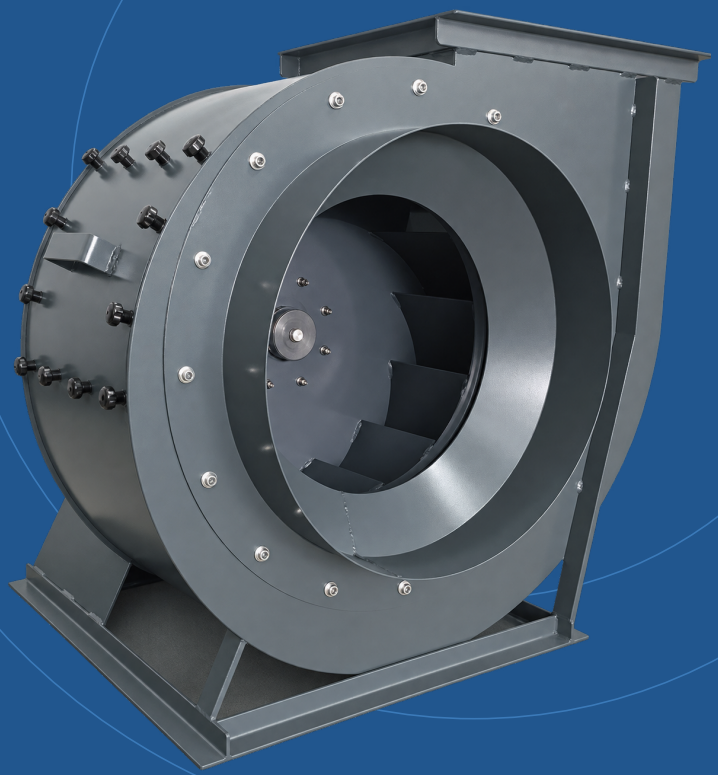
VLPF SERIES

Low pressure industrial centrifugal fans

VLPF

BACKWARD-CURVED IMPELLER

POWDER-COATED STEEL HOUSING



2500-40000	19	50 Hz
Nominal airflow / m^3/h	Models in the range	Single / three phase

01 / PRODUCT OVERVIEW

Large airflow. Backward-curved design.



01 Welded backward-curved impeller

A single-inlet centrifugal fan with a welded backward-curved wheel, powder-coated DKP sheet-steel scroll and rigid mounting base.

02 Low-pressure industrial ventilation

For clean-air extraction, air-conditioning, exhaust filtration and general process ventilation. Match the required duty to the model-specific curve.

03 Motor and air limits kept separate

The maximum transported-air temperature is +120 °C. Motor operating range is -20 to +55 °C; maintain motor ventilation and service clearance.

CURVES & MODEL SELECTION

Select the fan at the required working point.

Use each model's 50 Hz static-pressure curve. Nominal airflow, motor ratings and listed acoustic references are listed separately. The listed polynomial fits are preserved; final motor loading and application conditions must be checked for the selected duty.

Selection parameter	Series overview
Nominal airflow	2500-40000 m^3/h
Maximum static pressure	400-2400 Pa; model-specific nominal fields
Nominal motor power	0.25-22.00 kW
Electrical supply	230 V / 1 phase or 400 V / 3 phase / 50 Hz
Motor configuration	4 poles / Class F / IP55 / TEFC / IE2 or IE3
Motor range / transported-air maximum	-20 to +55 °C / +120 °C

Performance data. Photograph illustrates the open inlet; use the actual unit nameplate, outline and supplied motor diagram.

02 / TECHNICAL DATA

Compare the electrical configurations.

