4/2	6779	1470/2870	3830/7500	0.48/3.11	400	1.35/5.50	—	471	40	—	29.0	PDA 12 ³⁾	5081	M 3 ²⁾	1293	SDD 1	SDZ 1
Explosion proof, E Exe II, 3 ph. / 50 Hz, temperature class T1-T3, protected to IP 54																	
VARD 355/4 Ex	6685	1420	3740	0.37	400	1.14	—	470	40	—	19.0	not permitted		not permitted		SDD 1	SDZ 1
VARD 355/2 Ex ⁴⁾	6686	2860	7580	2.50	400	4.85/2.77	—	498	40	—	33.0	not permitted		not permitted		SDD 1	SDZ 1

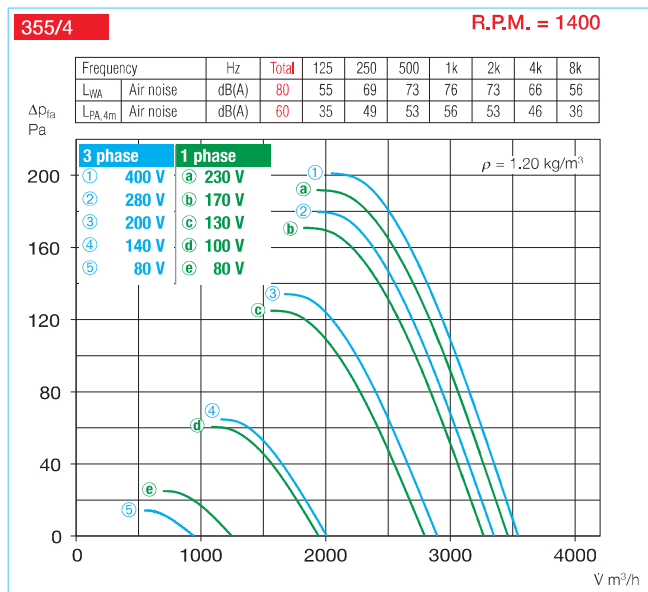
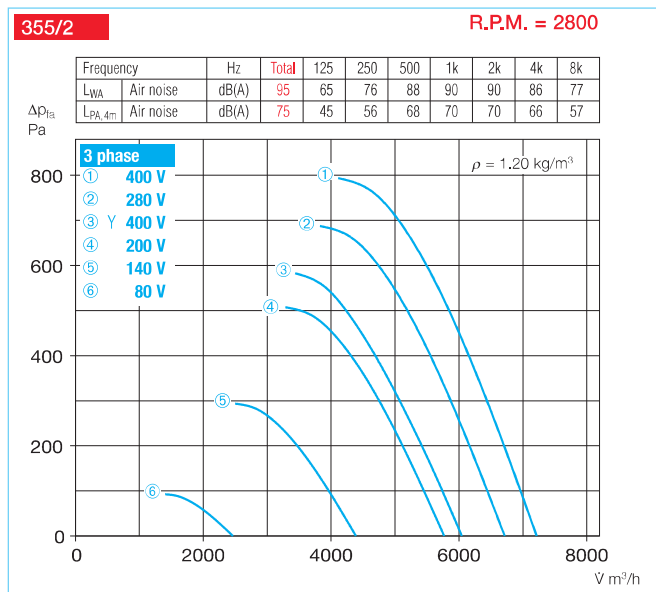
* Ex models: For nominal value of motor see information on page 16

¹⁾ includes full motor protection unit

²⁾ includes operation and speed switch

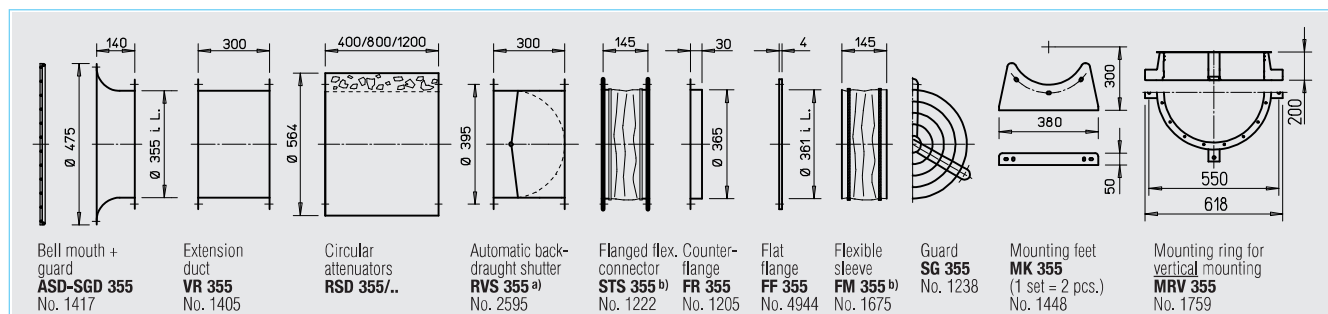
³⁾ see product page for flush mounted version

⁴⁾ Vibration monitoring is necessary (on site) pursuant to DIN EN 14986. ⁵⁾ Frequency inverter with integrated Sine filter, Type FU-BS 2.5, No. 5459, see product page FU.



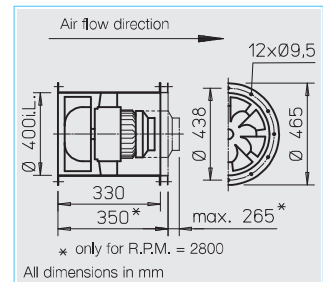
Other accessories	Page
b) Accessories for ex-proof fans	
Flanged flexible connector	
Type STS 355 Ex Ref. no. 2504	
Flexible sleeve	
Type FM 355 Ex Ref. no. 1691	
Attenuators	421 on
Shutters and grilles	487 on
Speed controllers and switches	525 on

Accessories Specification see page 231 on



a) For motorised shutters see accessory pages

b) Types for explosion proof fans see above



■ Specification

□ Casing

Manufactured in galvanised steel with flanges on both sides to DIN 24155, Pt. 3, vanes and fixed motor support. Models with R.P.M. = 2800 with welded casing made from hot dipped galvanised steel.

□ Impeller

Optimised for high pressure and performance. Specially developed mixed-flow curved impeller manufactured from hot dipped galvanised steel.

□ Motor

Direct driven, maintenance free flange motor, totally enclosed with an aluminium casing and cooling fins, protected to IP 54. Sealed for life ball bearings with tropicalized protection of windings and interference-free. Optional drainage holes made to order (please state installation position).

□ Speed control

For all speed controllable models the current is given in the "speed controlled" column of the table below which must be used when selecting a controller (see controller column). The air flow volumes can be seen from the characteristic curves. If the fan is to be controlled by a frequency inverter without a sine filter, this must be stated when ordering. This requires a change of fan design and potential additional costs. Explosion proof fans are not controllable.

□ Electrical connection

Terminal box fitted externally on the casing as standard (IP 55).

