

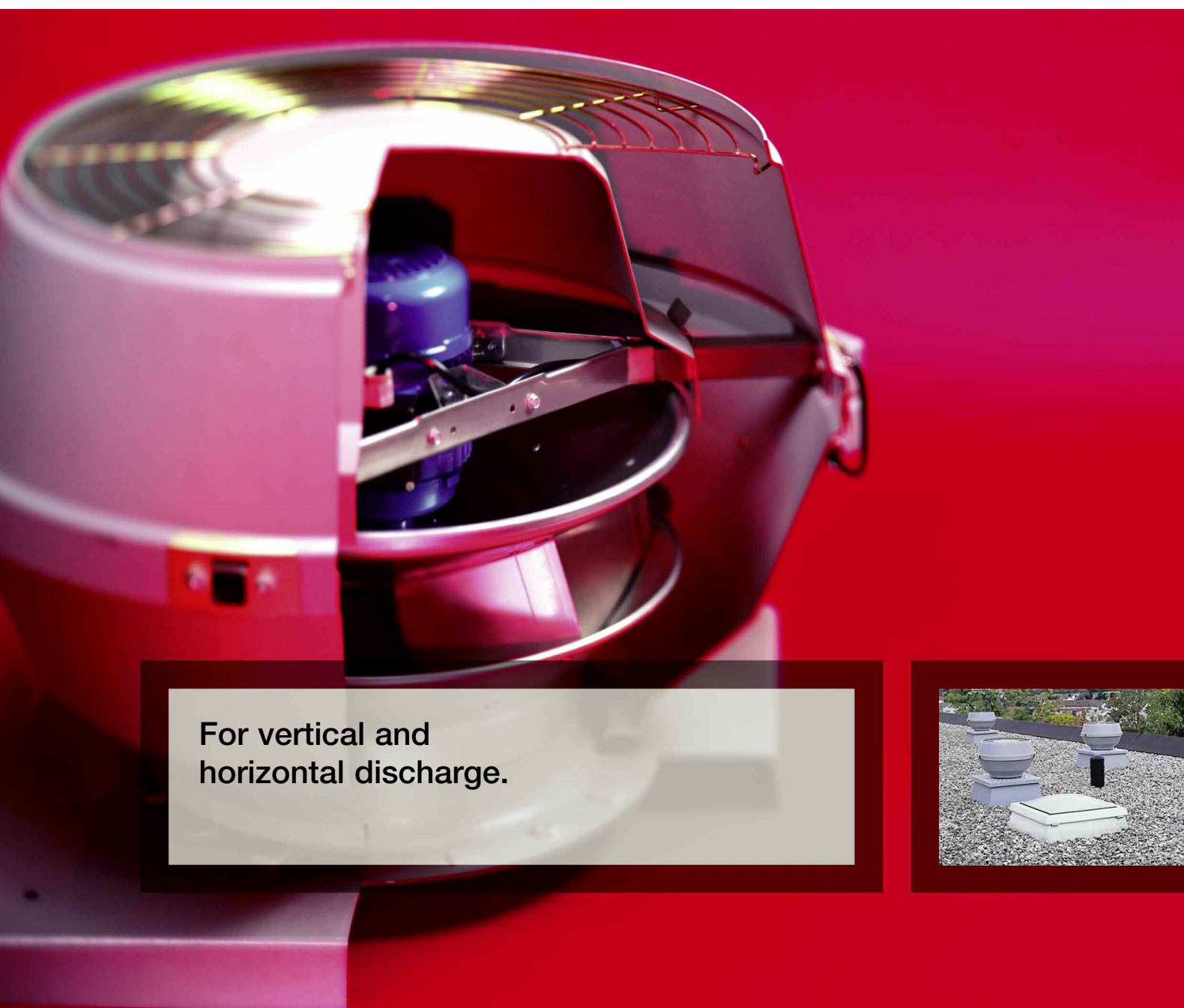
The wide range of Helios roof fans with an extensive accessory range offers the optimum solution for every application.

From 300 to 30 000 m<sup>3</sup>/h air flow volume, with motors which stand inside or outside of the air stream, vertical or horizontal discharge, in metal or glass fibre construction, for air flow temperatures from +40 °C, +100 °C as well as in temperature class F 400 (120 min.) according DIN 12101-3. Helios has it.

The Helios accessory is perfectly matched to the roof fans and completes the integrated total solution.

The optional purlin boxes and attenuators ø 180 to 450 mm have a hinge mechanism that results in advantages for cleaning and fitting.

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For vertical and horizontal discharge.



The following information completes the sector 'general information' and the information of the product pages.



■ **Models RC.. and VC..**

Designed as part of a modular roof fan kit consisting of roof cowl (RC) fan (HQ...) purlin box and soaker sheet. The RC roof cowl can be used alone to provide an easy to use roof termination. The RC unit has a horizontal air outlet and the VC has a vertical air outlet.

■ **Specification**

The RC and VC roof fans are a mix and match design using the Helios range of plate fans. The cowl designation specifies the plate fan size it matches e.g. RC 355 uses 355 plate fans. Some roof cowls cover two plate fan sizes. There is a selection of fans available for each roof cowl to make the roof fan. These include the standard single and three phase models as well as the two speed pole switching and Dahlander models. The cowls provide weather protection for the fans. The RC cowls can be used for either supply or extract ventilation. They are suitable for all roof styles and most roof profiles.

Manufactured from glass reinforced polyester resin (G.R.P.) the cowls are of a strong and lightweight construction. The cowls are corrosion resistant and the UV stabilised outer gel coat provides a weather resistant finish.

■ **Contact safety**

RC cowls are fitted as standard with a bird guard of corrosion resistant mesh. Backdraught shutters are an optional extra. VC cowls with backdraught shutters as standard.

■ **Fans**

Any Helios plate fan of the matching size can be used with the roof cowl (with the exception of the explosion proof fans) the fan is fixed between the base of the roof cowl and the roof curb or purlin box.

■ **Purlin Boxes**

Manufactured from glass reinforced polyester resin (G.R.P.) the purlin boxes are designed to fit on trimmers fixed to the roof purlins, to support the weight of

the roof cowl, fan and purlin box. Thus the roof sheeting does not support the weight of the roof fan.

■ **Soaker Sheets**

Manufactured from glass reinforced polyester resin (G.R.P.) the soaker sheets can be made specifically to match most roof profiles. The upstand in the centre is designed to provide weather resistance and is not designed to carry the weight of the roof fan. The upstand fits over the purlin box to complete the installation.

■ **On site roof curb**

Where the roof unit is to be mounted on a solid roof a roof curb or upstand can be made on site using a timber or metal construction (dimensions shown on the product pages).

To ensure a waterproof finish the curb should be sealed on to the roof using flashing. The top surface of the curb must be flat to ensure the fan and cowl sit firmly in place (note – on some models of fan the curb may need easing to accommodate the fan guard).

■ **Fixing Fan, Cowl etc.**

Where the fan and cowl are fixed to a roof curb the cowl base should be drilled to match the chosen plate fan four fixing holes. The cowl and plate fan are held together with nuts and bolts. The unit is secured to the curb by fixing through the sides of the base. Packing may be required to avoid damage to the cowl base. When the roof fan is fitted to purlin box and trimmers, first fit the trimmers purlin box and soaker sheet. The cowl base and purlin box should be drilled to match the chosen plate fan four fixing holes. The cowl and plate fan are held in position with nuts and bolts through the base, plate and purlin box.

Information	Pages
Design of ventilation systems, acoustic, explosion proof	12 on
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For quick selection of roof fans. Select the pressure from the top of the table and follow column downwards until you reach the volume (in m<sup>3</sup>/s)

that you require. Read the model and diameter by following the row to the left hand columns.

Type	Diameter mm	Max. pitch	Poles	R.P.M. min <sup>-1</sup>	Air flow volume in V m <sup>3</sup> /s in dependence to static pressure = N/m <sup>2</sup> = freely available pressure (ΔP <sub>stat.</sub> ) in Pa												
					0	25	50	75	100	125	150	175	200	225	250	275	300
<b>Horizontal discharge</b>																	
RC + HQ..	250		4	1400	0.200	0.125	0.044										
RC + HQ..	250		2	2590	0.456	0.431	0.408	0.375	0.336								
RC + HQ..	315		6	915	0.314	0.222											
RC + HQ..	315		4	1405	0.489	0.433	0.344										
RC + HQ..	355		6	940	0.464	0.353											
RC + HQ..	355		4	1405	0.703	0.642	0.561										
RC + HQ..	400		6	905	0.642	0.511											
RC + HQ..	400		4	1340	0.961	0.889	0.803	0.689									
RC + HQ..	450		6	960	0.975	0.872	0.686										
RC + HQ..	450		4	1250	1.278	1.194	1.111	0.969									
RC + HQ..	500		6	910	1.269	1.133	0.964										
RC + HQ..	500		4	1410	1.981	1.900	1.814	1.711	1.586	1.442							
RC + HQ..	560		6	955	1.764	1.567	1.319										
RC + HQ..	560		4	1405	2.786	2.675	2.556	2.428	2.286	2.136	1.983	1.722					
RC + HQD	630		8	735	1.803	1.556											
RC + HQ..	630		6	955	2.358	2.150	1.953										
RC + HQW	630		4	1415	3.883	3.761	3.639	3.508	3.369	3.217	3.050	2.862	2.642	2.436			
RC + HQD	710	31	8	700	2.839	2.511	2.114										
RC + HQD	710	28	6	920	3.536	3.331	3.033	2.733	2.386								
RC + HQD	710	35	6	930	4.003	3.735	3.475	3.139	2.794								
RC + HQW	710	25	6	925	3.042	2.817	2.558	1.847									
RC + HQD	710	20	4	1365	4.519	4.369	4.214	4.047	3.914	3.776	3.525	3.336	3.131	2.889	2.508	1.986	1.708
RC + HQD	710	26	4	1370	5.033	4.883	4.728	4.567	4.394	4.214	4.019	3.808	3.575	3.311	3.033		
RC + HQD	710	30	4	1435	5.803	5.647	5.486	5.317	5.144	4.967	4.781	4.594	4.394	4.181	3.944	3.689	
<b>Vertical discharge</b>																	
VC + HQ..	355		6	940	0.497	0.394											
VC + HQ..	355		4	1405	0.739	0.678	0.614	0.489									
VC + HQ..	400		6	905	0.675	0.572											
VC + HQ..	400		4	1340	1.011	0.936	0.881	0.750									
VC + HQ..	450		6	960	1.036	0.925	0.744										
VC + HQ..	450		4	1250	1.342	1.272	1.144	1.019									
VC + HQ..	500		6	910	1.336	1.200	1.031										
VC + HQ..	500		4	1410	2.083	2.000	1.914	1.814	1.703	1.547	1.378						
VC + HQ..	560		6	955	1.903	1.678	1.433	1.128									
VC + HQ..	560		4	1405	2.964	2.847	2.725	2.597	2.453	2.294	2.119	1.931					
VC + HQD	630		8	735	1.914	1.653											
VC + HQ..	630		6	955	2.472	2.289	2.078	1.756									
VC + HQW	630		4	1415	4.119	3.994	3.864	3.728	3.586	3.436	3.319	3.081	2.867	2.633			
VC + HQD	710	31	8	700	3.000	2.672	2.289	1.747									
VC + HQD	710	28	6	920	3.750	3.503	3.236	2.933	2.575	2.125							
VC + HQD	710	35	6	930	4.342	4.069	3.758	3.394	3.058								
VC + HQW	710	25	6	925	3.314	3.022	2.750	2.389									
VC + HQD	710	20	4	1365	4.739	4.586	4.428	4.264	4.092	3.911	3.719	3.517	3.303	3.064	2.756	2.250	1.764
VC + HQD	710	26	4	1370	5.356	5.192	5.025	4.850	4.675	4.486	4.289	4.072	3.836	3.567	3.319	3.000	
VC + HQD	710	30	4	1435	6.139	5.978	5.819	5.656	5.486	5.311	5.128	4.936	4.733	4.511	4.292	4.042	3.722

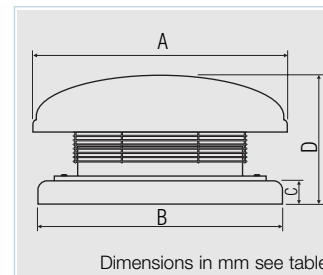
**■ Specification**

The range of HELIOS horizontal RC roof cowls are designed to be aerodynamically stable. The cowls provide weather protection to fans, when used and may also be used to screen roof openings or duct terminations. Manufactured from glass reinforced polyester resin (G.R.P), reinforced with coremat to provide additional strength with light weight. Units are finished in a hard gloss, UV stabilised, gel coat, giving an attractive weather proof finish.

**■ Fans**

Cowls accept any HELIOS plate axial fan and must be ordered separately. **Note:** Cowls are not suitable for use in combination with explosion proof fans. For further fan specification please see axial fan pages.

Horizontal discharge roof fan



Dimensions in mm see table

Type	Dimensions in mm			
	A	B	C	D
RC 200/250	490	500	85	270
RC 315	545	555	95	340
RC 355	670	685	100	380
RC 400/450	765	790	100	460

Type	Ref. No.	Nominal weight kg
RC 200/250	5127	4.3
RC 315	5128	6.5
RC 355	5129	8.5
RC 400/450	5130	12

**■ Speed control**

Most models are speed controllable via voltage reduction.

**■ Delivery**

Cowls and fans are supplied as separate items.

**■ Reverse operation**

Horizontal roof fans without back draught shutter are reversible when wired to a reversing switch. For intake allow a drop in performance.

**■ Backdraught shutter**

Backdraught shutters for horizontal models are available as an optional extra.

**■ Bird guard**

Bird guards are fitted as standard.

**■ Electrical connection**

Terminals in motor end cap (IP 55).

**■ Roof cowls for horizontal discharge**

Manufactured from glass reinforced polyester resin (G.R.P) and supplied complete with bird guard, neoprene sealing strip and fixings. Optional backdraught shutters see facing page.

**■ Colours**

Units may be supplied in any BS or RAL colour. 8 standard colours are available as a no cost option. Other colours may incur a minimal surcharge.

**■ The following colours are available as standard:**

- BS 00 A 05 (Silver Grey) Standard
- BS 10 A 05 (Goose Wing Grey)
- BS 18 B 25 (Merlin Grey)
- BS 08 B 29 (Dark Brown)
- BS 10 B 19 (Mushroom)
- BS 12 B 27 (Olive Green)
- BS 12 B 21 (Moorland Green)
- HELIOS Bright Red

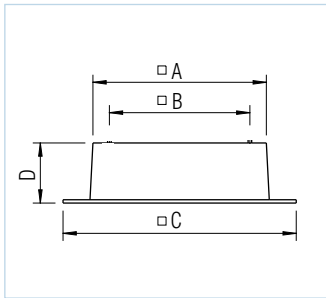
Information	Pages
Controllers and motor protection units	397 on
The full range of axial fans shown on pages 114 on may also be used with the cowls.	

Roof cowl horizontal discharge	Fan Type	Ref. No.	R.P.M.	Air flow volume (FID)	Power	Current	Wiring diagram	Maximum air flow temperature controlled		Nominal fan weight	Controllers				
								full load	+°C		5 step transformer	Electronic controller			
Type	Ref. No.		min <sup>-1</sup>	m <sup>3</sup> /h	kW	Amps	No.	+°C	+°C	kg	Type	Ref. No.	Type	Ref. No.	
<b>1 Phase motor, 230 V / 1 ph. / 50 Hz, protection to IP 55</b>															
RC 200/250	5127	HQW 250/4	1103	1400	720	0.04	0.20	439	60	40	7.5	TSW 0.3	3608	ESA 1	0238
RC 200/250	5127	HQW 250/2	1104	2590	1640	0.11	0.80	317	60	40	6.5	TSW 1.5	1495	ESA 1	0238
RC 315	5128	HQW 315/6	1105	915	1130	0.04	0.21	317	60	40	8.0	TSW 0.3	3608	ESA 1	0238
RC 315	5128	HQW 315/4	1106	1405	1760	0.06	0.50	475	60	40	8.0	TSW 1.5	1947	ESA 1	0238
RC 355	5129	HQW 355/6	1107	940	1670	0.05	0.33	475	60	40	9.5	TSW 1.5	1947	ESA 1	0238
RC 355	5129	HQW 355/4	1108	1405	2530	0.12	0.90	475	60	40	9.5	TSW 1.5	1947	ESA 1	0238
RC 400/450	5130	HQW 400/6	1110	905	2310	0.06	0.45	475	60	40	13.0	TSW 1.5	1947	ESA 1	0238
RC 400/450	5130	HQW 400/4	1111	1340	3460	0.16	1.30	475	60	40	13.0	TSW 1.5	1947	ESA 3	0239
RC 400/450	5130	HQW 450/6	0991	960	3510	0.12	1.00	475	60	40	15.5	TSW 1.5	1947	ESA 3	0239
RC 400/450	5130	HQW 450/4	0992	1250	4600	0.33	2.10	475	60	40	15.5	TSW 3.0	1948	ESA 3	0239
<b>3 Phase motor, 400 V / 3 ph. / 50 Hz, protection to IP 55</b>															
RC 200/250	5127	HQD 250/4	1115	1410	880	0.05	0.20	469	60	40	6.5	RDS 1 <sup>1)</sup>	1314	—	—
RC 200/250	5127	HQD 250/2	1116	2360	1490	0.11	0.35	469	60	40	6.5	RDS 1 <sup>1)</sup>	1314	—	—
RC 315	5128	HQD 315/6	1117	990	1230	0.04	0.25	469	60	40	8.0	RDS 1 <sup>1)</sup>	1314	—	—
RC 315	5128	HQD 315/4	1118	1360	1710	0.06	0.25	469	60	40	8.0	RDS 1 <sup>1)</sup>	1314	—	—
RC 355	5129	HQD 355/6	1120	950	1690	0.05	0.30	469	60	40	9.5	RDS 1 <sup>1)</sup>	1314	—	—
RC 355	5129	HQD 355/4	1121	1435	2590	0.12	0.85	469	60	40	9.5	RDS 1 <sup>1)</sup>	1314	—	—
RC 400/450	5130	HQD 400/6	1123	935	2390	0.06	0.30	469	60	40	13.0	RDS 1 <sup>1)</sup>	1314	—	—
RC 400/450	5130	HQD 400/4	1124	1395	3600	0.16	0.85	469	60	40	13.0	RDS 1 <sup>1)</sup>	1314	—	—
RC 400/450	5130	HQD 450/6	0993	950	3470	0.12	0.45	469	60	40	15.5	RDS 1 <sup>1)</sup>	1314	—	—
RC 400/450	5130	HQD 450/4	0994	1335	4910	0.33	1.00	469	50	40	15.5	RDS 2 <sup>1)</sup>	1315	—	—

<sup>1)</sup> Includes full motor protection unit; alternative: TSW/TSD; 5 step transformer controllers without motor protection unit.

■ Selection chart

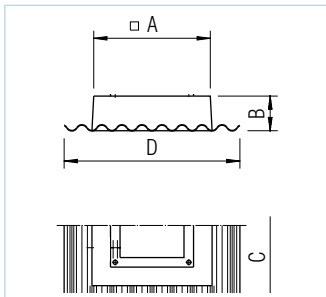
Type	Diameter mm	Max. pitch	Poles	R.P.M. min <sup>-1</sup>	Air flow volume in V m <sup>3</sup> /s in dependence to static pressure = N / m <sup>2</sup> = freely available pressure ( $\Delta p_{stat.}$ ) in Pa															
					0	25	50	75	100	125	150	175	200	225	250	275	300			
RC + HQ..	250		4	1400	0.200	0.125	0.044													
RC + HQ..	250		2	2590	0.456	0.431	0.408	0.375	0.336											
RC + HQ..	315		6	915	0.314	0.222														
RC + HQ..	315		4	1405	0.489	0.433	0.344													
RC + HQ..	355		6	940	0.464	0.353														
RC + HQ..	355		4	1405	0.703	0.642	0.561													
RC + HQ..	400		6	905	0.642	0.511														
RC + HQ..	400		4	1340	0.961	0.889	0.803	0.689												
RC + HQ..	450		6	960	0.975	0.872	0.686													
RC + HQ..	450		4	1250	1.278	1.194	1.111	0.969												



■ Purlin box for horizontal roof cowls

Manufactured from glass reinforced polyester resin (G.R.P.). Corrosion resistant and thermally efficient, finished in goose wing grey to match most building applications. The units are designed to give load bearing support to the range of HELIOS fans and cowls and may be fitted in pitched or flat roof applications.

Type	Ref. No.	Dimensions in mm				Nominal weight kg
		A	B	C	D	
PB 200/250	7656	425	300	595	225	2.0
PB 315	7657	445	350	615	220	2.5
PB 355	7658	625	400	780	240	4.0
PB 400/450	7659	730	510	880	240	6.0

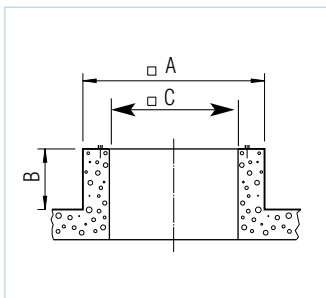


■ Soaker sheets

Available in an extensive range of profiles and colours to match HELIOS roof cowls. Standard colour is grey. Manufactured from glass reinforced polyester resin (G.R.P) with chamfered profiles around the upstand to stop water build-up.

Type	Ref. No.	Dimensions in mm			
		A	B	C	D
SS 200/250	7662	400	150	1800	<sup>1)</sup>
SS 315	7663	500	150	1800	<sup>1)</sup>
SS 355	7664	650	150	1800	<sup>1)</sup>
SS 400/450	7665	750	150	1800	<sup>1)</sup>

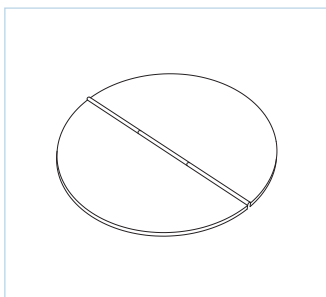
<sup>1)</sup> Dimension D and weight vary for different profiles.



■ Curb dimensions

Curbs should be manufactured from hardwood, treated soft-wood or a similar material. All dimensions include any flashing covering the curb. On some models the fan guard is close to the edge of the fan plate, so on it may be necessary on site to make provision for this in the curb.

Cowl size	A	B	C
	Max.	Min.	Min.
200/250	425	150	230/280
315	445	150	345
355	625	150	390
400/450	730	150	440/490



■ Backdraught shutter

Backdraught shutters are available as an optional extra. They are manufactured from glass reinforced polyester resin (G.R.P) and reduce unwanted draughts and heat loss when the roof fan is not in use.

Type	Ref. No.
BS 200/250	7650
BS 315	7651
BS 355	7652
BS 400/450	7653



**■ Specification**

The range of HELIOS horizontal RC roof cowls are designed to be aerodynamically stable. The cowls provide weather protection to fans, when used and may also be used to screen roof openings or duct terminations. Manufactured from glass reinforced polyester resin (G.R.P), reinforced with coremat to provide additional strength with light weight. Units are finished in a hard gloss, UV stabilised, gel coat, giving an attractive weather proof finish.

**■ Fans**

Cowls accept any HELIOS plate axial fan and must be ordered separately. Note: Cowls are not suitable for use in combination with explosion proof fans. For further specification please see axial fan pages.

**■ Speed control**

Most models are speed controllable via voltage reduction.

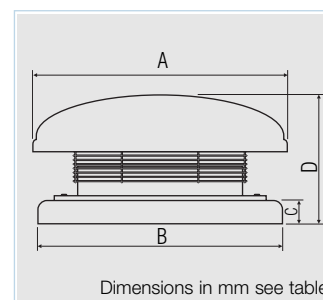
**■ Delivery**

Cowls and fans are supplied as separate items.

**■ Reverse operation**

Horizontal roof fans without back draught shutter are reversible when wired to a reversing switch. For intake allow a drop in performance.

Horizontal discharge roof fan



Type	Dimensions in mm			
	A	B	C	D
RC 500/560	1000	925	110	550
RC 630/710	1115	1045	110	650

Type	Ref. No.	Nominal weight kg
RC 500/560	5131	21
RC 630/710	5132	27

**■ Backdraught shutter**

Backdraught shutters for horizontal models are available as an optional extra.

**■ Bird guard**

Bird guards are fitted as standard.

**■ Electrical connection**

Terminals in motor end cap (IP 55).

**■ Roof cowls for horizontal discharge**

Manufactured from glass reinforced polyester resin (G.R.P) and supplied complete with bird guard, neoprene sealing strip and fixings. Optional backdraught shutters see facing page.

**■ Colours**

Units may be supplied in any BS or RAL colour. 8 standard colours are available as a no cost option. Other colours may incur a minimal surcharge.

**■ The following colours are available as standard:**

- BS 00 A 05 (Silver Grey) Standard
- BS 10 A 05 (Goose Wing Grey)
- BS 18 B 25 (Merlin Grey)
- BS 08 B 29 (Dark Brown)
- BS 10 B 19 (Mushroom)
- BS 12 B 27 (Olive Green)
- BS 12 B 21 (Moorland Green)
- HELIOS Bright Red

Information	Pages
Controllers and motor protection units	397 on
The full range of axial fans shown on pages 114 on may also be used with the cowls.	

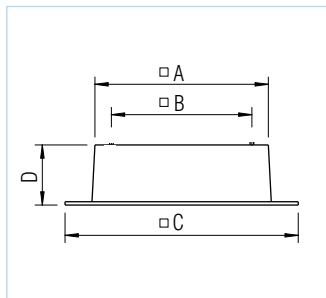
Roof cowl horizontal discharge	Fan Type	Ref. No.	R.P.M.	Air flow volume (FID)	Power	Current	Wiring diagram	Maximum air flow temperature		Nominal fan weight	Controllers				
								full load	controlled		5 step transformer	Electronic controller			
Type	Ref. No.		min <sup>-1</sup>	m <sup>3</sup> /h	kW	Amps	No.	+°C	+°C	kg	Type	Ref. No.	Type	Ref. No.	
<b>1 Phase motor, 230 V / 1 ph. / 50 Hz, protection to IP 55</b>															
RC 500/560	5131	HQW 500/6	1112	910	4570	0.14	1.20	475	60	40	17.3	TSW 1.5	1947	ESA 3	0239
RC 500/560	5131	HQW 500/4	1113	1410	7130	0.45	2.60	475	60	40	17.3	TSW 3.0	1948	ESA 3 i	7806
RC 500/560	5131	HQW 560/6	0385	955	6350	0.25	2.10	475	60	40	22.0	TSW 3.0	1948	ESA 3	0239
RC 500/560	5131	HQW 560/4	5054	1405	10030	0.75	5.60	475	40	40	25.0	TSW 7.5	1950	ESA 6 i	7807
RC 630/710	5132	HQW 630/6	5037	955	8490	0.45	3.20	475	60	40	25.0	TSW 5.0	1949	ESA 6 i	7807
RC 630/710	5132	HQW 630/4	5056	1415	13980	1.50	7.00	475	40	40	35.0	TSW 7.5	1950	ESA 10 i	7808
RC 630/710	5132	HQW 710/6/..	5047	925	10950	0.50	2.50/(3.00)	475	25*	40	60.0	TSW 5.0	1949	ESA 6 i	7807
<b>3 Phase motor, 400 V / 3 ph. / 50 Hz, protection to IP 55</b>															
RC 500/560	5131	HQD 500/6	1126	910	4570	0.14	0.50	469	60	40	17.2	RDS 1 <sup>1)</sup>	1314	—	—
RC 500/560	5131	HQD 500/4	1127	1320	6670	0.45	1.25	469	40	40	17.2	RDS 2 <sup>1)</sup>	1315	—	—
RC 500/560	5131	HQD 560/6	0386	960	6380	0.25	1.00	469	60	40	22.0	RDS 2 <sup>1)</sup>	1315	FUR 3 <sup>1)</sup>	9485
RC 500/560	5131	HQD 560/4	0387	1380	9850	0.75	1.75	469	40	40	23.0	RDS 2 <sup>1)</sup>	1315	FUR 3 <sup>1)</sup>	9485
RC 630/710	5132	HQD 630/8	5029	735	6490	0.25	1.50	469	60	40	27.0	RDS 2 <sup>1)</sup>	1315	FUR 3 <sup>1)</sup>	9485
RC 630/710	5132	HQD 630/6	5027	970	8620	0.55	1.80	469	60	40	28.0	RDS 2 <sup>1)</sup>	1315	FUR 3 <sup>1)</sup>	9485
RC 630/710	5132	HQD 710/8/..	5599	700	10220	0.37	1.60/(1.60)	469	31*	40	57.0	RDS 2 <sup>1)</sup>	1315	FUR 3 <sup>1)</sup>	9485
RC 630/710	5132	HQD 710/6/6..	5602	920	12730	0.43/0.75	1.2/2.2	520	28*	40	55.0	RDS 4 <sup>1)</sup>	1316	FUR 3 <sup>1)</sup>	9485
RC 630/710	5132	HQD 710/6/6..	5603	930	14410	0.71/1.30	2.10/3.50	520	35*	40	60.0	RDS 4 <sup>1)</sup>	1316	FUR 4 <sup>1)</sup>	9487
RC 630/710	5132	HQD 710/4/4..	5604	1365	16270	0.95/1.55	2.10/3.70	520	20*	40	60.0	RDS 7 <sup>1)</sup>	1578	FUR 4 <sup>1)</sup>	9487
RC 630/710	5132	HQD 710/4/4..	5605	1370	18120	1.5/2.2	3.50/5.90	520	26*	40	75.0	RDS 7 <sup>1)</sup>	1578	FUR 6 <sup>1)</sup>	9489
RC 630/710	5132	HQD 710/4/..	5606	1435	20890	3.00	6.7	776	30*	40	88.0	—	—	FUR 6 <sup>1)</sup>	9489

<sup>1)</sup> Includes full motor protection unit; alternative: TSW/TSD; 5 step transformer controllers without motor protection unit.