19 MODELS / 50 Hz / 4 POLES

Model	Supply V / phase	Airflow m^3/h	Max. Ps Pa	Motor kW	Speed rpm	Current A	Weight kg	LpA / 3 m dB(A)	Motor IE class
VLPF 1M	230 / 1	2500	400	0.25	1380	2.10	67	70	IE2
VLPF 2M	230 / 1	3500	525	0.55	1365	3.30	78	72	IE2
VLPF 3M	230 / 1	5000	600	0.75	1410	5.40	91	75	IE2
VLPF 4M	230 / 1	7000	815	1.50	1400	9.80	104	85	IE3
VLPF 5M	230 / 1	10000	1050	2.20	1425	14.00	145	88	IE3
VLPF 6M	230 / 1	12000	1050	3.00	1430	20.00	158	92	IE3
VLPF 1T	400 / 3	2500	400	0.25	1380	0.87	67	70	IE2
VLPF 2T	400 / 3	3500	525	0.55	1365	1.60	78	72	IE2
VLPF 3T	400 / 3	5000	600	0.75	1410	1.92	91	75	IE3
VLPF 4T	400 / 3	7000	815	1.50	1400	3.50	104	85	IE3
VLPF 5T	400 / 3	10000	1050	2.20	1420	4.90	145	88	IE3
VLPF 6T	400 / 3	12000	1050	3.00	1430	6.70	158	92	IE3
VLPF 7T	400 / 3	15000	1320	4.00	1440	8.40	175	95	IE3
VLPF 8T	400 / 3	18000	1350	5.50	1450	11.50	225	98	IE3
VLPF 9T	400 / 3	20000	1630	7.50	1455	16.00	240	100	IE3
VLPF 10T	400 / 3	23000	1650	11.00	1465	21.30	255	102	IE3
VLPF 11T	400 / 3	25000	1700	15.00	1470	29.40	325	103	IE3
VLPF 12T	400 / 3	30000	2200	18.50	1470	34.50	375	105	IE3
VLPF 13T	400 / 3	40000	2400	22.00	1475	43.00	410	105	IE3

Airflow, maximum static pressure and motor data are nominal ratings. M = single phase; T = three phase. LpA is the supplied sound-pressure reference at 3 m; housing sound-power data are listed separately on page 9.

VLPF 2T: nominal maximum airflow 3500 m^3/h and pressure 525 Pa; the curve starts at 800 Pa and extends to 4300 m^3/h. Both representations are retained. Confirm this model's performance before final duty selection.

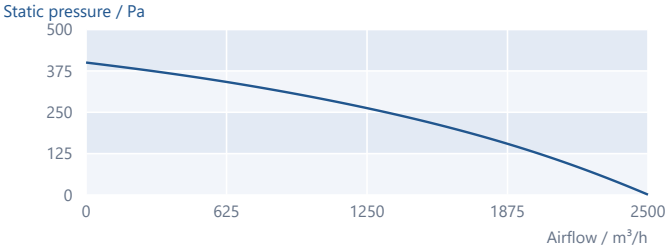
Class F / IP55 / TEFC / S1. Motor range: -20 to +55 °C. Maximum transported air: +120 °C. Listed pressure fits are not normalized to nominal maximum-pressure fields.

