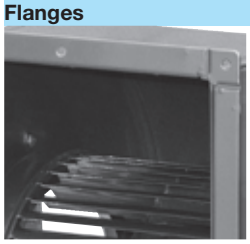
Fittings / Accessories

DE WIT ventilatoren

Accessories

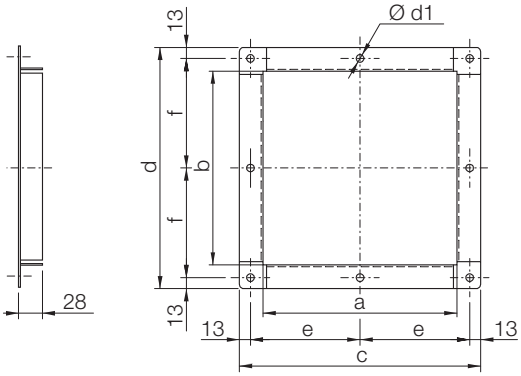
All options and accessories must be specified separately.
Please take the technical data and dimensions from the corresponding page of the catalogue.

Flanges



Made from galvanized or painted steel, to connect ducts and system components to the fan outlet side.

Dimensions in mm, subject to change.

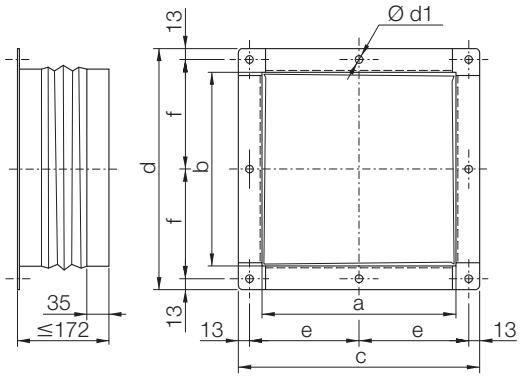


DD	a	b	c	d	e	f	Ø d1
7/7	232	201	288	257	131	115.5	9
9/7	232	255	288	311	131	142.5	9
9/9	298	255	354	311	164	142.5	9
10/8	265	284	321	340	147.5	157	9
10/10	331	284	387	340	180.5	157	9
12/9	309	334	365	390	169.5	182	9
12/12	395	334	451	390	212.5	182	9
15/11	373	397	429	453	201.5	213.5	9
15/15	471	397	527	453	250.5	213.5	9
18/18	557	471	613	527	293.5	250.5	9

Flexible connection

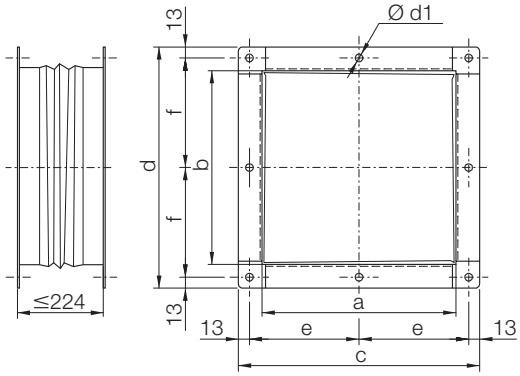
Flexible connection to connect the fan to system components or units, absorbing and stopping the vibration transmission.

Dimensions in mm, subject to change.



DD	a	b	c	d	e	f	Ø d1
7/7	232	201	288	257	131	115.5	9
9/7	232	255	288	311	131	142.5	9
9/9	298	255	354	311	164	142.5	9
10/8	265	284	321	340	147.5	157	9
10/10	331	284	387	340	180.5	157	9
12/9	309	334	365	390	169.5	182	9
12/12	395	334	451	390	212.5	182	9
15/11	373	397	429	453	201.5	213.5	9
15/15	471	397	527	453	250.5	213.5	9
18/18	557	471	613	527	293.5	250.5	9

Dimensions in mm, subject to change.



