VOLTVENT®
VENTILATION SYSTEMS

VDC SERIES

Aluminium industrial centrifugal fans

VDC

FORWARD-CURVED IMPELLER

CAST-ALUMINIUM SCROLL HOUSING



800-8400
Nominal airflow / m^3/h

16
Models in the range

50 Hz
Single / three phase

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01 / PRODUCT OVERVIEW

Rigid housing. Industrial airflow.



01 Cast-aluminium scroll housing

A single-inlet centrifugal design with a rigid cast-aluminium body, rectangular discharge flange and motor outside the transported airstream.

02 Forward-curved impeller

The galvanized-steel centrifugal impeller serves the current two-pole range. The product photograph illustrates an inlet grille and external motor.

03 Equipment and process ventilation

For machinery cooling, boiler air supply, industrial furnaces and resistance-heating equipment. Match the selected model to the stated temperature and duty limits.

SELECTION & PERFORMANCE

Match airflow, pressure and motor.

Use each model's static-pressure curve to select the duty point. Nominal motor power is distinct from absorbed operating power. Verify the selected duty and motor loading in FSP, allowing for losses in the connected system.

Selection parameter	Technical overview
Nominal airflow range	800-8400 m^3/h
Nominal motor power	0.25-5.50 kW
Electrical supply	230 V / 1 phase or 400 V / 3 phase / 50 Hz
Motor configuration	2 poles / Class F / IP55 / TEFC / IE2
Motor operating range	-20 to +40 °C
Maximum transported-air temperature	+40 °C

Performance data. Use the actual unit nameplate, dimensions and supplied terminal diagram.

02 / TECHNICAL DATA

Compare the complete range.

NOMINAL RATINGS / 50 Hz / 2 POLES

Model	Supply V / phase	Airflow m^3/h	Motor kW	Speed rpm	Current A	Weight kg	Sound pressure dB(A) / 3 m
VDC 1M 140-70	230 / 1	800	0.25	2870	1.60	9	50
VDC 1T 140-70	400 / 3	800	0.25	2840	0.67	9	50
VDC 2M 160-90	230 / 1	1700	0.37	2885	2.50	11	55
VDC 2T 160-90	400 / 3	1700	0.37	2800	1.05	11	55
VDC 3M 180-90	230 / 1	2100	0.55	2865	3.50	13	60
VDC 3T 180-90	400 / 3	2100	0.55	2780	1.27	13	60
VDC 4M 225-90	230 / 1	2600	0.75	2770	5.00	18	65
VDC 4T 225-90	400 / 3	2600	0.75	2760	1.75	18	65
VDC 4M 225-102	230 / 1	3200	1.10	2770	7.00	19	68
VDC 4T 225-102	400 / 3	3200	1.10	2770	2.30	19	68
VDC 5M 250-112	230 / 1	3700	1.50	2820	9.80	25	70
VDC 5T 250-112	400 / 3	3700	1.50	2820	3.30	25	70
VDC 6M 268-112	230 / 1	4650	2.20	2800	13.50	31	71
VDC 6T 268-112	400 / 3	4650	2.20	2800	4.50	31	71
VDC 7T 300-112	400 / 3	6200	4.00	2880	7.90	43	72
VDC 8T 315-112	400 / 3	8400	5.50	2900	10.30	48	73

Airflow is the nominal maximum, not a selected duty point. Motor power is the nominal motor rating, not absorbed duty power. Speed and current vary with operation. Sound pressure is the supplied model-specific reference at 3 m.

COMMON MOTOR DATA

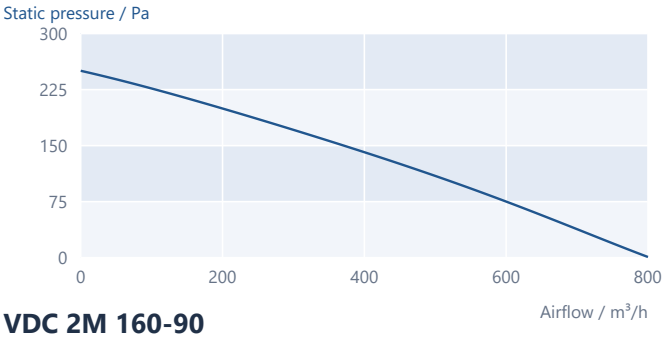
Class F / IP55 / TEFC / IE2 / two poles / S1 continuous duty. Motor operating range: -20 to +40 °C. Maximum transported-air temperature: +40 °C. M = single phase; T = three phase. Verified sound-power and octave-band data are not supplied.