03 / AIR PERFORMANCE / 1 OF 2

Fan Performance Curves

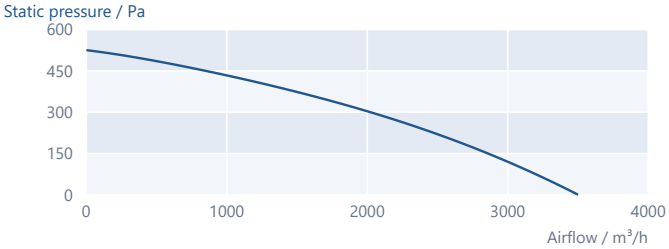
VLPF 1M

230 V / 1 phase / 50 Hz / 0.25 kW



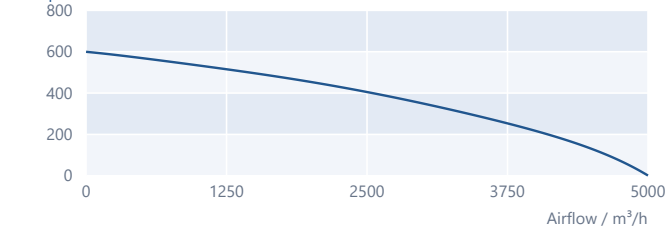
VLPF 2M

230 V / 1 phase / 50 Hz / 0.55 kW



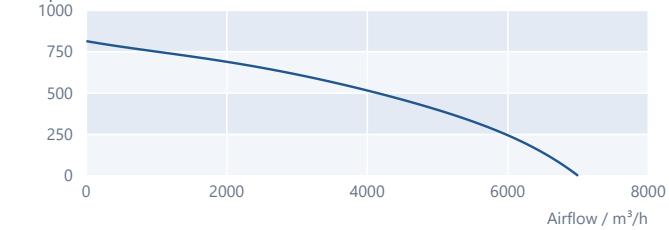
VLPF 3M

230 V / 1 phase / 50 Hz / 0.75 kW



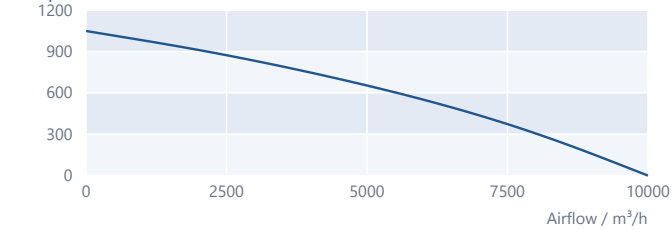
VLPF 4M

230 V / 1 phase / 50 Hz / 1.50 kW



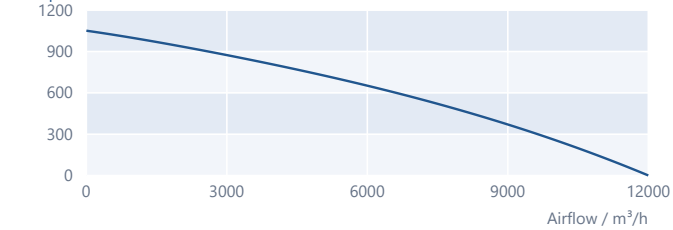
VLPF 5M

230 V / 1 phase / 50 Hz / 2.20 kW



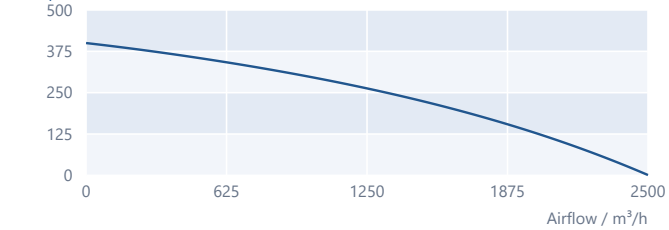
VLPF 6M

230 V / 1 phase / 50 Hz / 3.00 kW



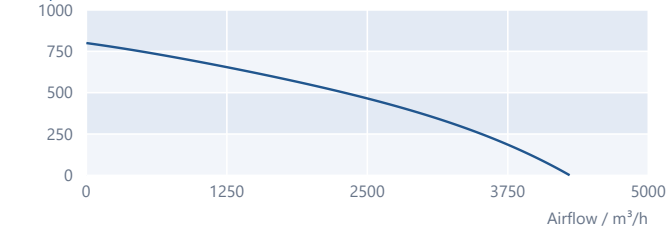
VLPF 1T

400 V / 3 phase / 50 Hz / 0.25 kW



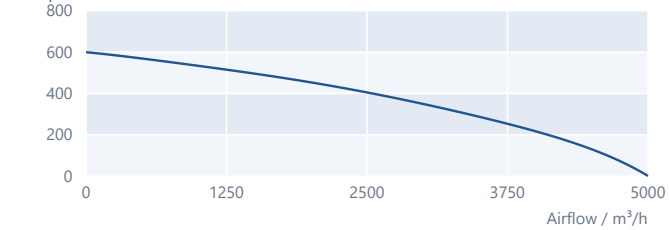
VLPF 2T

400 V / 3 phase / 50 Hz / 0.55 kW



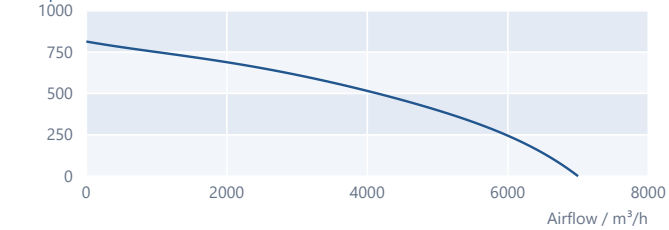
VLPF 3T

400 V / 3 phase / 50 Hz / 0.75 kW



VLPF 4T

400 V / 3 phase / 50 Hz / 1.50 kW



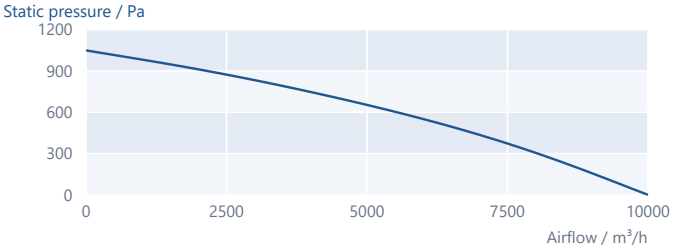
Model-specific scales; listed 50 Hz curves. Tiny negative fit tails stop at zero pressure. No extrapolation. VLPF 2T nominal/curve discrepancy: see page 3.