DD	a	b	c	d	e	f	Ø d1
7/7	232	201	288	257	131	115.5	9
9/7	232	255	288	311	131	142.5	9
9/9	298	255	354	311	164	142.5	9
10/8	265	284	321	340	147.5	157	9
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15/15	471	397	527	453	250.5	213.5	9
18/18	557	471	613	527	293.5	250.5	9

Fittings / Accessories

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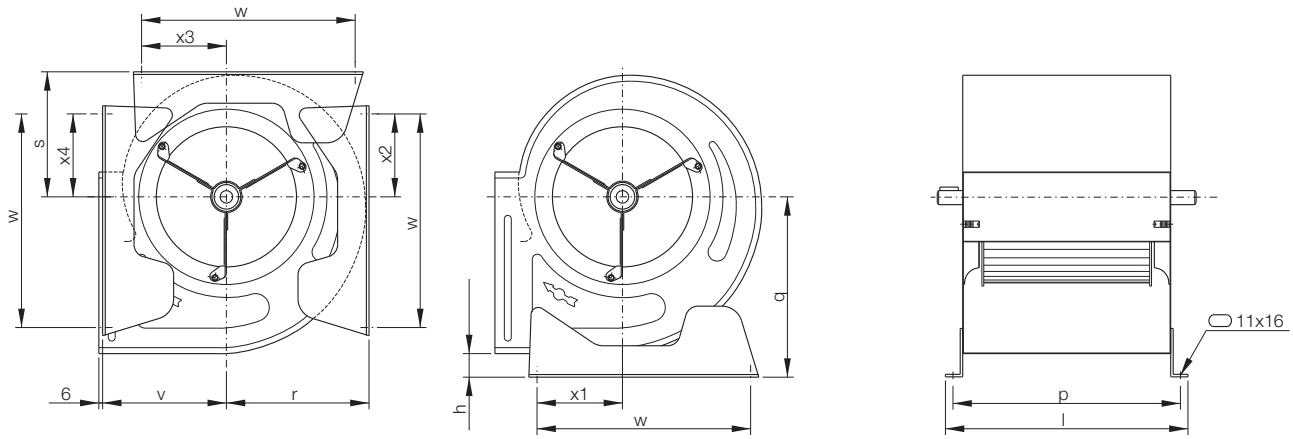
Mounting feet

Feet made from galvanized steel, either mounted or loose, enable the fan to be installed with a 0, 90 and 270 orientation.

Dimensions in mm, subject to change.

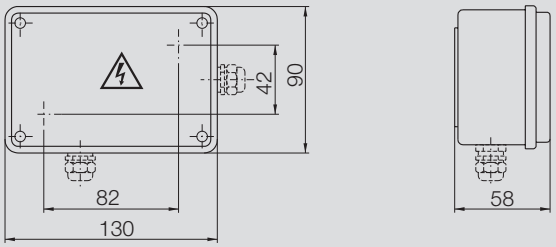


DD	h	l	p	q	r	s	v	w	x1	x2	x3	x4
7/7	17	282	258	203	169	145	147	225	117	86	88	47
9/7	38	282	258	253	199	177	179	300	119	124	123	120
9/9	38	348	324	253	199	177	179	300	119	124	123	120
10/8	38	315	291	287	227	198	197	340	136	132	135	132
10/10	38	381	357	287	227	198	197	340	136	132	135	132
12/9	38	359	335	332	266	232	224	408	161	153	161	153
12/12	38	445	421	332	266	232	224	408	161	153	161	153
15/11	38	423	399	380	309	272	258	495	197	211	201	200
15/15	38	521	497	380	309	272	258	495	197	211	201	200
18/18	42	607	583	457	376	340	307	608	262	283	278	288

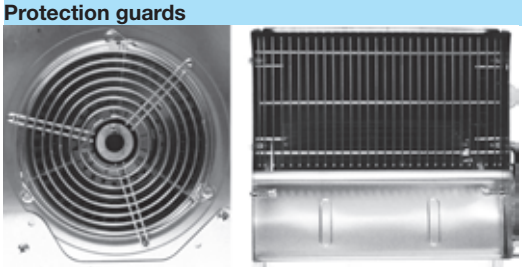
Terminal box

Each fan is equipped with a loose cable, a terminal strip or a terminal box (see specific catalog data for details)
The terminal box is commonly fitted to the side plate of the fan. It is made of plastic material and provided with cable glands. A schematic diagram, always provided with the fan, displays the proper electrical connection.

Dimensions in mm, subject to change.



Protection guards



Inlet or outlet protection guards are available as accessories from size 7/7 to 10/10, for bigger sizes and for further information, please contact Nicotra Gebhardt technical department.