03 / AIR PERFORMANCE / 1 OF 2

Fan Performance Curves

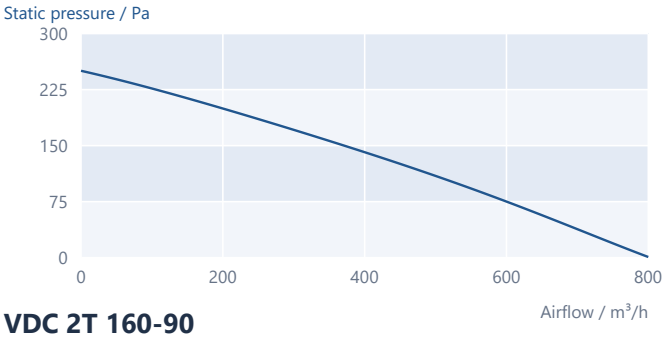
VDC 1M 140-70

230 V / 1 phase / 50 Hz / 0.25 kW motor



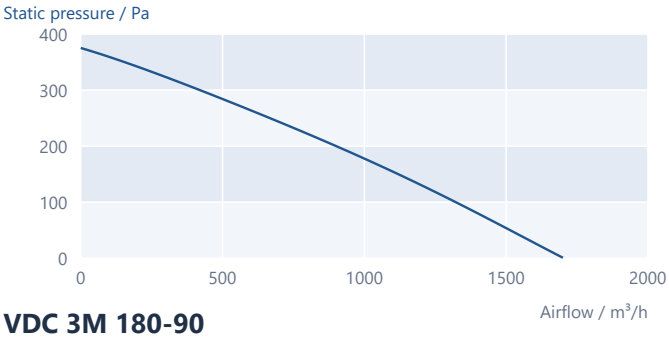
VDC 1T 140-70

400 V / 3 phase / 50 Hz / 0.25 kW motor



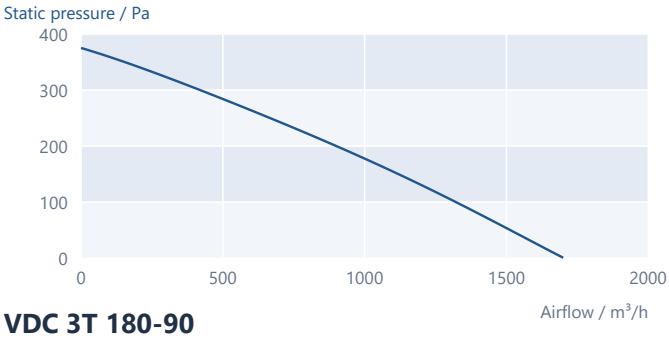
VDC 2M 160-90

230 V / 1 phase / 50 Hz / 0.37 kW motor



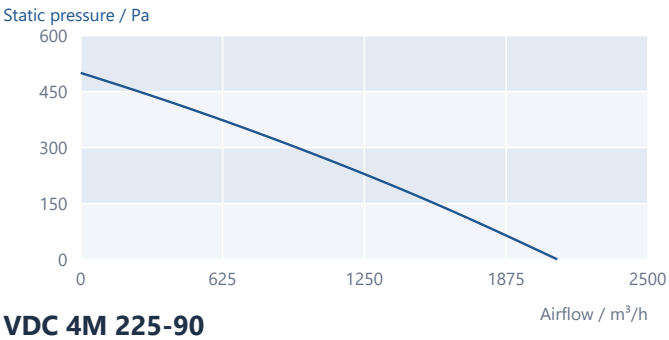
VDC 2T 160-90

400 V / 3 phase / 50 Hz / 0.37 kW motor



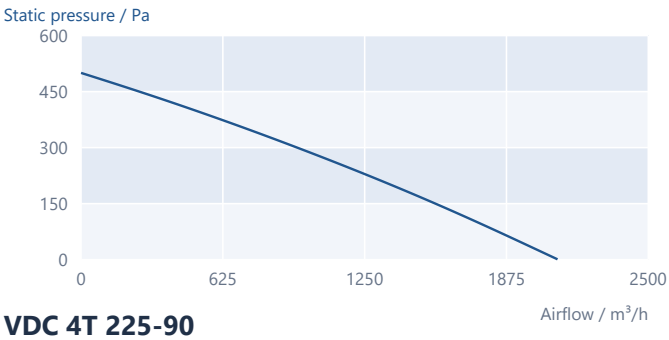
VDC 3M 180-90

