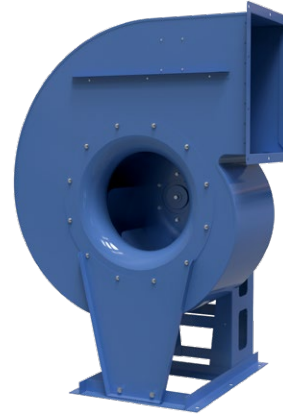




Series

VCD

Centrifugal smoke extraction fan



 Air flow: up to **86 500 m³/h**.

 Operational temperature:
+120 °C for long-term operation;
+400 °C for operation up to 120 minutes.

APPLICATION

The dual-purpose centrifugal smoke extraction fan is used in emergency exhaust ventilation systems for forced removal of smoke, heated gas and combustion products.

The fan may be used for general exhaust ventilation.

The fan is a component part and is not designed for independent operation.

OPERATION

The fan is designed to remove smoke and air mixtures heated up to +400 °C for up to 120 minutes, and long-term operation with transported air temperature of up to +120°C.

The fans can be equipped with a frequency converter to adjust the rotation speed.

The fan may be used for general extract ventilation.

The fan can be designed for temperate (**U**), tropical (**T**) or maritime moderately cold (**M**) climate of the first placement category.

DESIGN

The fans are made from steel with heat-resistant polymer coating, which ensures protection from weather conditions.

The impeller and backward curved blades are powder-coated.

The fan's casing can rotate within the angle range of 0° – 315°.

The unit design is constantly being improved, thus some models may be slightly different from those described in this catalog.

ELECTRIC MOTOR

The fans are equipped with three-phase electric motors rated for a voltage of 400 V.

The motor is located outside of the transported air flow. The motor protection class according to IEC 60034-5 is IP55.

DESIGNATION KEY**VCD-400-2D/x-R90-U1-400/2****Series**

VCD: centrifugal fan for smoke extraction with direct drive

Impeller size [mm]

400; 450; 500; 560; 630; 710; 800; 900; 1000; 1120

Number of poles

2, 4, 6, 8

No. of phases

D: three-phase

Motor power [kW]

R: right

Casing design

R: right

Casing rotation angle

0; 45; 90 (standard); 135; 180; 225; 270; 315

Climatic category

U: temperate climate (-40...+40 °C)

T: tropical climate (-10...+50 °C)

M: maritime moderately cold climate (-40...+40 °C)