\* Max. pitch angle [°]

■ Selection chart

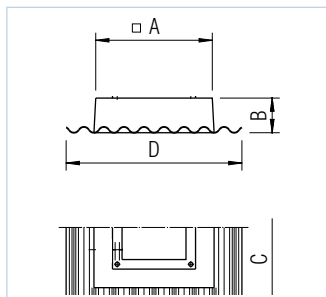
Type	Diameter mm	Max. pitch	Poles	R.P.M. min <sup>-1</sup>	Air flow volume in V m <sup>3</sup> /s in dependence to static pressure = N / m <sup>2</sup> = freely available pressure ( $\Delta p_{stat.}$ ) in Pa													
					0	25	50	75	100	125	150	175	200	225	250	275	300	
RC + HQ..	500		6	910	1.269	1.133	0.964											
RC + HQ..	500		4	1410	1.981	1.900	1.814	1.711	1.586	1.442								
RC + HQ..	560		6	955	1.764	1.567	1.319											
RC + HQ..	560		4	1405	2.786	2.675	2.556	2.428	2.286	2.136	1.983	1.722						
RC + HQD	630		8	735	1.803	1.556												
RC + HQ..	630		6	955	2.358	2.150	1.953											
RC + HQW	630		4	1415	3.883	3.761	3.639	3.508	3.369	3.217	3.050	2.862	2.642	2.436				
RC + HQD	710	31°	8	700	2.839	2.511	2.114											
RC + HQD	710	28°	6	920	3.536	3.331	3.033	2.733	2.386									
RC + HQD	710	35°	6	930	4.003	3.735	3.475	3.139	2.794									
RC + HQW	710	25°	6	925	3.042	2.817	2.558	1.847										
RC + HQD	710	20°	4	1365	4.519	4.369	4.214	4.047	3.914	3.776	3.525	3.336	3.131	2.889	2.508	1.986	1.708	
RC + HQD	710	26°	4	1370	5.033	4.883	4.728	4.567	4.394	4.214	4.019	3.808	3.575	3.311	3.033			
RC + HQD	710	30°	4	1435	5.803	5.647	5.486	5.317	5.144	4.967	4.781	4.594	4.394	4.181	3.944	3.689		



■ Purlin box for horizontal roof cowls

Manufactured from glass reinforced polyester resin (G.R.P.). Corrosion resistant and thermally efficient, finished in goose wing grey to match most building applications. The units are designed to give load bearing support to the range of HELIOS fans and cowls and may be fitted in pitched or flat roof applications.

Type	Ref. No.	Dimensions in mm				Nominal weight kg
		A	B	C	D	
PB 500/560	7660	865	620	1050	250	8.0
PB 630/710	7661	900	780	1080	260	10

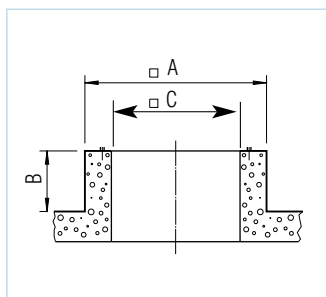


■ Soaker sheets

Available in an extensive range of profiles and colours to match HELIOS roof cowls. Standard colour is grey. Manufactured from glass reinforced polyester resin (G.R.P) with chamfered profiles around the upstand to stop water build-up.

Type	Ref. No.	Dimensions in mm			
		A	B	C	D
SS 500/560	7666	870	150	1800	<sup>1)</sup>
SS 630/710	7667	1000	150	1800	<sup>1)</sup>

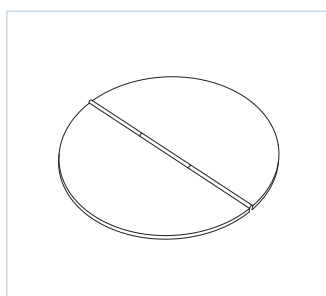
<sup>1)</sup> Dimension D and weight vary for different profiles.



■ Curb dimensions

Curbs should be manufactured from hardwood, treated soft-wood or a similar material. All dimensions include any flashing covering the curb. On some models the fan guard is close to the edge of the fan plate, so on it may be necessary on site to make provision for this in the curb.

Cowl size	A	B	C
	Max.	Min.	Min.
500/560	865	150	550/630
630/710	900	150	700/810



■ Backdraught shutter

Backdraught shutters are available as an optional extra. They are manufactured from glass reinforced polyester resin (G.R.P) and reduce unwanted draughts and heat loss when the roof fan is not in use.

Type	Ref. No.
BS 500/560	7654
BS 630/710	7655

**Specification**

The range of HELIOS vertical VC roof cowls are designed to be aerodynamically stable. The cowls provide weather protection to fans, when used and may also be used to screen roof openings or duct terminations. Manufactured from glass reinforced polyester resin (G.R.P.), reinforced with coremat to provide additional strength with light weight. Units are finished in a hard gloss, UV stabilised, gel coat, giving an attractive weather proof finish.

**Fans**

Cowls accept any HELIOS plate axial fan and must be ordered separately. Note: Cowls are not suitable for use in combination with explosion proof fans. For further specification please see axial fan pages.

**Speed control**

Most models are speed controllable via voltage reduction.

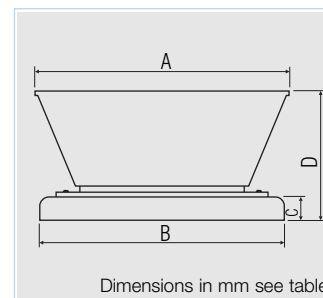
**Delivery**

Cowls and fans are supplied as separate items.

**Reverse operation**

Vertical roof fans are not reversible.

Vertical discharge roof fan



Type	Dimensions in mm			
	A	B	C	D
VC 355	690	685	100	475
VC 400/450	790	790	100	585

Type	Ref. No.	Nominal weight kg
VC 355	7695	8.5
VC 400/450	7696	12

**Backdraught shutter**

Vertical extract models have backdraught shutters fitted as standard.

**Bird guard**

Bird guards are fitted as standard.

**Electrical connection**

Terminals in motor end cap (IP 55).

**Roof cowls for vertical discharge**

Manufactured from glass reinforced polyester resin (G.R.P) and supplied complete with bird guard, neoprene sealing strip and fixings.

**Colours**

Units may be supplied in any BS or RAL colour. 8 standard colours are available as a no cost option. Other colours may incur a minimal surcharge.

**The following colours are available as standard:**

- BS 00 A 05 (Silver Grey) Standard
- BS 10 A 05 (Goose Wing Grey)
- BS 18 B 25 (Merlin Grey)
- BS 08 B 29 (Dark Brown)
- BS 10 B 19 (Mushroom)
- BS 12 B 27 (Olive Green)
- BS 12 B 21 (Moorland Green)
- HELIOS Bright Red

Information	Pages
Controllers and motor protection units	397 on
The full range of axial fans shown on pages 114 on may also be used with the cowls.	

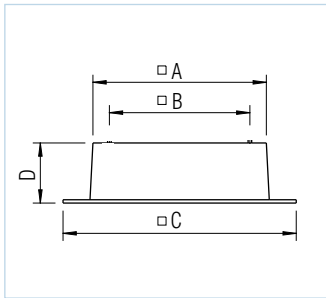
Roof cowl vertical discharge	Fan Type	Ref. No.	R.P.M.	Air flow volume (FID)	Power	Current	Wiring diagram	Maximum air flow temperature		Nominal fan weight	Controllers				
								full load	controlled		5 step transformer		Electronic controller		
Type	Ref. No.		min <sup>-1</sup>	m <sup>3</sup> /h	kW	Amps	No.	+°C	+°C	kg	Type	Ref. No.	Type	Ref. No.	
<b>1 Phase motor, 230 V / 1 ph. / 50 Hz, protection to IP 55</b>															
VC 355	7695	HQW 355/6	1107	940	0.05	0.33	475	60	40	9.5	TSW 1.5	1947	ESA 1	0238	
VC 355	7695	HQW 355/4	1108	1405	0.12	0.90	475	60	40	9.5	TSW 1.5	1947	ESA 1	0238	
VC 400/450	7696	HQW 400/6	1110	905	0.06	0.45	475	60	40	13.0	TSW 1.5	1947	ESA 1	0238	
VC 400/450	7696	HQW 400/4	1111	1340	0.16	1.30	475	60	40	13.0	TSW 1.5	1947	ESA 3	0239	
VC 400/450	7696	HQW 450/6	0991	960	0.12	1.00	475	60	40	15.5	TSW 1.5	1947	ESA 3	0239	
VC 400/450	7696	HQW 450/4	0992	1250	0.33	2.10	475	60	40	15.5	TSW 3.0	1948	ESA 3	0239	
<b>3 Phase motor, 400 V / 3 ph. / 50 Hz, protection to IP 55</b>															
VC 355	7695	HQD 355/6	1120	950	0.05	0.30	469	60	40	9.5	RDS 1 <sup>1)</sup>	1314	—	—	
VC 355	7695	HQD 355/4	1121	1435	0.12	0.85	469	60	40	9.5	RDS 1 <sup>1)</sup>	1314	—	—	
VC 400/450	7696	HQD 400/6	1123	935	0.06	0.30	469	60	40	13.0	RDS 1 <sup>1)</sup>	1314	—	—	
VC 400/450	7696	HQD 400/4	1124	1395	0.16	0.85	469	60	40	13.0	RDS 1 <sup>1)</sup>	1314	—	—	
VC 400/450	7696	HQD 450/6	0993	950	0.12	0.45	469	60	40	15.5	RDS 1 <sup>1)</sup>	1314	—	—	
VC 400/450	7696	HQD 450/4	0994	1335	0.33	1.00	469	50	40	15.5	RDS 2 <sup>1)</sup>	1315	—	—	

<sup>1)</sup> Includes full motor protection unit; alternative: TSW/TSD; 5 step transformer controllers without motor protection unit.



■ Selection chart

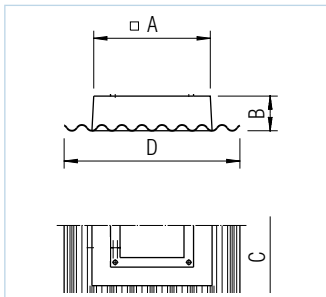
Type	Diameter mm	Max. pitch	Poles	R.P.M. min <sup>-1</sup>	Air flow volume in V m <sup>3</sup> /s in dependence to static pressure = N / m <sup>2</sup> = freely available pressure ( $\Delta p_{stat.}$ ) in Pa															
					0	25	50	75	100	125	150	175	200	225	250	275	300			
VC + HQ..	355		6	940	0.497	0.394														
VC + HQ..	355		4	1405	0.739	0.678	0.614	0.489												
VC + HQ..	400		6	905	0.675	0.572														
VC + HQ..	400		4	1340	1.011	0.936	0.881	0.750												
VC + HQ..	450		6	960	1.036	0.925	0.744													
VC + HQ..	450		4	1250	1.342	1.272	1.144	1.019												



■ Purlin box for vertical roof cowls

Manufactured from glass reinforced polyester resin (G.R.P.). Corrosion resistant and thermally efficient, finished in goose wing grey to match most building applications. The units are designed to give load bearing support to the range of HELIOS fans and cowls and may be fitted in pitched or flat roof applications.

Type	Ref. No.	Dimensions in mm				Nominal weight kg
		A	B	C	D	
PB 355	7658	625	400	780	240	4.0
PB 400/450	7659	730	510	880	240	6.0

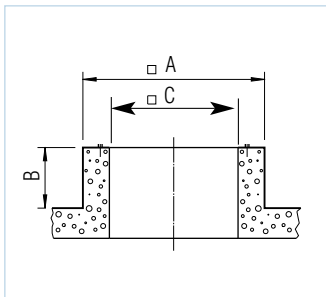


■ Soaker sheets

Available in an extensive range of profiles and colours to match HELIOS roof cowls. Standard colour is grey. Manufactured from glass reinforced polyester resin (G.R.P) with chamfered profiles around the upstand to stop water build-up.

Type	Ref. No.	Dimensions in mm			
		A	B	C	D
SS 355	7664	650	150	1800	<sup>1)</sup>
SS 400/450	7665	750	150	1800	<sup>1)</sup>

<sup>1)</sup> Dimension D and weight vary for different profiles.



■ Curb dimensions

Curbs should be manufactured from hardwood, treated soft-wood or a similar material. All dimensions include any flashing covering the curb.

On some models the fan guard is close to the edge of the fan plate, so on it may be necessary on site to make provision for this in the curb.

Cowl size	A	B	C
	Max.	Min.	Min.
355	625	150	390
400/450	730	150	440/490

**■ Specification**

The range of HELIOS vertical VC roof cowls are designed to be aerodynamically stable. The cowls provide weather protection to fans, when used and may also be used to screen roof openings or duct terminations. Manufactured from glass reinforced polyester resin (G.R.P.), reinforced with coremat to provide additional strength with light weight. Units are finished in a hard gloss, UV stabilised, gel coat, giving an attractive weather proof finish.

**■ Fans**

Cowls accept any HELIOS plate axial fan and must be ordered separately. Note: Cowls are not suitable for use in combination with explosion proof fans. For further specification please see axial fan pages.

**■ Speed control**

Most models are speed controllable via voltage reduction.

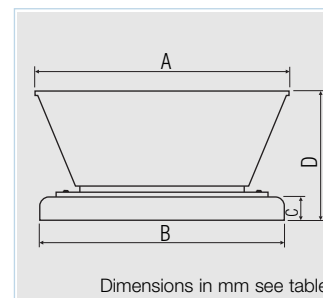
**■ Delivery**

Cowls and fans are supplied as separate items.

**■ Reverse operation**

Vertical roof fans are not reversible.

Vertical discharge roof fan



Type	Dimensions in mm			
	A	B	C	D
VC 500/560	950	925	110	700
VC 630/710	1030	1045	110	800

Type	Ref. No.	Nominal weight kg
VC 500/560	7697	21
VC 630/710	7698	27

**■ Backdraught shutter**

Vertical extract models have backdraught shutters fitted as standard.

**■ Bird guard**

Bird guards are fitted as standard.

**■ Electrical connection**

Terminals in motor end cap (IP 55).

**■ Roof cowls for vertical discharge**

Manufactured from glass reinforced polyester resin (G.R.P) and supplied complete with bird guard, neoprene sealing strip and fixings.

**■ Colours**

Units may be supplied in any BS or RAL colour. 8 standard colours are available as a no cost option. Other colours may incur a minimal surcharge.

**■ The following colours are available as standard:**

- BS 00 A 05 (Silver Grey) Standard
- BS 10 A 05 (Goose Wing Grey)
- BS 18 B 25 (Merlin Grey)
- BS 08 B 29 (Dark Brown)
- BS 10 B 19 (Mushroom)
- BS 12 B 27 (Olive Green)
- BS 12 B 21 (Moorland Green)
- HELIOS Bright Red

Information	Pages
Controllers and motor protection units	397 on
The full range of axial fans shown on pages 114 on may also be used with the cowls.	

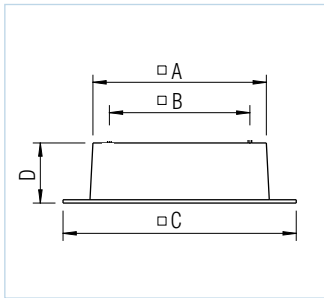
Roof cowl horizontal discharge	Fan Type	Ref. No.	R.P.M.	Air flow volume (FID)	Power	Current	Wiring diagram	Maximum air flow temperature controlled		Nominal fan weight	Controllers				
								full load	°C		5 step transformer	Electronic controller			
Type	Ref. No.		min <sup>-1</sup>	m <sup>3</sup> /h	kW	Amps	No.	+°C	+°C	kg	Type	Ref. No.	Type	Ref. No.	
<b>1 Phase motor, 230 V / 1 ph. / 50 Hz, protection to IP 55</b>															
VC 500/560	7697	HQW 500/6	1112	910	4810	0.14	1.20	475	60	40	17.3	TSW 1.5	1947	ESA 3	0239
VC 500/560	7697	HQW 500/4	1113	1410	7500	0.45	2.60	475	60	40	17.3	TSW 3.0	1948	ESA 3 i	7806
VC 500/560	7697	HQW 560/6	0385	955	6850	0.25	2.10	475	60	40	22.0	TSW 3.0	1948	ESA 3	0239
VC 500/560	7697	HQW 560/4	5054	1405	10670	0.75	5.60	475	40	40	25.0	TSW 7.5	1950	ESA 6 i	7807
VC 630/710	7698	HQW 630/6	5037	955	8900	0.45	3.20	475	60	40	25.0	TSW 5.0	1949	ESA 6 i	7807
VC 630/710	7698	HQW 630/4	5056	1415	14830	1.50	7.00	475	40	40	35.0	TSW 7.5	1950	ESA 10 i	7808
VC 630/710	7698	HQW 710/6/..	5047	925	11930	0.50	2.50/(3.00)	475	25*	40	60.0	TSW 5.0	1949	ESA 6 i	7807
<b>3 Phase motor, 400 V / 3 ph. / 50 Hz, protection to IP 55</b>															
VC 500/560	7697	HQD 500/6	1126	910	4810	0.14	0.50	469	60	40	17.2	RDS 1 <sup>1)</sup>	1314	—	—
VC 500/560	7697	HQD 500/4	1127	1320	7010	0.45	1.25	469	40	40	17.2	RDS 2 <sup>1)</sup>	1315	—	—
VC 500/560	7697	HQD 560/6	0386	960	6970	0.25	1.00	469	60	40	22.0	RDS 2 <sup>1)</sup>	1315	FUR 3 <sup>1)</sup>	9485
VC 500/560	7697	HQD 560/4	0387	1380	10480	0.75	1.75	469	40	40	23.0	RDS 2 <sup>1)</sup>	1315	FUR 3 <sup>1)</sup>	9485
VC 630/710	7698	HQD 630/8	5029	735	6890	0.25	1.50	469	60	40	27.0	RDS 2 <sup>1)</sup>	1315	FUR 3 <sup>1)</sup>	9485
VC 630/710	7698	HQD 630/6	5027	970	9100	0.55	1.80	469	60	40	28.0	RDS 2 <sup>1)</sup>	1315	FUR 3 <sup>1)</sup>	9485
VC 630/710	7698	HQD 710/6/..	5599	700	10800	0.37	1.60/(1.60)	469	31*	40	57.0	RDS 2 <sup>1)</sup>	1315	FUR 3 <sup>1)</sup>	9485
VC 630/710	7698	HQD 710/4/..	5602	920	13500	0.43/0.75	1.2/2.2	520	28*	40	55.0	RDS 4 <sup>1)</sup>	1316	FUR 3 <sup>1)</sup>	9485
VC 630/710	7698	HQD 710/6/6..	5603	930	15630	0.71/1.30	2.10/3.50	520	35*	40	60.0	RDS 4 <sup>1)</sup>	1316	FUR 4 <sup>1)</sup>	9487
VC 630/710	7698	HQD 710/4/4..	5604	1365	17060	0.95/1.55	2.10/3.70	520	20*	40	60.0	RDS 7 <sup>1)</sup>	1578	FUR 4 <sup>1)</sup>	9487
VC 630/710	7698	HQD 710/4/4..	5605	1370	19280	1.5/2.2	3.50/5.90	520	26*	40	75.0	RDS 7 <sup>1)</sup>	1578	FUR 6 <sup>1)</sup>	9489
VC 630/710	7698	HQD 710/4/..	5606	1435	22100	3.00	6.7	776	30*	40	88.0	—	—	FUR 6 <sup>1)</sup>	9489

<sup>1)</sup> Includes full motor protection unit; alternative: TSW/TSD; 5 step transformer controllers without motor protection unit.

\* Max. pitch angle [°]

■ Selection chart

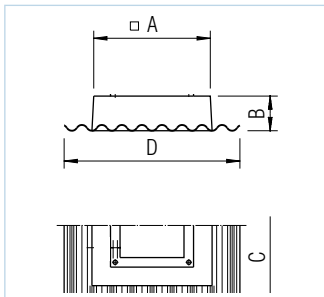
Type	Diameter mm	Max. pitch	Poles	R.P.M. min <sup>-1</sup>	Air flow volume in V m <sup>3</sup> /s in dependence to static pressure = N / m <sup>2</sup> = freely available pressure ( $\Delta p_{stat.}$ ) in Pa														
					0	25	50	75	100	125	150	175	200	225	250	275	300		
VC + HQ..	500		6	910	1.336	1.200	1.031												
VC + HQ..	500		4	1410	2.083	2.000	1.914	1.814	1.703	1.547	1.378								
VC + HQ..	560		6	955	1.903	1.678	1.433	1.128											
VC + HQ..	560		4	1405	2.964	2.847	2.725	2.597	2.453	2.294	2.119	1.931							
VC + HQD	630		8	735	1.914	1.653													
VC + HQ..	630		6	955	2.472	2.289	2.078	1.756											
VC + HQW	630		4	1415	4.119	3.994	3.864	3.728	3.586	3.436	3.319	3.081	2.867	2.633					
VC + HQD	710	31°	8	700	3.000	2.672	2.289	1.747											
VC + HQD	710	28°	6	920	3.750	3.503	3.236	2.933	2.575	2.125									
VC + HQD	710	35°	6	930	4.342	4.069	3.758	3.394	3.058										
VC + HQW	710	25°	6	925	3.314	3.022	2.750	2.389											
VC + HQD	710	20°	4	1365	4.739	4.586	4.428	4.264	4.092	3.911	3.719	3.517	3.303	3.064	2.756	2.250	1.764		
VC + HQD	710	26°	4	1370	5.356	5.192	5.025	4.850	4.675	4.486	4.289	4.072	3.836	3.567	3.319	3.000			
VC + HQD	710	30°	4	1435	6.139	5.978	5.819	5.656	5.486	5.311	5.128	4.936	4.733	4.511	4.292	4.042	3.722		



■ Purlin box for vertical roof cowls

Manufactured from glass reinforced polyester resin (G.R.P.). Corrosion resistant and thermally efficient, finished in goose wing grey to match most building applications. The units are designed to give load bearing support to the range of HELIOS fans and cowls and may be fitted in pitched or flat roof applications.

Type	Ref. No.	Dimensions in mm				Nominal weight kg
		A	B	C	D	
PB 500/560	7660	865	620	1050	250	8.0
PB 630/710	7661	900	780	1080	260	10

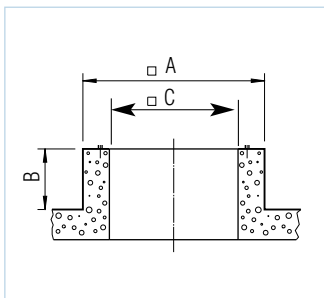


■ Soaker sheets

Available in an extensive range of profiles and colours to match HELIOS roof cowls. Standard colour is grey. Manufactured from glass reinforced polyester resin (G.R.P) with chamfered profiles around the upstand to stop water build-up.

Type	Ref. No.	Dimensions in mm			
		A	B	C	D
SS 500/560	7666	870	150	1800	<sup>1)</sup>
SS 630/710	7667	1000	150	1800	<sup>1)</sup>

<sup>1)</sup> Dimension D and weight vary for different profiles.



■ Curb dimensions

Curbs should be manufactured from hardwood, treated soft-wood or a similar material. All dimensions include any flashing covering the curb. On some models the fan guard is close to the edge of the fan plate, so on it may be necessary on site to make provision for this in the curb.

Cowl size	Dimensions in mm		
	A Max.	B Min.	C Min.
500/560	865	150	550/630
630/710	900	150	700/810

This section covers the general technical information and product information.

Common features of the vertical discharge models - VD.. and VDR..

**Features**

Because of the vertical discharge air flow, these units have the following advantages:

- Less impact to the environment through pollution.
- Minimising the effect of the exhaust air on the roofs, roof lights and light domes of adjacent buildings.
- By discharging the exhaust fumes higher into the atmosphere disturbing factors (such as odours, vapours) do not enter adjacent buildings. So open windows, hatches or chimneys within the surrounding area or other supply or exhaust air roof fans are un affected.

**Speed control**

The information regarding this can be found on product pages and "general technical product information".

**Electrical connection**

The supply cable can enter the unit from the under side via a cable gland in the base plate or directly over the roof. The connection must be carried out without dismantling other parts in the external terminal box and following the attached wiring diagram.

**Motor protection**

The information on motor protection is given in the specific product page.

**Sound levels**

The information on sound levels is given in the specific product page.

**Incorrect direction of rotation**

The VD..- and VDR..- units are suitable for exhaust air operation only. If the fan is operated in the incorrect direction of rotation the motor will overheat and the built-in thermal contacts will trip. Typical indication for this is a very low air flow combined with high noise levels and vibration.

**Installation**

Vertical discharge roof fans must be mounted horizontally. On sloping roofs this can be achieved by using an appropriate base construction. This is to prevent the ingress of water. Installation of the RD.. horizontal discharge units is given on the product pages.



**Design VDR..**

Vertical discharge centrifugal roof fan with isolation switch on the casing. Casing and base plate made of galvanised steel. The fans are factory-wired with the isolation switch.

The base plate of casing is supplied with drilled holes (hole pattern to DIN 24155, Bl. 3) in order to connect the supply air accessories.

**Motor**

The units are operated by totally enclosed external rotor motors (IP 44), in the air stream. Their design complies with DIN EN 60034 / VDE 0530 and DIN EN 60335-1 / VDE 0700-1, of the insulation class B and protection class I. They are equipped with maintenance free ball bearings, which are suitable for up to 30.000 operating hours.

**Impellers**

Highly efficient, backward curved centrifugal impellers made of polymer.

Low vibration operation through dynamic balancing according to DIN ISO 1940 T.1 – grade 6.3.

**Air flow temperature**

The units can be used in the range of -40 °C to +60 °C. The upper limit is type-specific and can be obtained from the product page. If the fan is speed-controlled, this value must be reduced by approx. 10 °C.



**Design VD..**

The casing is made of glass fibre polyester by using the latest techniques to ensure the optimally smooth surface. Thus the unit externally is totally corrosion proof and resistant to chemical substances and UV, also ensuring unit weighs less. The motor is outside of the air stream (except VD.. 180) beneath a GRP-cowl. A cooling fan and vents in the motor cover ensure a recooling through the atmospheric air. Starting from VD 200 the motor mountings and other fixing elements are made of stainless steel. The impeller is direct driven by the motor. Easy to assemble / disassemble for servicing. Simple electrical connection through an external terminal box protected to IP 65. The base plate of casing is supplied with drilled holes (hole pattern to DIN 24155, Bl. 3) or with threaded bolts in order to connect the supply air accessories.

**Motor**

Starting from the VD 200, maintenance free IEC-squirrel cage motors are used. These motors are designed for continuous operation and are rated to cover the full range of the unit. They are equipped with maintenance free ball bearings, which are suitable for up to 30.000 operating hours. The motors comply with DIN EN 60034 / VDE 0530 and DIN EN 60335-1 / VDE 0700-1 as well as other national regulations. They have the insulation class B or F and are protected to IP 44 or 54 (see product page).

**Impellers**

Starting from VD 200.. the mixed-flow impellers made of aluminium are specially developed for this specific application. The air flow pattern that is achieved provides the optimal vertical outlet airflow pattern. The VD.. 180 is equipped with highly efficient backward curved centrifugal impellers made of galvanised steel. Dynamically balanced in accordance with DIN ISO 1940 T.1 – grade 6.3. to ensure low vibration in operation.