230 V / 1 phase / 50 Hz / 0.55 kW motor



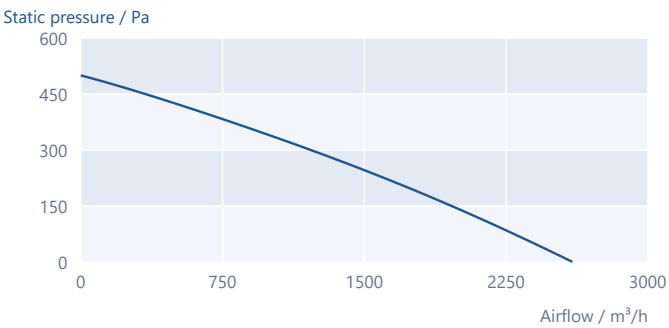
VDC 3T 180-90

400 V / 3 phase / 50 Hz / 0.55 kW motor



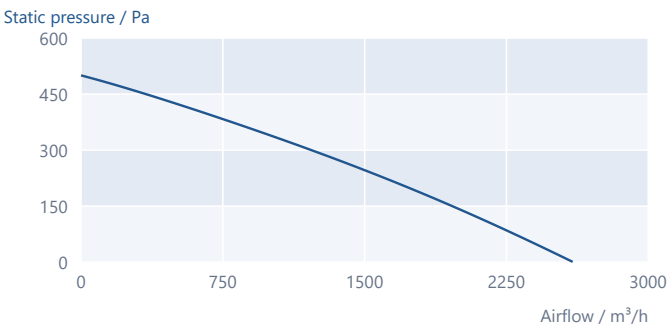
VDC 4M 225-90

230 V / 1 phase / 50 Hz / 0.75 kW motor



VDC 4T 225-90

400 V / 3 phase / 50 Hz / 0.75 kW motor



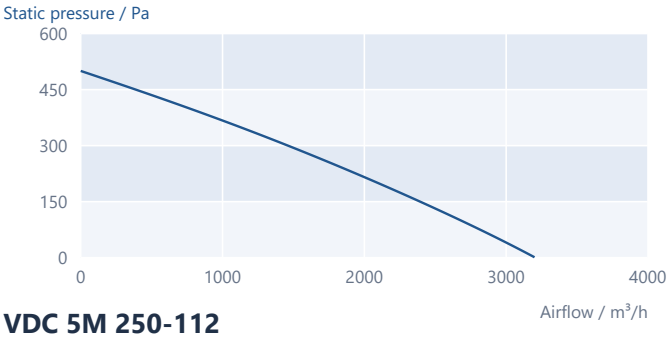
Model-specific scales. Curves stay within their supplied domains. VDC 8T ends at zero pressure before its small negative listed tail; nominal airflow remains in the technical table.

