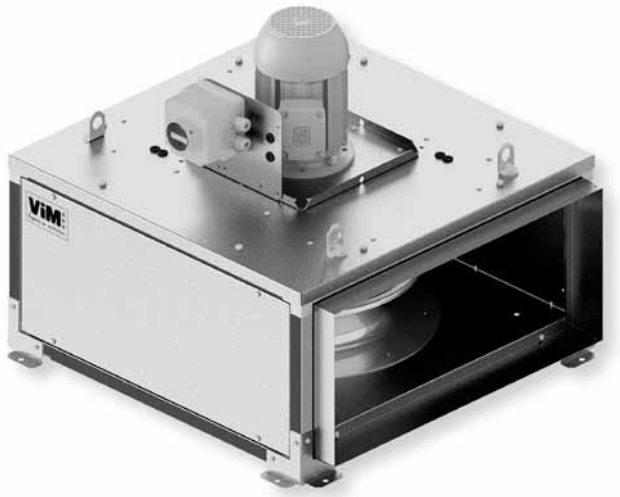
KUBAIR® F400

Smoke extract unit F400 - 120 (400°C 120 min)



INDEX

1. GENERAL

1.1 Warnings

This product was manufactured according to rigorous technical safety rules in compliance with EC standards. The EC declaration and the manual can be downloaded from the Internet (address given on the last page).
Before installing and using this product, carefully read these instructions, which contain important indications to ensure your safety and the user's safety during the installation, commissioning and maintenance of this product.
Once the installation is terminated, keep this manual handy nearby the machine for future consultation.

The installation of this product (implementation, connections, commissioning, maintenance) and all other interventions must be performed by a professional applying the recognized rules of good practice, standards and safety regulations in force.
It must conform to the prescriptions related to Electromagnetic Compatibility (EMC) and the Low Voltage Directive (LV).

VIM shall not be held responsible for possible injuries and/or damages caused by the non compliance with safety instructions or following a modification of the product.

The smoke extract units KUBAIR® F400 are intended for smoke extraction and ventilation applications in residential buildings, tertiary buildings, industrial buildings and professional kitchens:

- Outdoor installation.
- Environmental temperature range: -20°C / +40°C.
- Max temperature of extracted air in permanent operation: 120°C.
- Relative humidity: max 95% non-condensing.
- Atmosphere not potentially explosive.
- Low salinity atmosphere, with no corrosive chemical agents.

1.2 Safety instructions

- Wear appropriate IPE (Individual Protection Equipment) before any intervention.
- Before installing the smoke extract unit, make sure that the support and placement are sufficiently resistant to withstand the unit's weight and that of the accessories.
- Do not open the access doors without first switching off the electrical power supply with the padlockable mains power switch present on the unit.
- If the work is to be performed inside the device, switch off the electrical power supply on the main circuit breaker and make sure that no one can accidentally switch it on.
- Make sure that the moving parts are stopped.
- Make sure that the motor driven fans are not accessible from the connection taps (connection duct or screened protection).

Before starting, check the following points :

- Make sure that the device does not contain any foreign body.
- Make sure that all the components are attached in their original placements.
- Check manually that the fans do not rub or are not blocked.
- Make sure that the rotating heat exchanger is not blocked.
- Check the earthing connection.

1.3 Acceptance – Storage

In case of missing, non-conforming, or totally or partially damaged delivered products, the Purchaser must make written reservation on the transporter's receipt and confirm them within seventy-two (72) hours by sending a recommended letter to the transporter, as well as a copy to VIM. Acceptance of the equipment without any reservation will deprive the Purchaser of any subsequent recourse against us.
The product must be stored in an area protected from bad weather, shocks and stains due to splashings or splatterings of any kind during its transport from the supplier to the end customer and onto the worksite before installation.

1.4 Warranty

The equipment supplied by VIM is warranted twelve (12) months – Parts only – starting from the invoicing date. VIM agrees to replace the parts or the equipment whose operation is recognised defective by our departments except for all damages and interests or penalties such as operating losses, commercial prejudice, or other immaterial or indirect damages.
The following are not covered by our warranty : defects resulting from an abnormal usage or a usage not conforming to the recommendations of our manuals; faults observed as a consequence to normal wear ; incidents caused by negligence, lack of monitoring, or servicing ; faults due to the incorrect installation of the devices or to bad storage conditions before mounting.
In any case, VIM will not be responsible for transformed equipment, repaired even partially.