**Contact protection**

All units come with a bird guard made of galvanised steel according to DIN EN ISO 13857 on the outlet as standard. If there is no protection for safety against rotating parts on the intake, a guard must be installed as well (available as accessory).

**Air flow temperature**

Starting from VD 200 the units can be used in the range of -40 °C to +90 °C because the motors are outside of the air stream. The maximum limit can be seen on the corresponding product page. If the fan is speed-controlled, this value is reduced generally by 10-20 °C. Explosion proof models are rated at max. +40 °C.

**Explosion proof**

All the polymer components of these models have an electroconductive, black coating. The ex-proof models corresponding the unit group II, category 2 G for applications in zone 1 and 2 according to directive 94/9/EG. The EG-declaration of conformity which is attached to every unit details the design according to DIN EN 60079-0 / VDE 0170-1 and DIN EN 60079-7 / VDE 0170-6. It is protected to Ex e 2G. The temperature class is given on the product page. The external terminal box is also protected to Ex e 2G. All units have a KEMA declaration of conformity. For further information see "design of ventilation systems explosion proof fans" and "general technical information".

**Chemical endurance**

Starting from VD.. 200 all the case parts such as base plate with inlet nozzle, top and base cover as well as motor encapsulation are made of glass fibre polyester and are therefore resistant to many substances. The self-ventilated motor is outside of the air stream; its mountings are made of stainless steel. The aluminium impeller and the hot-dip galvanised safety guard can be damaged by some substances. For aggressive air an acrylic polymer coating of impeller is recommended (on order at extra cost).

Information	Page
Design of ventilation systems, acoustic, explosion proof	12 on
General technical information, speed control	17 on

RD



### ■ Model RD

Horizontal discharging centrifugal fans for extraction.

### ■ Specification

Robust, corrosion and weather resistant construction. Base plate made of galvanised steel. Cowl and protection grille made of galvanised steel, nominal sizes 225–400 mm made of aluminium. Nominal size 710 mm with cowl made of glass fibre reinforced polyester. All explosion proof models with base plate made of galvanised steel. Quiet operation through resiliently mounted motor. Compact design with excellent weather protection.

### ■ Motor

Totally enclosed external rotor motor with ball bearings, protected to IP 44 or IP 54 and to insulation class B or F according to DIN EN 60034 / VDE 0530 and DIN EN 60335-1 / VDE 0700-1. The windings are additionally impregnated to protect against high humidity. The ball bearings are greased for a running time of up to 30.000 running hours and are thus maintenance free. Motor and impeller are balanced as the unit according to DIN ISO 1940 T. 1 – class 6.3 to ensure a low vibration operation.

### ■ Impellers

High performance, efficiency optimised backward curved centrifugal impellers, made of galvanised steel. Pressed on motor and balanced as unit.

### ■ Contact safety

All units come with a bird guard to DIN EN ISO 13857 on the outlet as standard. If there is no ducting connected, then for safety protection against rotating parts on the intake, a guard must be installed as well (available as accessory).

### ■ Air flow temperature

The operating range is between –40 to +60 °C. Thermal contacts protect against higher temperatures. For higher air flow temperatures the vertical discharge model VD can be used.

### ■ Speed control

All single speed RD fans (except RDD 225/6 Ex and RDD 710/6) are 100% speed controllable. For suitable controllers see chart on individual fan page. Further information see “general technical information”.

### ■ Electric wiring

The supply cable can enter the unit from the under side via cable gland in the base plate

or directly over the roof. Connect following the the wiring diagram in the terminal box (protection to IP 55) located below the cowl.

### ■ Full motor protection

All models (except explosion proof) are equipped with thermal contacts, wired to the terminal box. For motor overheat protection connect the thermal contacts to the protection units as shown in the fan chart. The motors of RD.. Ex are equipped with positive temperature coefficient thermistors (PTC) of winding (for direct temperature monitoring) as standard. To provide the required motor overheat protection a suitable motor tripping unit must be fitted e.g the MSA unit (accessory).

### ■ Explosion proof

The ex-proof models corresponding to unit group II, category 3 G for applications in zone 2 according to directive 94/9/EG. Designed according to DIN EN 60079-0 / VDE 0530 and DIN EN 60079-7 / VDE 0170-6. Protected to Ex e 3G. The temperature class is given in the fan chart. The material conforms to DIN EN 14986 as shown in the fan chart. The motors of RD.. Ex are equipped with positive temperature coefficient thermistors (PTC) of winding (for direct temperature monitoring) as standard. To provide the required motor overheat protection a suitable motor tripping unit must be fitted e.g the MSA unit (accessory). With these features the speed of RD.. Ex fans can be controlled (except RDD 225/6 Ex models) where transformer control units TSD, TSSD can be used. A minimum voltage of 115 V must be observed. The electrical connection is by a 80 cm long flying lead which is attached to the motor. (A separate explosion proof terminal box can be supplied as an accessory). Installation and operation must be in compliance with the relevant regulations. For further information see “design of ventilation systems explosion proof fans” and “general technical information”.

### ■ Sound levels

Data is given on product pages and under “general product specific information”.

### ■ Incorrect direction of rotation

If the fan is operated in the incorrect direction of rotation the motor will overheat and the motor protection will trip. Typical indication for this is a very low air flow combined with high noise levels and vibration.

### ■ Base construction, mounting and delivery

Supplied as ready to install units. The fans can be installed quickly and easily; suitable for installation on all of roof constructions. The roof curb or purlin should be horizontal. With the models RD.. a slope of max. 25° is allowed. We recommend the use of the purlin boxes and soaker sheets offered in the accessory range. Using these components minimises the cost of designing, completion and installation. The roof curb can also be produced on site in concrete, wood, brick or similar. A flat surface is necessary as a perfect sealing with the roof. After mounting the unit, the fan base plate is secured by 4 screws to the base. Helios purlin box and base attenuator with sizes 180–450 mm have a hinged mechanism and offer advantages for cleaning and maintenance. With bases built on the site packing should be used to level any flatness imperfection. Any resulting gap between the fan’s base plate and the roof’s base must be sealed with a sealant. After tightening the screws evenly, check if impeller rotates freely.

Information	Page
Design of ventilation systems, acoustic, explosion proof	12 on
General technical information, speed control	17 on



# Selection chart Roof fans



With the combination parameters; static pressure increase  $\Delta p_{stat}$ , impeller diameter DN mm the following chart makes the selection of roof fans  $\phi$  180 to 710 easier.  
air flow volume V, revolution per minute  $min^{-1}$ , noise level in 4 m distance,

Diameter	R.P.M.	Sound pressure intake	Air flow volume V in m <sup>3</sup> /s against static pressure = N / m <sup>2</sup> (Pa.) external pressure																		
mm	min <sup>-1</sup>	L <sub>pa</sub> dB(A)	$(\Delta p_{stat})$ in Pa																		
		in 4 m distance	0	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	
<b>Model VD – vertical discharge</b>																					
180	2300	60	0.253	0.236	0.217	0.197	0.178	0.157	0.125	0.110	0.075										
180	1400	45	0.136	0.097	0.047																
200	2900	67	0.722	0.694	0.672	0.642	0.614	0.575	0.550	0.525	0.494	0.450	0.406	0.361	0.300						
200	1400	51	0.347	0.294	0.231	0.136															
200	900	42	0.235	0.164																	
200	700	36	0.186																		
225	2900	71	0.947	0.917	0.894	0.867	0.833	0.800	0.767	0.753	0.717	0.675	0.625	0.611	0.556	0.486	0.444	0.347	0.297		
225	1400	56	0.500	0.456	0.408	0.317	0.194														
225	900	46	0.326	0.236																	
225	700	41	0.292	0.131																	
250	1400	60	0.778	0.728	0.664	0.586	0.500	0.369													
250	900	49	0.522	0.428	0.283																
250	700	45	0.394	0.267																	
315	1400	63	1.044	0.972	0.900	0.819	0.725	0.606	0.425	0.200											
315	900	53	0.708	0.600	0.458	0.175															
315	700	46	0.556	0.386																	
400	1400	66	1.458	1.389	1.294	1.222	1.097	0.978	0.850	0.700	0.528	0.306									
400	900	57	0.956	0.833	0.683	0.469	0.133														
400	700	48	0.711	0.522	0.194																
450	1400	70	2.222	2.139	2.067	1.986	1.875	1.769	1.650	1.500	1.354	1.150	0.925	0.472							
450	900	60	1.486	1.361	1.208	1.035	0.792	0.422													
450	700	54	1.132	0.931	0.660	0.208															
500	1400	75	3.778	3.653	3.528	3.417	3.278	3.150	3.000	2.850	2.711	2.600	2.450	2.222	2.119	1.944	1.650	1.389	1.000		
500	900	65	2.361	2.194	2.028	1.850	1.658	1.400	1.072	0.600											
500	700	60	1.736	1.611	1.389	1.083	0.544														
500	350	44	0.872	0.369																	
560	1400	79	5.306	5.278	5.167	5.028	4.917	4.800	4.700	4.550	4.450	4.300	4.194	3.944	3.889	3.806	3.550	3.278	3.150		
560	900	70	3.667	3.528	3.361	3.194	2.944	2.700	2.350	2.000	1.550	1.050									
560	700	63	3.139	2.775	2.361	1.986	1.600	1.131	0.481												
560	350	48	1.500	0.731																	
<b>Model VDR – vertical discharge</b>																					
180	2500	50	0.128	0.114	0.094	0.078	0.061	0.042													
180	1700	42	0.078	0.056	0.039	0.022															
200	2650	60	0.314	0.294	0.272	0.247	0.219	0.189	0.158	0.122	0.081	0.042									
200	2600	50	0.214	0.186	0.158	0.128	0.094	0.061	0.025												
<b>Model RD – horizontal discharge</b>																					
225	1420	48	0.478	0.428	0.378	0.319	0.186														
225	1380	48	0.467	0.414	0.361	0.297	0.103														
225	1260	46	0.433	0.372	0.311	0.211															
225	950	38	0.317	0.247																	
225	910	37	0.306	0.225																	
225	720	31	0.236	0.078																	
315	1400	58	1.339	1.264	1.192	1.122	1.053	0.981	0.889	0.758	0.533	0.111									
315	1220	55	1.200	1.108	1.019	0.933	0.836	0.711	0.522	0.247											
315	890	47	0.856	0.739	0.622	0.425															
315	700	41	0.689	0.519	0.264																
400	1420	61	1.883	1.808	1.733	1.653	1.567	1.475	1.378	1.275	1.161	1.019	0.750	0.206							
400	1330	60	1.786	1.703	1.617	1.525	1.425	1.322	1.211	1.092	0.942	0.656	0.258								
400	1250	58	1.697	1.606	1.508	1.403	1.292	1.175	1.050	0.900	0.636	0.275	0.014								
400	850	48	1.158	1.022	0.867	0.686	0.275														
400	690	43	0.914	0.744	0.522																
400	600	40	0.836	0.592	0.258																
450	1350	63	2.536	2.439	2.339	2.239	2.136	2.028	1.919	1.808	1.697	1.583	1.456	1.303	1.017	0.428	0.100				
450	1260	63	2.400	2.292	2.183	2.094	1.953	1.833	1.708	1.583	1.450	1.300	1.094	0.700	0.356	0.097					
450	1100	59	2.142	2.014	1.881	1.742	1.592	1.439	1.286	1.114	0.861	0.519	0.281	0.081							
450	930	53	1.728	1.589	1.442	1.289	1.125	0.919	0.317												
450	780	49	1.497	1.317	1.119	0.908	0.594	0.125													
450	660	45	1.239	1.036	0.803	0.319															
560	920	60	3.528	3.317	3.108	2.903	2.694	2.472	2.228	1.933	1.542	0.833									
560	700/6	54	2.839	2.522	2.206	1.881	1.506	1.022	0.458												
560	700/8	54	2.658	2.383	2.114	1.825	1.458	0.772													
560	470	42	1.767	1.361	0.808																
630	880	63	4.667	4.447	4.225	4.000	3.764	3.517	3.250	2.956	2.619	2.197	1.536	0.722	0.142						
630	680	57	3.769	3.439	3.097	2.728	2.342	1.942	1.347	0.606	0.286	0.031									
630	650	55	3.469	3.169	2.858	2.517	2.125	1.597	0.611												
630	440	45	2.314	1.858	1.275																
710	950	68	8.867	6.631	6.400	6.178	5.958	5.750	5.542	5.331	5.103	4.850	4.553	4.194	3.764	3.261	2.683	1.844			
710	940	72	9.583	9.314	9.047	8.786	8.533	8.286	8.044	7.808	7.567	7.319	7.053	6.764	6.436	6.056	5.614	5.100	4.522	3.867	
710	660	59	4.869	4.511	4.169	3.847	3.500	3.067													
710	480	50	3.436	2.997	2.572	1.919															

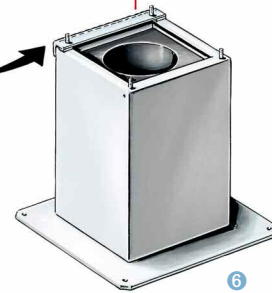
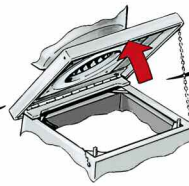
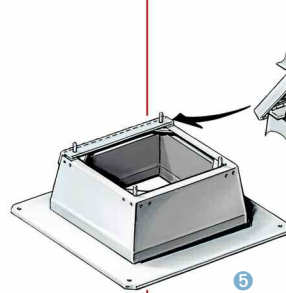
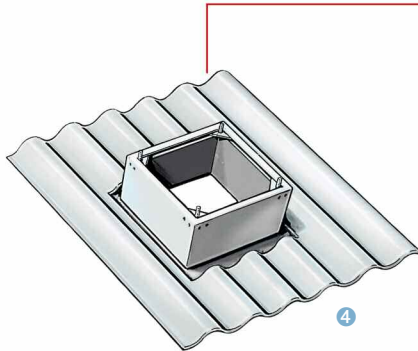
**1**  
**Centrifugal roof fan RD**  
**Horizontal discharge**  
 Cost effective.  
 A compact, low profile design with rain protection hood.



**2**  
**Centrifugal roof fan VD**  
**Vertical discharge**  
 Motor located outside the air stream. All the casing parts are made of glass fibre polyester, thus fully corrosion proof and UV-resistant.



**3**  
**Centrifugal roof fan VDR**  
**Vertical discharge**  
 Cost effective for smaller air flow volumes.  
 Built-on isolation switch as standard.

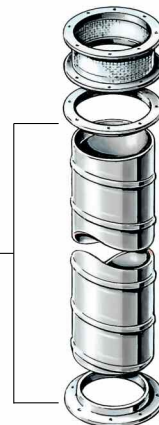


**Backdraught shutter**  
 Prevents backdraughts, loss of energy and prevents draughts. **Automatic RVS**



**Motorised RVM**  
 With built-on spring reversing motor (outside the air stream).

**Flange FR**  
 Made of galvanised steel. For connection to ducting.



**Flanged flexible sleeve STS**  
 Prevents vibration transmission to the ducting.

**Commercial ducts**  
 Standard duct sizes to suit Helios components available from various stockists.

**Inlet bell mouth with guard ASD-SGD**  
 Optimal design with large intake diameter and flange.



**Guard SG**  
 Spot welded zinc plated wire mesh (8 mm).



**4**  
**Soaker sheet WDS**  
 For roof fans and roof cowls on profiled roofs. Weather resistant and corrosion-free made of glass fibre reinforced polyester.  
**Slanting roof base SDS (Page 360)**  
 For roof fans and roof cowls on slanting and sloped roofs. Inner surface of the upstand is lined with sound and thermal insulation.

**5**  
**Purlin box FDS**  
 For low priced and efficient mounting of roof fans and roof cowls on flat roofs. Made of corrosion resistant glass fibre reinforced polyester or galvanised steel. Sizes 180 to 450 mm are with hinged mechanism for simple inspection and cleaning.

**6**  
**Base attenuator SSD**  
 For sound insulation on intake of the fan. All metal parts made of galvanised steel. Incl. fixing screws, profile rubber and sealing between base and base plate. Sizes 180 to 450 mm with hinged mechanism and foamed material core. Allows access to ducting or ventilation shaft.

Vertical plastic VD

■ Specification

Roof fan with vertical discharge made of glass-fibre reinforced polymer.

■ Casing

The upper and lower shell, motor protection cover and base plate with inlet cone are made of glass-fibre polyester. Base plate with threaded bolt for connection of intake air accessories.

■ Impeller

High performance backward curved centrifugal impeller made of galvanised steel, dynamically balanced with the motor unit.

■ Motor

Totally enclosed external rotor motor with ball bearings, protected to IP 44, insulated for protection against moisture. Maintenance free and radio suppressed.

■ Motor protection

Through built-in thermal contacts connected in series with windings. Deactivated automatically at higher motor temperature and activated again after cooling down.

■ Electrical connection

In external terminal box, which is located beneath rain cowl.

■ Protection grille

On the outlet as standard, compliant with DIN EN ISO 13857.

■ Speed control

Adjustable between 0 – 100 % available with stepless electronic or five step control units. For selection see the model chart.

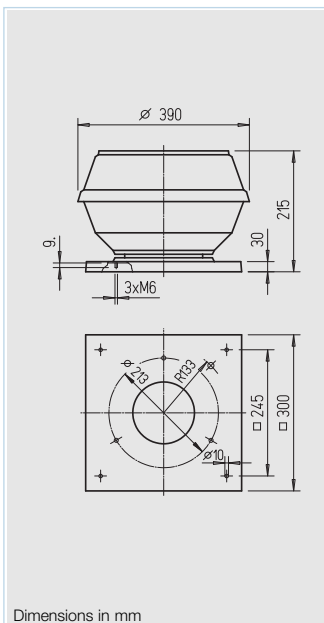
■ Sound level

Shown on the performance curves the sound pressure level is given in dB(A) at 4 metres. The total level and spectrum for sound pressure and sound power are given above the performance curves.

■ Delivery

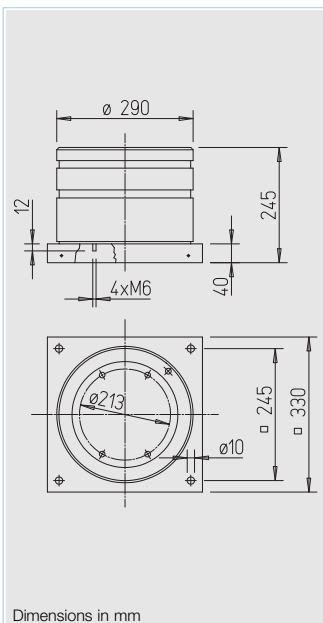
Fully assembled, ready to connect units.

Model VD



Dimensions in mm

Model VDR



Dimensions in mm

Vertical metal VDR

■ Specification

Centrifugal roof fan with vertical discharge.

■ Casing

The base plate, casing and other parts made of galvanised steel. Base plate with tapped holes for connection of intake air accessories.

■ Impeller

High performance backward curved centrifugal impeller made of polymer, dynamically balanced with the motor unit.

■ Motor

Totally enclosed external rotor motor with ball bearings, protected to IP 44, insulated for protection against moisture. Maintenance free and radio suppressed.

■ Motor protection

Through built-in thermal contacts connected in series with windings. Deactivated automatically at higher motor temperature and activated again after cooling down.

■ Electrical connection

Isolation switch on the casing as standard, factory-wired.

■ Speed control

Adjustable between 0 – 100 % available with stepless electronic or five step control units. For selection see the model chart.

■ Sound level

Shown on the performance curves the sound pressure level is given in dB(A) at 4 metres. The total level and spectrum for sound pressure and sound power are given above the performance curves.

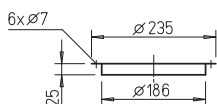
■ Delivery

Fully assembled, ready to connect units.

Accessories for VD

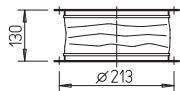
Flange rings  
FR 180

Ref. No. 1200



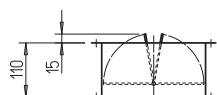
Flanged canvas connector  
STS 180

Ref. No. 1217



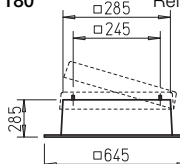
Automatic backdraught shutter  
DVS 180

Ref. No. 1247



Hinged flat roof base  
FDS 180

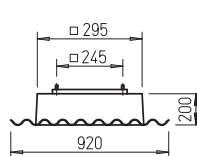
Ref. No. 1377



and VDRW

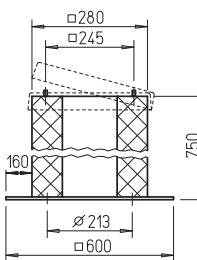
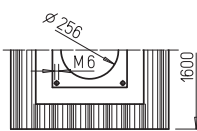
Corrugated roof base, profile 5  
WDS 180

Ref. No. 1559



Hinged base attenuator  
SSD 180

Ref. No. 5289

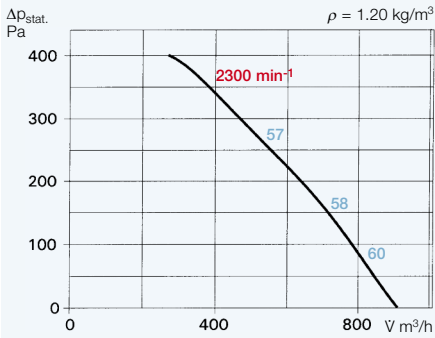


Dimensions in mm

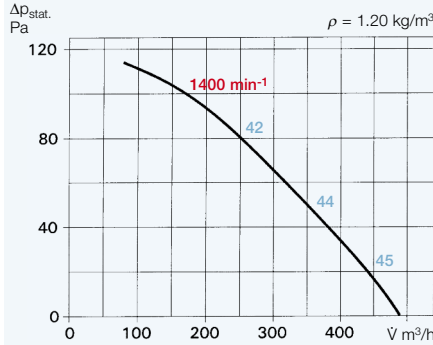
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**VDW 180/2**

Frequency	Hz	Total	125	250	500	1k	2k	4k
L <sub>PA, 4m</sub> Case breakout		dB(A) 60	34	47	53	54	52	53
L <sub>WA</sub> Intake		dB(A) 72	49	61	68	65	66	64


**VDW 180/4**

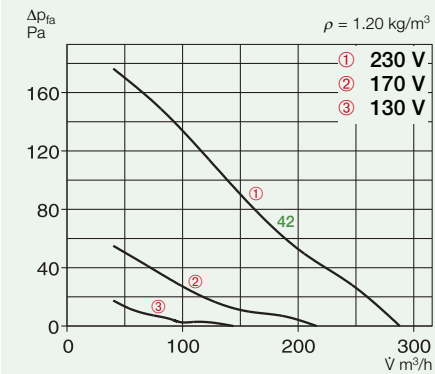
Frequency	Hz	Total	125	250	500	1k	2k	4k
L <sub>PA, 4m</sub> Case breakout		dB(A) 45	23	35	38	41	37	30
L <sub>WA</sub> Intake		dB(A) 57	49	53	50	51	41	32



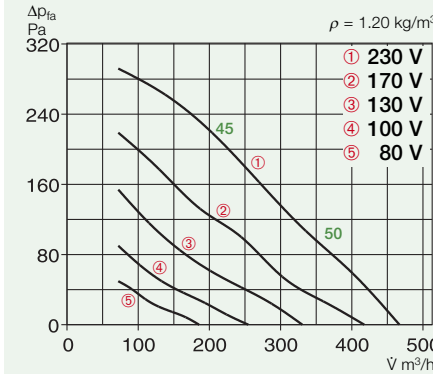
Type	Ref. No.	R.P.M.	Air flow volume (FID)	Sound pressure level	Power consumption		Wiring diagram	Max. air flow temperature	Nominal weight	Transformer controller 5-step		Electronic speed controller flush m. / surface m.	
					min <sup>-1</sup>	V m <sup>3</sup> /h				dB(A) in 4 m	kW	A	No.
<b>Single speed, 230 V, 50 Hz, 1ph capacitor motor, protection to IP 44</b>													
<b>VDW 180/4</b>	5135	1300	490	45	0.04	0.18	508	40	5.5	<b>TSW 0.3</b>	3608	<b>ESU 1/ESA 1</b>	0236/0238
<b>VDW 180/2</b>	5136	2310	910	60	0.17	0.76	508	40	5.5	<b>TSW 1.5</b>	1495	<b>ESU 1/ESA 1</b>	0236/0238

**VDRW 180/2 A**

Frequency	Hz	Total	125	250	500	1k	2k	4k
L <sub>PA, 4m</sub> Case breakout		dB(A) 42	17	32	34	38	35	32
L <sub>WA</sub> Intake		dB(A) 62	46	48	53	57	59	45


**VDRW 180/2 C**

Frequency	Hz	Total	125	250	500	1k	2k	4k
L <sub>PA, 4m</sub> Case breakout		dB(A) 50	27	40	42	46	43	40
L <sub>WA</sub> Intake		dB(A) 70	54	56	61	65	67	53



Type	Ref. No.	R.P.M.	Air flow volume (FID)	Sound pressure level	Power consumption		Wiring diagram	Max. air flow temperature	Nominal weight	Transformer controller 5-step		Electronic speed controller flush m. / surface m.	
					min <sup>-1</sup>	V m <sup>3</sup> /h				dB(A) in 4 m	kW	A	No.
<b>Single speed, 230 V, 50 Hz, 1ph capacitor motor, protection to IP 44</b>													
<b>VDRW 180/2 A</b>	2793	1700	290	42	0.035	0.14	826	50	5.5	<b>TSW 0.3</b>	3608	<b>ESU 1/ESA 1</b>	0236/0238
<b>VDRW 180/2 C</b>	2794	2500	470	50	0.058	0.26	826	50	5.5	<b>TSW 0.3</b>	3608	<b>ESU 1/ESA 1</b>	0236/0238

Vertical plastic VD

■ Specification

Roof fan with vertical discharge made of polymer with the motor out of the air stream. Engine mountings made of stainless steel.

■ Casing

The upper and lower shell, motor protection cover and base plate with inlet cone made of glass-fibre polyester. Base plate with threaded bolt for connection of intake air accessories.

■ Impeller

High performance backward curved centrifugal impeller made of aluminium, dynamically balanced.

■ Motor

Totally enclosed IEC-motor with surface cooling protected to IP 54, ball bearing mounted, insulated for protection against moisture. Maintenance free and radio suppressed.

■ Motor protection

All variable models (except models with pole switch) have built-in thermal contacts which must be connected to the motor full protection unit (see model chart) in order to protect the motor effectively.

■ Electrical connection

Directly from the roof in to the external terminal box protected to IP 65.

■ Protection grille

On the outlet as standard, compliant with DIN EN ISO 13857.

■ Speed control

All models where a speed controller is shown on the table are speed controllable via voltage reduction (1 ph. models electronically as well). Also two speed models are available.

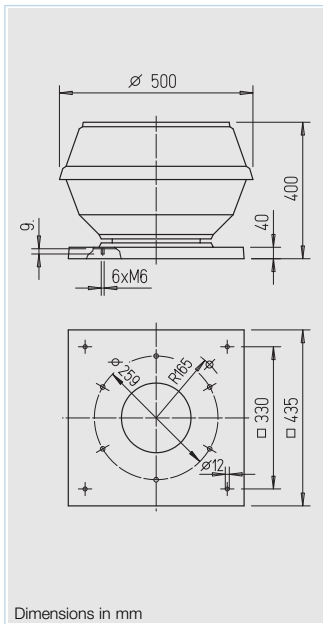
■ Sound level

Shown on the performance curves the sound pressure level is given in dB(A) at 4 metres. The total level and spectrum for sound pressure and sound power are given above the performance curves.

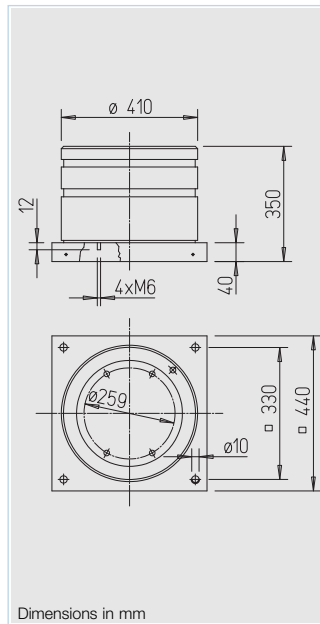
■ Delivery

Fully assembled, ready to connect units.

Model VD



Model VDR



Vertical metal VDR

■ Specification

Centrifugal roof fan with vertical discharge.

■ Casing

The base plate, casing and other parts made of galvanised steel. Base plate with tapped holes for connection of intake air accessories.