03 / AIR PERFORMANCE / 2 OF 2

Fan Performance Curves

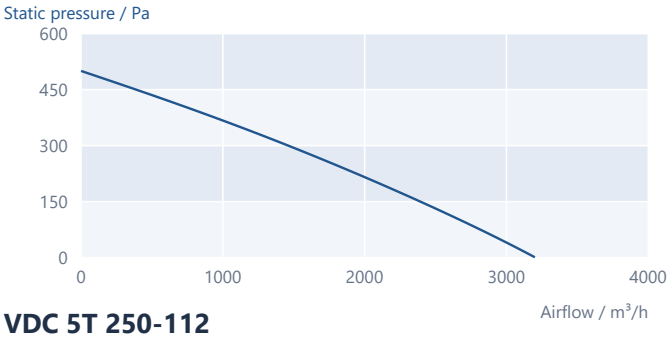
VDC 4M 225-102

230 V / 1 phase / 50 Hz / 1.10 kW motor



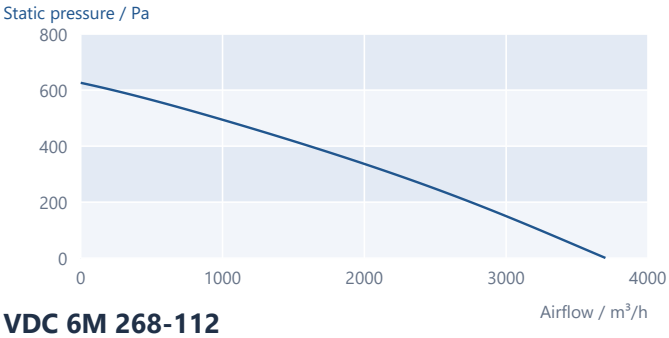
VDC 4T 225-102

400 V / 3 phase / 50 Hz / 1.10 kW motor



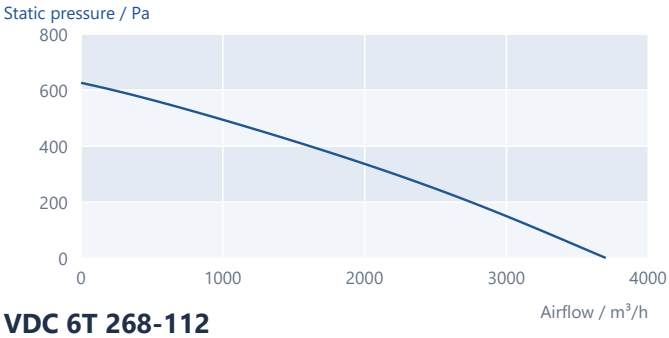
VDC 5M 250-112

230 V / 1 phase / 50 Hz / 1.50 kW motor



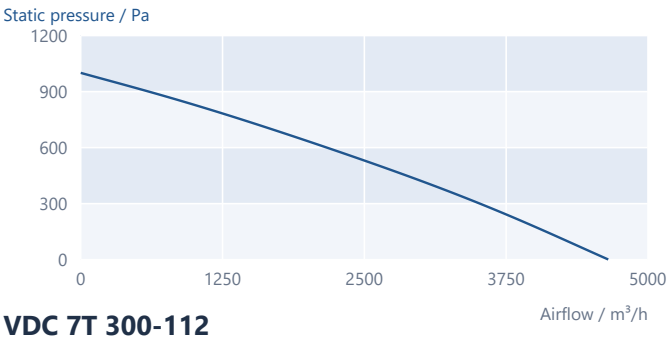
VDC 5T 250-112

400 V / 3 phase / 50 Hz / 1.50 kW motor



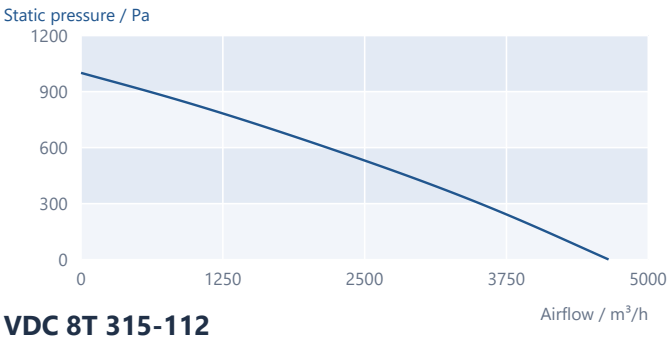
VDC 6M 268-112