2. PRODUCT PRESENTATION

CE certificate F400 -120 No. 1812-CPR-0040, according to European Standard NF EN 12101-3
F400 120 approved (400 °C 120 min)

	• **KUBAIR® F400 CC:** complete unit with multi-directional suction plenum, with horizontal or vertical axis motor.
	• **KUBAIR® F400 MV:** single ventilation unit, with horizontal or vertical axis motor.

- 8 sizes: 355 / 400 / 450 / 500 / 560 / 630 / 710 / 800.
- Flow of 500 to 23 000 m^3/h.

Construction
- Removable galvanised steel sheet panels.
- Modular structure with aluminium frame.
- Connection by 2 KUBZ 12 smooth flanges which are included.
- High performance galvanised steel reaction turbine, mounted by direct coupling with the motor.

Motorisation
- Standard B5 flange motor, IP 55, class F.
- Optional PTO thermal protection.
- 230V 50Hz single-phase with 1 speed and 2, 4 or 6 poles; accepts voltage variation.
- 230/400V 50Hz three-phase with 1 speed and 2, 4, 6 or 8 poles, IE1, IE2 or IE3; accepts frequency variation.
- 400V 50Hz three-phase with 2 speeds and 4/6, 4/8, 6/8 or 6/12 poles, Dahlander or separate windings.

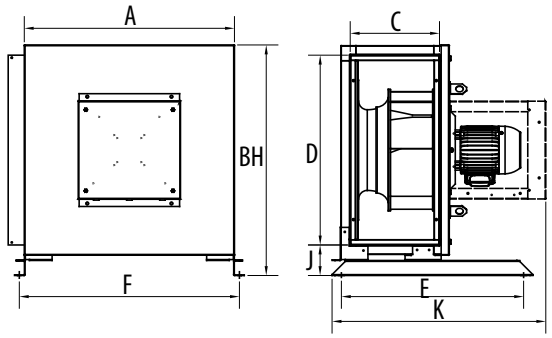
Kitchen Option
The kitchen option includes a reinforced seal of the casing, double skin panel (insulation option) and a drain to carry away wash water. The drain should be installed at the bottom of the casing to allow the wash water to be effectively discharged.