■ Impeller

High performance backward curved centrifugal impeller made of polymer, dynamically balanced with the motor unit.

■ Motor

Totally enclosed external rotor motor with ball bearings, protected to IP 44, insulated for protection against moisture. Maintenance free and radio suppressed.

■ Motor protection

Through built-in thermal contacts connected in series with windings. Deactivated automatically at higher motor temperature and activated again after cooling down.

■ Electrical connection

Isolation switch on the casing as standard, factory-wired.

■ Speed control

Adjustable between 0 – 100 % available with stepless electronic or five step control units. For selection see the model chart.

■ Sound level

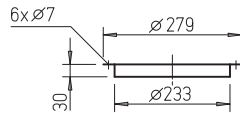
Shown on the performance curves the sound pressure level is given in dB(A) at 4 metres. The total level and spectrum for sound pressure and sound power are given above the performance curves.

■ Delivery

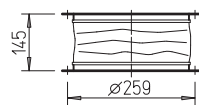
Fully assembled, ready to connect units.

Accessories for VD

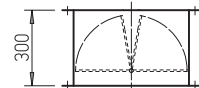
Flange rings DFR 200 Ref. No. 1201



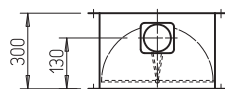
Flanged canvas connector DSTS 200 Ref. No. 1218  
For explosion proof fans DSTS 200 Ex Ref. No. 2500



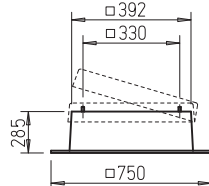
Automatic backdraught shutter DRVS 200 Ref. No. 2591



Motorised backdraught shutter DRVM 200 Ref. No. 2575

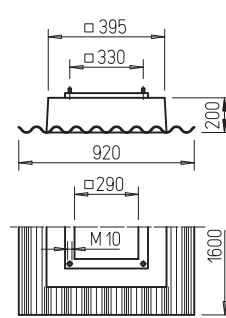


Hinged flat roof base FDS 200 Ref. No. 1378

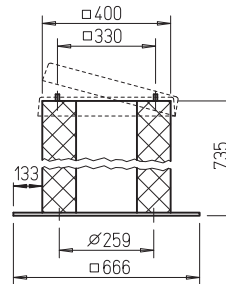


and VDRW

Corrugated roof base, profile 5 WDS 200 Ref. No. 1560



Hinged base attenuator SSD 200 Ref. No. 5290



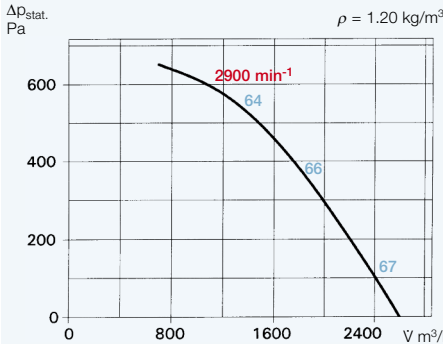
Dimensions in mm

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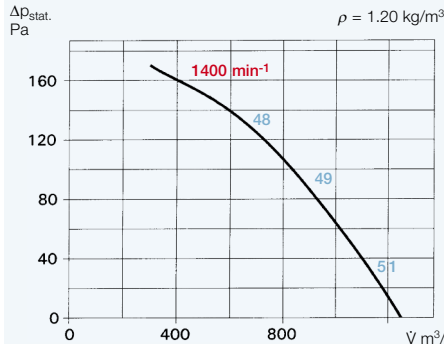
**VD 200/2**

Frequency	Hz	Total	125	250	500	1k	2k	4k
L <sub>PA, 4m</sub> Case breakout		dB(A)	67	48	58	59	61	58
L <sub>WA</sub> Intake		dB(A)	81	62	72	74	75	71



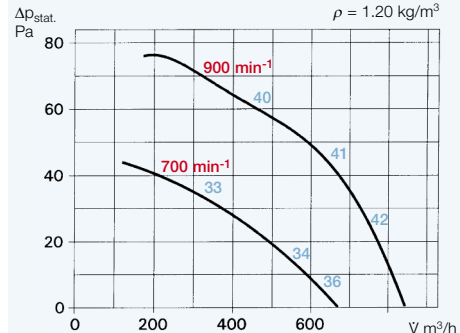
**VD 200/4**

Frequency	Hz	Total	125	250	500	1k	2k	4k
L <sub>PA, 4m</sub> Case breakout		dB(A)	51	37	40	44	47	43
L <sub>WA</sub> Intake		dB(A)	63	51	54	59	56	50



**VD 200/6 and 200/8**

Frequency	Hz	Total	125	250	500	1k	2k	4k
L <sub>PA, 4m</sub> Case breakout		dB(A)	42	27	33	37	39	31
L <sub>WA</sub> Intake		dB(A)	54	41	47	52	44	38
L <sub>PA, 4m</sub> Case breakout		dB(A)	36	22	25	29	32	28
L <sub>WA</sub> Intake		dB(A)	48	36	39	44	41	35



Type	Ref. No.	R.P.M.	Air flow volume (FID)	Sound pressure level	Power consumption	Wiring diagram	Max. air flow temperature	Nominal weight	Motor full protection unit	Transformer controller
		min <sup>-1</sup>	V m <sup>3</sup> /h	dB(A) in 4 m	kW	A	°C	kg	Type	Ref. No.

**Single speed, 230 V, 50 Hz, 1ph capacitor motor, protection to IP 54**

<b>VDW 200/6</b>	5137	940	845	42	0.060	0.30	563	90	11.0	<b>MW</b>	1579	<b>MWS 1.5<sup>3)</sup></b>	1947
<b>VDW 200/4</b>	5138	1380	1250	51	0.085	0.45	563	90	11.0	<b>MW</b>	1579	<b>MWS 1.5<sup>3)</sup></b>	1947
<b>VDW 200/2</b>	5139	2730	2600	67	0.530	2.35	508	90	12.0	w/o thermal contacts		not variable	

**Single speed, three phase alternating current 400 V, 50 Hz, squirrel-cage motor, protection to IP 54**

<b>VDD 200/6</b>	5140	930	845	42	0.046	0.19	469	90	11.0	<b>MD</b>	5849	<b>RDS 1<sup>3)</sup></b>	1314
<b>VDD 200/4</b>	5141	1390	1250	51	0.085	0.26	469	90	11.0	<b>MD</b>	5849	<b>RDS 1<sup>3)</sup></b>	1314
<b>VDD 200/2</b>	5142	2880	2600	67	0.620	1.20	470	90	12.0	w/o thermal contacts		not variable	

**Pole-changeable, with 2 speed motor, three phase alternating current 400 V, 50 Hz, protection to IP 54**

<b>VDD 200/8/4<sup>1)</sup></b>	5143	740 / 1490	670 / 1250	36 / 51	0.075 / 0.170	0.39 / 0.90	471	90	15.0	w/o thermal contacts		<b>PDA 12<sup>4)</sup></b>	5081
<b>VDD 200/6/4<sup>2)</sup></b>	5144	990 / 1490	845 / 1250	42 / 51	0.095 / 0.150	0.34 / 0.70	473	90	15.0	w/o thermal contacts		<b>PGWA 12<sup>4)</sup></b>	5083

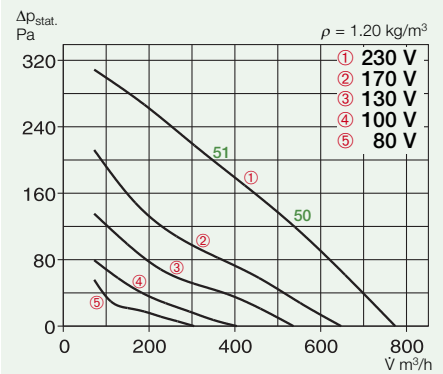
**Explosion proof, temperature class T1 – T3, three phase alternating current 400 V, 50 Hz, protection to IP 54**

<b>VDD 200/4 Ex</b>	5145	1400	1250	51	0.120	0.41	470	40	12.0	w/o thermal contacts		not variable	
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<sup>1)</sup> Dahlander-winding    <sup>2)</sup> Separate winding    <sup>3)</sup> Includes motor full protection unit    <sup>4)</sup> For the flush-mounted version see the product page - switches

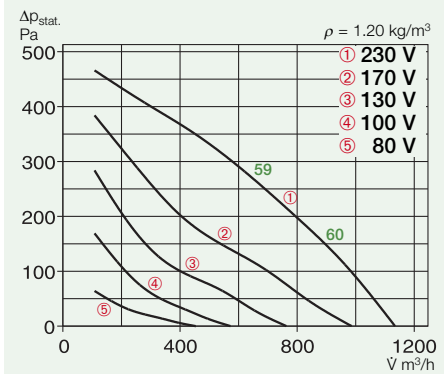
**VDRW 200/2 B**

Frequency	Hz	Total	125	250	500	1k	2k	4k
L <sub>PA, 4m</sub> Case breakout		dB(A)	50	19	31	42	46	45
L <sub>WA</sub> Intake		dB(A)	69	49	53	63	66	58



**VDRW 200/2 D**

Frequency	Hz	Total	125	250	500	1k	2k	4k
L <sub>PA, 4m</sub> Case breakout		dB(A)	60	31	42	55	53	47
L <sub>WA</sub> Intake		dB(A)	79	62	63	72	77	61



Type	Ref. No.	R.P.M.	Air flow volume (FID)	Sound pressure level	Power consumption	Wiring diagram	Max. air flow temperature	Nominal weight	Transformer controller	Electronic speed controller
		min <sup>-1</sup>	V m <sup>3</sup> /h	dB(A) in 4 m	kW	A	°C	kg	Type	Ref. No.

**Single speed, 230 V, 50 Hz, 1ph capacitor motor, protection to IP 44**

<b>VDRW 200/2 B</b>	2795	2600	770	50	0.085	0.38	826	40	9.5	<b>TSW 1.5</b>	1495	<b>ESU 1/ESA 1</b>	0236/0238
<b>VDRW 200/2 D</b>	2796	2650	1130	60	0.135	0.60	826	60	10.5	<b>TSW 1.5</b>	1495	<b>ESU 1/ESA 1</b>	0236/0238

**Vertical discharge VD**

**■ Specification**

Roof fan with vertical discharge made of polymer with the motor out of the air stream. Engine mountings made of stainless steel.

**■ Casing**

The upper and lower shell, motor protection cover and base plate with inlet cone are made of glass-fibre polyester. Base plate with threaded bolt for connection of intake air accessories.

**■ Impeller**

High performance backward curved centrifugal impeller made of aluminium, dynamically balanced.

**■ Motor**

Totally enclosed IEC-motor with surface cooling protected to IP 54, ball bearing mounted, insulated for protection against moisture. Maintenance free and radio suppressed.

**■ Motor protection**

All variable models (except models with pole switch) have built-in thermal contacts which must be connected to the motor full protection unit (see model chart) in order to protect the motor effectively.

**■ Electrical connection**

Directly from the roof in to the external terminal box protected to IP 65.

**■ Protection grille**

On the outlet as standard, compliant with DIN EN ISO 13857.

**■ Speed control**

All models where a speed controller is shown on the table are speed controllable via voltage reduction (1 ph. models electronically as well). Also two speed models are available.

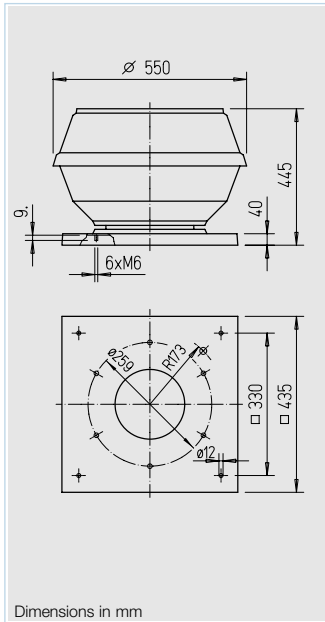
**■ Sound level**

Shown on the performance curves the sound pressure level is given in dB(A) at 4 metres. The total level and spectrum for sound pressure and sound power are given above the performance curves.

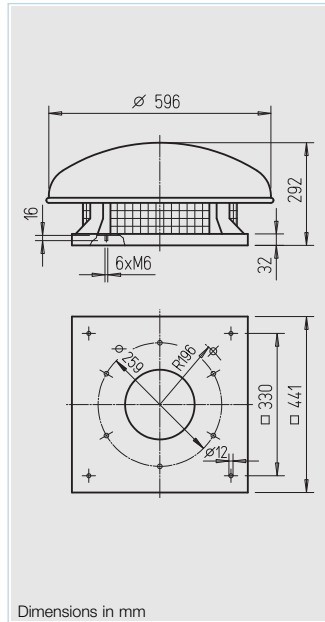
**■ Delivery**

Fully assembled, ready to connect units.

**Vertical discharge VD**



**Horizontal discharge RD**



**Horizontal discharge RD**

**■ Specification**

Centrifugal roof fan with horizontal discharge. Flat design with large overlying rain cowl.

**■ Casing**

Base plate (with inlet cone) and other parts made of galvanised steel. Rain cowl and protection grille made of aluminium. Base plate with threaded bolt for connection of intake air accessories.

**■ Impeller**

High performance backward curved centrifugal impeller made of galvanised steel, dynamically balanced with the motor unit.

**■ Motor**

Totally enclosed external rotor motor with ball bearings, protected to IP 44, insulated for protection against moisture. Maintenance free and radio suppressed.

**■ Motor protection**

Through built-in thermal contacts which must be connected to the motor full protection unit. Explosion proof models are equipped with thermal motor protection through built-in PTC thermistor which is connected to the tripping unit MSA. Hereby speed control is allowed where the minimum voltage must not be less than 115 V.

**■ Electrical connection**

Terminal box (protection to IP 55) located beneath rain cowl as standard. The explosion proof models are supplied with a 80 cm long connection lead. Explosion proof terminal box is available as accessory (KK Ex, Ref. No. 6862).

**■ Protection grille**

On the outlet as standard, compliant with DIN EN ISO 13857.

**■ Speed control**

All models where a speed controller is shown on the table are speed controllable via voltage reduction (1 ph. models electronically as well). Also two speed models are available.

**■ Sound level**

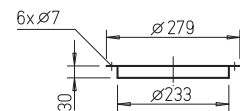
Shown on the performance curves the sound pressure level is given in dB(A) at 4 metres. The total level and spectrum for sound pressure and sound power are given above the performance curves.

**■ Delivery**

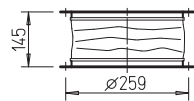
Fully assembled, ready to connect units.

**Accessories for VD**

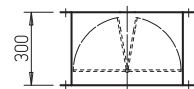
**Flange rings FR 225** Ref. No. 1201



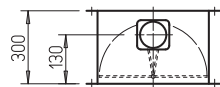
**Flanged canvas connector STS 225** Ref. No. 1218  
For explosion proof fans **STS 225 Ex** Ref. No. 2500



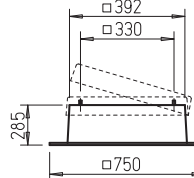
**Automatic backdraught shutter RVS 225** Ref. No. 2591



**Motorised backdraught shutter RVM 225** Ref. No. 2575

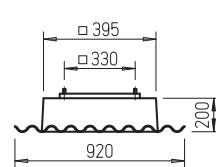


**Hinged flat roof base FDS 225** Ref. No. 1378

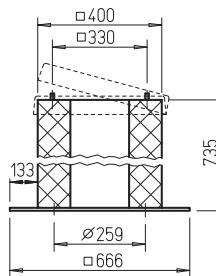


**and RD**

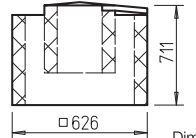
**Corrugated roof base, profile 5 WDS 225** Ref. No. 1560



**Hinged base attenuator SSD 225** Ref. No. 5290



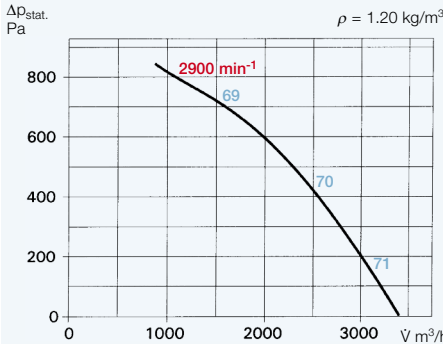
**Roof fan attenuator HSDV 225** Ref. No. 6757  
only for RD..



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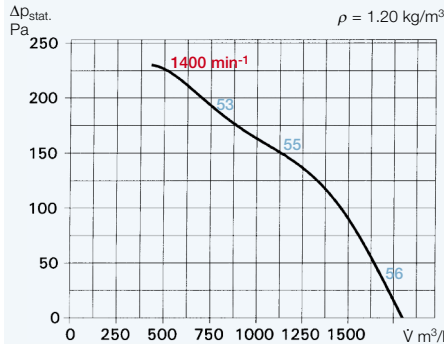
**VD 225/2**

Frequency	Hz	Total	125	250	500	1k	2k	4k	
L <sub>PA, 4m</sub> Case breakout		dB(A)	71	53	63	64	66	64	63
L <sub>WA</sub> Intake		dB(A)	84	68	77	79	77	78	74



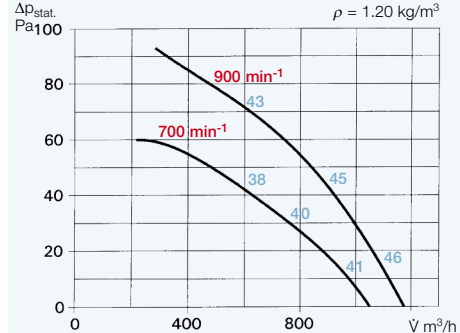
**VD 225/4**

Frequency	Hz	Total	125	250	500	1k	2k	4k	
L <sub>PA, 4m</sub> Case breakout		dB(A)	56	40	46	50	51	48	43
L <sub>WA</sub> Intake		dB(A)	69	55	60	65	61	62	54



**VD 225/6 and 225/8**

Frequency	Hz	Total	125	250	500	1k	2k	4k	
L <sub>PA, 4m</sub> Case breakout		dB(A)	46	31	38	40	41	37	31
L <sub>WA</sub> Intake		dB(A)	59	46	52	55	50	51	42
L <sub>PA, 4m</sub> Case breakout		dB(A)	41	25	31	35	36	33	28
L <sub>WA</sub> Intake		dB(A)	54	40	45	50	46	47	39

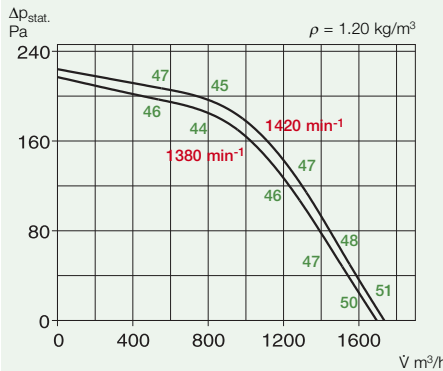


Type	Ref. No.	R.P.M.	Air flow volume (FID)	Sound pressure level	Power consumption		Wiring diagram	Max. air flow temperature	Nominal weight	Motor full protection unit		Transformer controller	
					kW	A				Type	Ref. No.	Type	Ref. No.
<b>Single speed, 230 V, 50 Hz, 1ph capacitor motor, protection to IP 54</b>													
VDW 225/6	5146	900	1175	46	0.07	0.34	563	90	12.5	MW	1579	MWS 1.5 <sup>3)</sup>	1947
VDW 225/4	5147	1320	1800	56	0.15	0.77	563	90	12.5	MW	1579	MWS 1.5 <sup>3)</sup>	1947
<b>Single speed, three phase alternating current 400 V, 50 Hz, squirrel-cage motor, protection to IP 54</b>													
VDD 225/6	5148	890	1175	46	0.06	0.19	469	90	12.5	MD	5849	RDS 1 <sup>3)</sup>	1314
VDD 225/4	5149	1330	1800	56	0.17	0.40	469	90	12.5	MD	5849	RDS 1 <sup>3)</sup>	1314
VDD 225/2	5150	2880	3410	71	1.00	2.00	470	90	15.0	w/o thermal contacts		not variable	
<b>Pole-changeable, with 2 speed motor, three phase alternating current 400 V, 50 Hz, protection to IP 54</b>													
VDD 225/8/4 <sup>1)</sup>	5151	730 / 1470	1050 / 1800	41 / 56	0.085 / 0.220	0.35 / 0.80	471	90	16.0	w/o thermal contacts		PDA 12 <sup>4)</sup>	5081
VDD 225/6/4 <sup>2)</sup>	5152	980 / 1480	1175 / 1800	46 / 56	0.100 / 0.200	0.33 / 0.75	473	90	16.0	w/o thermal contacts		PGWA 12 <sup>4)</sup>	5083
<b>Explosion proof, temperature class T1 – T3, three phase alternating current 400 V, 50 Hz, protection to IP 54</b>													
VDD 225/6 Ex	5153	850	1175	46	0.25	0.81	470	40	14.0	w/o thermal contacts		not variable	
VDD 225/4 Ex	5154	1400	1800	56	0.12	0.41	470	40	13.0	w/o thermal contacts		not variable	

<sup>1)</sup> Dahlander-winding    <sup>2)</sup> Separate winding    <sup>3)</sup> Includes motor full protection unit    <sup>4)</sup> For the flush-mounted version see the product page - switches

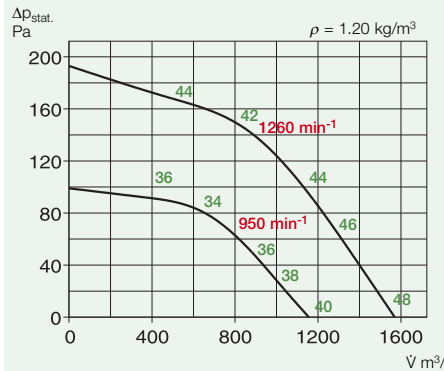
**RD.. n=1420 / 1380 min<sup>-1</sup>**

Frequency	Hz	Total	125	250	500	1k	2k	4k	
1420 min <sup>-1</sup> L <sub>WA</sub> Intake		dB(A)	68	63	58	60	61	59	52
1380 min <sup>-1</sup> L <sub>WA</sub> Intake		dB(A)	67	62	57	59	60	58	51



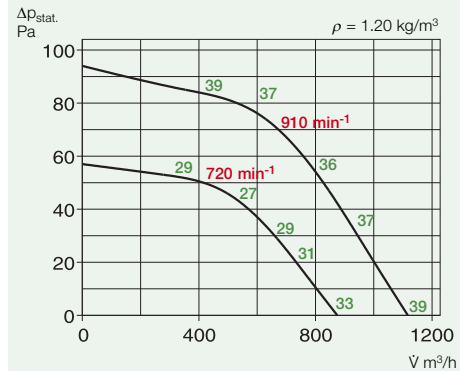
**RD.. n=1260 / 950 min<sup>-1</sup>**

Frequency	Hz	Total	125	250	500	1k	2k	4k	
1260 min <sup>-1</sup> L <sub>WA</sub> Intake		dB(A)	66	61	56	58	59	57	50
950 min <sup>-1</sup> L <sub>WA</sub> Intake		dB(A)	58	53	48	50	51	48	42



**RD.. n=910 / 720 min<sup>-1</sup>**

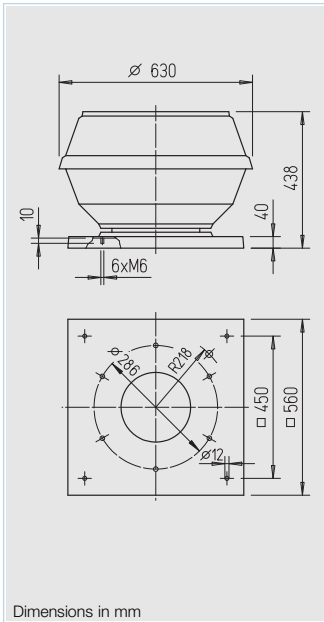
Frequency	Hz	Total	125	250	500	1k	2k	4k	
910 min <sup>-1</sup> L <sub>WA</sub> Intake		dB(A)	57	52	47	49	50	47	41
720 min <sup>-1</sup> L <sub>WA</sub> Intake		dB(A)	51	46	41	43	44	42	35



Type	Ref. No.	R.P.M.	Air flow volume (FID)	Sound pressure level	Power consumption		Wiring diagram	Max. air flow temperature	Nominal weight	Motor full protection unit		Transformer controller	
					kW	A				Type	Ref. No.	Type	Ref. No.
<b>Single speed, 230 V, 50 Hz, 1ph capacitor motor, protection to IP 44</b>													
RDW 225/6	1508	910	1120	37	0.08	0.34	467	60	12.0	MW	1579	MWS 1.5 <sup>2)</sup>	1947
RDW 225/4	1507	1380	1690	48	0.16	0.76	467	55	12.0	MW	1579	MWS 1.5 <sup>2)</sup>	1947
<b>Single speed, three phase alternating current 400 V, 50 Hz, squirrel-cage motor, protection to IP 44</b>													
RDD 225/6	1164	950	1160	38	0.08	0.28	499	60	12.0	MD	5849	RDS 1 <sup>2)</sup>	1314
<b>Two speed, three phase alternating current 400 V, 50 Hz, Y/Δ-switching, protection to IP 44</b>													
RDD 225/4/4	1515	1260 / 1420	1570 / 1730	46 / 48	0.09 / 0.13	0.16 / 0.40	520	60	13.0	M 4 <sup>3)</sup>	1571	RDS 1 <sup>2)</sup>	1314
<b>Pole-changeable, with 2 speed motor, three phase alternating current 400 V, 50 Hz, protection to IP 44</b>													
RDD 225/8/4 <sup>1)</sup>	1517	720 / 1430	880 / 1740	31 / 48	0.05 / 0.16	0.15 / 0.37	472	60	13.0	M 3 <sup>3)</sup>	1293	PDA 12 <sup>4)</sup>	5081
<b>Explosion proof, temperature class T1 – T3, three phase alternating current 400 V, 50 Hz, protection to IP 44</b>													
RDD 225/6 Ex <sup>5)</sup>	1519	990	1015	41	0.14	0.89	838	40	13.0	MSA	1289	not variable	
RDD 225/4 Ex	1167	1390	1700	50	0.13	0.37	837	40	13.0	MSA	1289	TSD 0.8	1500

<sup>1)</sup> Dahlander-winding    <sup>2)</sup> Includes motor full protection unit    <sup>3)</sup> Includes speed control and pole switch    <sup>4)</sup> Flush-mounted version see the product page, switches    <sup>5)</sup> Perf. curves on request

Vertical discharge VD



Dimensions in mm

■ Specification

Roof fan with vertical discharge made of polymer with the motor out of the air stream. Engine mountings made of stainless steel.

■ Casing

The upper and lower shell, motor protection cover and base plate with inlet cone made of glass-fibre polyester. Base plate with threaded bolt for connection of intake air accessories.

■ Impeller

High performance backward curved centrifugal impeller made of aluminium, dynamically balanced.

■ Motor

Totally enclosed IEC-motor with surface cooling protected to IP 54, ball bearing mounted, insulated for protection against moisture. Maintenance free and radio suppressed.

■ Motor protection

All variable models (except models with pole switch) have built-in thermal contacts which must be connected to the motor full protection unit (see model chart) in order to protect the motor effectively.

■ Electrical connection

Directly from the roof in to the external terminal box protected to IP 65.

■ Protection grille

On the outlet as standard, compliant with DIN EN ISO 13857.

■ Speed control

All models where a speed controller is shown on the table are speed controllable via voltage reduction (1 ph. models electronically as well). Two speed models are also available.

■ Sound level

Shown on the performance curves the sound pressure level is given in dB(A) at 4 metres. The total level and spectrum for sound pressure and sound power are given above the performance curves.

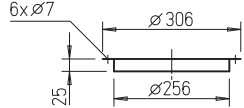
■ Delivery

Fully assembled, ready to connect units.