□ Installation

Installation in any position. Ensure that motor drainage holes (where used) face downwards.

□ Motor protection

All models (excluding ex-proof models and model VARD 400/4/2) have thermal contacts as standard which must be connected to a full motor protection unit (see table below) for effective motor protection. Models without thermal contacts must be protected by a conventional circuit breaker.

□ Sound levels

Data shown within the performance curves refer to sound power levels. For determination of the lower sound pressure levels refer to diagram on "Technical information" page. Sound emission and acoustic information on page 10 on.

■ Information Page

Technical description	208
Selection chart	209
Information for planning	10 on

Made to order designs

Alternative voltages, frequencies, protection classes, acid protection, high temperatures etc. are available on request.

For safety and correct use note the technical information on page 15 on.

Type	Ref. no.	R.P.M.	Air flow volume (FD)	Motor power*	Voltage	Current*		Wiring diagram	Maximum air flow temp. standard supply	Maximum air flow temp. speed controlled	Nominal weight (net)	5 step transformer controller Pole switch	Full motor protection starter using the motor thermal contacts	Anti vibration mounts		
		min ⁻¹	∇ m³/h	kW	V	A	A	No.	+°C	+°C	kg	Type Ref. no.	Type Ref. no.	Type	susp	
1 Phase motor, 1 ph. / 50 Hz, protection to IP 54																
VARW 400/4	6688	1375	5130	0.70	230	3.00	3.35	967	60	40	22.5	MWS 5 ¹⁾	1949	MW	1579	SDD 1 SDZ 1
3 Phase motor, 50 Hz, protection to IP 54																
VARD 400/4	6690	1400	5240	0.72	400	1.95	2.00	469	60	40	22.5	RDS 4 ^{1) 5)}	1316	MD	5849	SDD 1 SDZ 1
Two-speed, 3 ph., 50 Hz, Y/Δ switch, protection to IP 54																
VARD 400/2/2	6691	2475/2800	8320/10610	3.63/4.95	400Y/Δ	5.75/7.95	—	520	60	40	74.0	RDS 11 ¹⁾	1332	M 4 ²⁾	1571	SDD 1 SDZ 2
Pole-switching, 2 speed motor (Dahlander windings Y/YY), 3 ph. / 50 Hz, protection to IP 54																
												Pole switch				
VARD 400/4/2	6782	1400/2890	5220/10700	0.80/5.90	400	2.43/9.13	—	471	40	—	74.0	PDA 12 ³⁾	5081	M 3 ²⁾	1293	SDD 1 SDZ 2
Explosion proof, E Exe II, 3 ph. / 50 Hz, temperature class T1-T3, protected to IP 54																
VARD 400/6 Ex	6692	920	3465	0.25	400	0.97	—	470	40	—	21.0	not permitted	not permitted	SDD 1	SDZ 1	
VARD 400/4 Ex	6693	1400	5360	0.55	400	1.51	—	470	40	—	25.0	not permitted	not permitted	SDD 1	SDZ 1	
VARD 400/2 Ex ⁴⁾	6694	2895	10950	4.60	400	8.20	—	498	40	—	83.0	not permitted	not permitted	SDD 2	SDZ 2	

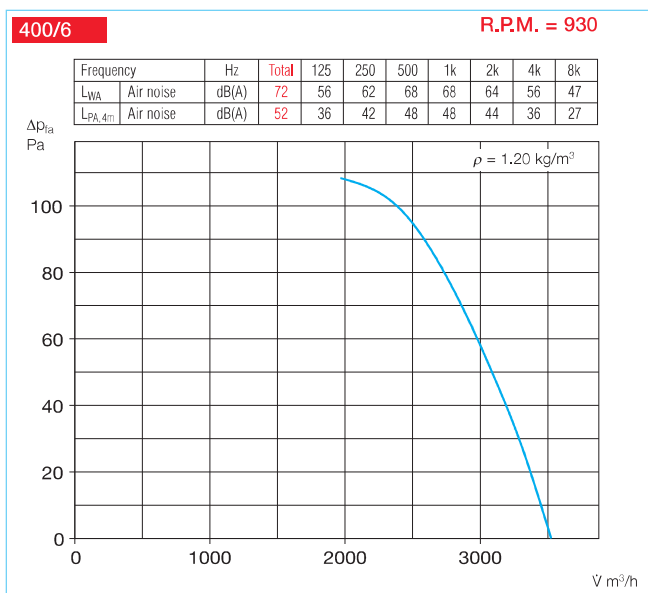
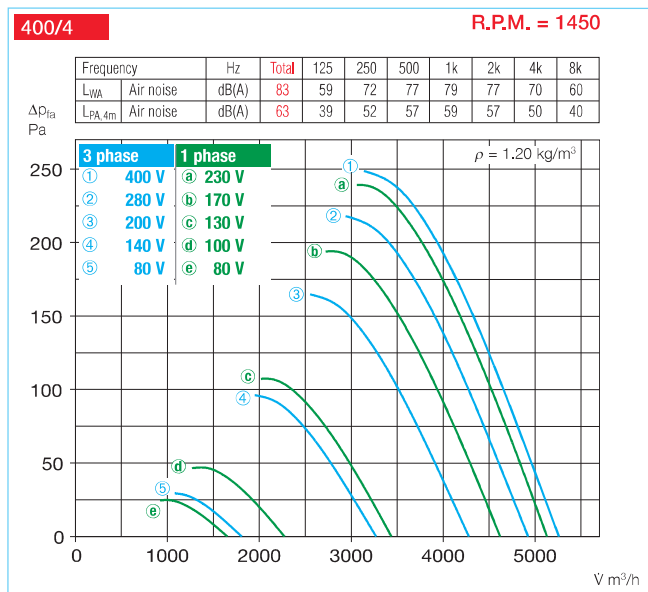
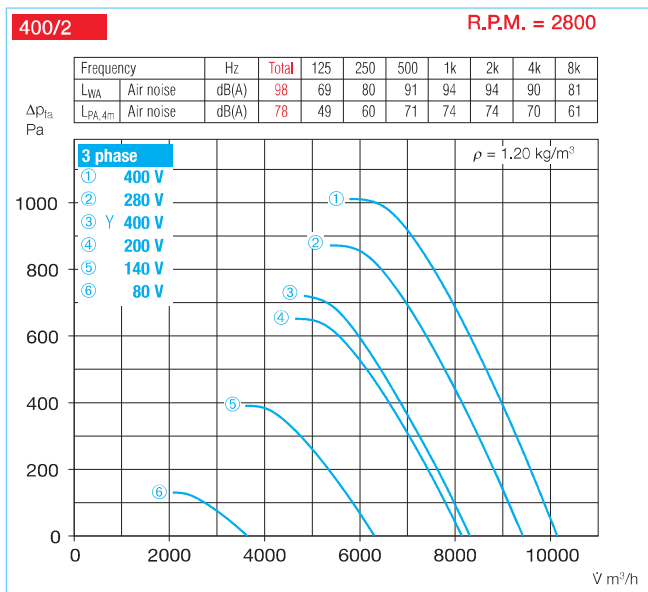
* Ex models: For nominal value of motor see information on page 16