Placement category

1: outdoors

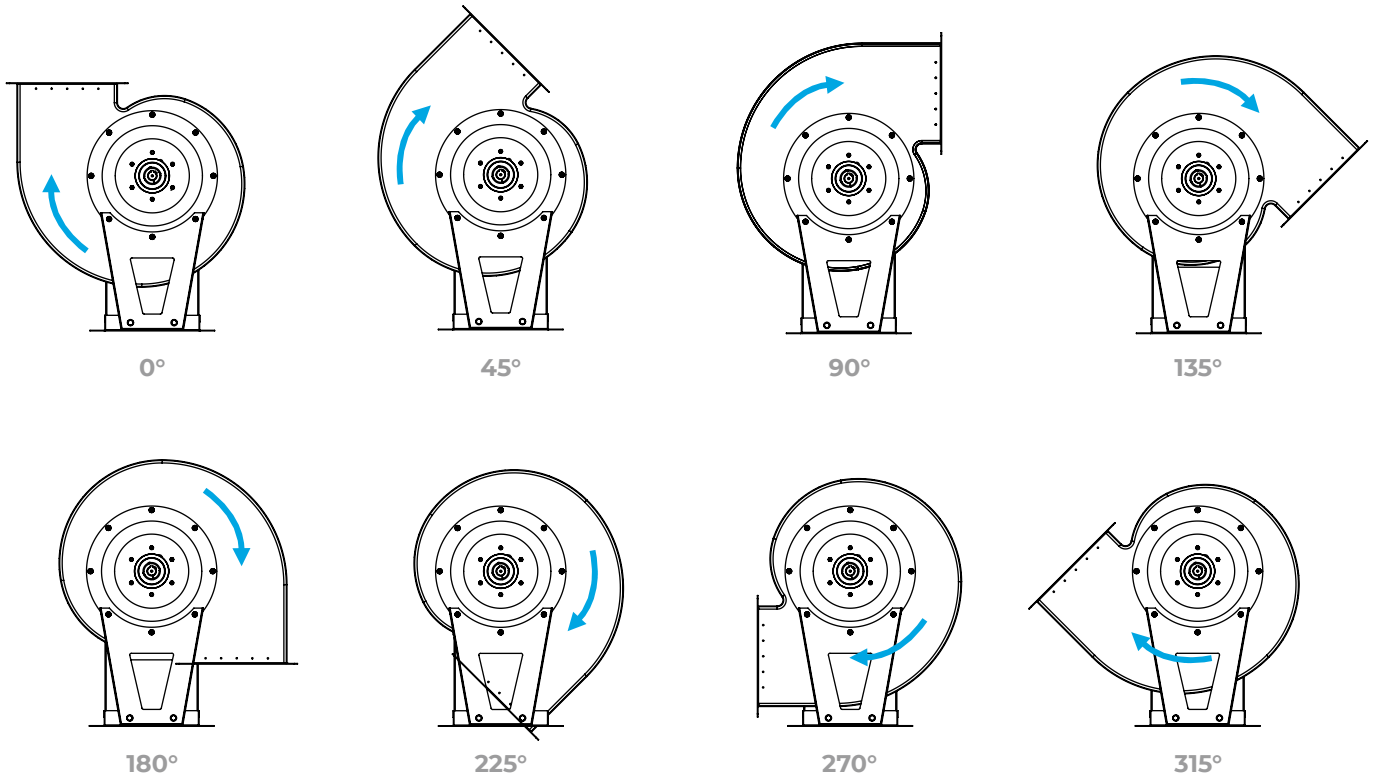
2: under a canopy or indoors, where the conditions are the same as outdoors, except for solar radiation and precipitation