03 / AIR PERFORMANCE / 2 OF 2

Fan Performance Curves

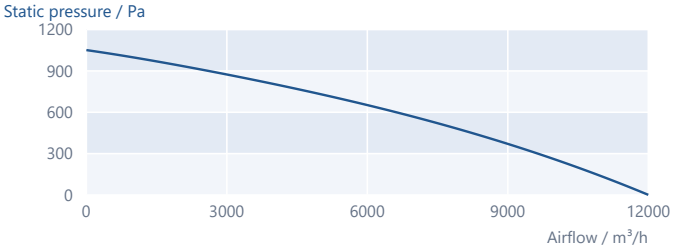
VLPF 5T

400 V / 3 phase / 50 Hz / 2.20 kW



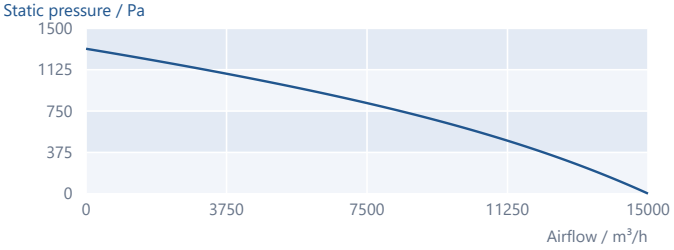
VLPF 6T

400 V / 3 phase / 50 Hz / 3.00 kW



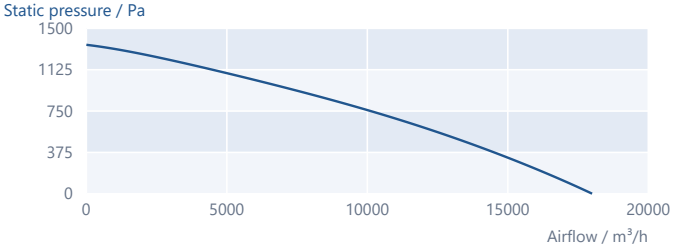
VLPF 7T

400 V / 3 phase / 50 Hz / 4.00 kW



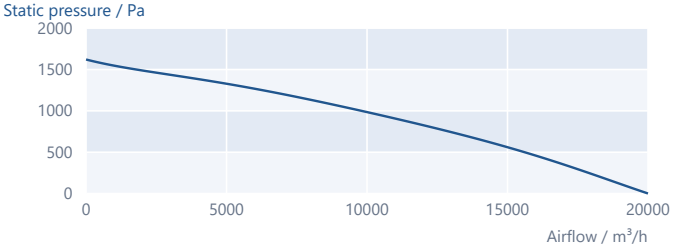
VLPF 8T

400 V / 3 phase / 50 Hz / 5.50 kW



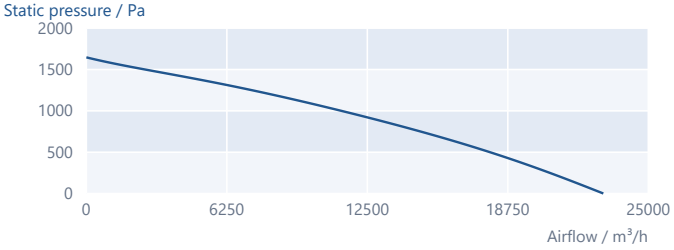
VLPF 9T

400 V / 3 phase / 50 Hz / 7.50 kW



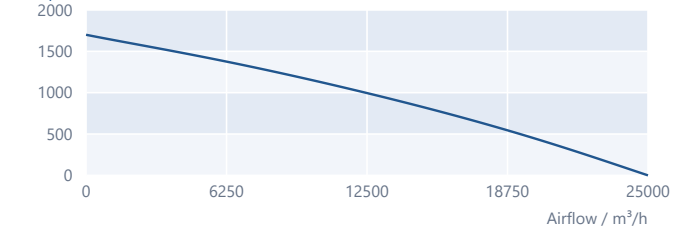
VLPF 10T

400 V / 3 phase / 50 Hz / 11.00 kW



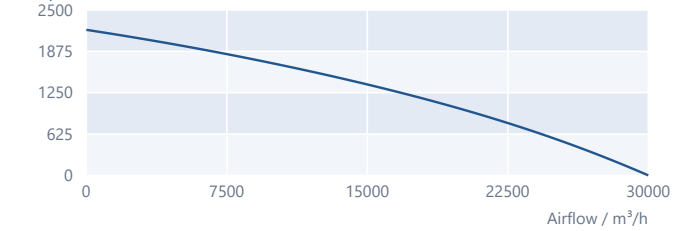
VLPF 11T

400 V / 3 phase / 50 Hz / 15.00 kW



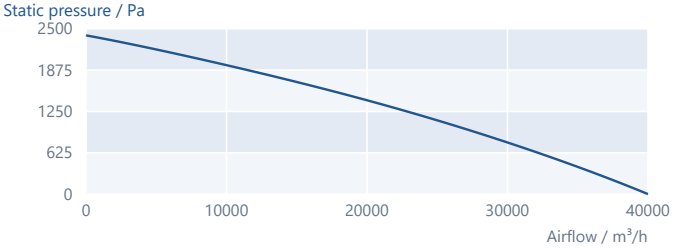
VLPF 12T

400 V / 3 phase / 50 Hz / 18.50 kW



VLPF 13T

400 V / 3 phase / 50 Hz / 22.00 kW



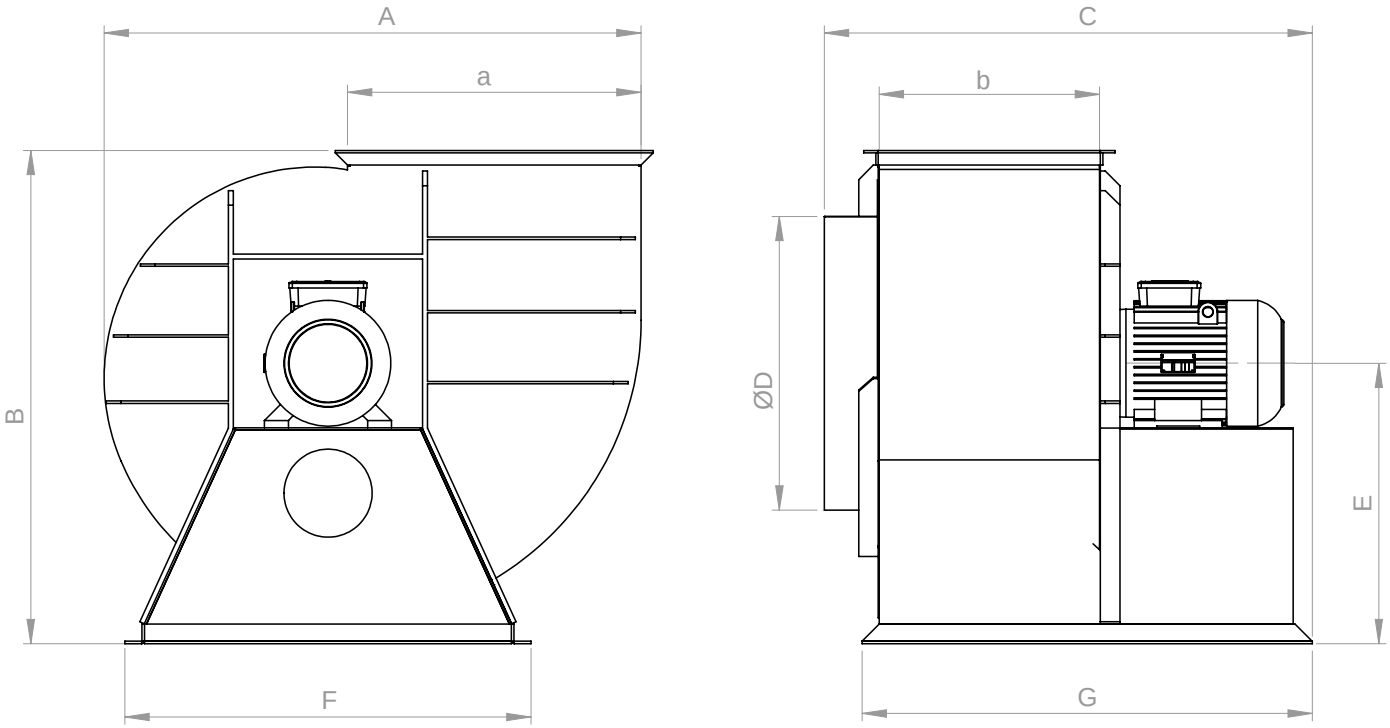