3. INSTALLATION

3.1 Dimensions and weight (mm)

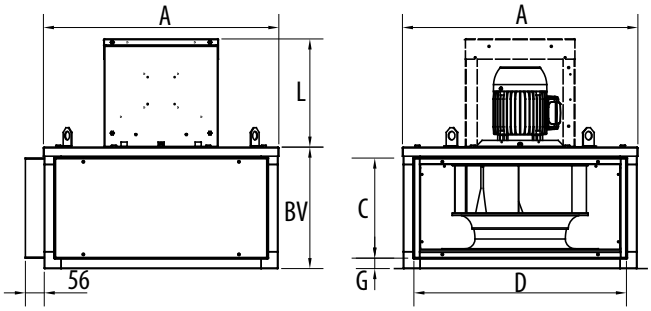
KUBAIR® F400 MV

Assembly with horizontal motor axis



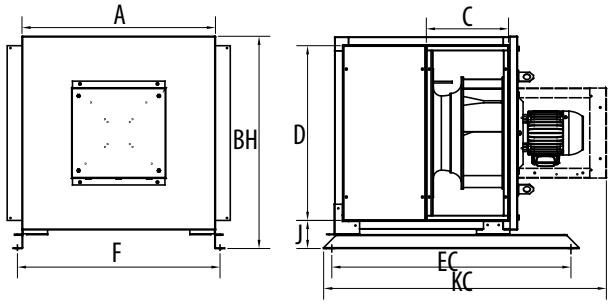
Tipping risk during handling operations

Assembly with vertical motor axis

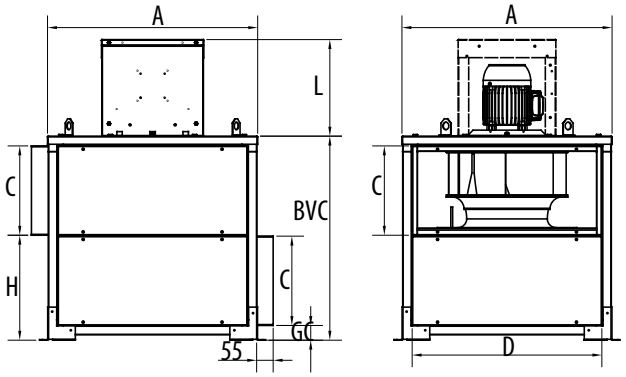


KUBAIR® F400 CC

Assembly with horizontal motor axis



Assembly with vertical motor axis



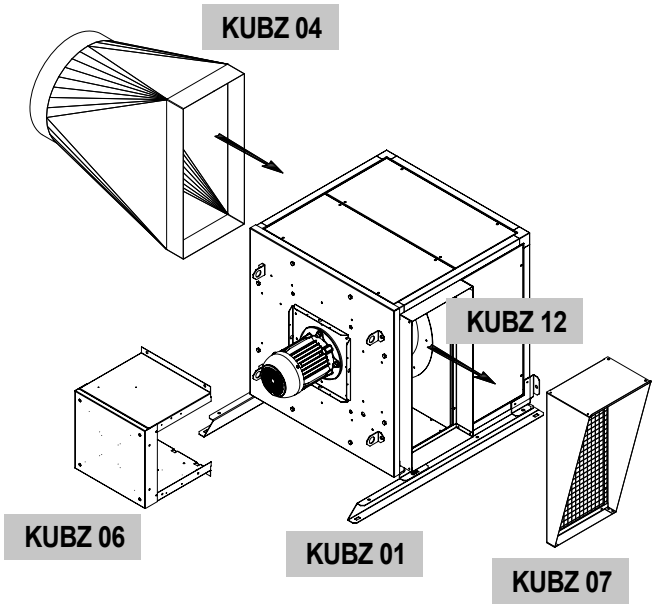
Size	A	BH	BV	BVC	C	D	E	EC	F	G	GC	H	J	K	KC	L
355	627	695	327	645	263	559	606	790	660	31	50	315	102	677	954	321
400	699	767	361	678	297	631	606	864	732	31	50	349	102	711	1022	321
450	779	847	392	738	326	711	606	990	812	31	50	378	102	743	1081	321
500	858	925	424	784	338	768	700	1039	890	42	62	402	112	805	1145	351
560	954	1021	441	817	354	864	700	1139	986	42	62	419	112	822	1178	351
630	1066	1133	488	912	403	977	700	1183	1098	42	62	466	112	869	1273	351
710	1194	1261	551	1032	462	1104	906	1325	1226	42	62	526	112	994	1488	446
800	1338	1420	574	1084	488	1248	906	1379	1370	42	62	552	127	1050	1540	446

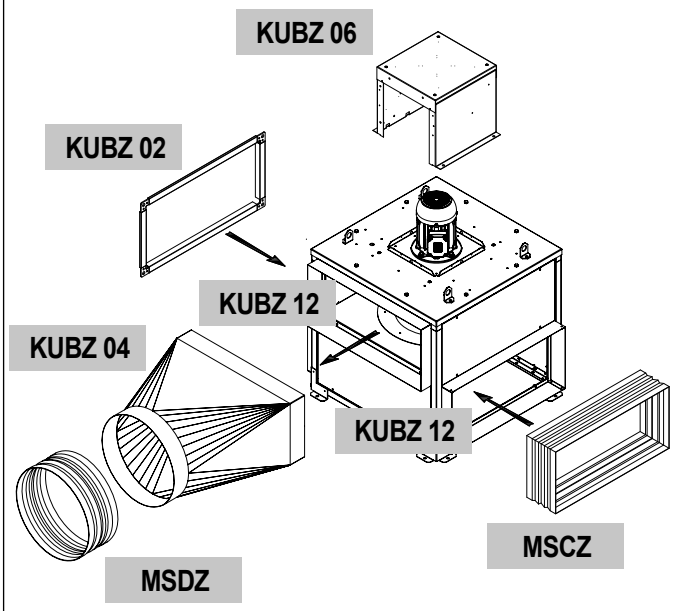
Model	Rated P. (kW)	Weights (kg) MV Naked/ Insulated	Weights (kg) CC Naked/ Insulated
MOTOR 1 SPEED MONO 4 POLES			
355	0,25	39/42	59/65
400	0,55	49/53	72/80
MOTOR 1 SPEED MONO 6 POLES			
355	0,18	39/42	59/65
400	0,25	49/53	72/80
450	0,25	67/72	92/102
500	0,37	88/94	114/126
MOTOR 1 SPEED MONO 4 POLES			
355	0,25	39/42	59/65
400	0,55	49/53	72/80
450	1,1	67/72	92/102
500	1,5	88/94	114/126
560	2,2	111/118	159/173
MOTOR 1 SPEED MONO 6 POLES			
355	0,18	39/42	59/65
400	0,37	49/53	72/80
450	0,37	67/72	92/102
500	0,55	88/94	114/126
560	0,75	111/118	159/173
630	1,1	118/125	162/180
710	3,0	144/153	264/288
800	4,0	224/236	307/335
MOTOR 1 SPEED MONO 8 POLES			
450	0,18	68/73	93/103
500	0,18	89/95	115/127
560	0,37	112/119	160/174
630	0,55	119/124	163/181
710	2,2	145/154	265/289
800	2,2	225/237	308/336