3: indoors without artificial climate control

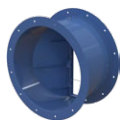
Fire resistance rating/hours

400/2: 400 °C/2 h

CASING ROTATION ANGLE



ACCESSORIES



Backdraft damper
KOM-VO...400/2



Flexible joint
VVGF-VO...400/2



Protective mesh
SZ-VO



Spring-loaded
anti-vibration mount
VVCp-VO



Frequency converter
Basic Drive FC-101

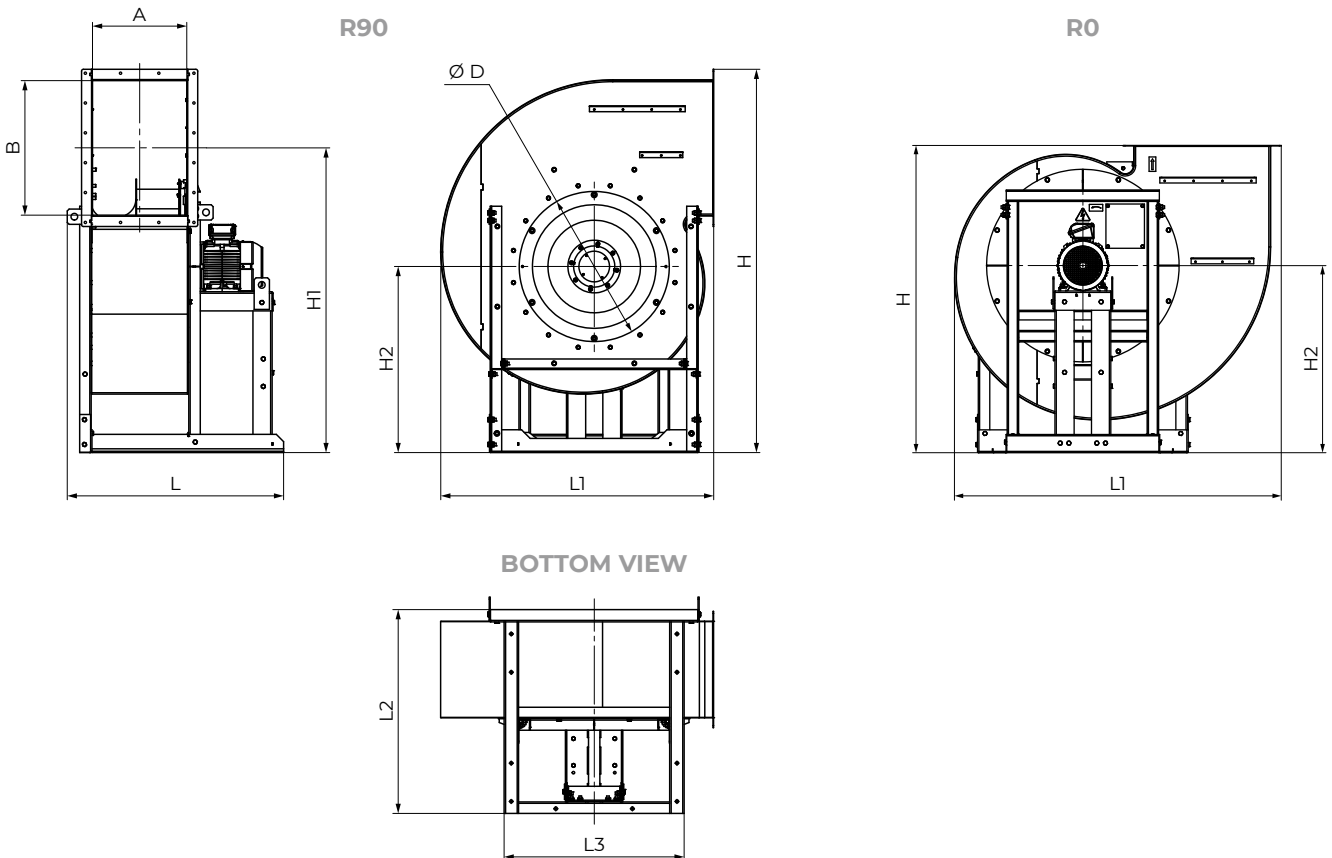


Safety switches
AS

OVERALL DIMENSIONS

Fan Type	Overall and connection dimensions [mm]												Weight [kg]										
	A	B	Ø D	H (R90)	H (R0)	H1	H2	L	L1 (R90)	L1 (R0)	L2	L3											
VCD 400-2D/4-400/2	258	316	400	966	777	771	498	648	655	765	610	400	67										
VCD 400-4D/0.37-400/2													57										
VCD 450-2D/7.5-400/2	283	356	450	1078	835	863	556	767	734	856	705	450	112										
VCD 450-4D/0.75-400/2													65										
VCD 500-4D/1.5-400/2	343	396	500	1210	1005	975	634	855	818	947	855	510	98										
VCD 500-6D/0.37-400/2													88										
VCD 560-4D/2.2-400/2	353	436	560	1312	1073	1057	671	742	901	1055	705	450	110										
VCD 560-6D/0.75-400/2													100										
VCD 630-6D/1.5-400/2	397	491	630	1469	1204	1186	753	787	1014	1182	767	550	128										
VCD 630-4D/4-400/2													148										
VCD 710-8D/1.1-400/2	442	554	710	1709	1422	1385	897	895	1146	1338	895	570	153										
VCD 710-6D/2.2-400/2													160										
VCD 710-4D/7.5-400/2													192										
VCD 800-8D/2.2-400/2	492	703	800	2002	1596	1592	972	1130	1426	1697	1065	940	306										
VCD 800-6D/4-400/2																							308
VCD 800-4D/15-400/2								1330															
VCD 900-8D/4-400/2	562	782	900	2349	1892	1900	1210	1265	1573	1880	1200	1060	435										
VCD 900-6D/7.5-400/2																						455	
VCD 900-4D/30-400/2								1415												1350			480
VCD 1000-8D/7.5-400/2	613	900	1000	2426	1908	1916	1125	1339	1808	2153	1321	1240	550										
VCD 1000-6D/15-400/2																							590
VCD 1120-8D/11-400/2	686	1001	1120	2663	2091	2103	1225	1468	2003	2383	1450	1300	725										
VCD 1120-8D/15-400/2	763							1595			1577		840										
VCD 1120-6D/22-400/2	686							1518			1500		795										
VCD 1120-6D/30-400/2	763							1685			1667		895										