¹⁾ includes full motor protection unit

²⁾ includes operation and speed switch

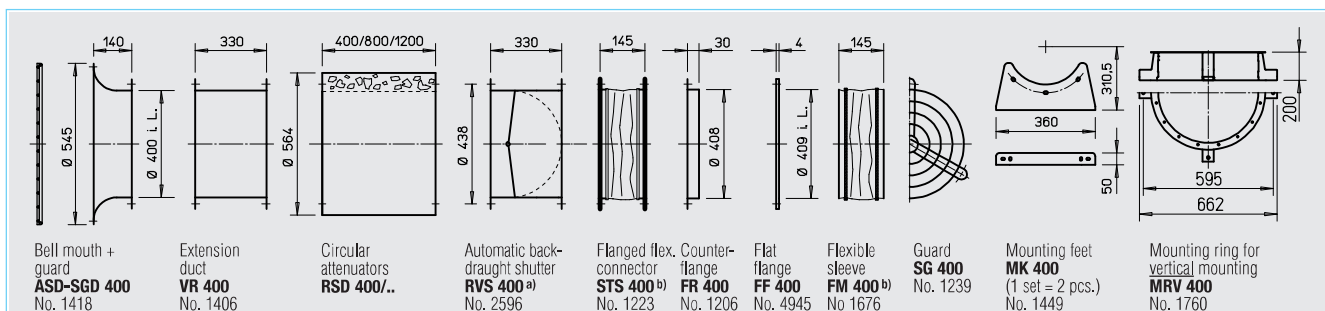
³⁾ see product page for flush mounted version

⁴⁾ Vibration monitoring is necessary (on site) pursuant to DIN EN 14986. ⁵⁾ Frequency inverter with integrated Sine filter, Type FU-BS 2.5, No. 5459, see product page FU.



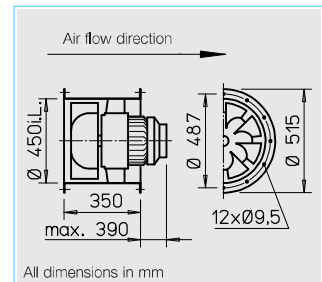
Other accessories	Page
b) Accessories for ex-proof fans	
Flanged flexible connector Type STS 400 Ex Ref. no. 2505	
Flexible sleeve Type FM 400 Ex Ref. no. 1692	
Attenuators	421 on
Shutters and grilles	487 on
Speed controllers and switches	525 on

Accessories Specification see page 231 on



a) For motorised shutters see accessory pages

b) Types for explosion proof fans see left page



■ Specification

□ Casing

Manufactured in galvanised steel with flanges on both sides to DIN 24155, Pt. 3, vanes and fixed motor support. Models with R.P.M. = 2800 with welded casing made from hot dipped galvanised steel.

□ Impeller

Optimised for high pressure and performance. Specially developed mixed-flow curved impeller manufactured from hot dipped galvanised steel.

□ Motor

Direct driven, maintenance free flange motor, totally enclosed with an aluminium casing and cooling fins, protected to IP 54. Sealed for life ball bearings with tropicalized protection of windings and interference-free. Optional drainage holes made to order (please state installation position).

□ Speed control

For all speed controllable models the current is given in the "speed controlled" column of the table below which must be used when selecting a controller (see controller column). The air flow volumes can be seen from the characteristic curves. If the fan is to be controlled by a frequency inverter without a sine filter, this must be stated when ordering. This requires a change of fan design and potential additional costs. Explosion proof fans are not controllable.

□ Electrical connection

Terminal box fitted externally on the casing as standard (IP 55).

□ Installation

Installation in any position. Ensure that motor drainage holes (where used) face downwards.

□ Motor protection

All models (excluding ex-proof models) have thermal contacts and PTC Thermistors as standard which must be connected to a full motor protection unit (see table below) for effective motor protection. Models without thermal contacts must be protected by a conventional circuit breaker.

□ Sound levels

Data shown within the performance curves refer to sound power levels. For determination of the lower sound pressure levels refer to diagram on "Technical information" page. Sound emission and acoustic information on page 10 on.

■ Information Page

Technical description	208
Selection chart	209
Information for planning	10 on

Made to order designs

Alternative voltages, frequencies, protection classes, acid protection, high temperatures etc. are available on request.

For safety and correct use note the technical information on page 15 on.

Type	Ref. no.	R.P.M.	Air flow volume (FID)	Motor power*	Voltage	Current*		Wiring diagram	Maximum air flow temp.		Nominal weight (net)	5 step transformer controller Pole switch	Full motor protection starter using the motor thermal contacts		Anti vibration mounts		
		min ⁻¹	l m³/h	kW	V	A	A	No.	+°C	+°C	kg	Type	Ref. no.	Type	Ref. no.	Type	Type
1 Phase motor, 1 ph. / 50 Hz, protection to IP 54																	
VARW 450/4	6736	1330	7180	1.47	230	6.50	7.00	968	60	40	45.0	MWS 7,5 ¹⁾	1950	MW	1579	SDD 1	SDZ 1
3 Phase motor, 50 Hz, protection to IP 54																	
VARD 450/2	6698	2950	14210	8.03	400	13.8	—	776	60	—	95.0	FU-CS18 ¹⁾⁵⁾	5469	MSA ³⁾	1289	SDD 2	SDZ 2
Two-speed, 3 ph., 50 Hz, Y/Δ switch, protection to IP 54																	
VARD 450/4/4	6697	1100/1370	5930/7390	0.74/1.00	400Y/Δ	1.2/2.3	2.3	520	60	40	45.0	RDS 4 ¹⁾	1316	M 4 ²⁾	1571	SDD 1	SDZ 1
Explosion proof, E Exe II, 3 ph. / 50 Hz, temperature class T1-T3, protected to IP 54																	
VARD 450/6 Ex	6699	900	5020	0.25	400	0.99	—	470	40	—	48.0	not permitted		not permitted		SDD 1	SDZ 1
VARD 450/4 Ex	6700	1425	7640	1.10	400	2.55	—	470	40	—	51.0	not permitted		not permitted		SDD 1	SDZ 1
VARD 450/2 Ex ⁴⁾	6701	2930	15810	7.50	400	14.10	—	498	40	—	155.0	not permitted		not permitted		SDD 2	SDZ 2