Model	Rated P. (kW)	Weights (kg) MV Naked/ Insulated	Weights (kg) CC Naked/ Insulated
MOTOR 2 SPEEDS TRI - BOB. IND. 4/6 P			
355	0,3/0,1	41/44	61/67
400	0,55/0,2	51/55	74/82
450	1,1/0,3	69/74	94/104
500	1,5/0,37	90/96	116/128
560	2,2/0,7	113/120	161/175
MOTOR 2 SPEEDS TRI - BOB. IND. 6/8 P			
450	0,37/0,2	69/74	94/104
500	0,55/0,37	90/96	116/128
560	0,75/0,37	113/120	161/175
630	1,1/0,55	120/125	164/182
710	3/0,75	146/155	266/290
800	4/1,1	226/238	309/337
MOTOR 2 SPEEDS TRI - BOB. DAHL. 4/8 P			
355	0,6/0,15	41/44	61/67
400	0,6/0,15	51/55	74/82
450	1,2/0,3	69/74	94/104
500	1,6/0,4	90/96	116/128
560	2,2/0,55	113/120	161/175
MOTOR 2 SPEEDS TRI - BOB. DAHL. 6/12 P			
630	1,1/0,22	120/125	164/182
710	4/1	146/155	266/290
800	4/1	226/238	309/337

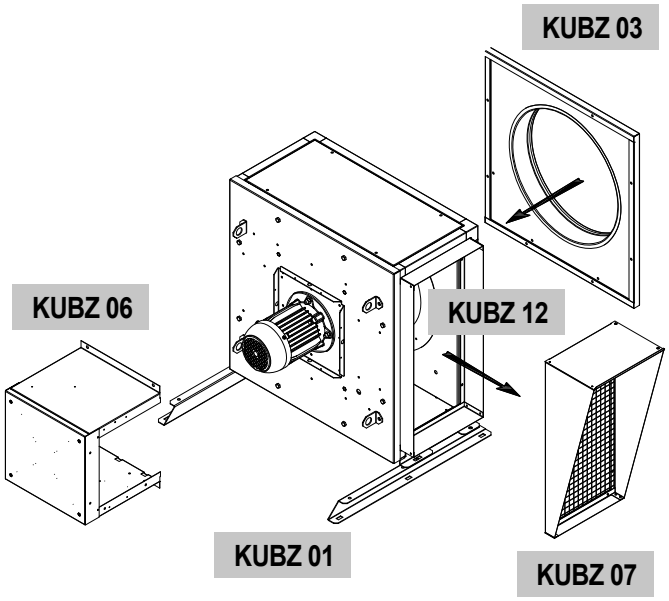
3.2 Summary charts of assembly and accessories