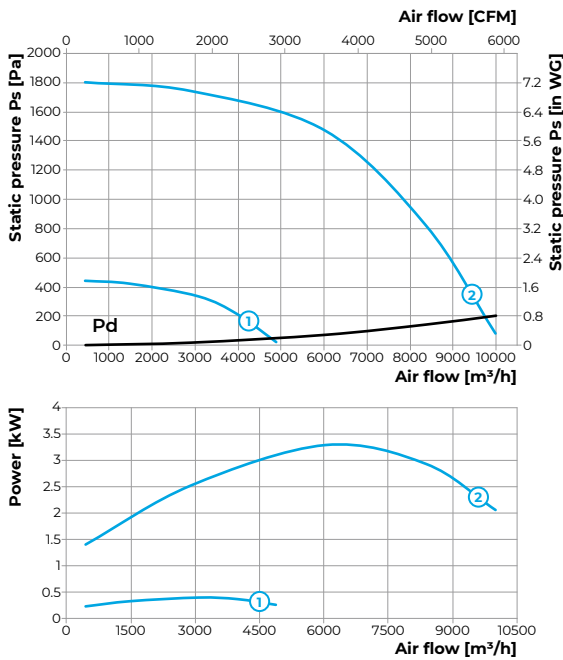
The dimensions provided apply to models with the R0 and R90 rotation angles. Dimensions for models with different rotation angles are available upon request.