Fittings / Accessories

DE WIT ventilatoren

Increased corrosion protection

Nicotra Gebhardt fans are provided – as a standard equipment – with a highly efficient corrosion protection but, in the event of extremely high corrosion risk, additional corrosion protections might be required.
Following to the application and corrosion stress conditions, special coatings of various types and thickness can be supplied on request.

RVM - Single-phase manual regulator

Electronical speed control unit producing a stepless modulated output voltage for fans with speed controlled single phase motors

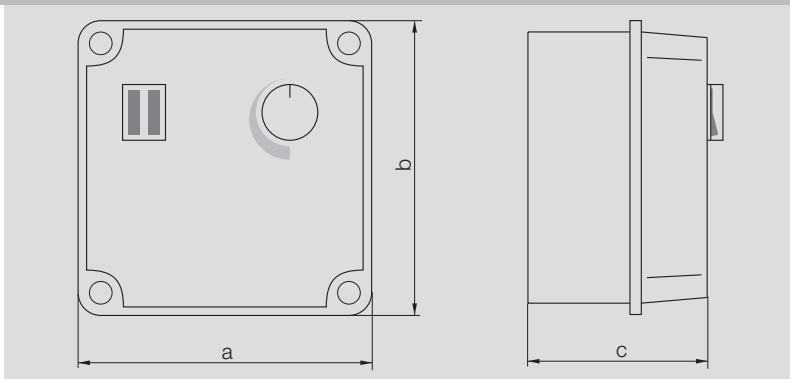
Execution
Casing made of impact resistant plastic.

Function
The speed controller is equipped with an EMC-filter, a turning knob for speed control starting at a fixed rpm-value, an operation indicating light (RVM 5I, RVM 9I, RVM 20I), and an internal fuse protection.

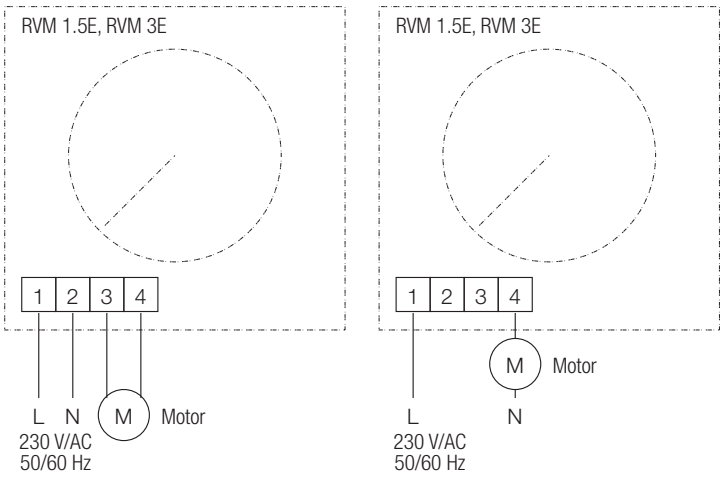
Technical Data

	Article number	Nominal voltage V	Max. current A	Frequency Hz	Protection class	Temperature range °C	Fuse	a mm	b mm	c mm
RVM 1,5E	K43157	230	1.5	50/60	IP20	+0/+40	5X20 10A FAST	82	82	38
RVM 3E	K43142	230	3	50/60	IP20	+0/+40	5X20 10A FAST	82	82	38
RVM 5I	K43143	230	5	50/60	IP54	-10/+40	5X20 10A FAST	125	125	90
RVM 9I	K43144	230	9	50/60	IP54	-10/+40	6,3X32 20A FAST	125	125	105
RVM 20I	K43139	230	20	50/60	IP54	-10/+40	6,3x32 32A GL	175	175	105

Dimensions



Wiring Diagram



Fittings / Accessories

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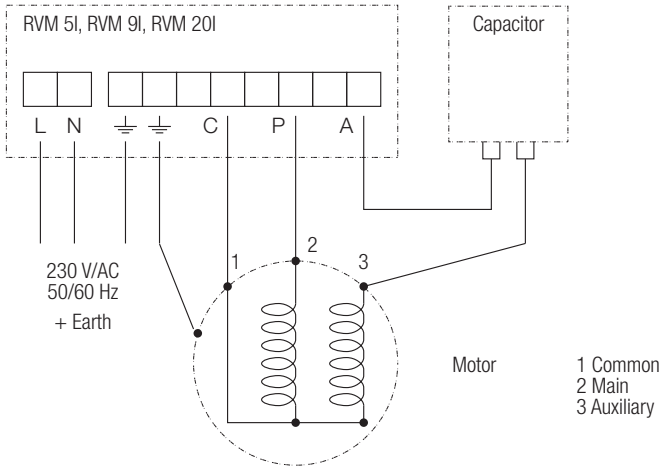
Wiring Diagram