230 V / 1 phase / 50 Hz / 2.20 kW motor



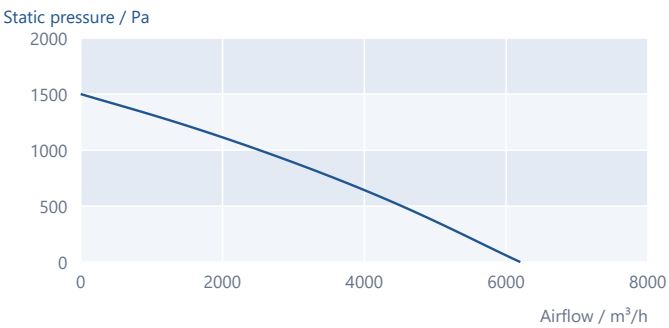
VDC 6T 268-112

400 V / 3 phase / 50 Hz / 2.20 kW motor



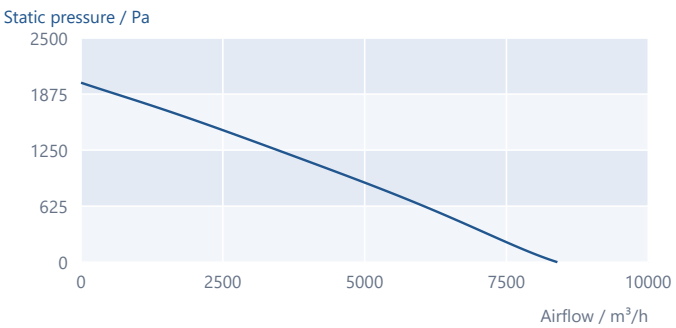
VDC 7T 300-112

400 V / 3 phase / 50 Hz / 4.00 kW motor



VDC 8T 315-112

400 V / 3 phase / 50 Hz / 5.50 kW motor



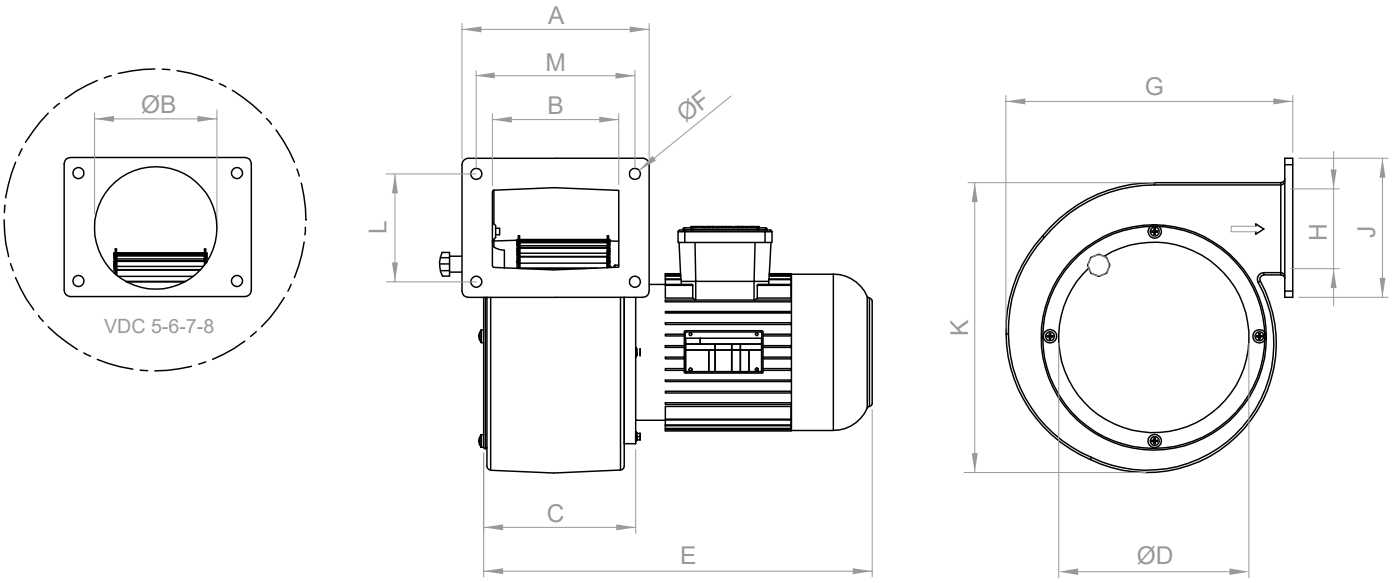
Model-specific scales. Curves stay within their supplied domains. VDC 8T ends at zero pressure before its small negative listed tail; nominal airflow remains in the technical table.