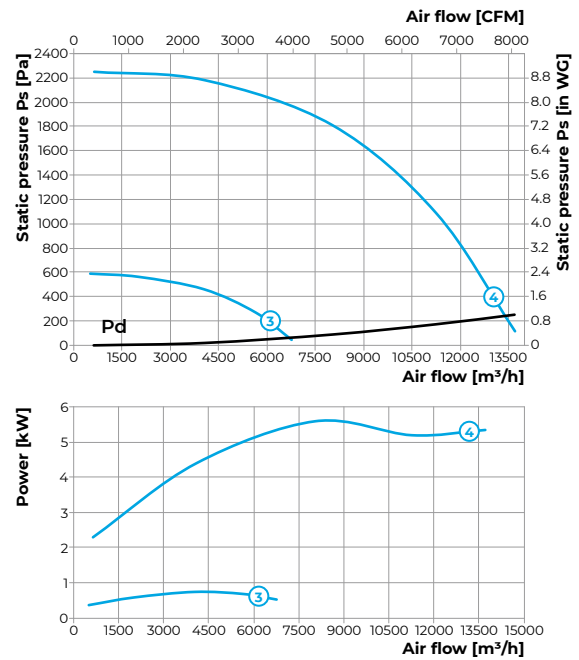
TECHNICAL DATA

Standard size	Number of poles	Voltage [V/50 Hz]	Fan model	Rated power Ny [kW]	Rated RPM [min ⁻¹]	Curve number
400	4	3~400	VCD-400-4D/0.37-400/2-	0.37	1440	①
400	2	3~400	VCD-400-2D/4-400/2	4	2880	②
450	4	3~400	VCD-450-4D/0.75-400/2	0.75	1440	③
450	2	3~400	VCD-450-2D/7.5-400/2	7.5	2880	④
500	6	3~400	VCD-500-6D/0.37-400/2	0.37	960	⑤
500	4	3~400	VCD-500-4D/1.5-400/2	1.5	1440	⑥
560	6	3~400	VCD-560-6D/0.75-400/2	0.75	960	⑦
560	4	3~400	VCD-560-4D/2.2-400/2	2.2	1440	⑧