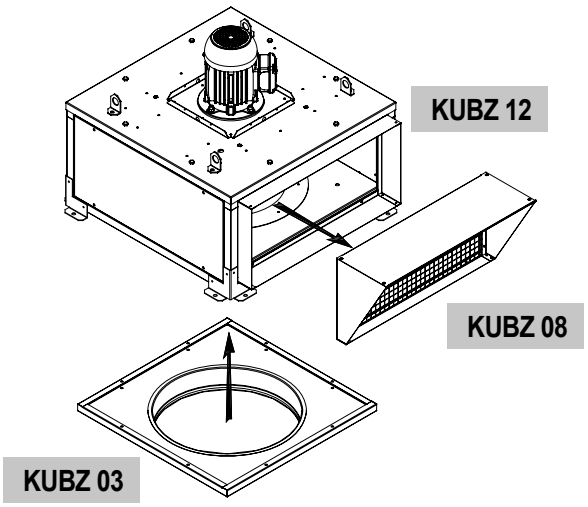
KUBAIR® F400 CC

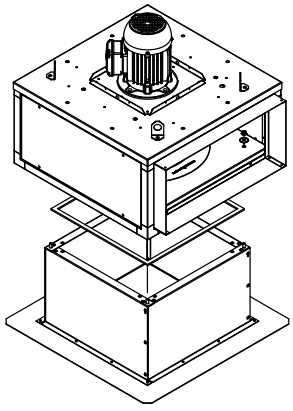




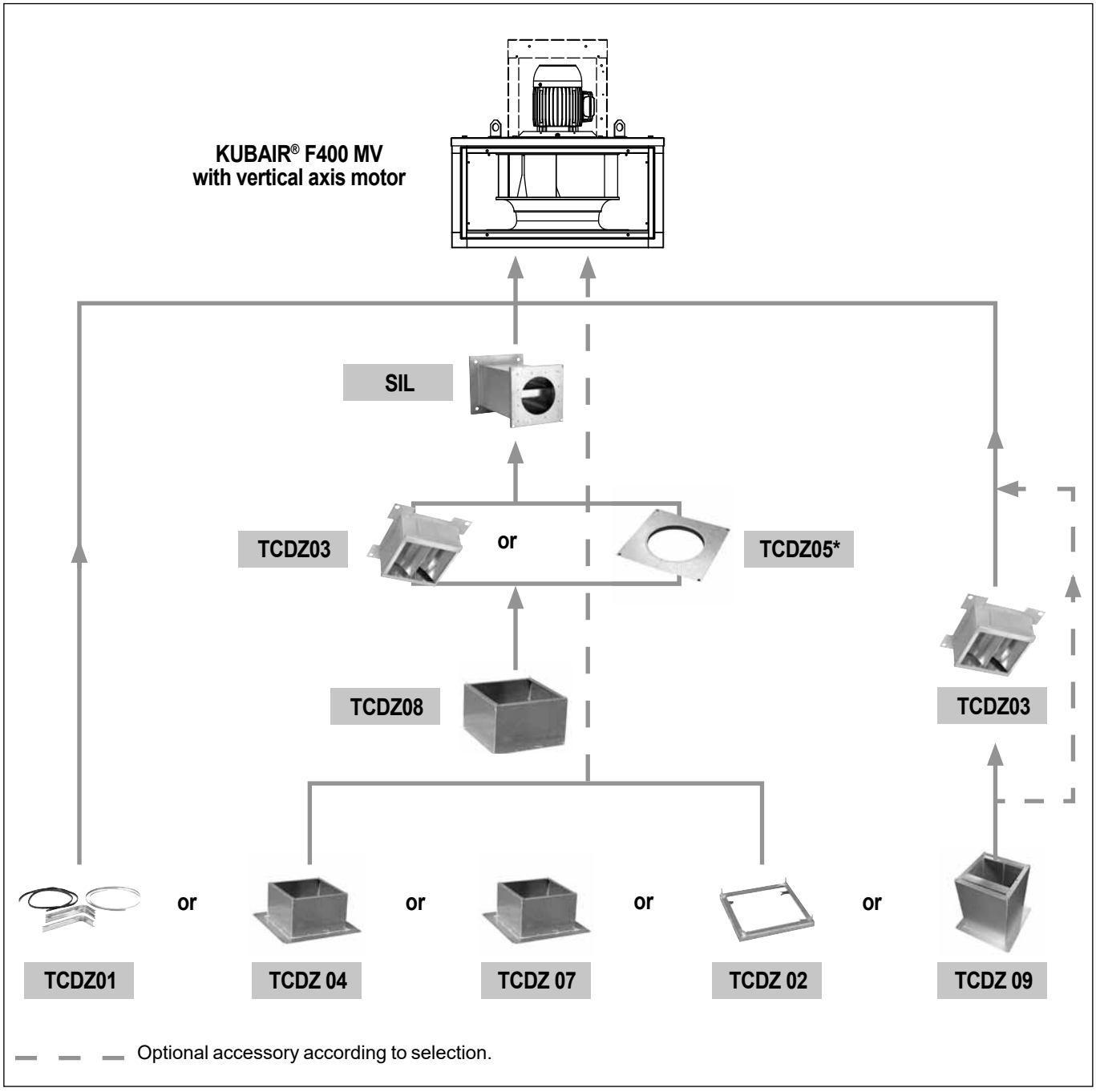
KUBAIR® F400 MV



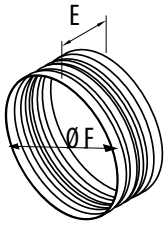
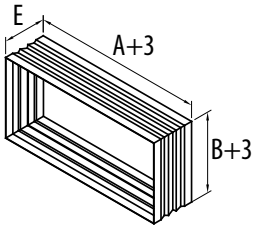
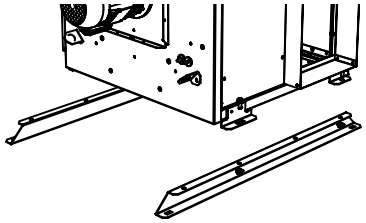
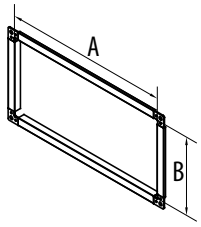
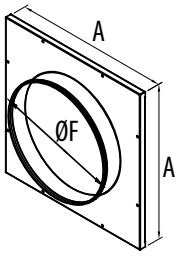
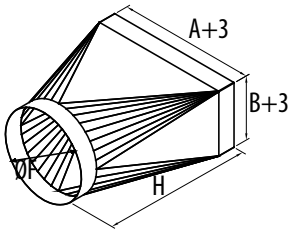
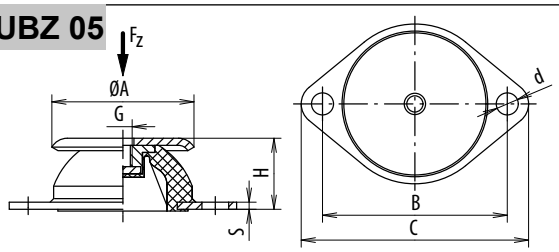
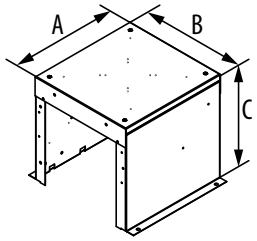




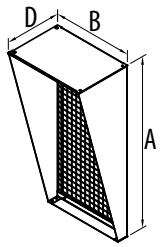
The TCDZ accessories on the diagram below can be used with the KUBAIR® F400 MV with a vertical axis motor: (example opposite side).


KUBAIR® F400 MV
with vertical axis motor
SIL
TCDZ03
or
TCDZ05*
TCDZ08
TCDZ03
or
or
or
or
TCDZ01
TCDZ 04
TCDZ 07
TCDZ 02
TCDZ 09
Optional accessory according to selection.

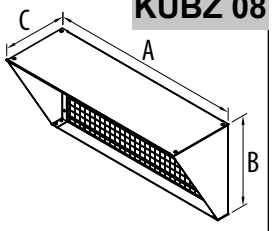
3.3 Accessories (dimensions in mm)

Circular flexible spool piece	Rectangular flexible spool piece
MSDZ 	**MSCZ** 
KUBZ 01 	**Standard support for horizontal axis motor:** This support means that the casing can be attached to the floor with the motor in a horizontal position (horizontal axis). The 2 support arms are attached to the casing by the 4 M8 x 15 screws which are supplied, and the 4 stands are attached to the arms by the 16 self-drilling 4.8 x 12 screws which are supplied. If the casing comes with a PILOTAIR® control panel (French regulation), this must be detached and then re-assembled onto the vertical wall of the motor cowl. Mounting holes are provided so that it can be re-assembled using the self-drilling screws.
KUBZ 02 	**Connecting flange** This connecting flange is attached to the smooth flange at its 4 corners for the purpose of attaching a duct.
KUBZ 03 	**Circular connection to the MV suction horizontal motor axis:** This connection is used with the KUBAIR® F400 MV for a duct connection which does not have a roof adapter and which must not bear the weight of the casing. The TCDZ 01 allows this connection supporting the casing for sizes 355 and 400 vertical motor axis.
KUBZ 04 	**Rigid circular connection**
KUBZ 05 	**Antivibration pads** 4 Antivibration pads are supplied with 4 screws to attach them to the casing.
KUBZ 06 	**KUBAIR® cowl** The motor cowl is used for external installations. It is screwed (screws supplied) onto the motor support panel.