Accessories for VD

Flange rings

FR 250 Ref. No. 1203

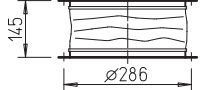


Flanged canvas connector

STS 250 Ref. No. 1220

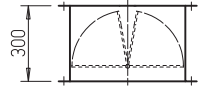
For explosion proof fans

STS 250 Ex Ref. No. 2501



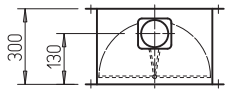
Automatic backdraught shutter

RVS 250 Ref. No. 2592



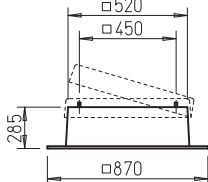
Motorised backdraught shutter

RVM 250 Ref. No. 2576



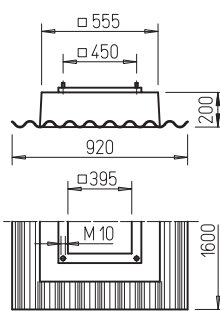
Hinged flat roof base

FDS 250 Ref. No. 1379



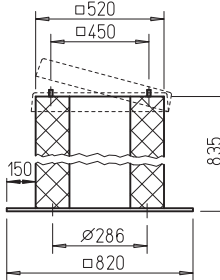
Corrugated roof base, profile 5

WDS 250 Ref. No. 1561



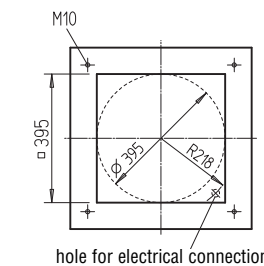
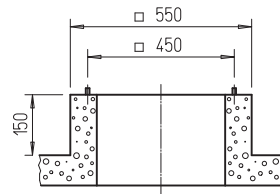
Hinged base attenuator

SSD 250 Ref. No. 5292



Dimensions in mm

Dimensions for the base on site

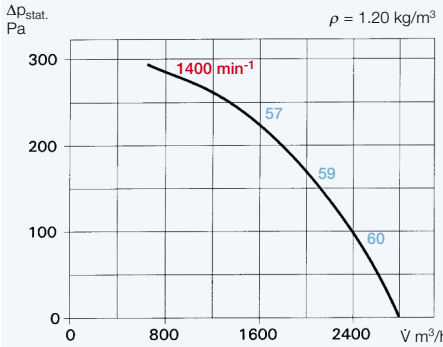


Dimensions in mm

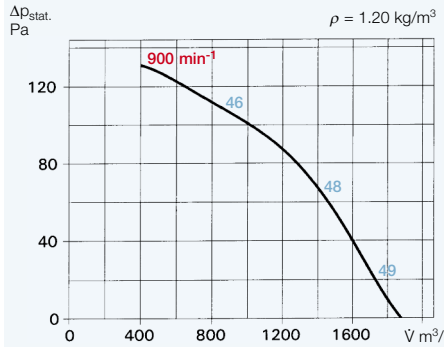
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Technical specification	332
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Accessories, details	359
Speed controllers, controllers and switches	397 on

**VD 250/4**

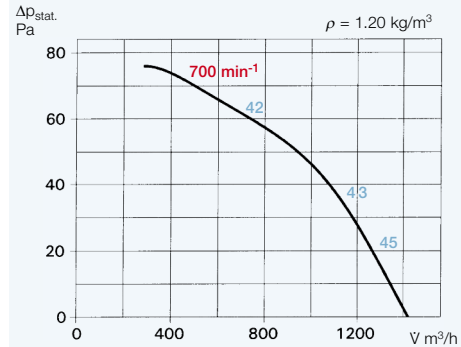
Frequency	Hz	Total	125	250	500	1k	2k	4k	
L <sub>PA, 4m</sub>	Case breakout	dB(A)	60	44	50	54	55	63	49
L <sub>WA</sub>	Intake	dB(A)	74	60	63	69	67	68	60


**VD 250/6**

Frequency	Hz	Total	125	250	500	1k	2k	4k	
L <sub>PA, 4m</sub>	Case breakout	dB(A)	49	32	40	43	45	40	34
L <sub>WA</sub>	Intake	dB(A)	62	48	53	58	54	55	45


**VD 250/8**

Frequency	Hz	Total	125	250	500	1k	2k	4k	
L <sub>PA, 4m</sub>	Case breakout	dB(A)	45	28	37	41	39	33	26
L <sub>WA</sub>	Intake	dB(A)	58	44	50	56	47	48	37



Type	Ref. No.	R.P.M.	Air flow volume (FID)	Sound pressure level	Power consumption		Wiring diagram	Max. air flow temperature	Nominal weight	Motor full protection unit		Transformer controller	
					kW	A				Type	Ref. No.	Type	Ref. No.

**Single speed, 230 V, 50 Hz, 1ph capacitor motor, protection to IP 54**

<b>VDW 250/6</b>	5155	920	1880	49	0.11	0.61	563	90	16.0	<b>MW</b>	1579	<b>MWS 1.5<sup>3)</sup></b>	1947
<b>VDW 250/4</b>	5156	1320	2800	60	0.23	1.06	563	90	14.5	<b>MW</b>	1579	<b>MWS 1.5<sup>3)</sup></b>	1947

**Single speed, three phase alternating current 400 V, 50 Hz, squirrel-cage motor, protection to IP 54**

<b>VDD 250/6</b>	5158	940	1880	49	0.11	0.35	469	90	14.5	<b>MD</b>	5849	<b>RDS 1<sup>3)</sup></b>	1314
<b>VDD 250/4</b>	5159	1390	2800	60	0.28	0.63	469	90	14.5	<b>MD</b>	5849	<b>RDS 1<sup>3)</sup></b>	1314

**Pole-changeable, with 2 speed motor, three phase alternating current 400 V, 50 Hz, protection to IP 54**

<b>VDD 250/8/6<sup>2)</sup></b>	5160	730 / 960	1420 / 1880	45 / 49	0.120 / 0.120	0.32 / 0.28	473	90	19.5	w/o thermal contacts		<b>PGWA 12<sup>4)</sup></b>	5083
<b>VDD 250/8/4<sup>1)</sup></b>	5161	740 / 1470	1420 / 2800	45 / 60	0.095 / 0.330	0.39 / 0.90	471	90	17.0	w/o thermal contacts		<b>PDA 12<sup>4)</sup></b>	5081
<b>VDD 250/6/4<sup>2)</sup></b>	5162	970 / 1470	1880 / 2800	49 / 60	0.130 / 0.280	0.34 / 0.77	473	90	17.0	w/o thermal contacts		<b>PGWA 12<sup>4)</sup></b>	5083

**Explosion proof, temperature class T1 – T3, three phase alternating current 400 V, 50 Hz, protection to IP 54**

<b>VDD 250/6 Ex</b>	5163	850	1880	49	0.25	0.81	470	40	15.5	w/o thermal contacts			not variable
<b>VDD 250/4 Ex</b>	5164	1355	2800	60	0.37	1.10	470	40	15.5	w/o thermal contacts			not variable

<sup>1)</sup> Dahlander-winding

<sup>2)</sup> Separate winding

<sup>3)</sup> Includes motor full protection unit

<sup>4)</sup> For the flush-mounted version see the product page - switches



## Vertical discharge VD

### ■ Specification

Roof fan with vertical discharge made of polymer with the motor out of the air stream. Engine mountings made of stainless steel.

### ■ Casing

The upper and lower shell, motor protection cover and base plate with inlet cone are made of glass-fibre polyester. Base plate with threaded bolt for connection of intake air accessories.

### ■ Impeller

High performance backward curved centrifugal impeller made of aluminium, dynamically balanced.

### ■ Motor

Totally enclosed IEC-motor with surface cooling protected to IP 54, ball bearing mounted, insulated for protection against moisture. Maintenance free and radio suppressed.

### ■ Motor protection

All variable models (except models with pole switch) have built-in thermal contacts which must be connected to the motor full protection unit (see model chart) in order to protect the motor effectively.

### ■ Electrical connection

Directly from the roof in to the external terminal box protected to IP 65.

### ■ Protection grille

On the outlet as standard, compliant with DIN EN ISO 13857.

### ■ Speed control

All models where a speed controller is shown on the table are speed controllable via voltage reduction (1 ph. models electronically as well). Two speed models are also available.

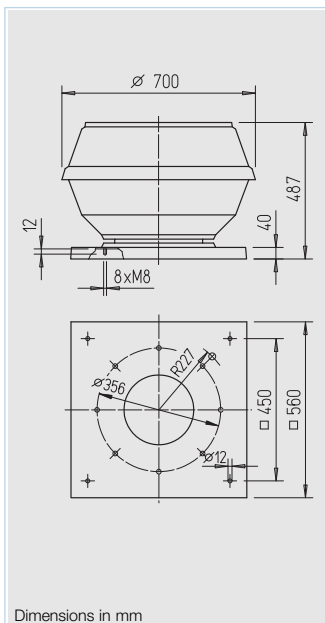
### ■ Sound level

Shown on the performance curves the sound pressure level is given in dB(A) at 4 metres. The total level and spectrum for sound pressure and sound power are given above the performance curves.

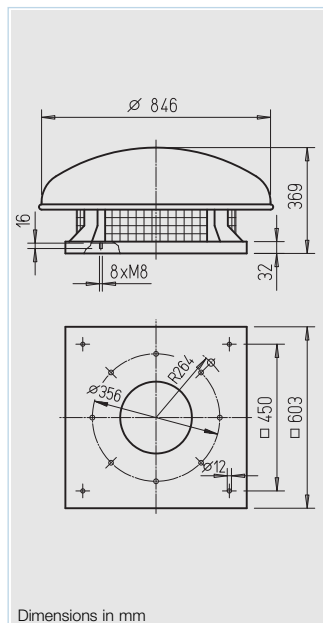
### ■ Delivery

Fully assembled, ready to connect units.

## Vertical discharge VD



## Horizontal discharge RD



## Horizontal discharge RD

### ■ Specification

Centrifugal roof fan with horizontal discharge. Flat design with large overlying rain cowl.

### ■ Casing

Base plate (with inlet cone) and other parts made of galvanised steel. Rain cowl and protection grille made of aluminium. Base plate with threaded bolt for connection of intake air accessories.

### ■ Impeller

High performance backward curved centrifugal impeller made of galvanised steel, dynamically balanced with the motor unit.

### ■ Motor

Totally enclosed external rotor motor with ball bearings, protected to IP 44, insulated for protection against moisture. Maintenance free and radio suppressed.

### ■ Motor protection

Through built-in thermal contacts which must be connected to the motor full protection unit. Explosion proof models are equipped with thermal motor protection through built-in PTC thermistor which is connected to the tripping unit MSA. Hereby speed control is allowed where the minimum voltage must not be less than 115 V.

### ■ Electrical connection

Terminal box (protection to IP 55) located beneath rain cowl as standard. The explosion proof models are supplied with a 80 cm long connection lead. Explosion proof terminal box is available as accessory (KK Ex, Ref. No. 6862).

### ■ Protection grille

On the outlet as standard, compliant with DIN EN ISO 13857.

### ■ Speed control

All models where a speed controller is shown on the table are speed controllable via voltage reduction (1 ph. models electronically as well). Two speed models are also available.

### ■ Sound level

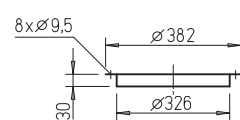
Shown on the performance curves the sound pressure level is given in dB(A) at 4 metres. The total level and spectrum for sound pressure and sound power are given above the performance curves.

### ■ Delivery

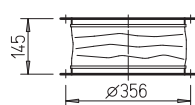
Fully assembled, ready to connect units.

## Accessories for VD

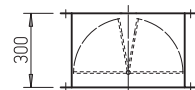
**Flange rings**  
FR 315 Ref. No. 1204



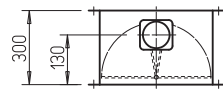
**Flanged canvas connector**  
STS 315 Ref. No. 1221  
For explosion proof fans  
STS 315 Ex Ref. No. 2503



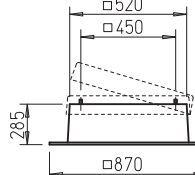
**Automatic backdraught shutter**  
RVS 315 Ref. No. 2594



**Motorised backdraught shutter**  
RVM 315 Ref. No. 2578

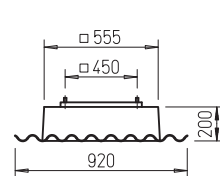


**Hinged flat roof base**  
FDS 315 Ref. No. 1379

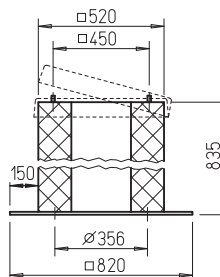


## and RD

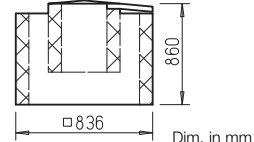
**Corrugated roof base, profile 5**  
WDS 315 Ref. No. 1561



**Hinged base attenuator**  
SSD 315 Ref. No. 5292



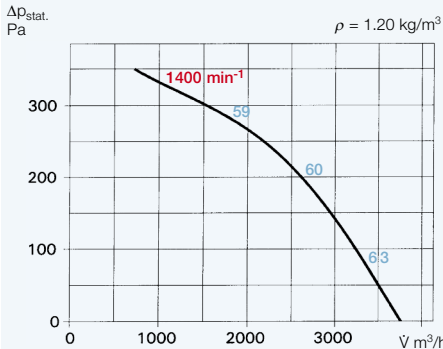
**Roof fan attenuator**  
HSDV 315 Ref. No. 6758  
only for RD..



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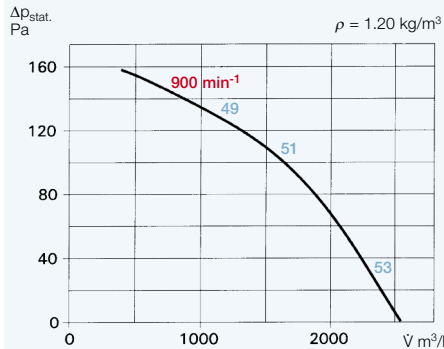
**VD 315/4**

Frequency	Hz	Total	125	250	500	1k	2k	4k
L <sub>PA, 4m</sub> Case breakout		dB(A)	63	45	53	58	54	50
L <sub>WA</sub> Intake		dB(A)	76	63	67	72	69	61



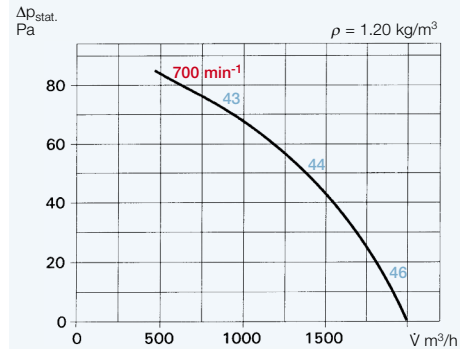
**VD 315/6**

Frequency	Hz	Total	125	250	500	1k	2k	4k
L <sub>PA, 4m</sub> Case breakout		dB(A)	53	36	45	48	43	38
L <sub>WA</sub> Intake		dB(A)	66	54	59	62	58	49



**VD 315/8**

Frequency	Hz	Total	125	250	500	1k	2k	4k
L <sub>PA, 4m</sub> Case breakout		dB(A)	46	29	38	42	41	37
L <sub>WA</sub> Intake		dB(A)	60	47	52	56	52	43



Type	Ref. No.	R.P.M.	Air flow volume (FID)		Sound pressure level	Power consumption		Wiring diagram	Max. air flow temperature	Nominal weight	Motor full protection unit		Transformer controller Pole switch	
			min <sup>-1</sup>	V m <sup>3</sup> /h		kW	A				Type	Ref. No.	Type	Ref. No.

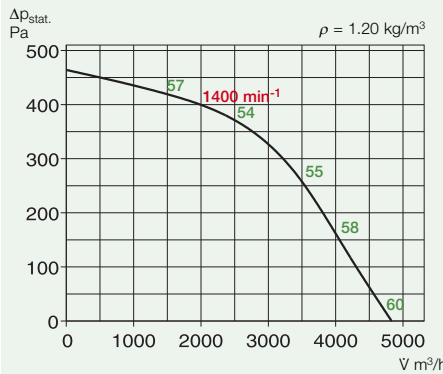
<b>Single speed, 230 V, 50 Hz, 1ph capacitor motor, protection to IP 54</b>														
<b>VDW 315/6</b>	5166		890	2550	53	0.15	0.85	563	80	18.5	<b>MW</b>	1579	<b>MWS 1.5<sup>3)</sup></b>	1947
<b>VDW 315/4</b>	5167		1370	3760	63	0.41	1.97	563	80	18.5	<b>MW</b>	1579	<b>MWS 3<sup>3)</sup></b>	1948
<b>Single speed, three phase alternating current 400 V, 50 Hz, squirrel-cage motor, protection to IP 54</b>														
<b>VDD 315/6</b>	5169		890	2550	53	0.18	0.47	469	80	18.5	<b>MD</b>	5849	<b>RDS 1<sup>3)</sup></b>	1314
<b>VDD 315/4</b>	5170		1390	3760	63	0.45	1.05	469	80	18.5	<b>MD</b>	5849	<b>RDS 2<sup>3)</sup></b>	1315
<b>Pole-changeable, with 2 speed motor, three phase alternating current 400 V, 50 Hz, protection to IP 54</b>														
<b>VDD 315/8/6<sup>2)</sup></b>	5172		710 / 920	2000 / 2550	46 / 53	0.13 / 0.18	0.32 / 0.32	473	80	21.5	w/o thermal contacts	<b>PGWA 12<sup>4)</sup></b>	<b>5083</b>	
<b>VDD 315/8/4<sup>1)</sup></b>	5173		720 / 1420	2000 / 3760	46 / 63	0.12 / 0.54	0.40 / 1.03	471	80	19.5	w/o thermal contacts	<b>PDA 12<sup>4)</sup></b>	<b>5081</b>	
<b>VDD 315/6/4<sup>2)</sup></b>	5174		920 / 1420	2550 / 3760	53 / 63	0.20 / 0.49	0.38 / 0.95	473	80	19.5	w/o thermal contacts	<b>PGWA 12<sup>4)</sup></b>	<b>5083</b>	
<b>Explosion proof, temperature class T1 – T3, three phase alternating current 400 V, 50 Hz, protection to IP 54</b>														
<b>VDD 315/6 Ex</b>	5175		850	2550	53	0.25	0.81	470	40	18.5	w/o thermal contacts		not variable	
<b>VDD 315/4 Ex</b>	5176		1355	3760	63	0.37	1.10	470	40	21.0	w/o thermal contacts		not variable	

<sup>1)</sup> Dahlander-winding    <sup>2)</sup> Separate winding    <sup>3)</sup> Includes motor full protection unit    <sup>4)</sup> For the flush-mounted version see the product page - switches

**RD..**

**n=1400 min<sup>-1</sup>**

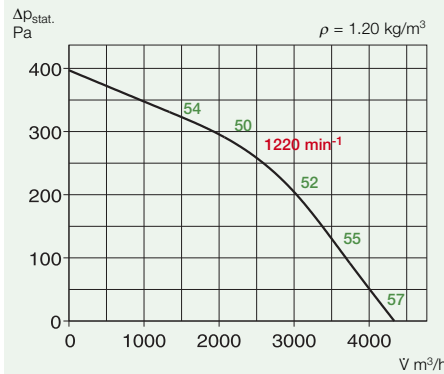
Frequency	Hz	Total	125	250	500	1k	2k	4k
1400 min <sup>-1</sup> L <sub>WA</sub> Intake		dB(A)	78	72	70	72	70	67



**RD..**

**n=1220 min<sup>-1</sup>**

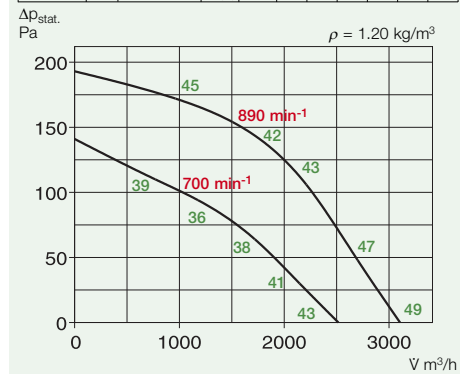
Frequency	Hz	Total	125	250	500	1k	2k	4k
1220 min <sup>-1</sup> L <sub>WA</sub> Intake		dB(A)	75	69	67	69	67	54



**RD..**

**n=890 / 700 min<sup>-1</sup>**

Frequency	Hz	Total	125	250	500	1k	2k	4k
890 min <sup>-1</sup> L <sub>WA</sub> Intake		dB(A)	67	61	59	61	59	56
700 min <sup>-1</sup> L <sub>WA</sub> Intake		dB(A)	61	55	53	55	53	50



Type	Ref. No.	R.P.M.	Air flow volume (FID)		Sound pressure level	Power consumption		Wiring diagram	Max. air flow temperature	Nominal weight	Motor full protection unit		Transformer controller Speed-/ Pole switch	
			min <sup>-1</sup>	V m <sup>3</sup> /h		kW	A				Type	Ref. No.	Type	Ref. No.

<b>Single speed, 230 V, 50 Hz, 1ph capacitor motor, protection to IP 44</b>														
<b>RDW 315/6</b>	1510		890	3100	47	0.20	0.91	467	60	22.0	<b>MW</b>	1579	<b>MWS 1.5<sup>2)</sup></b>	1947
<b>RDW 315/4</b>	1509		1220	4340	55	0.52	2.30	468	55	25.0	<b>MW</b>	1579	<b>MWS 3<sup>2)</sup></b>	1948
<b>Single speed, three phase alternating current 400 V, 50 Hz, Y/Δ-switching, protection to IP 44</b>														
<b>RDD 315/6/6</b>	1521		690 / 890	2520 / 3100	41 / 47	0.13 / 0.22	0.23 / 0.55	520	60	22.0	<b>M 4<sup>3)</sup></b>	1571	<b>RDS 1<sup>2)</sup></b>	1314
<b>RDD 315/4/4</b>	1520		1190 / 1400	4250 / 4830	55 / 58	0.44 / 0.58	0.74 / 1.35	520	60	25.0	<b>M 4<sup>3)</sup></b>	1571	<b>RDS 2<sup>2)</sup></b>	1315
<b>Pole-changeable, with 2 speed motor, three phase alternating current 400 V, 50 Hz, protection to IP 54</b>														
<b>RDD 315/8/4<sup>1)</sup></b>	1522		700 / 1380	2520 / 4780	41 / 58	0.12 / 0.62	0.38 / 1.20	472	60	27.0	<b>M 3<sup>3)</sup></b>	1293	<b>PDA 12<sup>4)</sup></b>	5081
<b>Explosion proof, temperature class T1 – T3, three phase alternating current 400 V, 50 Hz, protection to IP 44</b>														
<b>RDD 315/6 Ex</b>	1173		960	3290	50	0.25	0.91	838	40	27.0	<b>MSA</b>	1289	<b>TSD 1.5</b>	1501
<b>RDD 315/4 Ex</b>	1174		1290	4540	58	0.49	0.92	838	40	27.0	<b>MSA</b>	1289	<b>TSD 1.5</b>	1501

<sup>1)</sup> Dahlander-winding    <sup>2)</sup> Includes motor full protection unit    <sup>3)</sup> Includes speed control and pole switch    <sup>4)</sup> For the flush-mounted version see the product page - switches

**Vertical discharge VD**

**■ Specification**

Roof fan with vertical discharge made of polymer with the motor out of the air stream. Engine mountings made of stainless steel.

**■ Casing**

The upper and lower shell, motor protection cover and base plate with inlet cone made of glass-fibre polyester. Base plate with threaded bolt for connection of intake air accessories.

**■ Impeller**

High performance backward curved centrifugal impeller made of aluminium, dynamically balanced.

**■ Motor**

Totally enclosed IEC-motor with surface cooling protected to IP 54, ball bearing mounted, insulated for protection against moisture. Maintenance free and radio suppressed.

**■ Motor protection**

All variable models (except models with pole switch) have built-in thermal contacts which must be connected to the motor full protection unit (see model chart) in order to protect the motor effectively.

**■ Electrical connection**

Directly from the roof in to the external terminal box protected to IP 65.

**■ Protection grille**

On the outlet as standard, compliant with DIN EN ISO 13857.

**■ Speed control**

All models where a speed controller is shown on the table are speed controllable via voltage reduction (1 ph. models electronically as well). Two speed models are also available.

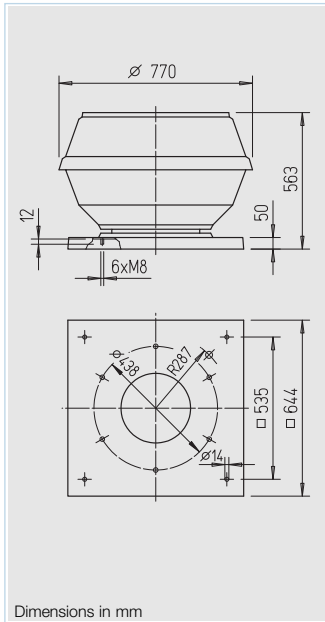
**■ Sound level**

Shown on the performance curves the sound pressure level is given in dB(A) at 4 metres. The total level and spectrum for sound pressure and sound power are given above the performance curves.

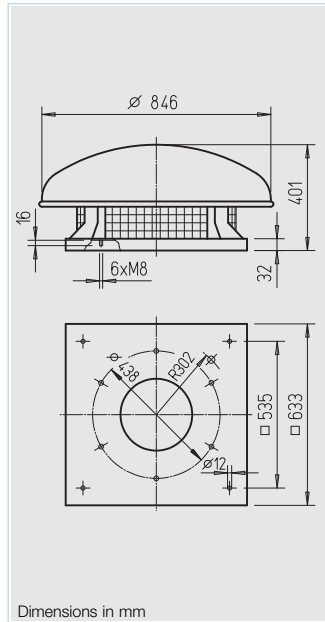
**■ Delivery**

Fully assembled, ready to connect units.

**Vertical discharge VD**



**Horizontal discharge RD**



**Horizontal discharge RD**

**■ Specification**

Centrifugal roof fan with horizontal discharge. Flat design with large overlying rain cowl.

**■ Casing**

Base plate (with inlet cone) and other parts made of galvanised steel. Rain cowl and protection grille made of aluminium. Base plate with threaded bolt for connection of intake air accessories.

**■ Impeller**

High performance backward curved centrifugal impeller made of galvanised steel, dynamically balanced with the motor unit.

**■ Motor**

Totally enclosed external rotor motor with ball bearings, protected to IP 44, insulated for protection against moisture. Maintenance free and radio suppressed.

**■ Motor protection**

Through built-in thermal contacts which must be connected to the motor full protection unit. Explosion proof models are equipped with thermal motor protection through built-in PTC thermistor which is connected to the tripping unit MSA. Hereby speed control is allowed where the minimum voltage must not be less than 115 V.

**■ Electrical connection**

Terminal box (protection to IP 55) located beneath rain cowl as standard. The explosion proof models are supplied with a 80 cm long connection lead. Explosion proof terminal box is available as accessory (KK Ex, Ref. No. 6862).

**■ Protection grille**

On the outlet as standard, compliant with DIN EN ISO 13857.

**■ Speed control**

All models where a speed controller is shown on the table are speed controllable via voltage reduction (1 ph. models electronically as well). Two speed models are also available.

**■ Sound level**

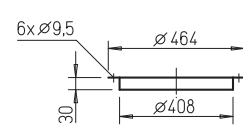
Shown on the performance curves the sound pressure level is given in dB(A) at 4 metres. The total level and spectrum for sound pressure and sound power are given above the performance curves.

**■ Delivery**

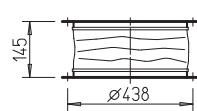
Fully assembled, ready to connect units.

**Accessories for VD**

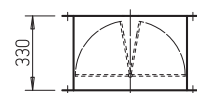
**Flange rings FR 400** Ref. No. 1206



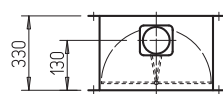
**Flanged canvas connector STS 400** Ref. No. 1223  
For explosion proof fans  
**STS 400 Ex** Ref. No. 2505



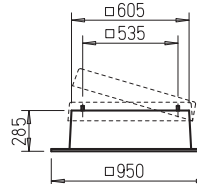
**Automatic backdraught shutter RVS 400** Ref. No. 2596



**Motorised backdraught shutter RVM 400** Ref. No. 2580

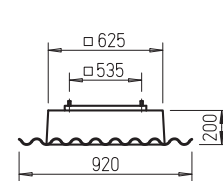


**Hinged flat roof base FDS 400** Ref. No. 1380

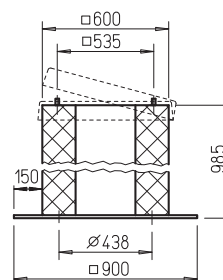


**and RD**

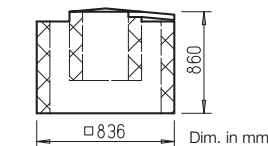
**Corrugated roof base, profile 5 WDS 400** Ref. No. 1562



**Hinged base attenuator SSD 400** Ref. No. 5291



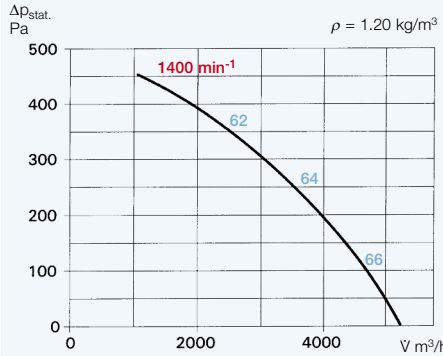
**Roof fan attenuator HSDV 400** Ref. No. 6758  
only for RD..