RVT - Three-phase manual regulator

Electronical speed control unit producing a stepless modulated output voltage for fans with speed controlled three phase motors.

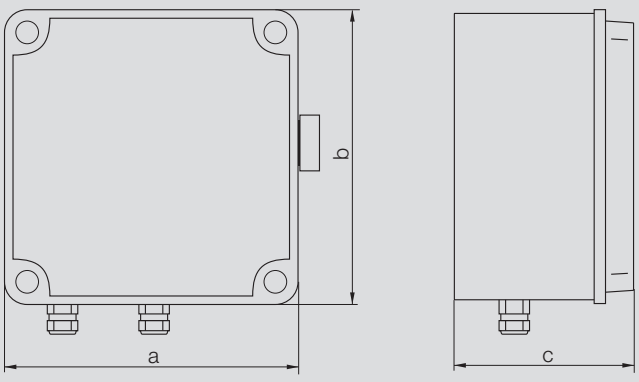
Execution
Plastic casing with cast aluminium base plate, IP54 protection class.

Function
With the control unit a setting of the minimum speed value as well as the maximum speed is provided. It is equipped with an internal overload protection and, as an option, there are contacts provided for connecting the thermo contacts (PTO) in the motor winding.
Following to switching the unit on, the controller automatically is operating a softstart of the motor up to the speed which is set by the position of the potentiometer. By turning the potentiometer the motor speed will be changing due to driving it with a varying voltage through phase cutting.

Technical Data

	Article number	Nominal voltage V	Nominal current V	Frequency Hz	Protection class	Tempera-ture range °C	Fuse	a mm	b mm	c mm
RVT 3A	K43114	400	3	50/60	IP54	+0/+40	6x32 GF10	175	175	105
RVT 6A	K43115	400	6	50/60	IP54	+0/+40	6x32 GF20	175	175	105
RVT 9A	K43116	400	9	50/60	IP54	+0/+40	6x32 GF20	175	250	105

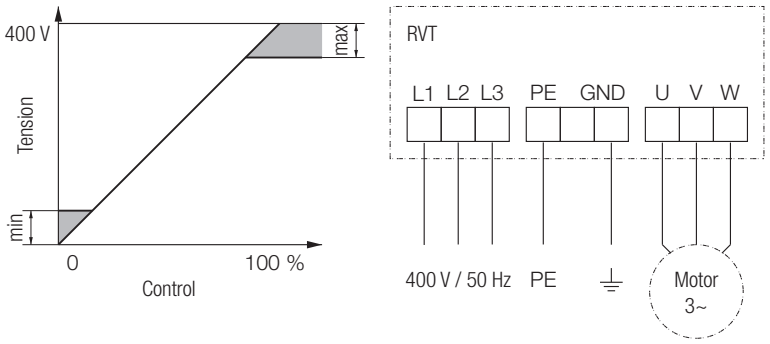
Dimensions



Fittings / Accessories

DE WIT ventilatoren

Wiring Diagram



Star-delta switch

Enclosed selector for star-delta motor configuration for three-phase motors.

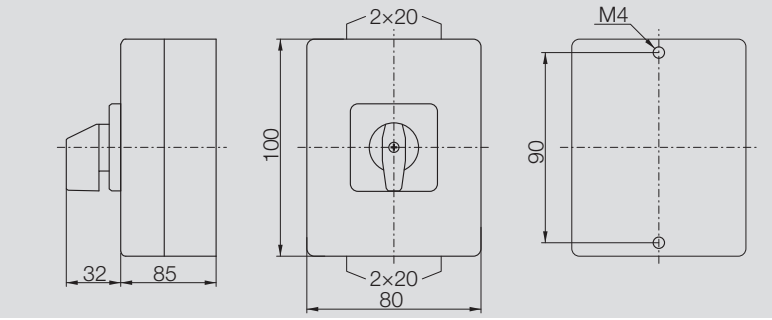
Execution
Insulated polycarbonate module, IP66 protection degree. front mounting, silver front panel, 60 switching angle, terminals accessible both from mounting direction or laterally, data rated according to IEC 60947.