* Ex models: For nominal value of motor see information on page 16

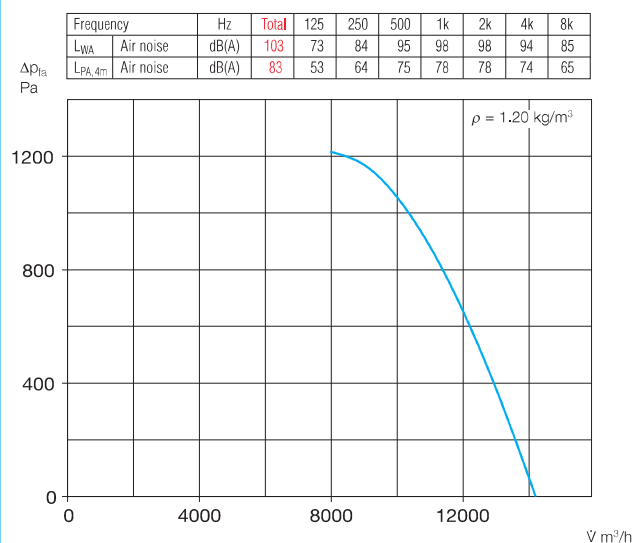
¹⁾ includes full motor protection unit

²⁾ includes operation and speed switch

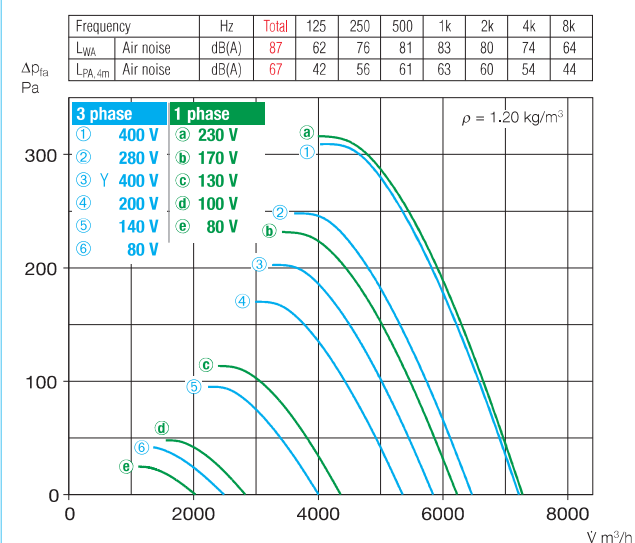
³⁾ for PTC Thermistor temp. sensor

⁴⁾ Vibration monitoring is necessary (on site) pursuant to DIN EN 14986. ⁵⁾ with integrated Sine filter, see product page FU

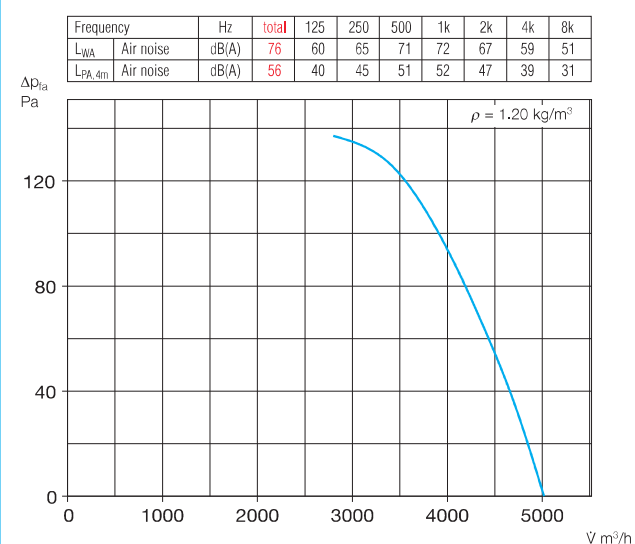
450/2 R.P.M. = 2800



450/4 R.P.M. = 1400



450/6 R.P.M. = 930



Other accessories Page

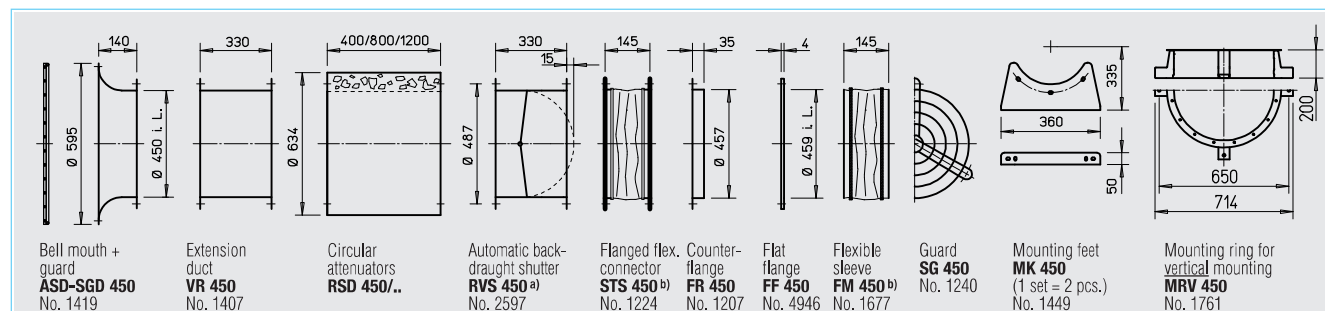
b) Accessories for ex-proof fans

Flanged flexible connector
Type STS 450 Ex Ref. no. 2506

Flexible sleeve
Type FM 450 Ex Ref. no. 1693

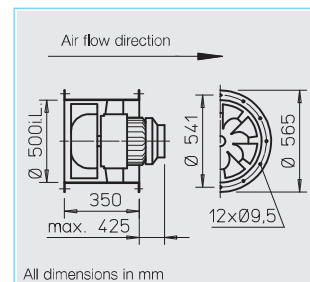
Attenuators 421 on
Shutters and grilles 487 on
Speed controllers and switches 525 on

Accessories Specification see page 231 on



a) For motorised shutters see accessory pages

b) Types for explosion proof fans see left page



■ Specification

□ Casing

Manufactured in galvanised steel with flanges on both sides to DIN 24155, Pt. 3, vanes and fixed motor support. Models with R.P.M. = 2800 with welded casing made from hot dipped galvanised steel.

□ Impeller

Optimised for high pressure and performance. Specially developed mixed-flow curved impeller manufactured from hot dipped galvanised steel.

□ Motor

Direct driven, maintenance free flange motor, totally enclosed with an aluminium casing and cooling fins, protected to IP 54. Sealed for life ball bearings with tropicalized protection of windings and interference-free. Optional drainage holes made to order (please state installation position).

□ Speed control

For all speed controllable models the current is given in the "speed controlled" column of the table below which must be used when selecting a controller (see controller column). The air flow volumes can be seen from the characteristic curves. If the fan is to be controlled by a frequency inverter without a sine filter, this must be stated when ordering. This requires a change of fan design and potential additional costs. Explosion proof fans are not controllable.

□ Electrical connection

Terminal box fitted externally on the casing as standard (IP 55).

□ Installation

Installation in any position. Ensure that motor drainage holes (where used) face downwards.