Model-specific scales; listed 50 Hz curves. Tiny negative fit tails stop at zero pressure. No extrapolation.

04 / DIMENSIONAL DRAWING

Define the inlet, discharge and base.

ORIGINAL FAMILY OUTLINE / A-G, a-b

All dimensions in mm



THIRTEEN CASING CONFIGURATIONS

Use the selected casing and model.

The outline defines the circular inlet, rectangular discharge and mounting geometry. Page 7 lists all nine supplied dimensions for each of the thirteen casings. Single-phase and three-phase versions of sizes 1-6 share the supplied outline values.

The product photograph illustrates the fan configuration and viewing angle. Use the selected model dimensions and actual flange for mating connections. Do not scale the drawing to obtain dimensions.

05 / DIMENSIONAL DATA

Every connection, by casing size.

CASING & MOUNTING DIMENSIONS / mm

Casing / models	A	a	B	b	C	D	E	F	G
VLPF 1M / 1T	515	195	507	185	474	225	291	420	445
VLPF 2M / 2T	580	225	584	205	495	260	325	460	460
VLPF 3M / 3T	699	335	680	275	650	310	386	560	590
VLPF 4M / 4T	782	377	760	300	685	350	435	635	615
VLPF 5M / 5T	872	414	883	320	771	400	520	733	696
VLPF 6M / 6T	925	436	900	350	826	450	515	755	755
VLPF 7T	1040	522	1015	396	886	500	602	740	825
VLPF 8T	1100	588	1008	450	997	600	573	830	920
VLPF 9T	1130	588	1080	500	1047	650	632	990	980
VLPF 10T	1272	664	1205	550	1176	700	703	1030	1105
VLPF 11T	1390	786	1265	600	1219	750	763	980	1145
VLPF 12T	1450	788	1365	600	1275	800	815	1050	1275
VLPF 13T	1576	826	1465	600	1275	850	847	1160	1290

All dimensions in mm. Lowercase a x b identifies the rectangular discharge profile; D is the circular inlet dimension shown in the outline. The listed calculation diameter is recorded separately in FSP. Actual mating flanges and installation clearances must follow the selected model.