Function
A 3-position changeover switch for 0 = Motor OFF, Y = STAR motor configuration, Δ = DELTA motor configuration. It must be installed between the 3-phase power supply (L1, L2, L3) and a 3-phase controllable motors, having the STAR-DELTA terminals externally available (U1, V1, W1 and U2, V2, W2 respectively). It provides a safe way to switch between the STAR and DELTA motor configurations, changing, in this way, between the high (DELTA) and low (STAR) motor speed.
The switch can't be used as STAR/DELTA motor starter!

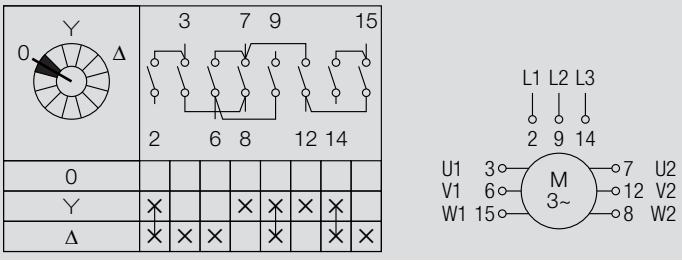
Technical Data

	Article number	Nominal voltage V	Nominal current A	Frequency Hz	Protection class	Temperature range °C
M200	K43131	400	16	50/60	IP66	-25/+40

Dimensions in mm, subject to change.



Wiring Diagram



Description

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Safety

These fans are intended to be incorporated into finished products for the treatment of clean and filtered air, free of dust, particles, shavings, grease, etc., within the rated ranges of temperature and electrical supply.
The design of the installation shall guarantee the essential safety requirements, as specified by the locally enforceable legislation, including safety against human contact with moving parts, e.g. by application of the design principles stated in EN ISO 12100.
When the inlet and/or outlet of a fan are connected to a ducting system, or to a closed plenum, including integral filters or grids, these may be designed also to provide the specified protection level.
Otherwise, the fan must be protected by fitting appropriate inlet or outlet guards, designed in accordance with EN ISO 13857, available from Nicotra Gebhardt as accessories or options.

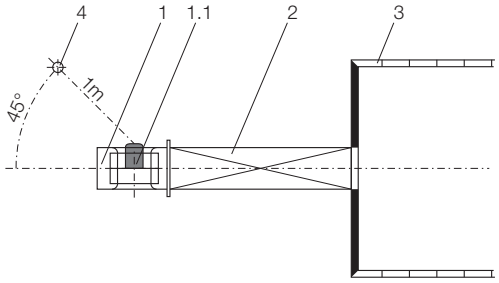
Type code

1F 3F	2P 4P 6P	1V 2V 3V 4V	FL	SCT	SP	SB	GRG	GRGP
Single phase Three phase	2-pole 4-pole 6-pole	1-Speed 2-Speeds 3-Speeds 4-Speeds	Outlet flange	Terminal box	Special version	Mounting Feet	Inlet guard	Outlet guard

Performance data

Air performance ratings shown in this catalogue have been derived from performance tests made with installation type "B", with free inlet and ducted outlet.
The performance data shall be obtained in a laboratory registered by AMCA for AMCA 210/99 air performance testing. Data are not certified by AMCA.
Ratings are referred to the standard air density of ρ_1 = 1.2kg/m^3 at the fan inlet.