□ Motor protection

All models (excluding ex-proof models) have thermal contacts and PTC Thermistors as standard which must be connected to a full motor protection unit (see table below) for effective motor protection. Models without thermal contacts must be protected by a conventional circuit breaker.

□ Sound levels

Data shown within the performance curves refer to sound power levels. For determination of the lower sound pressure levels refer to diagram on "Technical information" page. Sound emission and acoustic information on page 10 on.

Information	Page
Technical description	208
Selection chart	209
Information for planning	10 on

Made to order designs

Alternative voltages, frequencies, protection classes, acid protection, high temperatures etc. are available on request.

For safety and correct use note the technical information on page 15 on.

Type	Ref. no.	R.P.M.	Air flow volume (FID)	Motor power*	Voltage	Current* standard supply	speed controlled	Wiring diagram	Maximum air flow temp. standard supply	speed controlled	Nominal weight (net)	5 step transformer controller Pole switch	Full motor protection starter using the motor thermal contacts	Anti vibration mounts			
		min ⁻¹	ℳ m ³ /h	kW	V	A	A	No.	+°C	+°C	kg	Type	Ref. no.	Type	Ref. no.	Type	susp.
1 Phase motor, 1 ph. / 50 Hz, protection to IP 54																	
VARW 500/4	6739	1340	9920	2.02	230	9.10	9.10	968	60	40	70.0	MWS 10 ¹⁾	1946	MW	1579	SDD 2	SDZ 2
3 Phase motor, 50 Hz, protection to IP 54																	
VARD 500/2	6705	2935	21730	15.70	400	29/16.7	—	776	60	—	180.0	FU-CS32 ¹⁾⁵⁾	5471	MSA ³⁾	1289	SDD 2	SDZ 3
Two-speed, 3 ph., 50 Hz, Y/Δ switch, protection to IP 54																	
VARD 500/4/4	6704	1120/1370	8360/10070	1.2/1.8	400Y/Δ	2.1/3.9	3.9	520	60	40	70.0	RDS 7 ¹⁾	1578	M 4 ²⁾	1571	SDD 2	SDZ 2
Explosion proof, E Exe II, 3 ph. / 50 Hz, temperature class T1-T3, protected to IP 54																	
VARD 500/6 Ex	6706	930	6810	0.55	400	1.83	—	470	40	—	70.0	not permitted	not permitted			SDD 2	SDZ 2
VARD 500/4 Ex	6707	1420	10470	2.00	400	4.65	—	470	40	—	75.0	not permitted	not permitted			SDD 2	SDZ 2
VARD 500/2 Ex ⁴⁾	6708	2930	21760	12.50	400	23.50	—	498	40	—	215.0	not permitted	not permitted			SDD 3	SDZ 3

* Ex models: For nominal value of motor see information on page 16

¹⁾ includes full motor protection unit

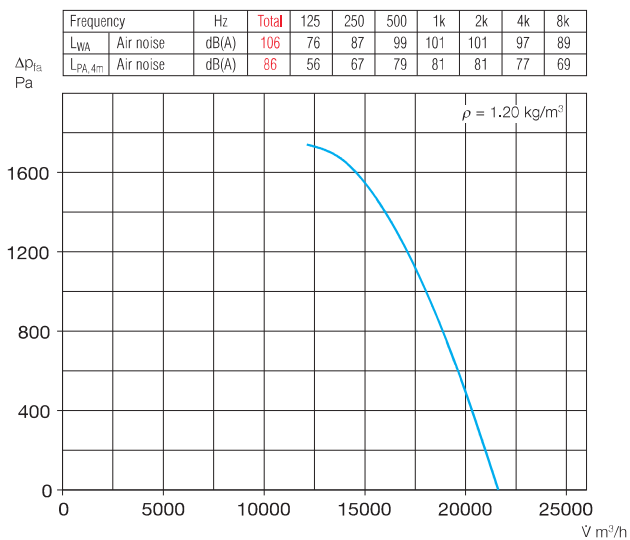
²⁾ includes operation and speed switch

³⁾ for PTC Thermistor temp. sensor

⁴⁾ Vibration monitoring is necessary (on site) pursuant to DIN EN 14986. ⁵⁾ with integrated Sine filter, see product page FU