Casings 1-6 apply to the listed M and T versions. Casings 7-13 are three phase only. All listed dimension values are retained; no missing or neighbouring model dimensions are inferred.

06 / INSTALLATION & MOTOR

Prepare the fan and the supply.

01 Mounting and service access

Fix the fan to a rigid support. Keep the inlet, discharge and motor ventilation clear, and provide access to the impeller and fasteners. Follow the selected outline. Motor operating range is -20 to +55 °C; maximum transported-air temperature is +120 °C.

02 Motor supply and control

M models use 230 V single-phase motors; T models use 400 V three-phase motors. Use compatible voltage control for M and compatible inverter control for T, subject to the actual motor/controller instructions. Published curves apply to 50 Hz. Isolate power before servicing.

SINGLE-PHASE MOTOR CAPACITORS

Model	Capacitor / µF	Capacitor rating / V
VLPF 1M	10	400
VLPF 2M	20	400
VLPF 3M	30	400
VLPF 4M	50	400
VLPF 5M	60	400
VLPF 6M	60	400

Capacitor voltage is the component rating; single-phase supply remains 230 V. Layout 18 shows the motor-terminal alternatives. Apply the diagram and capacitor arrangement supplied with the actual selected motor; three-phase models do not use these capacitor references.

07 / ACOUSTIC REFERENCE

Housing sound power, by model.

HOUSING BAND LEVELS / dB

Model	65 Hz	125 Hz	250 Hz	500 Hz	1 kHz	2 kHz	4 kHz	8 kHz	LwA dB(A)
VLPF 1M	37	48	61	65	64	63	61	57	70
VLPF 2M	40	51	64	68	67	66	64	60	73
VLPF 3M	44	55	68	72	71	70	68	64	77
VLPF 4M	48	59	72	76	75	74	72	68	81
VLPF 5M	51	62	75	79	78	77	75	71	84
VLPF 6M	53	64	77	81	80	79	77	73	86
VLPF 1T	37	48	61	65	64	63	61	57	70
VLPF 2T	40	51	64	68	67	66	64	60	73
VLPF 3T	44	55	68	72	71	70	68	64	77
VLPF 4T	48	59	72	76	75	74	72	68	81
VLPF 5T	51	62	75	79	78	77	75	71	84
VLPF 6T	53	64	77	81	80	79	77	73	86
VLPF 7T	56	67	80	84	83	82	80	76	89
VLPF 8T	57	68	81	85	84	83	81	77	90
VLPF 9T	59	70	83	87	86	85	83	79	92
VLPF 10T	61	72	85	89	88	87	85	81	94
VLPF 11T	-	-	-	-	-	-	-	-	-
VLPF 12T	63	74	87	91	90	89	87	83	96
VLPF 13T	65	76	89	93	92	91	89	85	98

Housing sound-power bands and totals are supplied selection datas. The first band is labelled 65 Hz in the original data and is retained as supplied. Inlet/outlet sound-power spectra and sound-pressure spectra are not supplied.