Information	Page
Design of systems	12 on
Technical specification	332
Selection chart	334
Accessories, details	359
Speed controllers, controllers and switches	397 on

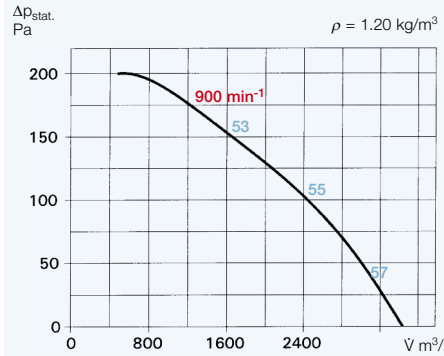
**VD 400/4**

Frequency	Hz	Total	125	250	500	1k	2k	4k	
L <sub>PA, 4m</sub> Case breakout		dB(A)	66	54	58	61	62	57	54
L <sub>WA</sub> Intake		dB(A)	80	70	72	75	72	73	67



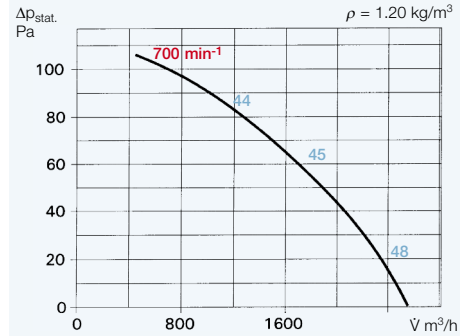
**VD 400/6**

Frequency	Hz	Total	125	250	500	1k	2k	4k	
L <sub>PA, 4m</sub> Case breakout		dB(A)	57	46	50	52	53	45	41
L <sub>WA</sub> Intake		dB(A)	70	62	64	66	60	61	54



**VD 400/8**

Frequency	Hz	Total	125	250	500	1k	2k	4k	
L <sub>PA, 4m</sub> Case breakout		dB(A)	48	35	40	44	43	35	30
L <sub>WA</sub> Intake		dB(A)	61	51	54	58	50	51	43
L <sub>PA, 4m</sub> Case breakout		dB(A)	42	31	35	37	38	30	26
L <sub>WA</sub> Intake		dB(A)	55	47	49	51	45	46	39



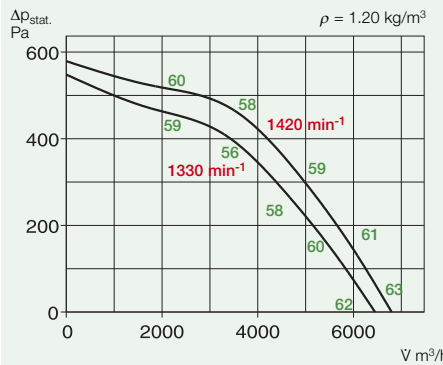
Type	Ref. No.	R.P.M.	Air flow volume (FID)	Sound pressure level	Power consumption		Wiring diagram	Max. air flow temperature	Nominal weight	Motor full protection unit		Transformer controller	
					kW	A				Type	Ref. No.	Type	Ref. No.

<b>Single speed, 230 V, 50 Hz, 1ph capacitor motor, protection to IP 54</b>													
<b>VDW 400/6</b>	5178	850	3440	57	0.30	1.41	563	75	21.0	<b>MW</b>	1579	<b>MWS 1.5<sup>3)</sup></b>	1947
<b>VDW 400/4</b>	5179	1350	5250	66	0.89	4.28	508	75	23.0	w/o thermal contacts		not variable	
<b>Single speed, three phase alternating current 400 V, 50 Hz, squirrel-cage motor, protection to IP 54</b>													
<b>VDD 400/8</b>	5180	680	2560	48	0.14	0.37	469	75	21.0	<b>MD</b>	5849	<b>RDS 1<sup>3)</sup></b>	1314
<b>VDD 400/6</b>	5181	900	3440	57	0.35	1.00	469	75	21.0	<b>MD</b>	5849	<b>RDS 2<sup>3)</sup></b>	1315
<b>VDD 400/4</b>	5182	1340	5250	66	0.75	1.50	469	75	23.0	<b>MD</b>	5849	<b>RDS 2<sup>3)</sup></b>	1315
<b>Pole-changeable, with 2 speed motor, three phase alternating current 400 V, 50 Hz, protection to IP 54</b>													
<b>VDD 400/8/6<sup>2)</sup></b>	5185	720 / 970	2560 / 3440	48 / 57	0.30 / 0.39	0.78 / 0.97	473	75	24.5	w/o thermal contacts		<b>PGWA 12<sup>4)</sup></b>	5083
<b>VDD 400/8/4<sup>1)</sup></b>	5186	720 / 1360	2560 / 5250	48 / 66	0.21 / 0.96	0.68 / 1.82	471	75	24.0	w/o thermal contacts		<b>PDA 12<sup>4)</sup></b>	5081
<b>VDD 400/6/4<sup>2)</sup></b>	5187	960 / 1400	3440 / 5250	57 / 66	0.40 / 1.04	0.78 / 2.13	473	75	24.0	w/o thermal contacts		<b>PGWA 12<sup>4)</sup></b>	5083
<b>Explosion proof, temperature class T1 – T3, three phase alternating current 400 V, 50 Hz, protection to IP 54</b>													
<b>VDD 400/6 Ex</b>	5188	850	3440	57	0.25	0.81	470	40	21.0	w/o thermal contacts		not variable	
<b>VDD 400/4 Ex</b>	5189	1420	5250	66	1.00	2.50	470	40	23.0	w/o thermal contacts		not variable	

<sup>1)</sup> Dahlander-winding    <sup>2)</sup> Separate winding    <sup>3)</sup> Includes motor full protection unit    <sup>4)</sup> For the flush-mounted version see the product page - switches

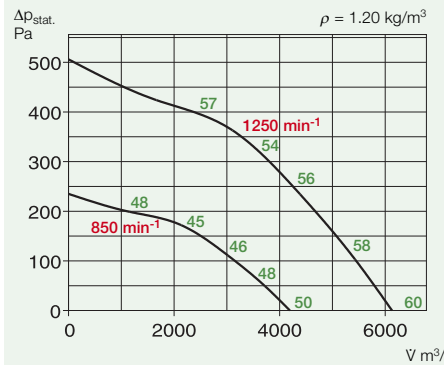
**RD.. n=1420 / 1330 min<sup>-1</sup>**

Frequency	Hz	Total	125	250	500	1k	2k	4k	
1420 min <sup>-1</sup> L <sub>WA</sub> Intake		dB(A)	81	78	72	73	70	68	63
1330 min <sup>-1</sup> L <sub>WA</sub> Intake		dB(A)	80	77	71	72	69	67	62



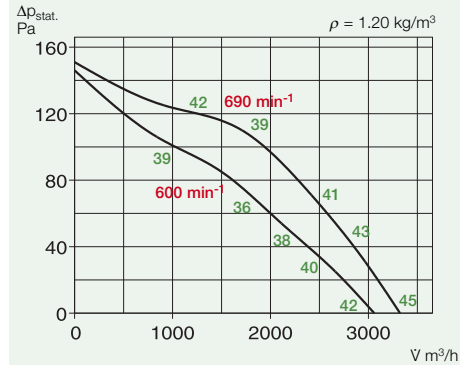
**RD.. n=1250 / 850 min<sup>-1</sup>**

Frequency	Hz	Total	125	250	500	1k	2k	4k	
1250 min <sup>-1</sup> L <sub>WA</sub> Intake		dB(A)	78	75	69	70	67	65	60
850 min <sup>-1</sup> L <sub>WA</sub> Intake		dB(A)	68	65	59	60	57	56	50



**RD.. n=690 / 600 min<sup>-1</sup>**

Frequency	Hz	Total	125	250	500	1k	2k	4k	
690 min <sup>-1</sup> L <sub>WA</sub> Intake		dB(A)	63	60	54	55	52	50	45
600 min <sup>-1</sup> L <sub>WA</sub> Intake		dB(A)	60	57	51	52	49	47	42



Type	Ref. No.	R.P.M.	Air flow volume (FID)	Sound pressure level	Power consumption		Wiring diagram	Max. air flow temperature	Nominal weight	Motor full protection unit		Transformer controller	
					kW	A				Type	Ref. No.	Type	Ref. No.

<b>Single speed, 230 V, 50 Hz, 1ph capacitor motor, protection to IP 44</b>													
<b>RDW 400/6</b>	1512	850	4150	48	0.31	1.40	467	60	29.0	<b>MW</b>	1579	<b>MWS 3<sup>2)</sup></b>	1948
<b>RDW 400/4</b>	1511	1330	6450	60	0.95	4.40	468	55	29.0	<b>MW</b>	1579	<b>MWS 5<sup>2)</sup></b>	1949
<b>Two speed, three phase alternating current 400 V, 50 Hz, Y/Δ-switching, protection to IP 44</b>													
<b>RDD 400/6/6</b>	1528	600 / 860	3060 / 4190	40 / 48	0.17 / 0.30	0.32 / 0.67	520	60	29.0	<b>M 4<sup>3)</sup></b>	1571	<b>RDS 1<sup>2)</sup></b>	1314
<b>RDD 400/4/4</b>	1526	1250 / 1420	6130 / 6800	58 / 61	0.76 / 0.95	1.30 / 2.30	520	60	29.0	<b>M 4<sup>3)</sup></b>	1571	<b>RDS 4<sup>2)</sup></b>	1316
<b>Pole-changeable, with 2 speed motor, three phase alternating current 400 V, 50 Hz, protection to IP 54</b>													
<b>RDD 400/8/4<sup>1)</sup></b>	1180	690 / 1380	3320 / 6650	43 / 61	0.15 / 1.00	0.54 / 2.00	472	60	34.0	<b>M 3<sup>3)</sup></b>	1293	<b>PDA 12<sup>4)</sup></b>	5081
<b>Explosion proof, temperature class T1 – T3, three phase alternating current 400 V, 50 Hz, protection to IP 44</b>													
<b>RDD 400/6 Ex<sup>5)</sup></b>	1181	920	4450	52	0.35	0.93	838	40	34.0	<b>MSA</b>	1289	<b>TSD 1.5</b>	1501
<b>RDD 400/4 Ex</b>	1530	1400	6730	63	0.98	2.50	838	40	34.0	<b>MSA</b>	1289	<b>TSD 3.0</b>	1502

<sup>1)</sup> Dahlander-winding    <sup>2)</sup> Includes motor full protection unit    <sup>3)</sup> Includes speed control and pole switch    <sup>4)</sup> Flush-mounted version see the product page, switches    <sup>5)</sup> Perf. curves on request



**Vertical discharge VD**

**■ Specification**

Roof fan with vertical discharge made of polymer with the motor out of the air stream. Engine mountings made of stainless steel.

**■ Casing**

The upper and lower shell, motor protection cover and base plate with inlet cone made of glass-fibre polyester. Base plate with threaded bolt for connection of intake air accessories.

**■ Impeller**

High performance backward curved centrifugal impeller made of aluminium, dynamically balanced.

**■ Motor**

Totally enclosed IEC-motor with surface cooling protected to IP 54, ball bearing mounted, insulated for protection against moisture. Maintenance free and radio suppressed.

**■ Motor protection**

All variable models (except models with pole switch) have built-in thermal contacts which must be connected to the motor full protection unit (see model chart) in order to protect the motor effectively.

**■ Electrical connection**

Directly from the roof in to the external terminal box protected to IP 65.

**■ Protection grille**

On the outlet as standard, compliant with DIN EN ISO 13857.

**■ Speed control**

All models where a speed controller is shown on the table are speed controllable via voltage reduction (1 ph. models electronically as well). Two speed models are also available.

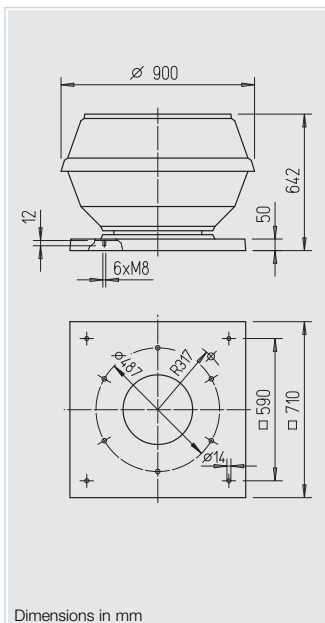
**■ Sound level**

Shown on the performance curves the sound pressure level is given in dB(A) at 4 metres. The total level and spectrum for sound pressure and sound power are given above the performance curves.

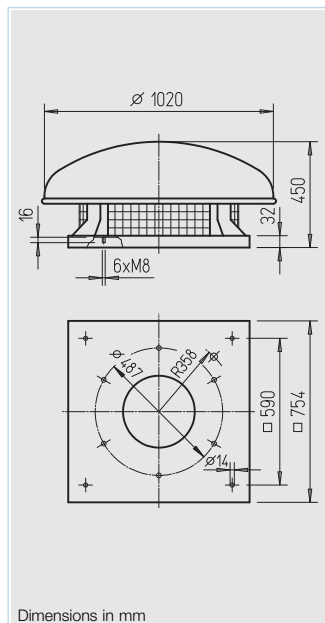
**■ Delivery**

Fully assembled, ready to connect units.

**Vertical discharge VD**



**Horizontal discharge RD**



**Horizontal discharge RD**

**■ Specification**

Centrifugal roof fan with horizontal discharge. Flat design with large overlying rain cowl.

**■ Casing**

Base plate (with inlet cone), rain cowl and other parts made of galvanised steel. Base plate with threaded bolt for connection of intake air accessories.

**■ Impeller**

High performance backward curved centrifugal impeller made of galvanised steel, dynamically balanced with the motor unit.

**■ Motor**

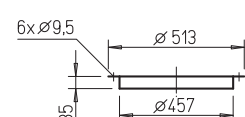
Totally enclosed external rotor motor with ball bearings, protected to IP 44, insulated for protection against moisture. Maintenance free and radio suppressed.

**■ Motor protection**

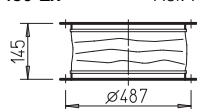
Through built-in thermal contacts which must be connected to the motor full protection unit. Explosion proof models are equipped with thermal motor protection through built-in PTC thermistor which is connected to the tripping unit MSA. Hereby speed control is allowed where the minimum voltage must not be less than 115 V.

**Accessories for VD**

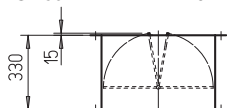
**Flange rings FR 450** Ref. No. 1207



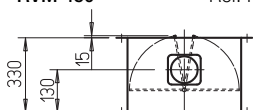
**Flanged canvas connector STS 450** Ref. No. 1224  
For explosion proof fans **STS 450 Ex** Ref. No. 2506



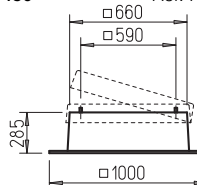
**Automatic backdraught shutter RVS 450** Ref. No. 2597



**Motorised backdraught shutter RVM 450** Ref. No. 2581

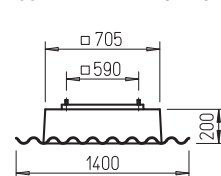


**Hinged flat roof base FDS 450** Ref. No. 1381

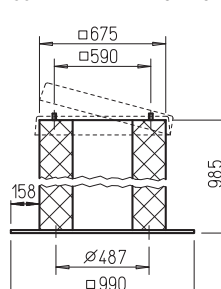


**and RD**

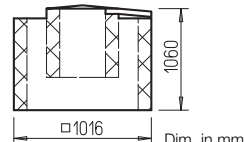
**Corrugated roof base, profile 5 WDS 450** Ref. No. 1563



**Hinged base attenuator SSD 450** Ref. No. 5288



**Roof fan attenuator HSDV 450** Ref. No. 6760  
only for RD..



**■ Electrical connection**

Terminal box (protection to IP 55) located beneath rain cowl as standard. The explosion proof models are supplied with a 80 cm long connection lead. Explosion proof terminal box is available as accessory (KK Ex, Ref. No. 6862).

**■ Protection grille**

On the outlet as standard, compliant with DIN EN ISO 13857.

**■ Speed control**

All models where a speed controller is shown on the table are speed controllable via voltage reduction (1 ph. models electronically as well). Two speed models are also available.

**■ Sound level**

Shown on the performance curves the sound pressure level is given in dB(A) at 4 metres. The total level and spectrum for sound pressure and sound power are given above the performance curves.

**■ Delivery**

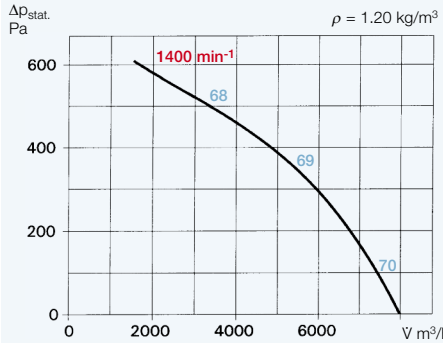
Fully assembled, ready to connect units.

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Speed controllers, controllers and switches	397 on



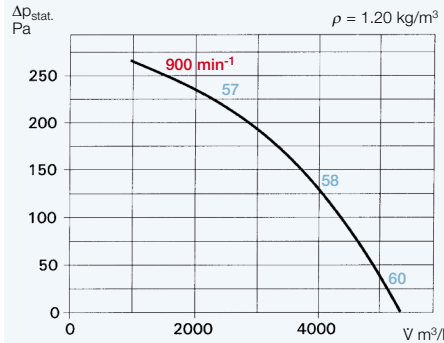
## VD 450/4

Frequency	Hz	Total	125	250	500	1k	2k	4k	
L <sub>PA, 4m</sub> Case breakout		dB(A)	70	55	64	66	64	59	57
L <sub>WA</sub> Intake		dB(A)	84	73	77	80	74	75	70



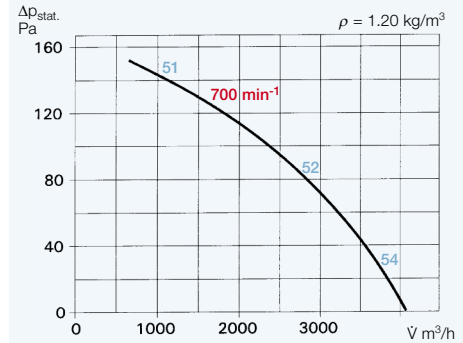
## VD 450/6

Frequency	Hz	Total	125	250	500	1k	2k	4k	
L <sub>PA, 4m</sub> Case breakout		dB(A)	60	46	55	55	54	48	45
L <sub>WA</sub> Intake		dB(A)	74	64	68	69	63	64	58



## VD 450/8

Frequency	Hz	Total	125	250	500	1k	2k	4k	
L <sub>PA, 4m</sub> Case breakout		dB(A)	54	40	49	49	48	43	39
L <sub>WA</sub> Intake		dB(A)	68	58	62	63	58	59	52



Type	Ref. No.	R.P.M.	Air flow volume (FID)	Sound pressure level	Power consumption		Wiring diagram	Max. air flow temperature	Nominal weight	Motor full protection unit		Transformer controller	
					kW	A				Type	Ref. No.	Type	Ref. No.

### Single speed, 230 V, 50 Hz, 1ph capacitor motor, protection to IP 54

<b>VDW 450/6</b>	5190	880	5350	60	0.52	2.55	563	65	27.0	<b>MW</b>	1579	<b>MWS 3<sup>3)</sup></b>	1948
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### Single speed, three phase alternating current 400 V, 50 Hz, squirrel-cage motor, protection to IP 54

<b>VDD 450/6</b>	5193	910	5350	60	0.45	1.15	469	65	28.0	<b>MD</b>	5849	<b>RDS 2<sup>2)</sup></b>	1315
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<b>VDD 450/4</b>	5194	1430	8000	70	1.62	2.72	470	65	27.0	w/o thermal contacts		not variable <sup>4)</sup>	
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### Pole-changeable, with 2 speed motor, three phase alternating current 400 V, 50 Hz, protection to IP 54

<b>VDD 450/8/6<sup>2)</sup></b>	5198	720 / 960	4075 / 5350	54 / 60	0.35 / 0.61	0.88 / 1.28	473	65	31.0	w/o thermal contacts		<b>PGWA 12<sup>4)</sup></b>	5083
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<b>VDD 450/8/4<sup>1)</sup></b>	5197	730 / 1420	4075 / 8000	54 / 70	0.35 / 1.58	1.16 / 2.85	471	65	28.0	w/o thermal contacts		<b>PDA 12<sup>5)</sup></b>	5081
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<b>VDD 450/6/4<sup>2)</sup></b>	5199	960 / 1430	5350 / 8000	60 / 70	0.59 / 1.69	1.21 / 3.22	473	65	34.0	w/o thermal contacts		<b>PGWA 12<sup>4)</sup></b>	5083
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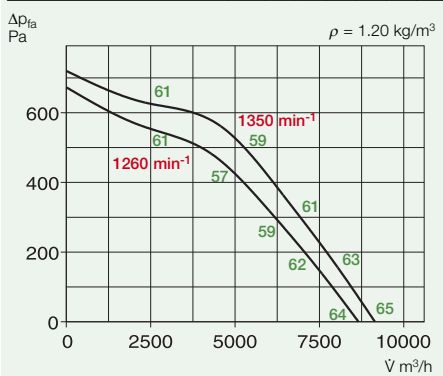
### Explosion proof, temperature class T1 – T3, three phase alternating current 400 V, 50 Hz, protection to IP 54

<b>VDD 450/6 Ex</b>	5201	930	5350	60	0.55	1.83	470	40	28.0	w/o thermal contacts		not variable	
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<sup>1)</sup> Dahlander-winding    <sup>2)</sup> Separate winding    <sup>3)</sup> Includes motor full protection unit    <sup>4)</sup> In special design supplied with speed controllable motor    <sup>5)</sup> Flush-mounted version see product page, switches

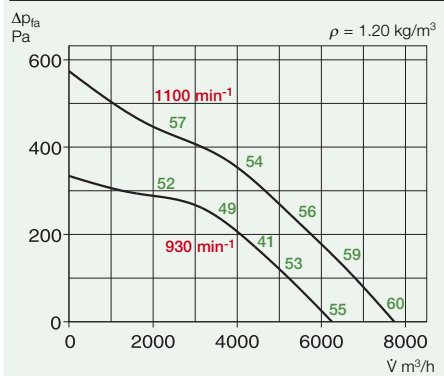
## RD.. n=1350 / 1260 min<sup>-1</sup>

Frequency	Hz	Total	125	250	500	1k	2k	4k	
1350 min <sup>-1</sup> L <sub>WA</sub> Intake		dB(A)	83	73	75	77	75	72	74
1260 min <sup>-1</sup> L <sub>WA</sub> Intake		dB(A)	82	72	74	76	74	71	73



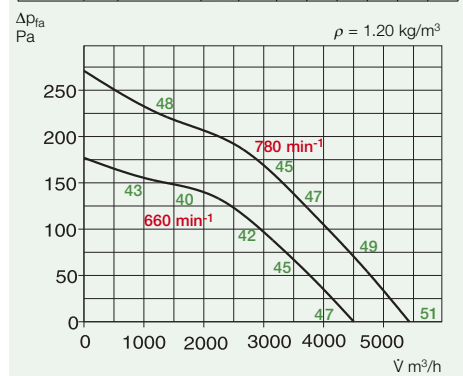
## RD.. n=1100 / 930 min<sup>-1</sup>

Frequency	Hz	Total	125	250	500	1k	2k	4k	
1100 min <sup>-1</sup> L <sub>WA</sub> Intake		dB(A)	79	69	71	73	71	68	70
930 min <sup>-1</sup> L <sub>WA</sub> Intake		dB(A)	73	63	65	67	65	62	64



## RD.. n=780 / 660 min<sup>-1</sup>

Frequency	Hz	Total	125	250	500	1k	2k	4k	
780 min <sup>-1</sup> L <sub>WA</sub> Intake		dB(A)	69	59	61	63	61	58	60
660 min <sup>-1</sup> L <sub>WA</sub> Intake		dB(A)	65	55	57	59	57	54	56



Type	Ref. No.	R.P.M.	Air flow volume (FID)	Sound pressure level	Power consumption		Wiring diagram	Max. air flow temperature	Nominal weight	Motor full protection unit		Transformer controller	
					kW	A				Type	Ref. No.	Type	Ref. No.

### Single speed, 230 V, 50 Hz, 1ph capacitor motor, protection to IP 44

<b>RDW 450/6</b>	1505	900	6100	53	0.54	2.60	468	45	44.0	<b>MW</b>	1579	<b>MWS 3<sup>2)</sup></b>	1948
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<b>RDW 450/4</b>	1514	1260	8660	63	1.45	6.70	468	60	52.0	<b>MW</b>	1579	<b>MWS 7,5<sup>2)</sup></b>	1950
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### Single speed, three phase alternating current 400 V, 50 Hz, squirrel-cage motor, protection to IP 54

<b>RDD 450/8</b>	1182	660	4500	45	0.28	0.69	499	55	43.0	<b>MD</b>	5849	<b>RDS 1<sup>2)</sup></b>	1314
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### Two speed, three phase alternating current 400 V, 50 Hz, Y/Δ-switching, protection to IP 44

<b>RDD 450/6/6</b>	1536	780 / 930	5430 / 6250	49 / 53	0.38 / 0.52	0.69 / 1.30	520	60	44.0	<b>M 4<sup>3)</sup></b>	1571	<b>RDS 2<sup>2)</sup></b>	1315
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<b>RDD 450/4/4</b>	1533	1100 / 1350	7740 / 9150	59 / 63	1.05 / 1.60	1.80 / 3.20	520	60	53.0	<b>M 4<sup>3)</sup></b>	1571	<b>RDS 4<sup>2)</sup></b>	1316
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### Pole-changeable, with 2 speed motor, three phase alternating current 400 V, 50 Hz, protection to IP 54

<b>RDD 450/8/4<sup>1)</sup></b>	1535	670 / 1320	4530 / 8960	45 / 63	0.25 / 1.62	0.77 / 2.90	472	50	59.0	<b>M 3<sup>3)</sup></b>	1293	<b>PDA 12<sup>4)</sup></b>	5081
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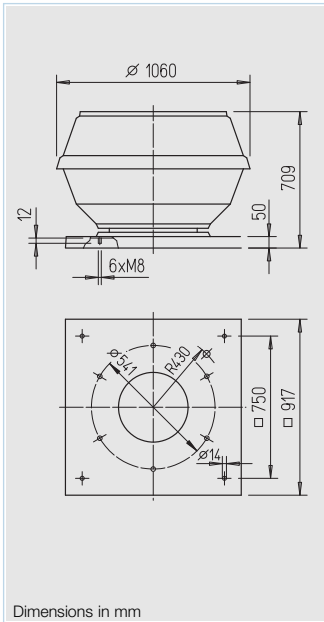
### Explosion proof, temperature class T1 – T3, three phase alternating current 400 V, 50 Hz, protection to IP 44

<b>RDD 450/6 Ex</b>	1187	900	6100	54	0.54	1.25	838	40	43.0	<b>MSA</b>	1289	<b>TSD 1.5</b>	1501
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<b>RDD 450/4 Ex</b>	1538	1380	9280	66	1.60	3.40	838	40	59.0	<b>MSA</b>	1289	<b>TSD 5.5</b>	1503
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<sup>1)</sup> Dahlander-winding    <sup>2)</sup> Includes motor full protection unit    <sup>3)</sup> Includes speed control and pole switch    <sup>4)</sup> For the flush-mounted version see the product page - switches

Vertical discharge VD



Dimensions in mm

■ Specification

Roof fan with vertical discharge made of polymer with the motor out of the air stream. Engine mountings made of stainless steel.

■ Casing

The upper and lower shell, motor protection cover and base plate with inlet cone made of glass-fibre polyester. Base plate with threaded bolt for connection of intake air accessories.

■ Impeller

High performance backward curved centrifugal impeller made of aluminium, dynamically balanced.

■ Motor

Totally enclosed IEC-motor with surface cooling protected to IP 54, ball bearing mounted, insulated for protection against moisture. Maintenance free and radio suppressed.

■ Motor protection

Ensured via on site motor protection switch.

■ Electrical connection

Directly from the roof in to the external terminal box protected to IP 65.

■ Protection grille

On the outlet as standard, compliant with DIN EN ISO 13857.

■ Speed control

Ensured by using the models with pole switches.