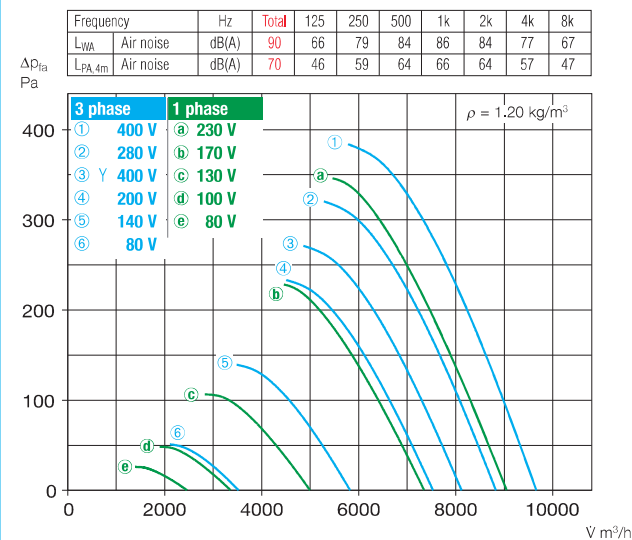
500/2

R.P.M. = 2900



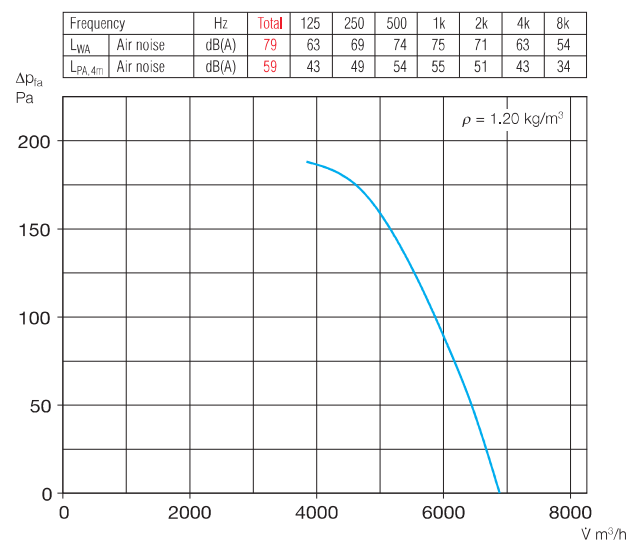
500/4

R.P.M. = 1450



500/6

R.P.M. = 930



Other accessories Page

b) Accessories for ex-proof fans

Flanged flexible connector

Type STS 500 Ex Ref. no. 2507

Flexible sleeve

Type FM 500 Ex Ref. no. 1694

Attenuators 421 on

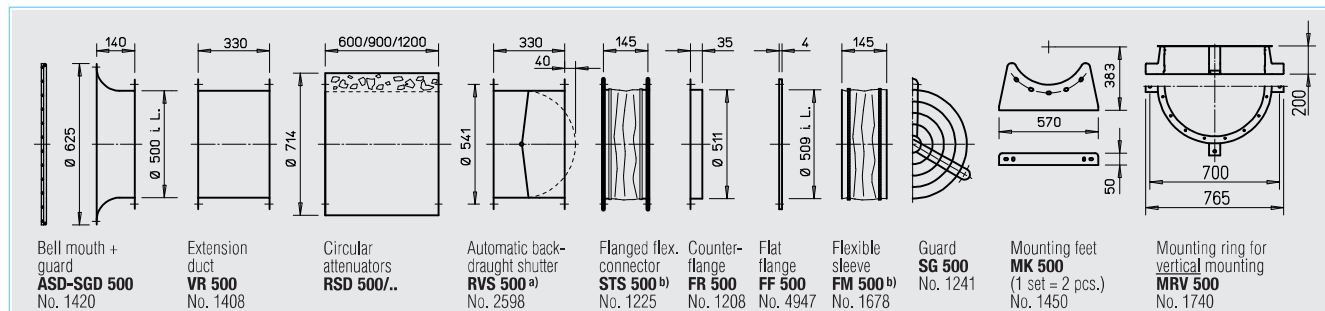
Shutters

and grilles 487 on

Speed controllers

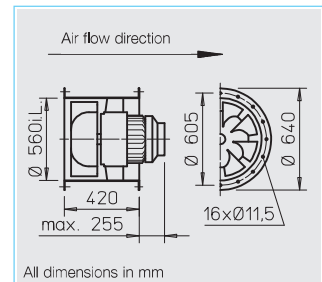
and switches 525 on

Accessories Specification see page 231 on



a) For motorised shutters see accessory pages

b) Types for explosion proof fans see left page



■ Specification

□ Casing

Manufactured in galvanised sheet steel with flanges on both sides to DIN 24155, Pt. 3, with fixed guide vanes and motor support.

□ Impeller

Optimised for high pressure and performance. Specially developed mixed-flow curved impeller manufactured from hot dipped galvanised steel.

□ Motor

Direct driven, maintenance free flange motor, totally enclosed with an aluminium casing and cooling fins, protected to IP 54. Sealed for life ball bearings with tropicalized protection of windings and interference-free. Optional drainage holes made to order (please state installation position).

□ Speed control

The voltage controllable models are identified by a value in the "speed controlled" column of the table below which must be used when selecting a controller (see controller column). The air flow volumes can be seen from the characteristic curves. Explosion proof fans are not controllable.

□ Electrical connection

Terminal box fitted externally on the casing as standard (IP 55).

□ Installation

Installation in any position. Ensure that motor drainage holes (where used) face downwards.

□ Motor protection

All models (excluding ex-proof models and pole switch models) have thermal contacts and PTC Thermistors as standard which must be connected to a full motor protection unit (see table below) for effective motor protection.

Models without thermal contacts must be protected by a conventional circuit breaker.

□ Sound levels

Data shown within the performance curves refer to sound power levels. For determination of the lower sound pressure levels refer to diagram on "Technical information" page. Sound emission and acoustic information on page 10 on.

■ Information

Page

Technical description	208
Selection chart	209
Information for planning	10 on

Made to order designs

Alternative voltages, frequencies, protection classes, acid protection, high temperatures etc. are available on request.

For safety and correct use note the technical information on page 15 on.

Type	Ref. no.	R.P.M.	Air flow volume (FID)	Motor power*	Voltage	Current* standard supply speed controlled		Wiring diagram	Maximum air flow temp. standard supply	flow temp. speed controlled	Nominal weight (net)	5 step transformer controller Pole switch	Full motor protection starter using the motor thermal contacts	Anti vibration mounts comp susp	
		min ⁻¹	∇ m³/h	kW	V	A	A	No.	+°C	+°C	kg	Type Ref. no.	Type Ref. no.	Type	Type
Two-speed, 3 ph., 50 Hz, Y/Δ switch, protection to IP 54															
VARD 560/4/4	6711	1130/1380	10780/12810	2.20/3.00	400Y/Δ	3.5/5.9	6.5	520	60	40	95.0	RDS 7 ¹⁾ 1578	M 4 ²⁾ 1571	SDD 2	SDZ 2
Pole-switching, 2 speed motor (Dahlander windings Y/YY), 3 ph. / 50 Hz, protection to IP 54												Pole switch			
VARD 560/8/4	6790	705/1440	6590/13570	0.90/3.60	400	2.9/8.3	—	471	60	—	100.0	PDA 12 ³⁾ 5081	— —	SDD 2	SDZ 2
Explosion proof, E Exe II, 3 ph. / 50 Hz, temperature class T1-T3, protected to IP 54															
VARD 560/8 Ex	6712	700	7120	0.37	400	1.61	—	470	40	—	85.0	not permitted	not permitted	SDD 2	SDZ 2
VARD 560/6 Ex	6713	900	9360	1.10	400	3.10	—	470	40	—	90.0	not permitted	not permitted	SDD 2	SDZ 2
VARD 560/4 Ex ⁴⁾	6714	1440	14980	3.60	400	7.70	—	498	40	—	105.0	not permitted	not permitted	SDD 2	SDZ 2

* Ex models: For nominal value of motor see information on page 16

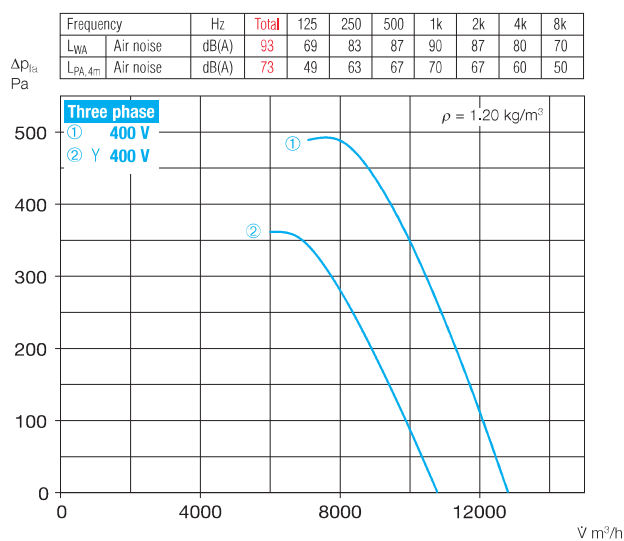
¹⁾ includes full motor protection unit

²⁾ includes operation and speed switch

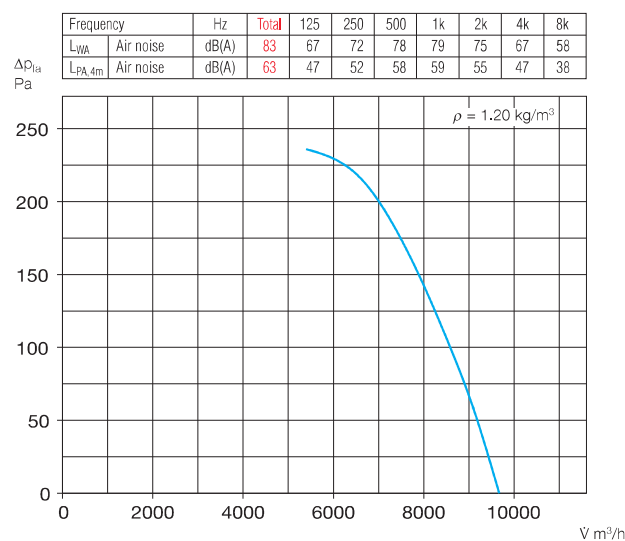
³⁾ see product page for flush mounted version

⁴⁾ Vibration monitoring is necessary (on site) pursuant to DIN EN 14986.