KUBZ 07

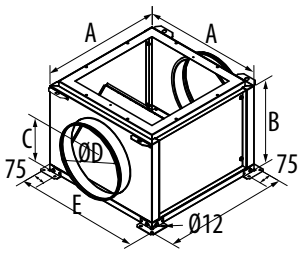


KUBZ 08



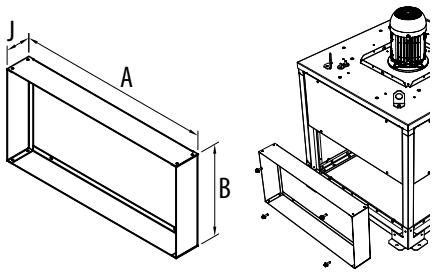
Rain guard with bird guard
These guards are attached after the supplied smooth flange (KUBZ 12) has been detached from the casing.

KUBZ 11



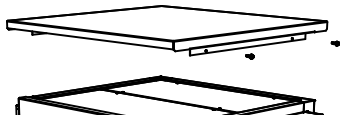
Double suction plenum
To be bolted under the casing, without any accessory between the KUBZ 11 and the casing.

KUBZ 12



Smooth flange for spool piece
2 smooth flanges are supplied already mounted on the air delivery and suction. Other smooth flanges can be supplied and mounted.

KUBZ 15



Covering (necessary for external use) - horizontal axis motor
Assembly of the cover: the cover is attached with 4 (MV version) or 8 (CC version) 4.8 x 12 self-drilling screws which are supplied.

Dimensions (mm) and weight (kg)

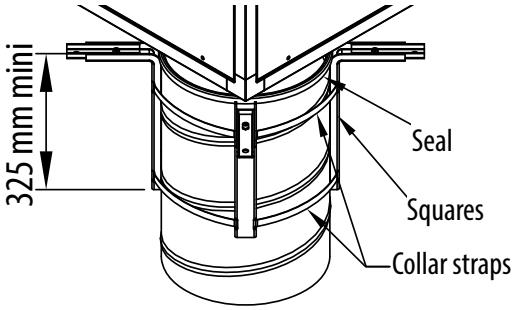
MSDZ - MSCZ - KUBZ 02 à 08 - KUBZ 12								
Model	**A**	**B**	**C**	**D**	**E**	**ØF**	**H**	**J**
355	559	263	197	194	160	400	670	80
400	631	297	216	213	160	450	670	80
450	711	326	233	234	160	500	670	80
500	768	338	240	249	160	560	670	80
560	864	354	250	275	160	630	670	80
630	977	403	278	305	160	710	670	80
710	1104	462	311	340	160	800	670	80
800	1248	488	328	378	160	900	670	80

Weight					
KUBZ 01	**KUBZ 03**	**KUBZ 04**	**KUBZ 06**	**KUBZ 07**	**KUBZ 08**
7.0	2.9	7.5	3.6	1.9	2.0
8.2	3.5	8.5	3.6	2.4	2.4
9.7	4.2	9.6	3.6	2.8	2.8
10.6	4.6	10.5	5.4	3.1	3.1
11.9	5.6	11.6	5.4	3.7	3.5
13.8	6.9	13.2	5.4	4.5	4.3
17.0	8.3	15.1	6.9	5.6	5.3
19.6	10.2	17.0	6.9	6.8	6.1

Size	**KUBZ 05**								**KUBZ 06**		
	A	**C**	**H**	**G**	**B**	**d**	**S**	**Screws supplied**	**A**	**B**	**C**
355 à 450	60	90	24	M6	76	62	3	M6x16	340	325	305
500 à 630	80	120	27	M8	100	82	3	M8x15	415	475	355
710 à 800	100	148	28	M10	124	102	3	M10x15	510	465	450

KUBZ 11						
Size	**A**	**B**	**C**	**ØD**	**E**	**Weight**
355	622	448	238	355	662	21
400	694	498	260	400	734	25
450	774	555	289	450	814	30
500	852	675	349	560	892	37
560	948	755	389	630	988	60
630	1060	805	441	630	1100	81
710	1188	885	481	710	1228	99