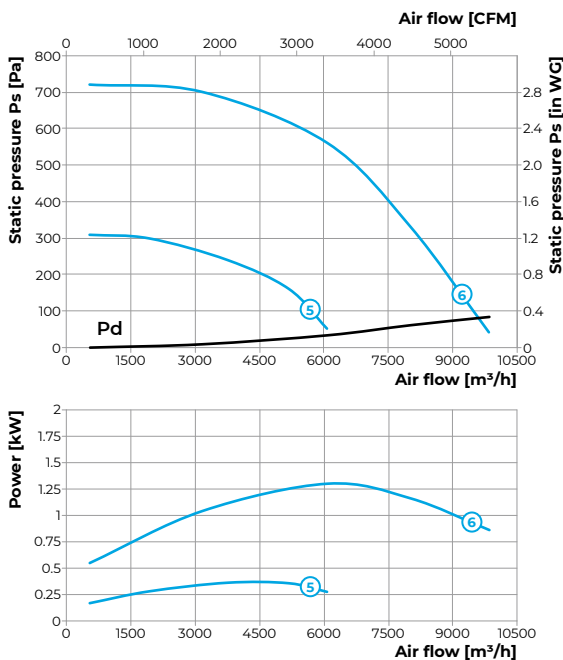
STANDARD SIZE: 400



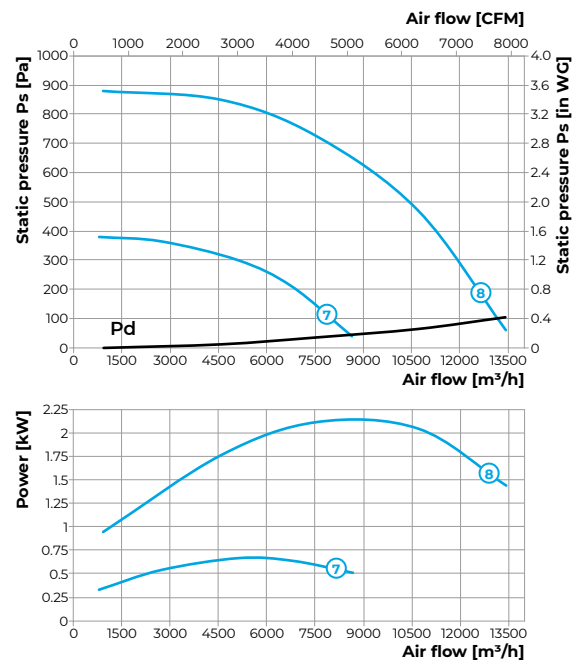
STANDARD SIZE: 450



STANDARD SIZE: 500

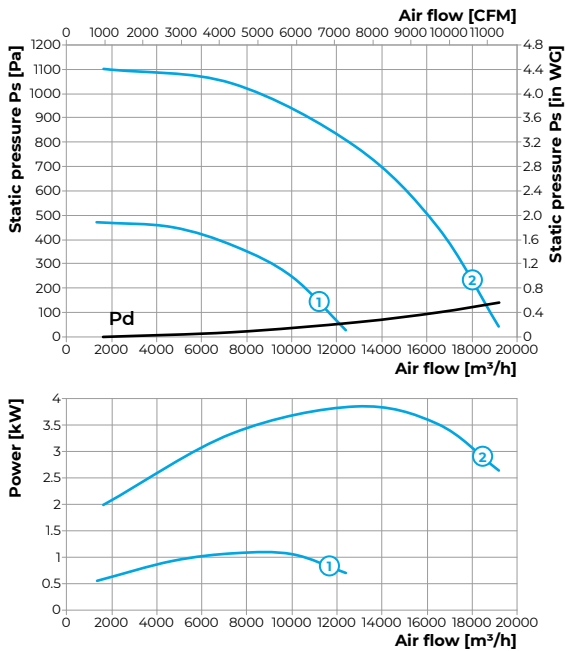


STANDARD SIZE: 560

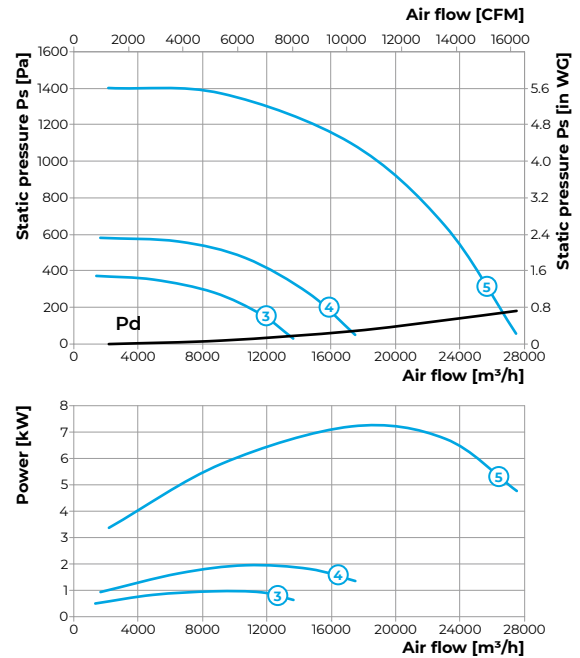


Standard size	Number of poles	Voltage [V/50 Hz]	Fan model	Rated power Ny [kW]	Rated RPM [min ⁻¹]	Curve number
630	6	3~400	VCD-630-6D/1.5-400/2	1.5	950	①
630	4	3~400	VCD-630-4D/4-400/2	4	1440	②
710	8	3~400	VCD-710-8D/1.1-400/2	1.1	730	③
710	6	3~400	VCD-710-6D/2.2-400/2	2.2	940	④
710	4	3~400	VCD-710-4D/7.5-400/2	7.5	1440	⑤
800	8	3~400	VCD-800-8D/2.2-400/2	2.2	730	⑥
800	6	3~400	VCD-800-6D/4-400/2	4	940	⑦
800	4	3~400	VCD-800-4D/15-400/2	15	1440	⑧
900	8	3~400	VCD-900-8D/4-400/2	4	750	⑨
900	6	3~400	VCD-900-6D/7.5-400/2	7.5	1000	⑩
900	4	3~400	VCD-900-4D/30-400/2	30	1470	⑪