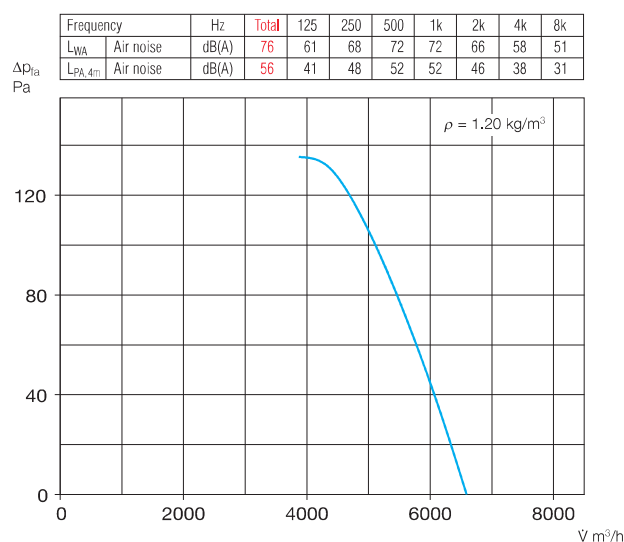
560/4 R.P.M. = 1450



560/6 R.P.M. = 950



560/8 R.P.M. = 725



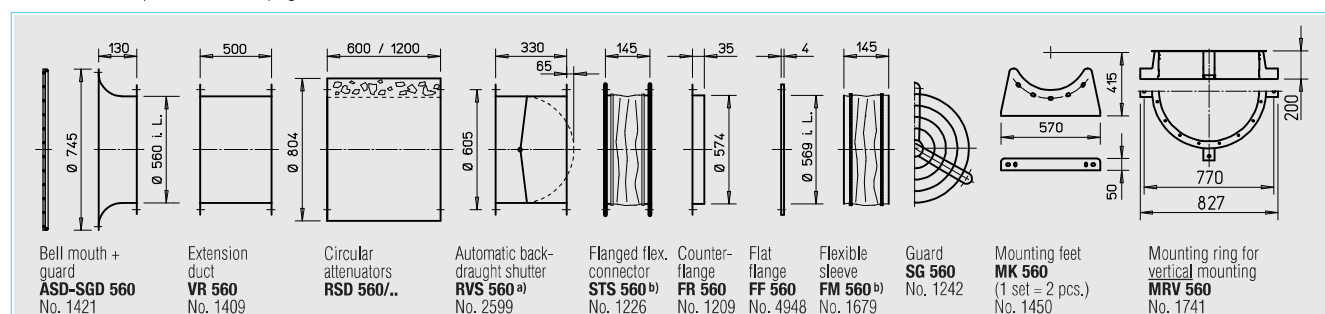
Other accessories Page

b) Accessories for ex-proof fans

Flanged flexible connector
Type STS 560 Ex Ref. no. 2508
Flexible sleeve
Type FM 560 Ex Ref. no. 1695

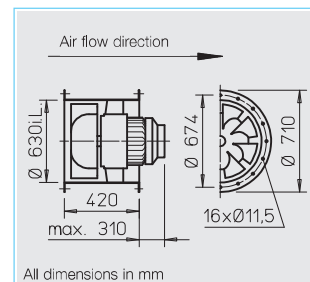
Attenuators 421 on
Shutters and grilles 487 on
Speed controllers and switches 525 on

Accessories Specification see page 231 on



^{a)} For motorised shutters see accessory pages

^{b)} Types for explosion proof fans see left page



■ Specification

□ Casing

Manufactured in galvanised sheet steel with flanges on both sides to DIN 24155, Pt. 3, with fixed guide vanes and motor support, hot dipped galvanised.

□ Impeller

Optimised for high pressure and performance. Specially developed mixed-flow curved impeller manufactured from hot dipped galvanised steel.

□ Motor

Direct driven, maintenance free flange motor, totally enclosed with an aluminium casing and cooling fins, protected to IP 54. Sealed for life ball bearings with tropicalized protection of windings and interference-free. Optional drainage holes made to order (please state installation position).

□ Speed control

Stepless (0-100%) by using a frequency inverter (excluding pole switch models). If the fan is to be controlled by a frequency inverter without a sine filter, this must be stated when ordering. This requires a change of fan design and potential additional costs. Explosion proof fans are not controllable.

□ Electrical connection

Terminal box fitted externally on the casing as standard (IP 55).

□ Installation

Installation in any position. Ensure that motor drainage holes (where used) face downwards.

□ Motor protection

Model VARD 630/4 has PTC thermistors which must be connected to a full motor protection unit (see table below) for effective motor protection. Models without thermal contacts must be protected by a conventional circuit breaker.

□ Sound levels

Data shown within the performance curves refer to sound power levels. For determination of the lower sound pressure levels refer to diagram on "Technical information" page. Sound emission and acoustic information on page 10 on.

■ Information

Information	Page
Technical description	208
Selection chart	209
Information for planning	10 on

Made to order designs

Alternative voltages, frequencies, protection classes, acid protection, high temperatures etc. are available on request.

For safety and correct use note the technical information on page 15 on.