■ Sound level

Shown on the performance curves the sound pressure level is given in dB(A) at 4 metres. The total level and spectrum for sound pressure and sound power are given above the performance curves.

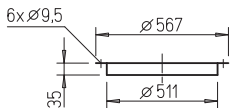
■ Delivery

Fully assembled, ready to connect units.

Accessories for VD

Flange rings  
FR 500

Ref. No. 1208



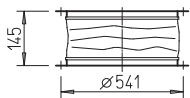
Flanged canvas connector  
STS 500

Ref. No. 1225

For explosion proof fans

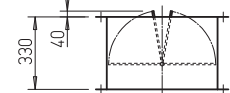
STS 500 Ex

Ref. No. 2507



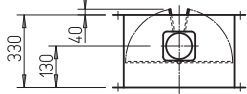
Automatic backdraught shutter  
RVS 500

Ref. No. 2598



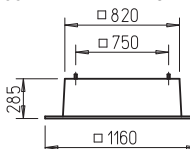
Motorised backdraught shutter  
RVM 500

Ref. No. 2582



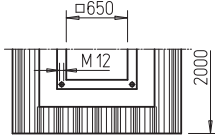
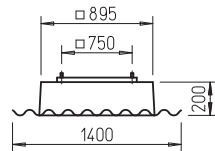
Flat roof base  
FDS 500

Ref. No. 1382



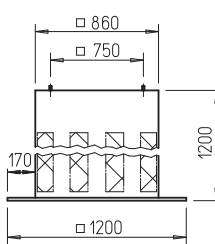
Corrugated roof base, profile 5  
WDS 500

Ref. No. 1564



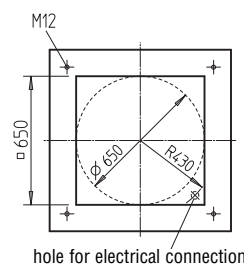
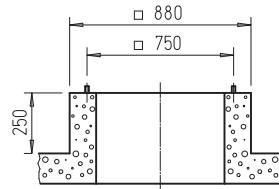
Hinged base attenuator  
SSD 500

Ref. No. 5017



Dimensions in mm

Dimensions for the base on site



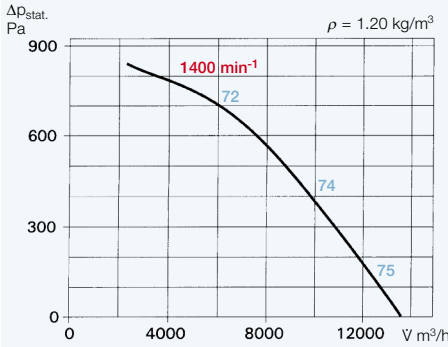
hole for electrical connection

All dimensions in mm

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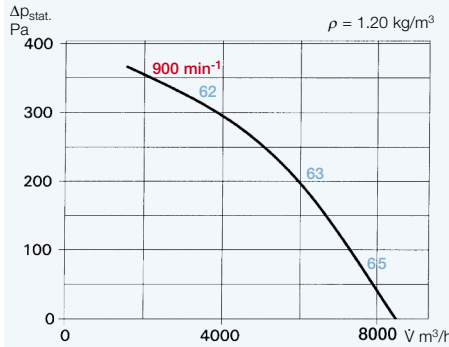
**VD 500/4**

Frequency	Hz	Total	125	250	500	1k	2k	4k	
L <sub>PA, 4m</sub>	Case breakout	dB(A)	75	60	70	71	68	62	59
L <sub>WA</sub>	Intake	dB(A)	88	78	83	85	77	78	72



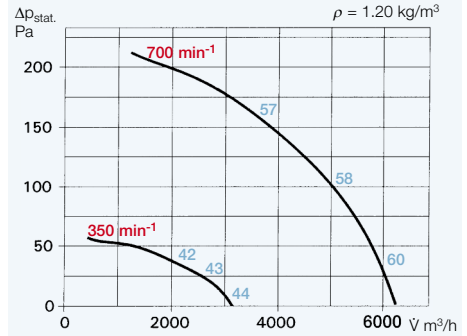
**VD 500/6**

Frequency	Hz	Total	125	250	500	1k	2k	4k	
L <sub>PA, 4m</sub>	Case breakout	dB(A)	65	50	60	61	57	52	47
L <sub>WA</sub>	Intake	dB(A)	78	68	73	75	67	68	60



**VD 500/8 and 500/16**

Frequency	Hz	Total	125	250	500	1k	2k	4k	
L <sub>PA, 4m</sub>	Case breakout	dB(A)	60	44	54	56	52	46	40
L <sub>WA</sub>	Intake	dB(A)	73	62	67	70	61	62	53
L <sub>PA, 4m</sub>	Case breakout	dB(A)	44	29	39	41	37	31	25
L <sub>WA</sub>	Intake	dB(A)	58	47	52	55	46	47	38



Type	Ref. No.	R.P.M.	Air flow volume (FID)	Sound pressure level	Power consumption		Wiring diagram	Max. air flow temperature	Nominal weight	Motor full protection unit		Pole switch	
					kW	A				Type	Ref. No.	Type	Ref. No.
<b>Single speed, three phase alternating current 400 V, 50 Hz, squirrel-cage motor, protection to IP 54</b>													
VDD 500/8	5203	720	6520	60	0.47	1,90	470	60	38.0	w/o thermal contacts	not variable <sup>3)</sup>		
VDD 500/6	5204	940	8500	65	0.96	2,09	470	60	39.0	w/o thermal contacts	not variable <sup>3)</sup>		
<b>Single speed, three phase alternating current 400/690 V, 50 Hz, squirrel-cage motor, protection to IP 55</b>													
VDD 500/4	5205	1450	13600	75	3.08	5,80	498	60	51.0	w/o thermal contacts	not variable		
<b>Pole-changeable, with 2 speed motor, three phase alternating current 400 V, 50 Hz, protection to IP 55</b>													
VDD 500/16/8 <sup>1)</sup>	5206	360 / 720	3140 / 6520	44 / 60	0.23 / 0.60	0.62 / 1.42	471	60	38.5	w/o thermal contacts	PDA 12 <sup>4)</sup>	5081	
VDD 500/8/6 <sup>2)</sup>	5209	730 / 970	6520 / 8500	60 / 65	0.72 / 1.12	2.20 / 2.60	473	60	43.0	w/o thermal contacts	PGWA 12 <sup>4)</sup>	5083	
VDD 500/8/4 <sup>1)</sup>	5208	740 / 1460	6520 / 13600	60 / 75	0.57 / 3.15	2.10 / 5.75	471	60	52.5	w/o thermal contacts	PDA 12 <sup>4)</sup>	5081	
VDD 500/6/4 <sup>2)</sup>	5210	970 / 1440	8500 / 13600	65 / 75	1.31 / 3.36	3.05 / 5.95	473	60	52.5	w/o thermal contacts	PGWA 12 <sup>4)</sup>	5083	
<b>Explosion proof, temperature class T1 – T3, three phase alternating current 400 V, 50 Hz, protection to IP 54</b>													
VDD 500/6 Ex	5212	910	8500	65	0.950	2.60	470	40	42.0	w/o thermal contacts	not variable		

<sup>1)</sup> Dahlander-winding

<sup>2)</sup> Separate winding

<sup>3)</sup> In special design supplied with speed controllable motor

<sup>4)</sup> For the flush-mounted version see the product page - switches

Vertical discharge VD

■ Specification

Roof fan with vertical discharge made of polymer with the motor out of the air stream. Engine mountings made of stainless steel.

■ Casing

The upper and lower shell, motor protection cover and base plate with inlet cone made of glass-fibre polyester. Base plate with threaded bolt for connection of intake air accessories.

■ Impeller

High performance backward curved centrifugal impeller made of aluminium, dynamically balanced.

■ Motor

Totally enclosed IEC-motor with surface cooling protected to IP 54, ball bearing mounted, insulated for protection against moisture. Maintenance free and radio suppressed.

■ Motor protection

Ensured via on site motor protection switch.

■ Electrical connection

Directly from the roof in to the external terminal box protected to IP 65.

■ Protection grille

On the outlet as standard, compliant with DIN EN ISO 13857.

■ Speed control

Ensured by using the models with pole switches.

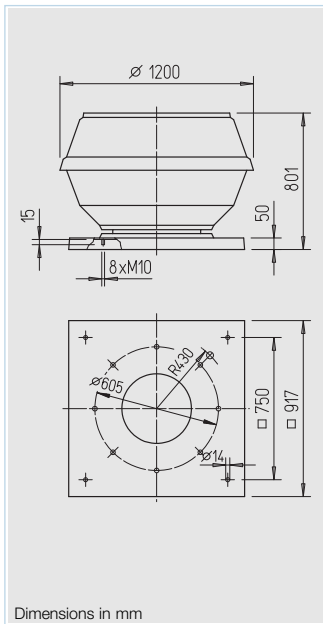
■ Sound level

Shown on the performance curves the sound pressure level is given in dB(A) at 4 metres. The total level and spectrum for sound pressure and sound power are given above the performance curves.

■ Delivery

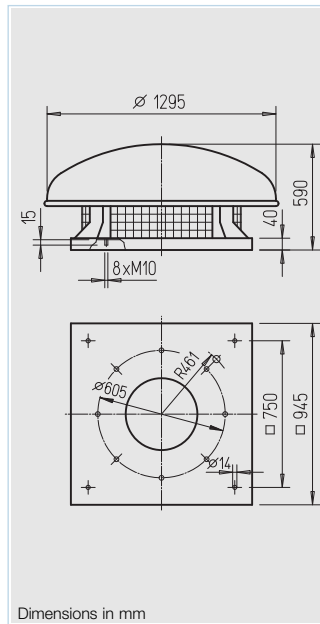
Fully assembled, ready to connect units.

Vertical discharge VD



Dimensions in mm

Horizontal discharge RD



Dimensions in mm

Horizontal discharge RD

■ Specification

Centrifugal roof fan with horizontal discharge. Flat design with large overlying rain cowl.

■ Casing

Base plate (with inlet cone), rain cowl and other parts made of galvanised steel. Base plate with threaded bolt for connection of intake air accessories.

■ Impeller

High performance backward curved centrifugal impeller made of galvanised steel, dynamically balanced with the motor unit.

■ Motor

Totally enclosed external rotor motor with ball bearings, protected to IP 44, insulated for protection against moisture. Maintenance free and radio suppressed.

■ Motor protection

Through built-in thermal contacts which must be connected to the motor full protection unit. Explosion proof models are equipped with thermal motor protection through built-in PTC thermistor which is connected to the tripping unit MSA. Hereby speed control is allowed where the minimum voltage must not be less than 115 V.

■ Electrical connection

Terminal box (protection to IP 55) located beneath rain cowl as standard. The explosion proof models are supplied with a 80 cm long connection lead. Explosion proof terminal box is available as accessory (KK Ex, Ref. No. 6862).

■ Protection grille

On the outlet as standard, compliant with DIN EN ISO 13857.

■ Speed control

All models where a speed controller is shown on the table are speed controllable via voltage reduction. Two speed models are also available.

■ Sound level

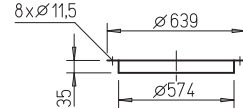
Shown on the performance curves the sound pressure level is given in dB(A) at 4 metres. The total level and spectrum for sound pressure and sound power are given above the performance curves.

■ Delivery

Fully assembled, ready to connect units.

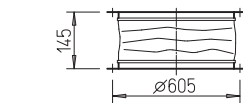
Accessories for VD

Flange rings  
FR 560 Ref. No. 1209

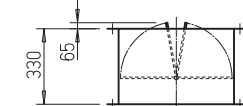


Flanged canvas connector  
STS 560 Ref. No. 1226

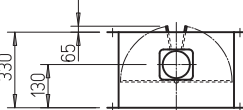
For explosion proof fans  
STS 560 Ex Ref. No. 2508



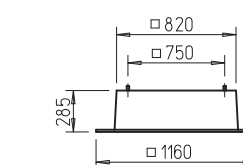
Automatic backdraught shutter  
RVS 560 Ref. No. 2599



Motorised backdraught shutter  
RVM 560 Ref. No. 2583

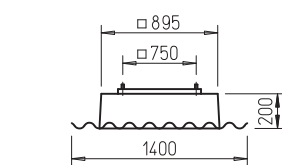


Flat roof base  
FDS 560 Ref. No. 1382

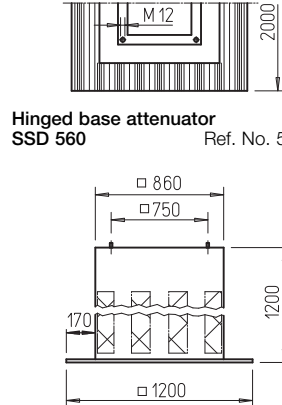


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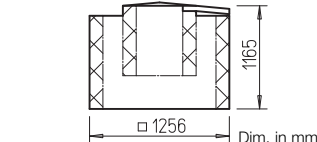
Corrugated roof base, profile 5  
WDS 560 Ref. No. 1564



Hinged base attenuator  
SSD 560 Ref. No. 5017



Roof fan attenuator  
HSDV 560 Ref. No. 6761

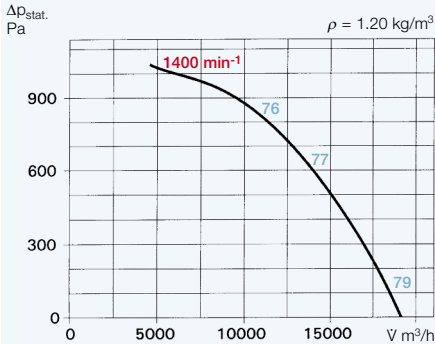


Dim. in mm

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Speed controllers, controllers and switches	397 on

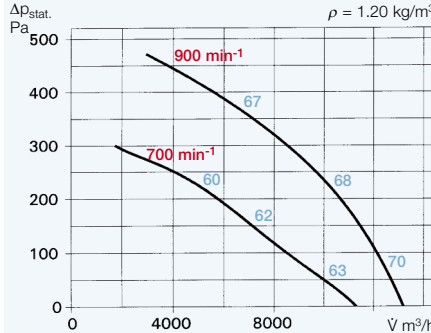
**VD 560/4**

Frequency	Hz	Total	125	250	500	1k	2k	4k	
L <sub>PA, 4m</sub> Case breakout		dB(A)	79	65	72	74	74	65	63
L <sub>WA</sub> Intake		dB(A)	92	83	85	88	80	81	76



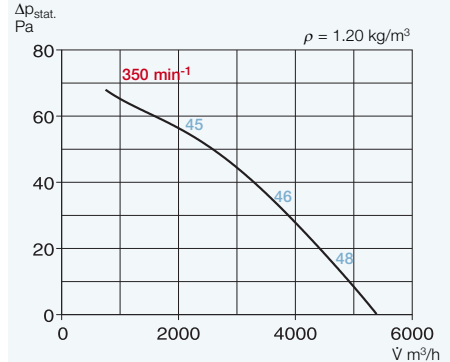
**VD 560/6 and 560/8**

Frequency	Hz	Total	125	250	500	1k	2k	4k	
900 min <sup>-1</sup> L <sub>PA, 4m</sub> Case breakout		dB(A)	70	56	64	65	64	54	51
L <sub>WA</sub> Intake		dB(A)	82	74	77	79	69	70	64
700 min <sup>-1</sup> L <sub>PA, 4m</sub> Case breakout		dB(A)	63	49	58	59	57	47	44
L <sub>WA</sub> Intake		dB(A)	76	67	71	73	62	63	57



**VD 560/16**

Frequency	Hz	Total	125	250	500	1k	2k	4k	
350 min <sup>-1</sup> L <sub>PA, 4m</sub> Case breakout		dB(A)	48	34	43	44	42	32	30
L <sub>WA</sub> Intake		dB(A)	61	52	56	58	47	48	42

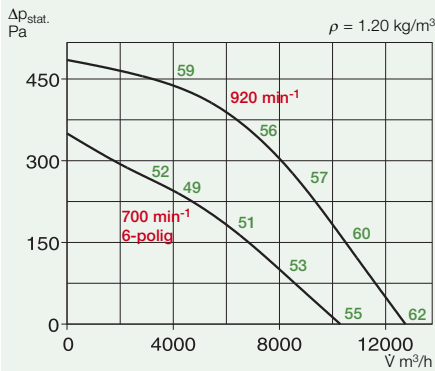


Type	Ref. No.	R.P.M.	Air flow volume (FID)		Sound pressure level	Power consumption		Wiring diagram	Max. air flow temperature	Nominal weight	Motor full protection unit		Pole switch	
			min <sup>-1</sup>	V m <sup>3</sup> /h		kW	A				Type	Ref. No.	Type	Ref. No.
<b>Single speed, three phase alternating current 400 V, 50 Hz, squirrel-cage motor, protection to IP 54</b>														
VDD 560/8	5214	720	11300		63	0.81	1.90	470	60	51.0	w/o thermal contacts		not variable <sup>3)</sup>	
VDD 560/6	5215	920	13200		70	1.89	4.03	470	60	54.0	w/o thermal contacts		not variable <sup>3)</sup>	
<b>Pole-changeable, with 2 speed motor, three phase alternating current 400 V, 50 Hz, protection to IP 55</b>														
VDD 560/16/8 <sup>1)</sup>	5216	360 / 710	5400 / 11300		48 / 63	0.29 / 0.91	0.98 / 2.30	471	60	52.5	w/o thermal contacts		PDA 12 <sup>4)</sup>	5081
VDD 560/8/4 <sup>1)</sup>	5217	740 / 1470	11300 / 19100		63 / 80	1.04 / 6.07	4.15 / 10.75	471	60	81.0	w/o thermal contacts		PDA 12 <sup>4)</sup>	5081
VDD 560/6/4 <sup>2)</sup>	5218	990 / 1470	13200 / 19100		70 / 80	2.09 / 5.78	4.60 / 10.10	473	60	81.0	w/o thermal contacts		PGWA 12 <sup>4)</sup>	5083
<b>Explosion proof, temperature class T1 – T3, three phase alternating current 400 V, 50 Hz, protection to IP 54</b>														
VDD 560/6 Ex	5220	940	13200		70	1.90	4.70	470	40	72.0	w/o thermal contacts		not variable	

<sup>1)</sup> Dahlander-winding    <sup>2)</sup> Separate winding    <sup>3)</sup> In special design supplied with speed controllable motor    <sup>4)</sup> For the flush-mounted version see the product page - switches

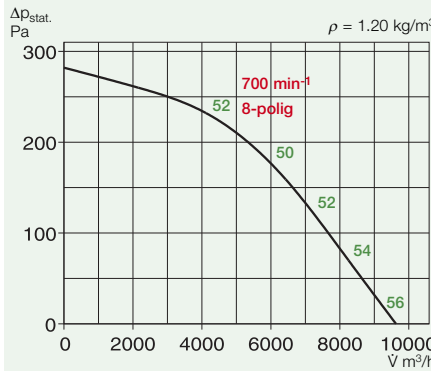
**RD.. n=920 / 700 min<sup>-1</sup>, 6-polig**

Frequency	Hz	Total	125	250	500	1k	2k	4k	
920 min <sup>-1</sup> L <sub>WA</sub> Intake		dB(A)	80	72	74	74	72	69	70
700 min <sup>-1</sup> L <sub>WA</sub> Intake		dB(A)	74	66	68	68	66	63	64



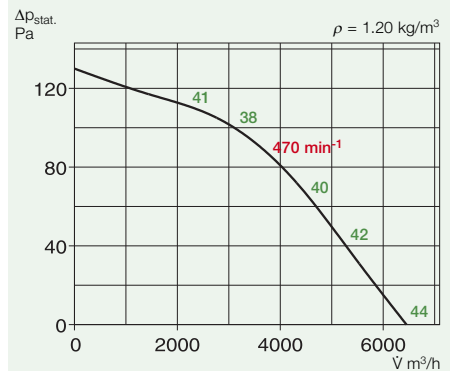
**RD.. n=700 min<sup>-1</sup>, 8-polig**

Frequency	Hz	Total	125	250	500	1k	2k	4k	
700 min <sup>-1</sup> L <sub>WA</sub> Intake		dB(A)	73	65	67	67	65	62	63



**RD.. n=470 min<sup>-1</sup>**

Frequency	Hz	Total	125	250	500	1k	2k	4k	
470 min <sup>-1</sup> L <sub>WA</sub> Intake		dB(A)	62	54	56	56	54	51	52



Type	Ref. No.	R.P.M.	Air flow volume (FID)		Sound pressure level	Power consumption		Wiring diagram	Max. air flow temperature	Nominal weight	Motor full protection unit		Transformer controller	
			min <sup>-1</sup>	V m <sup>3</sup> /h		kW	A				No.	°C	kg	Type
<b>Single speed, three phase alternating current 400 V, 50 Hz, squirrel-cage motor, protection to IP 54</b>														
RDD 560/8	1188	700	9630		54	0.76	1.80	499	55	89.0	MD	5849	RDS 2 <sup>2)</sup>	1315
<b>Two speed, three phase alternating current 400 V, 50 Hz, Y/Δ-switching, protection to IP 44</b>														
RDD 560/6/6	1544	700 / 900	10300 / 12500		54 / 59	0.88 / 1.30	1.70 / 2.90	520	60	87.0	M 4 <sup>3)</sup>	1571	RDS 4 <sup>2)</sup>	1316
<b>Pole-changeable, with 2 speed motor, three phase alternating current 400 V, 50 Hz, protection to IP 54</b>														
RDD 560/12/6 <sup>1)</sup>	1545	470 / 920	6450 / 12750		42 / 60	0.29 / 1.73	0.93 / 3.10	472	55	104.0	M 3 <sup>3)</sup>	1293	PDA 12 <sup>4)</sup>	5081
<b>Explosion proof, temperature class T1 – T3, three phase alternating current 400 V, 50 Hz, protection to IP 44</b>														
RDD 560/6 Ex	1192	790	11300		58	1.14	2.2	838	40	89.0	MSA	1289	TSD 3.0	1502

<sup>1)</sup> Dahlander-winding    <sup>2)</sup> Includes motor full protection unit    <sup>3)</sup> Includes speed control and pole switch    <sup>4)</sup> For the flush-mounted version see the product page - switches



Horizontal discharge RD



■ Specification

Centrifugal roof fan with horizontal discharge. Flat design with large overlying rain cowl.

■ Casing

Base plate (with inlet cone), rain cowl and other parts made of galvanised steel. Base plate with threaded bolt for connection of intake air accessories.

■ Impeller

High performance backward curved centrifugal impeller made of galvanised steel, dynamically balanced with the motor unit.

■ Motor

Totally enclosed external rotor motor with ball bearings, protected to IP 44, insulated for protection against moisture. Maintenance free and radio suppressed.

■ Motor protection

Through built-in thermal contacts which must be connected to the motor full protection unit. Explosion proof models are equipped with thermal motor protection through built-in PTC thermistor which is connected to the tripping unit MSA. Hereby speed control is allowed where the minimum voltage must not be less than 115 V.

■ Electrical connection

Terminal box (protection to IP 55) located beneath rain cowl as standard. The explosion proof models are supplied with a 80 cm long connection lead. Explosion proof terminal box is available as accessory (KK Ex, Ref. No. 6862).

■ Protection grille

On the outlet as standard, compliant with DIN EN ISO 13857.

■ Speed control

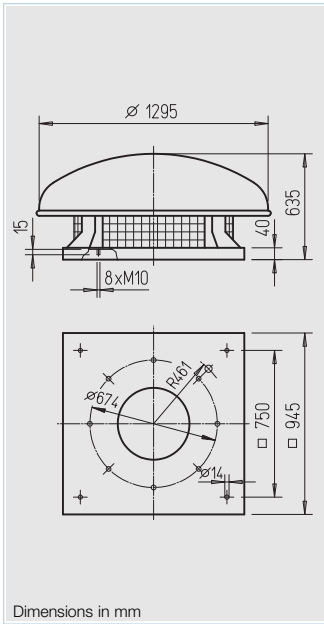
All models where a speed controller is shown on the table are speed controllable via voltage reduction. Two speed models are also available.

■ Sound level

Shown on the performance curves the sound pressure level is given in dB(A) at 4 metres. The total level and spectrum for sound pressure and sound power are given above the performance curves.

■ Delivery

Fully assembled, ready to connect units.

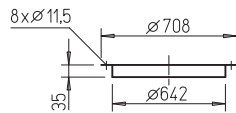


Dimensions in mm

Accessories for RD

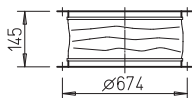
Flange rings  
FR 630

Ref. No. 1211



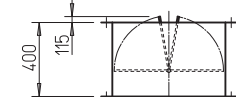
Flanged canvas connector  
STS 630

Ref. No. 1228  
Ref. No. 2509



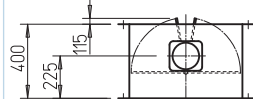
Automatic backdraught shutter  
RVS 630

Ref. No. 2600



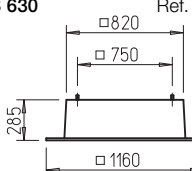
Motorised backdraught shutter  
RVM 630

Ref. No. 2609



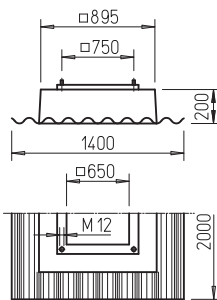
Flat roof base  
FDS 630

Ref. No. 1382



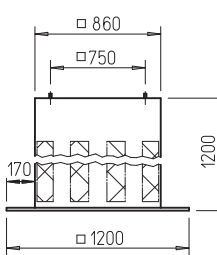
Corrugated roof base, profile 5  
WDS 630

Ref. No. 1564



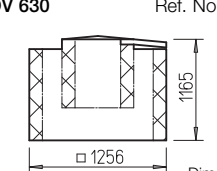
Hinged base attenuator  
SSD 630

Ref. No. 5017



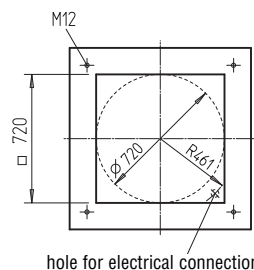
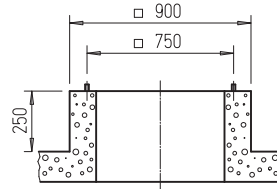
Roof fan attenuator  
HSDV 630

Ref. No. 6761



Dim. in mm

Dimensions for the base on site

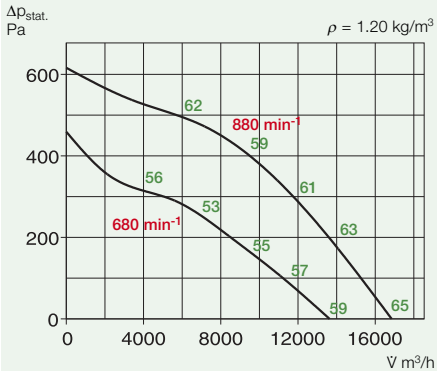


All dimensions in mm

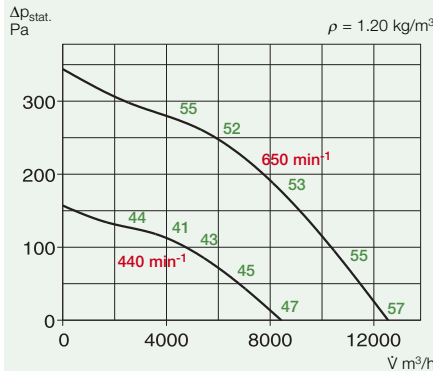
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**RD.. n=880 / 680 min<sup>-1</sup>**

Frequency	Hz	Total	125	250	500	1k	2k	4k
880 min <sup>-1</sup>	L <sub>WA</sub> Intake	dB(A) 83	74	78	76	75	73	74
680 min <sup>-1</sup>	L <sub>WA</sub> Intake	dB(A) 77	68	72	70	69	67	68


**RD.. n=650 / 440 min<sup>-1</sup>**

Frequency	Hz	Total	125	250	500	1k	2k	4k
650 min <sup>-1</sup>	L <sub>WA</sub> Intake	dB(A) 75	66	70	68	67	65	66
440 min <sup>-1</sup>	L <sub>WA</sub> Intake	dB(A) 65	56	60	58	57	55	56



Type	Ref. No.	R.P.M.	Air flow volume (FID)	Sound pressure level	Power consumption		Wiring diagram	Max. air flow temperature	Nominal weight	Motor full protection unit		Transformer controller	
					kW	A				Type	Ref. No.	Type	Ref. No.
<b>Single speed, three phase alternating current 400 V, 50 Hz, squirrel-cage motor, protection to IP 54</b>													
RDD 630/8	1194	650	12250	55	1.20	2.7	499	55	101	MD	5849	RDS 4 <sup>2)</sup>	1316
<b>Single speed, three phase alternating current 400 V, 50 Hz, Y/Δ-switching, protection to IP 54</b>													
RDD 630/6/6	1195	680/880	13640 / 16850	57 / 63	1.50 / 2.50	2.8 / 5.0	520	45	107	M 4 <sup>3)</sup>	1571	RDS 7 <sup>2)</sup>	1578
<b>Pole-changeable, with 2 speed motor, three phase alternating current 400 V, 50 Hz, protection to IP 54</b>													
RDD 630/12/6 <sup>1)</sup>	1197	440/880	8430 / 16850	45 / 63	0.39 / 2.60	1.5 / 4.9	472	50	112	M 3 <sup>3)</sup>	1293	PDA 12 <sup>4)</sup>	5081
<b>Explosion proof, temperature class T1 – T3, three phase alternating current 400 V, 50 Hz, protection to IP 54</b>													
RDD 630/6 Ex	1551	910	17300	66	2.60	5.6	838	40	101	MSA	1289	TSD 7.0	1504

<sup>1)</sup> Dahlander-winding

<sup>2)</sup> Includes motor full protection unit

<sup>3)</sup> Includes speed control and pole switch

<sup>4)</sup> For the flush-mounted version see the product page - switches

Horizontal discharge RD



■ Specification

Centrifugal roof fan with horizontal discharge. Flat design with large overlying rain cowl.