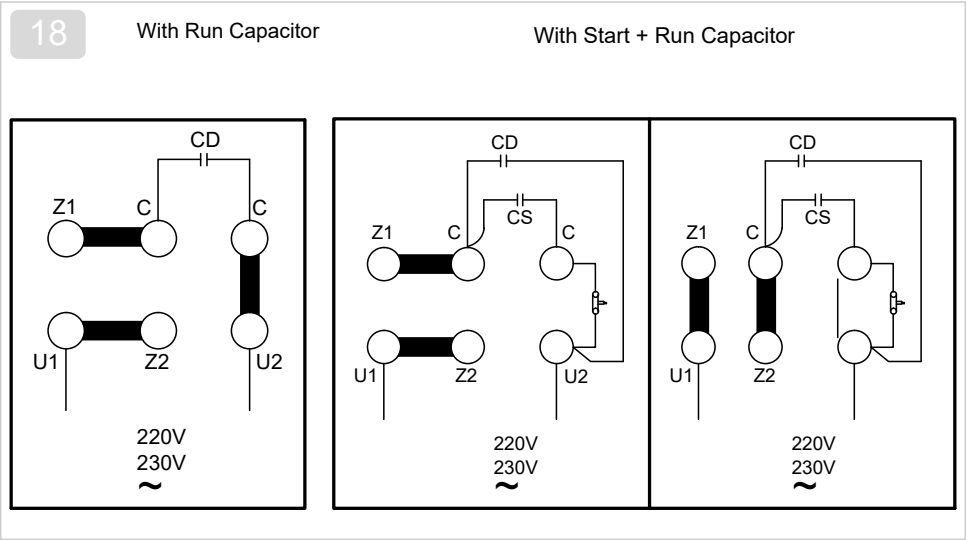
VLPF 11T: housing spectrum and sound-power total are not supplied; no values are inferred. The technical table retains its independent listed LpA reference at 3 m.

Test conditions linking housing LwA and listed LpA are not specified. They remain separate, unreconciled selection datas; confirm acoustic performance for the actual installation.

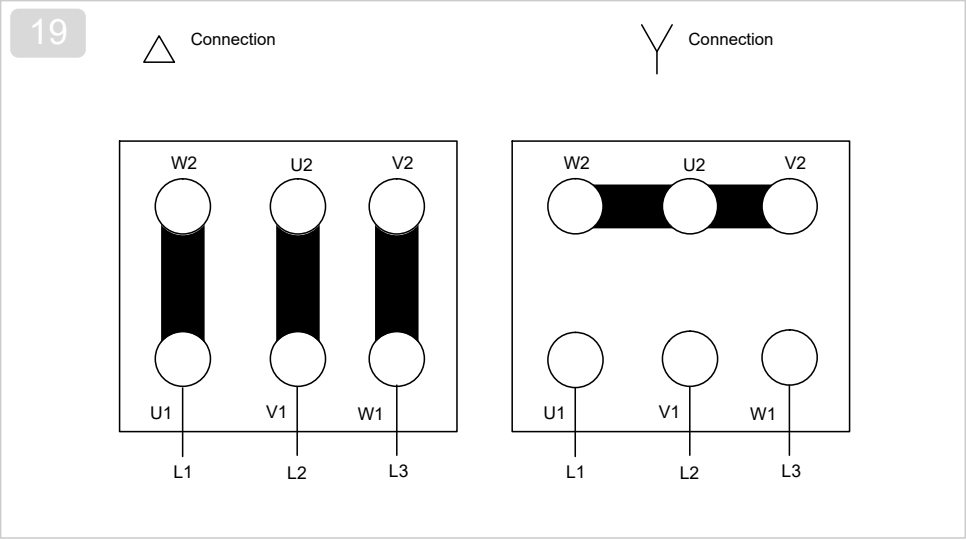
08 / ELECTRICAL CONNECTION

Match the motor terminal layout.

SINGLE PHASE / LAYOUT 18 / 230 V / 50 Hz



THREE PHASE / LAYOUT 19 / 400 V / 50 Hz



Schema 18 shows the capacitor-motor terminal arrangements; use the actual motor's supplied capacitor circuit. Schema 19 shows delta/star three-phase arrangements. The selected motor nameplate determines the correct connection.

Connect protective earth, verify rotation and specify motor protection for the actual unit. These are terminal references, not complete application control-panel designs.

VLPF

Low pressure industrial centrifugal fans



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