Type	Ref. no.	R.P.M.	Air flow volume (FD)	Motor power*	Voltage	Current*		Wiring diagram	Maximum air standard supply	flow temp. speed controlled	Nominal weight (net)	5 step transformer controller Pole switch		Full motor protection starter using the motor thermal contacts		Anti vibration mounts	
		min ⁻¹	l m³/h	kW	V	A	A	No.	+°C	+°C	kg	Type	Ref. no.	Type	Ref. no.	Type	Type
3 Phase motor, 50 Hz, protection to IP 54																	
VARD 630/4	6717	1440	21320	6,20	400	12,0/6,9	—	776	60	—	145,0	FU-BS 14 ¹⁾	5463	MSA ⁴⁾	1289	SDD 2	SDZ 2
Pole-switching, 2 speed motor (Dahlander windings Y/YY), 3 ph. / 50 Hz, protection to IP 54												Pole switch					
VARD 630/8/4	6792	715/1430	10590/21170	1,40/5,50	400	5,0/12,0	—	471	60	—	145,0	PDA 12 ³⁾	5081	—	—	SDD 2	SDZ 2
Explosion proof, E Exe II, 3 ph. / 50 Hz, temperature class T1-T3, protection to IP 54																	
VARD 630/8 Ex	6718	700	10220	0,95	400	2,75	—	470	40	—	110,0	not permitted		not permitted		SDD 2	SDZ 2
VARD 630/6 Ex	6719	950	13990	1,90	400	4,70	—	470	40	—	130,0	not permitted		not permitted		SDD 2	SDZ 2
VARD 630/4 Ex ⁵⁾	6720	1435	21400	6,80	400	13,1	—	498	40	—	165,0	not permitted		not permitted		SDD 2	SDZ 3

* Ex models: For nominal value of motor see information on page 16

³⁾ see product page for flush mounted version

¹⁾ includes full motor protection unit and Sine filter

⁴⁾ for PTC Thermistor temp. sensor

²⁾ includes operation and speed switch

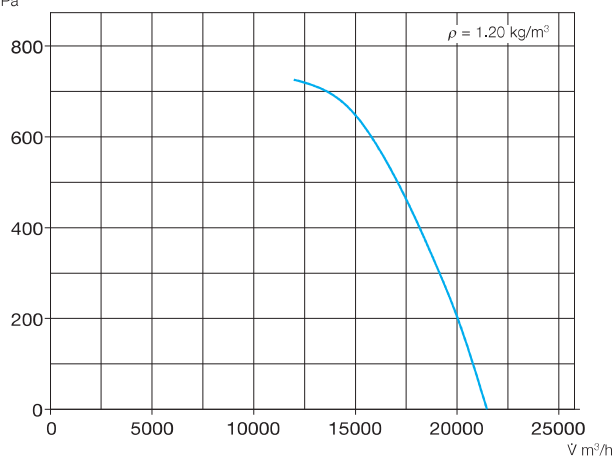
⁵⁾ Vibration monitoring is necessary (on site) pursuant to DIN EN 14986.

630/4

R.P.M. = 1450

Frequency		Hz	Total	125	250	500	1k	2k	4k	8k	
Δp_{rel}	L _{WA}	Air noise	dB(A)	97	73	89	91	93	91	84	74
	L _{PA 4m}	Air noise	dB(A)	77	53	69	71	73	71	64	54

ΔP_{ts}
Pa

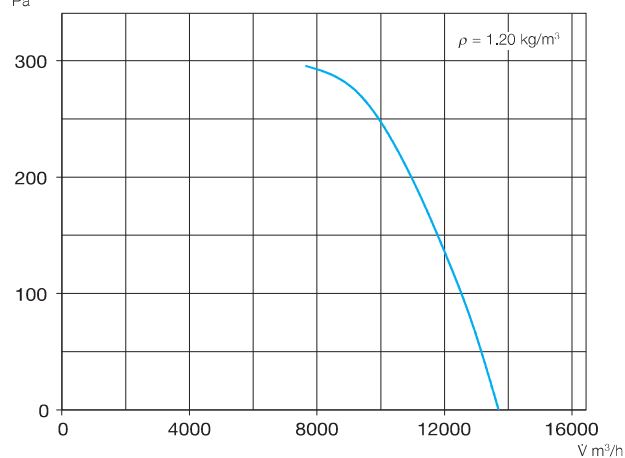


630/6

R.P.M. = 950

Frequency		Hz	Total	125	250	500	1k	2k	4k	8k	
Δp_{ia}	L _{WA}	Air noise	dB(A)	87	70	76	82	83	78	70	62
	L _{PA,4m}	Air noise	dB(A)	67	50	56	62	63	58	50	42

ΔP_{ts}
Pa

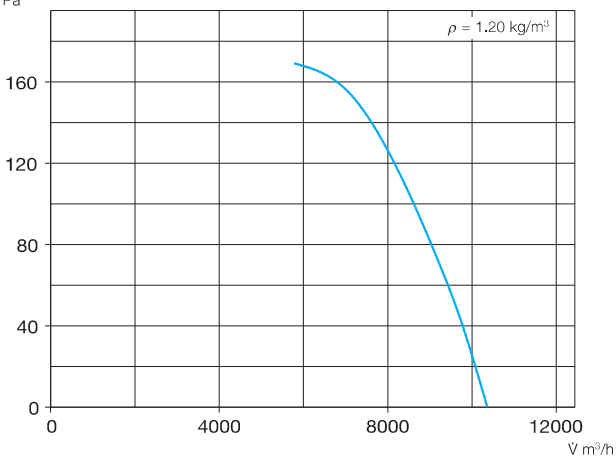


630/8

R.P.M. = 725

Frequency		Hz	Total	125	250	500	1k	2k	4k	8k	
Δp_{ja}	L _{WA}	Air noise	dB(A)	80	65	71	76	75	70	62	55
	L _{PA, 4m}	Air noise	dB(A)	60	45	51	56	55	50	42	35

ΔP_{ts}
Pa



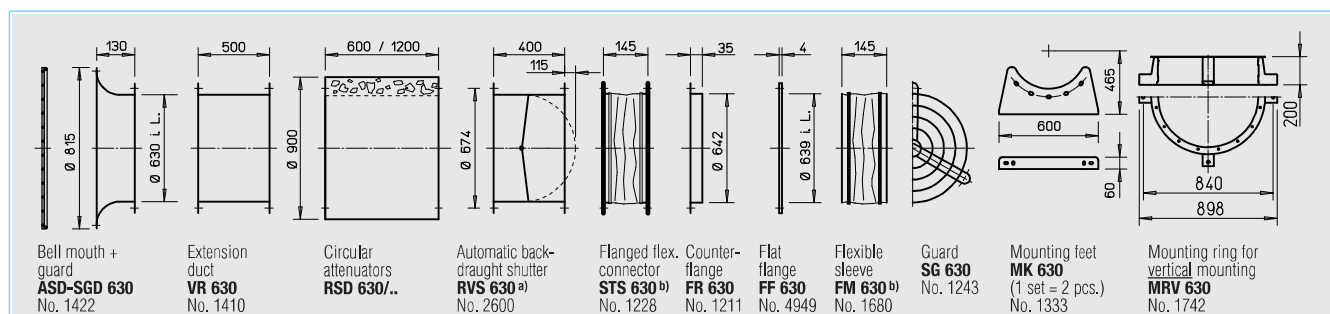
Other accessories Page

b) Accessories for ex-proof fans

Flanged flexible connector
Type STS 630 Ex Ref. no. 2509
Flexible sleeve
Type FM 630 Ex Ref. no. 1696

Attenuators 421 on
Shutters and grilles 487 on
Speed controllers and switches 525 on

Accessories Specification see page 231 on



a) For motorised shutters see accessory pages

b) Types for explosion proof fans see left page