04 / DIMENSIONAL DATA

Plan the flange and mounting.

ORIGINAL SERIES DRAWING / A-H, J-M

All dimensions in mm



Casing / impeller size	A	B	C	D	E	F	G	H	J	K	L	M
VDC 1 / 140-70	133	88.5	124.5	128	302	7	229	68	125	205.5	99.5	110.5
VDC 2 / 160-90	155	95	133	150	332	9	270	112	163	245	129	130
VDC 3 / 180-90	163	101	138	175	333	9	305	108.5	163	270	130	130
VDC 4 / 225-90	190	128	163	220	378	10	370	108	162	354	126	155
VDC 4 / 225-102	190	128	163	220	378	10	370	N/V	162	354	126	155
VDC 5 / 250-112	200	155	178	246	448	9	407	N/V	205	422	165	165
VDC 6 / 268-112	205	160	183	260	472	9	480	N/V	205	420	165	165
VDC 7 / 300-112	240	170	198	236	516	10	480	N/V	250	482	205	200
VDC 8 / 315-112	240	160	199	243	536	10	480	N/V	250	480	205	200

N/V = not supplied in The available data. H is unavailable for 225-102 and all 250-315 sizes; do not infer it from a neighbouring configuration. Each casing row applies to its listed M / T variants. Nominal discharge profiles appear on the next page.

05 / INSTALLATION & MOTOR

Prepare the installation.

01 Mounting, airflow and servicing

Fix the cast-aluminium housing to a rigid support. Follow the selected flange and mounting drawing; keep the inlet guard, discharge and motor cooling paths clear. Isolate the supply before cleaning or inspection. Maximum transported air: +40 °C; motor operating range: -20 to +40 °C.

02 Motor supply and control

M models use 230 V single-phase motors; T models use 400 V three-phase motors. Listed families allow compatible voltage regulation, inverter control or a discharge damper. Confirm the selected motor and controller suitability. Nominal motor ratings and absorbed operating power are distinct.

DISCHARGE PROFILES & SINGLE-PHASE CAPACITORS

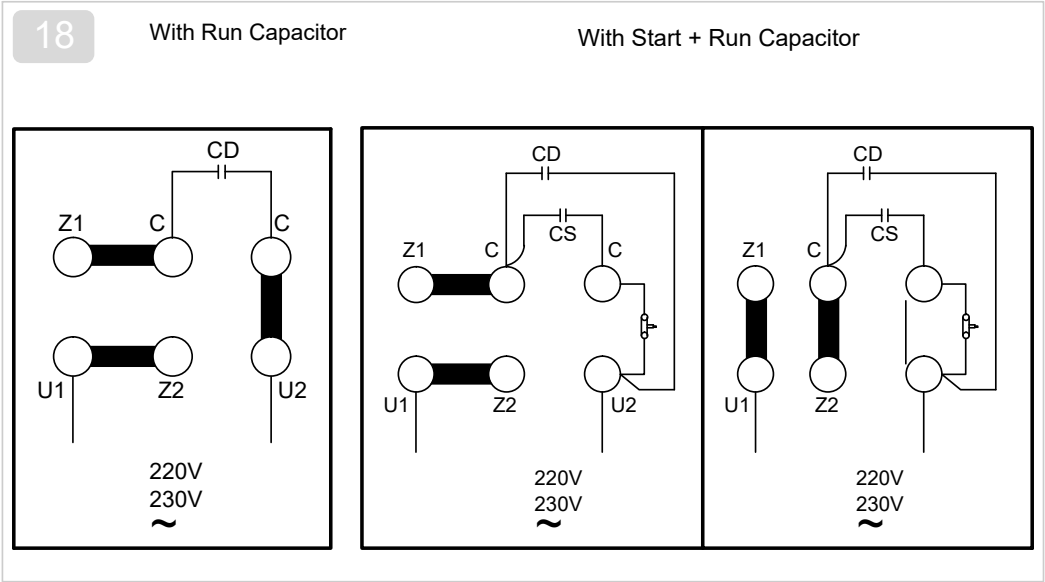
Casing / impeller size	Nominal discharge profile / mm	M motor capacitor / µF / V
VDC 1 / 140-70	133 x 99.5	10 / 400
VDC 2 / 160-90	155 x 129	15 / 400
VDC 3 / 180-90	163 x 130	20 / 400
VDC 4 / 225-90	190 x 126	30 / 400
VDC 4 / 225-102	190 x 126	35 / 400
VDC 5 / 250-112	200 x 165	40 / 400
VDC 6 / 268-112	205 x 165	50 / 400
VDC 7 / 300-112	240 x 205	Not applicable
VDC 8 / 315-112	240 x 205	Not applicable