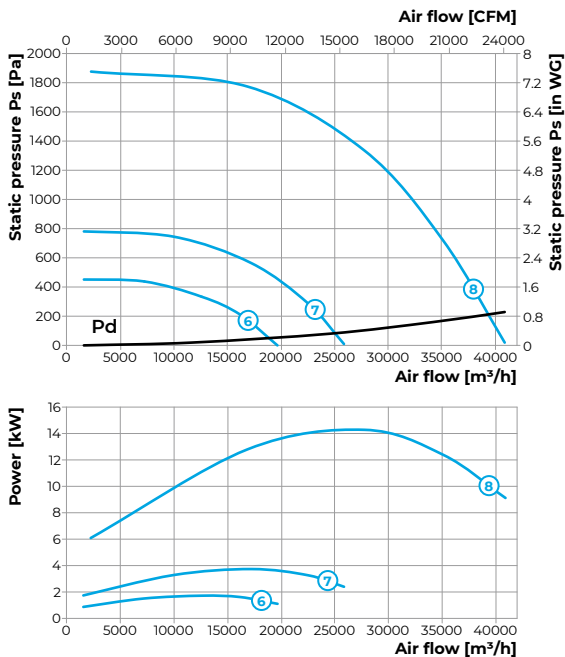
STANDARD SIZE: 630



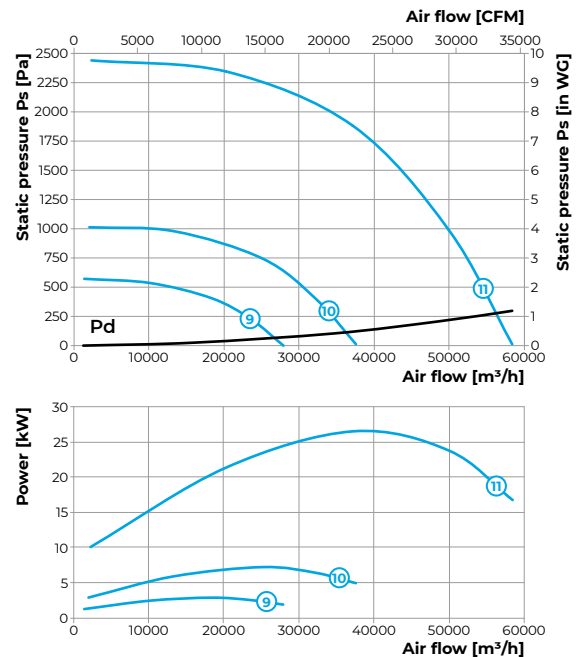
STANDARD SIZE: 710



STANDARD SIZE: 800

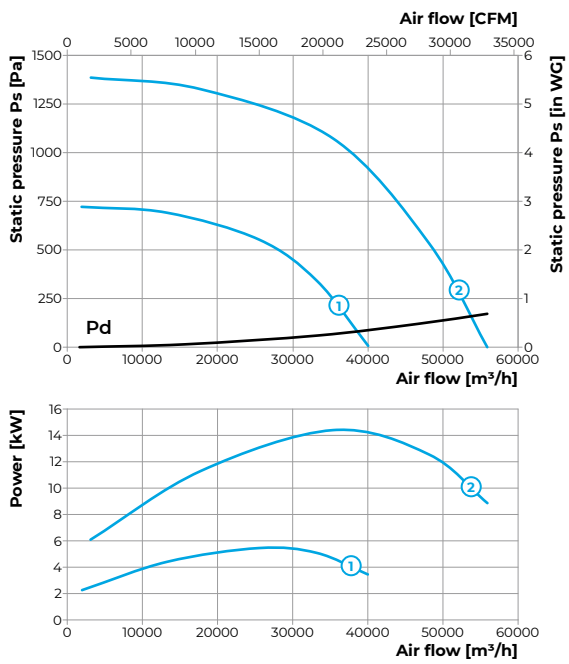


STANDARD SIZE: 900



Standard size	Number of poles	Voltage [V/50 Hz]	Fan model	Rated power Ny [kW]	Rated RPM [min ⁻¹]	Curve number
1000	8	3~400	VCD-1000-8D/7.5-400/2	7.5	750	①
1000	6	3~400	VCD-1000-6D/15-400/2	15	1000	②
1120	8	3~400	VCD-1120-8D/11-400/2	11	750	③
1120	8	3~400	VCD-1120-8D/15-400/2	15	750	④
1120	6	3~400	VCD-1120-6D/22-400/2	22	1000	⑤
1120	6	3~400	VCD-1120-6D/30-400/2	30	1000	⑥

STANDARD SIZE: 1000



STANDARD SIZE: 1120