■ Casing

Base plate (with inlet cone) and other parts made of galvanised steel. Rain cowl made of glass fibre polyester. Base plate with threaded bolt for connection of intake air accessories.

■ Impeller

High performance backward curved centrifugal impeller made of galvanised steel, dynamically balanced with the motor unit.

■ Motor

Totally enclosed external rotor motor with ball bearings, protected to IP 44, insulated for protection against moisture. Maintenance free and radio suppressed.

■ Motor protection

All models have built-in thermal contacts which must be connected to the motor full protection unit (see model chart) in order to protect the motor effectively.

■ Electrical connection

Terminal box (protection to IP 55) located beneath rain cowl as standard.

■ Protection grille

On the outlet as standard, compliant with DIN EN ISO 13857.

■ Speed control

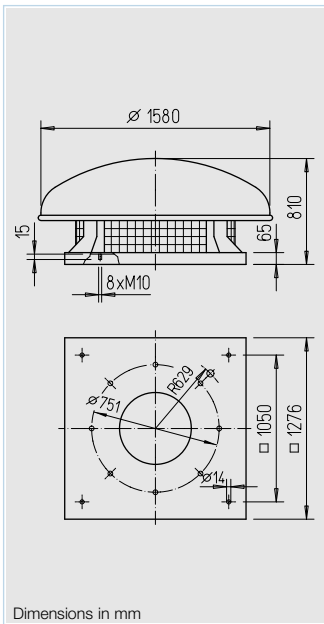
Ensured by using the models with pole switches.

■ Sound level

Shown on the performance curves the sound pressure level is given in dB(A) at 4 metres. The total level and spectrum for sound pressure and sound power are given above the performance curves.

■ Delivery

Fully assembled, ready to connect units.

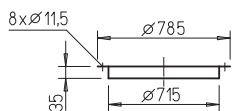


Dimensions in mm

Accessories for RD

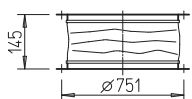
Flange rings  
FR 710

Ref. No. 1212



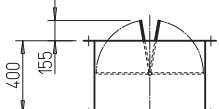
Flanged canvas connector  
STS 710

Ref. No. 1229



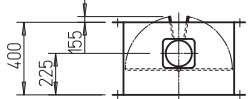
Automatic backdraught shutter  
RVS 710

Ref. No. 2601



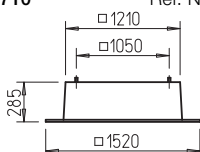
Motorised backdraught shutter  
RVM 710

Ref. No. 2610



Flat roof base  
FDS 710

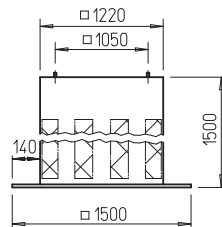
Ref. No. 6658



Dimensions in mm

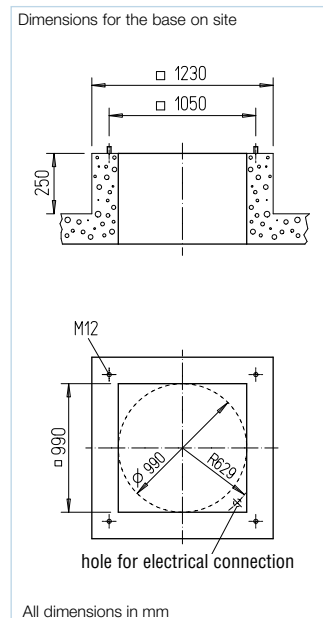
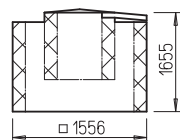
Hinged base attenuator  
SSD 710

Ref. No. 5287



Roof fan attenuator  
HSDV 710

Ref. No. 6763

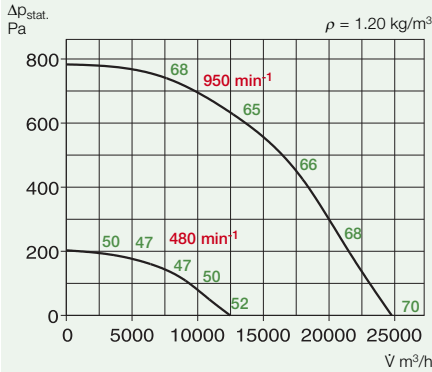


All dimensions in mm

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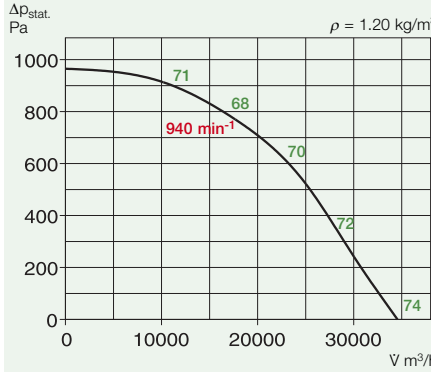
**RD 710/12/6** **n=950 / 480 min<sup>-1</sup>**

Frequency	Hz	Total	125	250	500	1k	2k	4k		
950 min <sup>-1</sup>	L <sub>WA</sub>	Intake	dB(A)	88	79	83	81	80	78	79
480 min <sup>-1</sup>	L <sub>WA</sub>	Intake	dB(A)	70	61	65	63	62	60	61



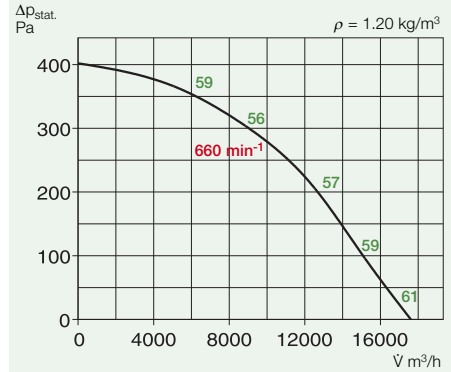
**RD 710/6** **n=940 min<sup>-1</sup>**

Frequency	Hz	Total	125	250	500	1k	2k	4k		
940 min <sup>-1</sup>	L <sub>WA</sub>	Intake	dB(A)	92	83	87	85	84	82	83



**RD 710/8** **n=660 min<sup>-1</sup>**

Frequency	Hz	Total	125	250	500	1k	2k	4k		
660 min <sup>-1</sup>	L <sub>WA</sub>	Intake	dB(A)	79	70	74	72	71	69	70



Type	Ref. No.	R.P.M.	Air flow volume (FID)	Sound pressure level	Power consumption		Wiring diagram	Max. air flow temperature	Nominal weight	Motor full protection unit		Pole switch	
					kW	A				Type	Ref. No.	Type	Ref. No.

**Single speed, three phase alternating current 400 V, 50 Hz, squirrel-cage motor, protection to IP 54**

<b>RDD 710/8</b>	1554	660	17600	59	2.00	4.4	469	40	158	<b>MD</b>	5849	<b>RDS 7<sup>2)</sup></b>	1578
<b>RDD 710/6</b>	1553	940	34550	72	8.60	15.8	499	40	190	<b>MD</b>	5849		not variable

**Pole-changeable, with 2 speed motor, three phase alternating current 400 V, 50 Hz, protection to IP 54**

<b>RDD 710/12/6<sup>1)</sup></b>	1556	480 / 950	12470 / 24800	50 / 68	0.70 / 4.50	2.4 / 8.5	472	55	167	<b>M 3<sup>3)</sup></b>	1293	<b>PDA 12<sup>4)</sup></b>	5081
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<sup>1)</sup> Dahlander-winding

<sup>2)</sup> Includes motor full protection unit

<sup>3)</sup> Includes speed control and pole switch

<sup>4)</sup> For the flush-mounted version see the product page - switches

Roof cowls VDH

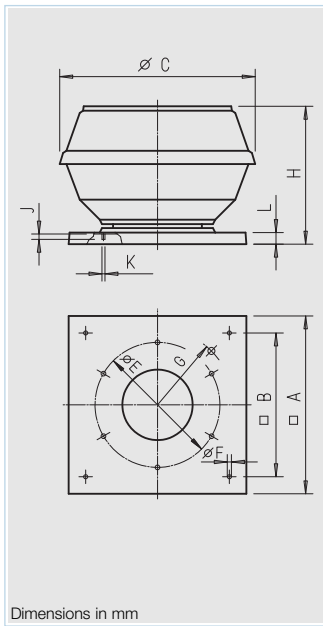
■ Specification

For covering the convection and supply air vents on the roof. Same design as vertical discharge roof fans VD.. and provides uniformity of appearance for systems with supply and extract.  
When using in mechanical ventilation systems the emerging system losses must be considered (see diagram). Accessories as in roof fans.

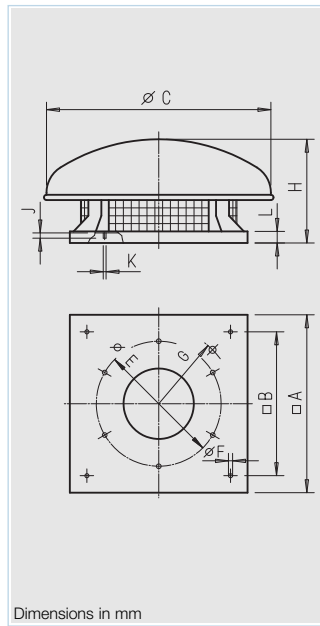
■ Model range

Type	Ref. No.	Nominal size in mm
VDH 200	5126	200
VDH 225	5127	225
VDH 250	5120	250
VDH 315	5121	315
VDH 400	5125	400
VDH 450	5122	450
VDH 500	5123	500

Roof cowls VDH



Roof cowls HDH



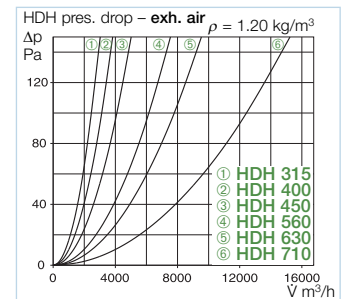
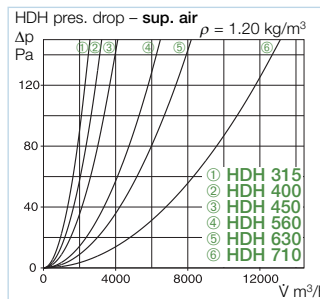
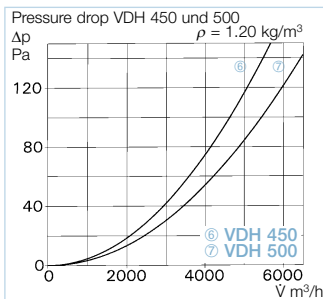
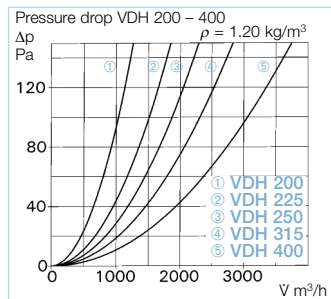
Roof cowls HDH

■ Specification

For covering the convection and supply air vents on the roof. Same design as horizontal discharge roof fans VD.. and provides uniformity of appearance for systems with supply and extract.  
When using in mechanical ventilation systems the emerging system losses must be considered (see diagram). Accessories as in roof fans.

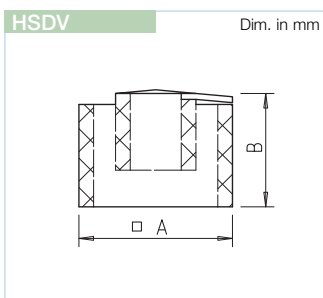
■ Model range

Type	Ref. No.	Nominal size in mm
HDH 315	5128	315
HDH 400	5129	400
HDH 450	5130	450
HDH 560	5132	560
HDH 630	5133	630
HDH 710	5231	710



Type	□ A	□ B	Ø C	Ø E	Ø F	G	H	J	K	L
200	435	330	544	259	12	173	449	12	6 x M6	40
225	435	330	629	259	12	173	425	12	6 x M6	40
250	560	450	695	286	12	218	488	11	6 x M6	40
315	560	450	770	356	12	227	535	19	8 x M8	40
400	644	535	900	438	12	287	615	19	8 x M8	50
450	710	590	1060	487	14	317	628	18	8 x M8	50
500	917	750	1200	541	14	430	768	18	8 x M8	50

Type	□ A	□ B	Ø C	Ø E	Ø F	G	H	J	K	L
315	603	450	846	356	12	264	369	16	8 x M8	32
400	633	535	846	438	12	302	401	16	6 x M8	32
450	754	590	1020	487	14	358	450	16	6 x M8	32
560	945	750	1295	605	14	461	590	15	8 x M10	40
630	945	750	1295	674	14	461	635	15	8 x M10	40
710	1276	1050	1580	751	14	670	810	15	8 x M10	65



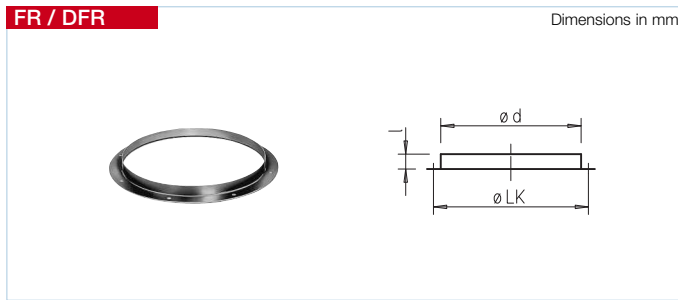
Roof fan attenuator HSDV for noise attenuation on discharge

Average attenuation value 11 dB. Available for models RD, nominal sizes 225 – 710.  
The construction encloses the roof fan and can be subsequently mounted without any structural alterations. Can only be mounted on RD.. models.

■ Model range

Type	Ref. No.	A in mm	B in mm
HSDV 225	6757	626	711
HSDV 315	6758	836	860
HSDV 400	6758	836	860
HSDV 450	6760	1016	1060
HSDV 560	6761	1256	1165
HSDV 630	6761	1256	1165
HSDV 710	6763	1556	1655



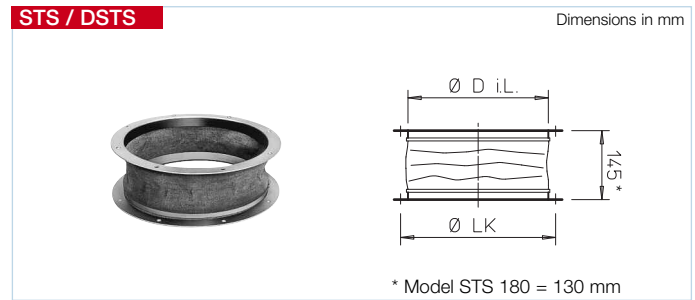


### Flange rings FR

Made of galvanised steel, for intake duct connections. Can be screwed directly on the fan base plate.

Dimensions according to DIN 24 155, Pt. 2.

Type	Ref. No.	$\varnothing LK$	l	$\varnothing d$	Weight in kg
FR 180	1200	213	25	186	0.4
DFR 200	1201	259	30	233	0.5
FR 225	1201	259	30	233	0.5
FR 250	1203	286	25	256	0.6
FR 315	1204	356	30	326	0.9
FR 400	1206	438	30	408	1.2
FR 450	1207	487	35	457	1.8
FR 500	1208	541	35	511	1.8
FR 560	1209	605	35	574	2.0
FR 630	1211	674	35	642	2.2
FR 710	1212	751	35	715	3.3



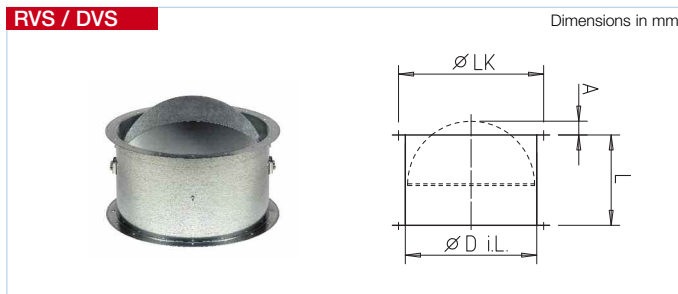
### Flanged canvas connector STS

To reduce vibration transmission in intake air ducting. Flanges made of galvanised steel. Flexible sleeve made of a polymer fabric cloth. For explosion proof fans, model

STS.. Ex must be used. To be mounted directly on the fan base plate. Flange dimensions according to DIN 24 155, Pt. 2.

Type	Ref. No.	Type*	Ref. No.	$\varnothing D i.L.$	$\varnothing LK$	Weight in kg
STS 180	1217	–	–	183	213	0.9
DSTS 200	1218	DSTS 200 Ex	2500	229	259	1.1
STS 225	1218	STS 225 Ex	2500	229	259	1.1
STS 250	1220	STS 250 Ex	2501	252	286	1.3
STS 315	1221	STS 315 Ex	2503	322	356	1.8
STS 400	1223	STS 400 Ex	2505	404	438	2.5
STS 450	1224	STS 450 Ex	2506	453	487	3.8
STS 500	1225	STS 500 Ex	2507	507	541	3.4
STS 560	1226	STS 560 Ex	2508	570	605	4.5
STS 630	1228	STS 630 Ex	2509	638	674	4.6
STS 710	1229	–	–	711	751	7.0

\* for explosion proof fans



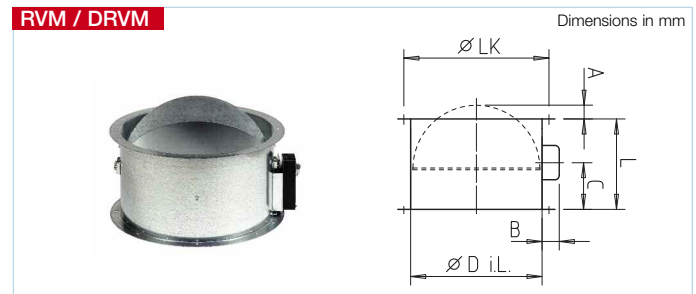
### Automatic backdraught shutter with spring reverse RVS<sup>1)</sup>

To prevent cold air backdraught when the fan is not in use. For vertical air flow bottom-up position (otherwise model RVM to be used). Automatic opening function when the fan is in use. Spring mechanism outside the airflow. Holding force adjustable to fan power and

installation position. Flaps and casing made of galvanised steel, flaps with nominal sizes 225-560 mm made of aluminium. Can be screwed directly on the fan's base plate. With flange holes on both sides according to DIN 24155, Pt. 2. Ambient temperature –30 to +100 °C

Type	Ref. No.	$\varnothing D i.L.$	L	A	$\varnothing LK$	Weight in kg
DVS 180	1247	180	110	15	213	1.2
DRVS 200	2591	225	300	–	259	3.0
RVS 225	2591	225	300	–	259	3.0
RVS 250	2592	250	300	–	286	3.4
RVS 315	2594	315	300	–	356	4.3
RVS 400	2596	400	330	–	438	7.2
RVS 450	2597	454	330	15	487	10.4
RVS 500	2598	504	330	40	541	11.7
RVS 560	2599	560	330	65	605	16.1
RVS 630	2600	630	400	115	674	19.5
RVS 710	2601	710	400	155	751	26.5

<sup>1)</sup> For pressure drop diagram see page 364.



### Motorised backdraught shutter RVM<sup>1) 2)</sup>

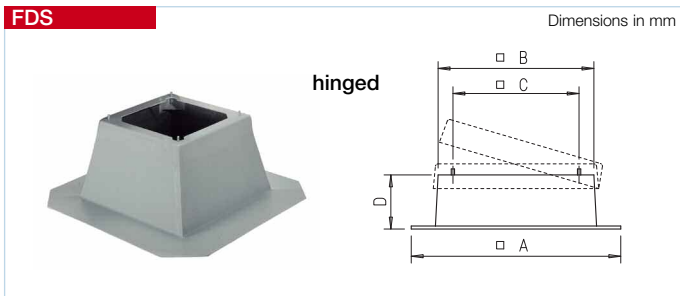
As RVS, but with spring reversing motor, mounted outside the air flow and for vertical air flow in any direction. Allows natural ventilation when the fan is not in use. Control of air flow in combination with a roof cowl. To be electrically operated together with the fan.

Connect with a 0,9 m long lead.  
Ambient temperature –30 to +60 °C  
Protection to IP 54  
Voltage/Frequency 230 V AC, 50/60 Hz  
Power consumption 14 W/8,5 W  
– to  $\varnothing 560$  / from  $\varnothing 630$  75 sec./150 sec.  
Valve opening time, ca.  
– to  $\varnothing 560$  / from  $\varnothing 630$  75 sec./150 sec.  
Wiring diagram-No. SS-380.1

Type	Ref. No.	$\varnothing D i.L.$	B	C	L	A	$\varnothing LK$	Weight in kg
DRVM 200	2575	225	95	130	300	–	259	3.3
RVM 225	2575	225	95	130	300	–	259	3.3
RVM 250	2576	250	95	130	300	–	286	3.7
RVM 315	2578	315	95	130	300	–	356	4.6
RVM 400	2580	400	95	130	330	–	438	7.5
RVM 450	2581	454	95	130	330	15	487	10.7
RVM 500	2582	504	95	130	330	40	541	12.0
RVM 560	2583	560	95	130	330	65	605	16.4
RVM 630	2609	630	150	225	400	115	674	21.0
RVM 710	2610	710	150	225	400	155	751	28.0

<sup>2)</sup> DRVM../RVM.. are not suitable for explosion proof areas.

## FDS



### Flat roof base FDS

For roof fans and roof cowls on flat roofs. Horizontal installation. Slope of up to 25° is allowed with RD.. roof fans. Offering reduced cost and installation time compared to crafted designs. Made of corrosion resistant glass reinforced polyester resin (size 710 made of galvanised steel) with abrasion proof, sound and heat absorbing insulation. Provides a raised height off the roof good for areas of high snow fall.

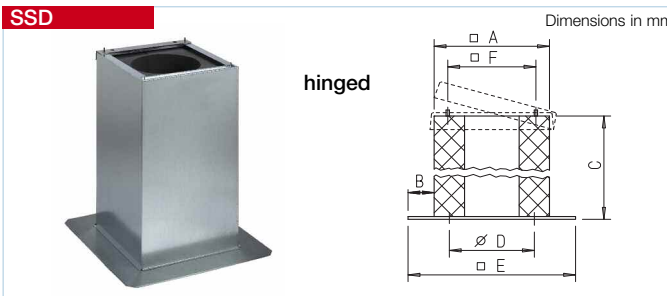
### Installation

To be installed above the ceiling opening (roof). Roof coating to be covered completely with felt and to be sealed with tar. Includes mounting screws, profile rubber and sealing between base and base plate.

Type	Ref. No.	A in mm	B in mm	C in mm	D in mm
FDS 180*	1377	645	285	245	285
FDS 200*	1378	750	392	330	285
FDS 225*	1378	750	392	330	285
FDS 250*	1379	870	520	450	285
FDS 315*	1379	870	520	450	285
FDS 400*	1380	950	605	535	285
FDS 450*	1381	1000	660	590	285
FDS 500	1382	1160	820	750	285
FDS 560	1382	1160	820	750	285
FDS 630	1382	1160	820	750	285
FDS 710	6658	1550	1190	1050	285

\* With folding mechanism for easy access and cleaning.

## SSD



### Hinged base attenuator SSD for intake attenuation

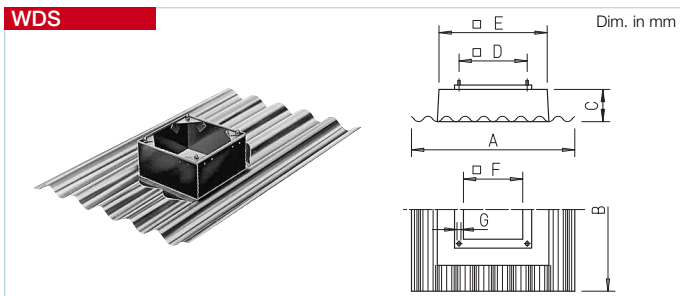
Average attenuation is 15 dB. All metal parts made of galvanised steel. For installation on flat roofs used like a flat roof base. Delivery includes mounting screws, profile rubber and sealing between base and base plate. NG 500–710: Acoustically lined with nonflammable material, class A2, covered on both sides with glass fibre.

NG 180–450: Equipped with hinges to fold the fan for maintenance purposes. Foamed material with free cross-section allows access to ducting or shaft system. Base plate is equipped with threaded holes (to DIN 24155, Bl. 2) to install the supply air accessories.

Type	Ref. No.	A	B	C	D	E	F
SSD 180*	5289	280	160	750	213	600	245
SSD 200*	5290	400	133	735	259	666	330
SSD 225*	5290	400	133	735	259	666	330
SSD 250*	5292	520	150	835	286	820	450
SSD 315*	5292	520	150	835	356	820	450
SSD 400*	5291	600	150	985	438	900	535
SSD 450*	5288	675	158	985	487	990	590
SSD 500	5017	860	170	1200	–	1200	750
SSD 560	5017	860	170	1200	–	1200	750
SSD 630	5017	860	170	1200	–	1200	750
SSD 710	5287	1220	140	1500	–	1500	1050

\* With folding mechanism for easy access and cleaning.

## WDS



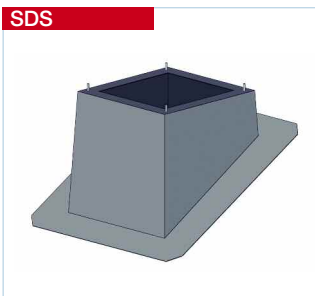
### Corrugated roof base WDS

For roof fans and roof cowls on corrugated roof. Slope to 25° allowed with RD.. roof fans. Made of weather proof and corrosion resistant glass reinforced polyester resin, low on weight, low risk of breakage on shipment and on site. Low heat transfer. Profile distance 177 mm (profile No. 5). Reduces costs and installation efforts to minimum, Rain drains on the front

and rear valley between the square base and the corrugated plate ensure an installation of roof slab independent of the ceiling direction. Includes screws, washers and profile rubber for mounting and sealing of the fan base plate.

Type	Ref. No.	A	B	C	D	E	F	G
WDS 180	1559	920	1600	200	245	295	∅ 256	M 6
WDS 200/225	1560	920	1600	200	330	395	290	M 10
WDS 250/315	1561	920	1600	200	450	555	395	M 10
WDS 400	1562	920	1600	200	535	625	475	M 10
WDS 450	1563	1400	2000	200	590	705	525	M 12
WDS 500/560	1564	1400	2000	200	750	895	650	M 12
WDS 630	1564	1400	2000	200	750	895	650	M 12

## SDS



### Sloping roof base SDS

For roof fans and roof cowls on sloping roofs with a slope up to 45°. Made of galvanised steel, with sound and thermal insulation, 50 mm thick lining inner side.

All SDS models are available on request. When ordering please specify the fan type or the nominal size of roof cowl, the roof pitch angle, the type of brick or the profile shape and height (for profile roofs), if necessary.

### Installation

To be installed on the roof construction. The enclosing collar made of lead to be sealed. Includes mounting screws, plates and sealing between base and base plate.

Note	Page
All centrifugal roof fans delivered without guard on intake. If there is no duct connected directly to the unit, a guard (model ASD-SGD or SG) must be used.	171
Other accessories	Page
Speed controllers, controllers and switches	397 on.