Sound



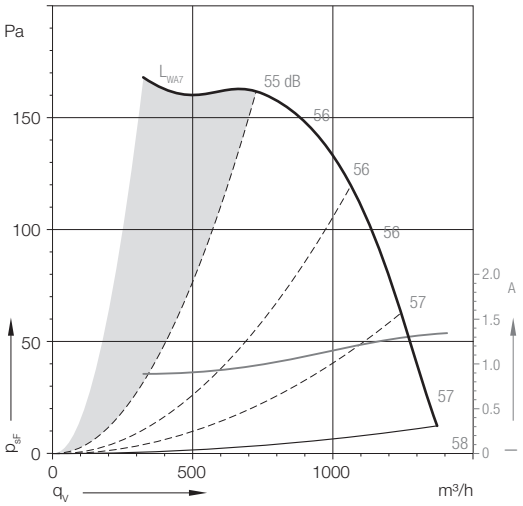
In the diagrams, the A-weighted housing and free inlet sound power level L_{WA7} is given as the emission parameter for the ventilator.
The A-weighted noise level L_{pA7} for a distance of 1m (see sketch) is achieved approximately in that the correction value given below is subtracted from the respective A sound power level.
It should be noted that site acoustics, duct design, reverberation, natural frequencies etc. can all influence noise to a greater or a lesser extent.

$L_{pA7} \approx L_{wA7}$ - dL

Correction values dL:
Size ≤10/10: dL = **7dB**
Size ≥12/9: dL = **8dB**

1 = Fan
1.1 = Motor
2 = duct on discharge
3 = Chamber
4 = Microphone position

Fan operating area



For a proper fan selection the duty point in the grey area to the left of the leftmost dashed parabolic line drawn on each performance diagram should preferably be avoided. In this area the fan stall is producing fluctuating pressure and fluctuating loads on the fan and motor; some single-phase motors may also be overheating in this low-load condition.
When the performance curves of a fan are cut to the right with continuous-line parabola, a fan selection with the duty point located below of this parabola shall be carefully avoided, because the drive motor would be overloaded and would be overheating. Such an operating condition may be evidenced by a motor input current exceeding the maximum rated value.

Description

DE WIT ventilatoren

Fan lifespan

The high level of manufacturing technology and the use of selected materials provide a considerable fan operating lifetime.
In most applications, the fan components more subjected to wear are the motor bearings.
The bearings are sized to reach, using 80% of the maximum allowed current and working at an air temperature not higher than 40°C, a L_{10h} operating life of 20,000 hours.
This means a 7 years fan lifetime, for fans running 8 hours a day.

Media

This range of fans are specially designed for use into air handling units (AHU) and ventilation systems.
The centrifugal fans are ideal for conveying clean air. The allowed air temperature comes from -20°C to +40°C.

Motors

Most motors have “F” ISO insulation class but some of the smaller models have nevertheless “B” ISO insulation class.
Motors could have IP32; IP44; IP54 or IP55 protection class (closed frame) or IP10; IP20 protection class (open frame).
Detailed information for each fan model are provided with fan specification on the product pages.

Motor protection

All standard production motors are equipped with an integrated thermal overload protectors (TOP), as protection against thermal overload.
TOP may be wired internally to windings and then they’ll automatically stop the motor, if a overheating event occurs, and start the motor again once it is cooled down.
TOP may alternatively be externally wired, that means TOP terminals are available to the user in the motor terminal block or terminal box.
In this case, the TOP terminals can be manually connected in series between power supply and motor windings or, alternatively, to an external device that switches off the mains to prevent that the motor be damaged by an overheating conditions.

Speed regulation generally

All standard production motors can always be used with transformers or devices which do not modify the sinusoidal wave line to change the fan speed is always allowed.

Speed regulation for fans equipped with single-phase motors

Single or multiple speed available. Single phase motors are generally suitable for speed regulation by changing the input voltage with our electronic single-phase RVM speed regulators (see chapter "Options/Accessories" for further information).
The speed variable types are marked with an dot in the technical data tables.
The reduced – voltage curves shown in the catalogue may be obtained by either using transformers or our RVM regulators. In the last case, we have commonly used a 2-wires connection for running currents up to 3 Ampere max and a 3-wires connection for higher running currents.
Speed regulation of multi-speed fans is obtained by connecting the mains to the correct motor terminals according to the wiring diagram supplied with each fan.

Speed regulation for fans equipped with three-phase motors

Single or double speed available. Performance diagrams of single speed fans usually shows only the curve referred to a 230V star – 400V delta configuration.
Performance diagrams of double speed fans usually shows the curves referred to a 400V star (high speed) – 400V delta (low speed) configurations.
The use of RVT controllers or inverter is only acceptable with special motors equipped with a reinforced insulation of the windings. In this case, these devices shall be in accordance with the requirements of IEC / TS 60034-17:2006.