Profile values are nominal discharge references. Use the original drawing and actual unit flange for mating connections. Capacitor voltage is the component rating; single-phase supply remains 230 V. The 300-112 and 315-112 configurations are three phase only.

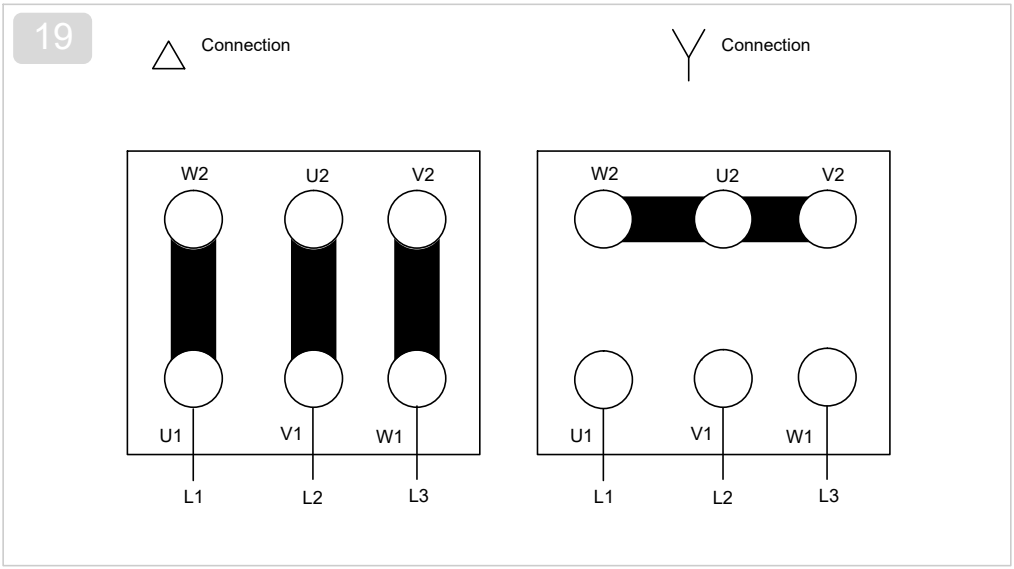
06 / ELECTRICAL CONNECTION

Match the motor terminal layout.

SINGLE PHASE / LAYOUT 18 / 230 V / 50 Hz



THREE PHASE / LAYOUT 19 / 400 V / 50 Hz



Schema 18 shows listed run-capacitor and start/run-capacitor arrangements. Use only the arrangement supplied for the actual motor. Schema 19 retains the listed delta / star terminal options; the motor nameplate determines the suitable connection at the supply voltage.

Use the terminal arrangement and capacitor specification supplied with the motor. Page 7 gives the capacitor ratings; separate start-capacitor values are not specified. Confirm the unit nameplate and supplied diagram before connection.

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