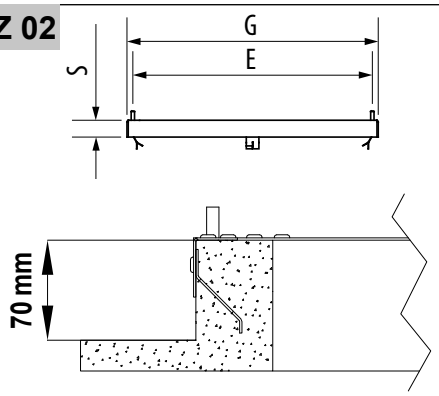
TCDZ 01



Standard support (sizes 355 or 400)
This assembly is not adapted for the use an energy-saving component or an adapter plate. Make sure that the duct can bear the weight of the casing.

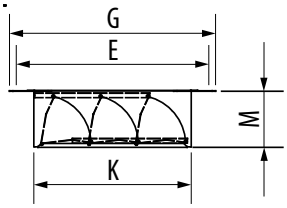
- Set up the 4 squares and the 2 collar straps on the duct.
- Set up the seal on the free edge of the duct.
- Put the casing on the duct by correctly placing it in the centre.
- Adjust and assemble the squares on the unit.
- Stretch out the 2 collar straps.

TCDZ 02



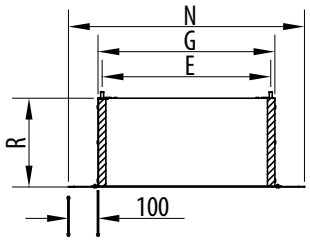
Sealing frame
Embed the frame into the constructed support and make sure that the fixing lugs are embedded into the concrete.

TCDZ 03

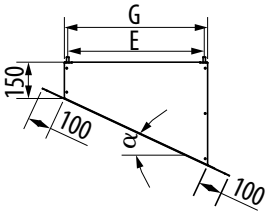


Energy-saving component
Assemble the energy-saving component inside the upstands, under the casing. It is incompatible with the use of the TCDZ 05 adapter plates and the TCDZ 01 standard support. Make sure that the components are able to move freely before the casing is assembled. Take into account 50Pa pressure drop.

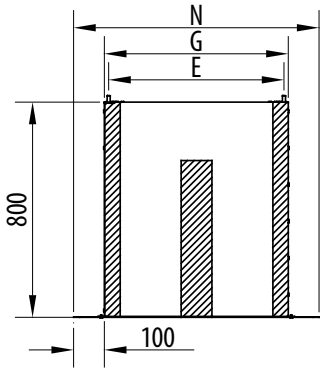
TCDZ 04



TCDZ 07

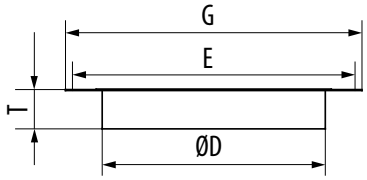


TCDZ 09



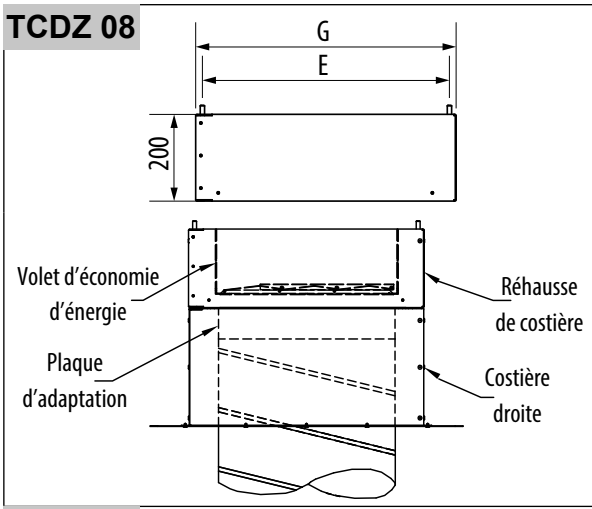
Straight, inclined and acoustic upstand
According to DTU 43.1, it is possible to attach a TCDZ 03 energy-saving component or a TCDZ 05 (excluding TCDZ 09) adapter plate which is placed inside the upstand.
For any casing with an acoustic straight upstand (TCDZ 09). Take into account 80Pa pressure drop.

TCDZ 05



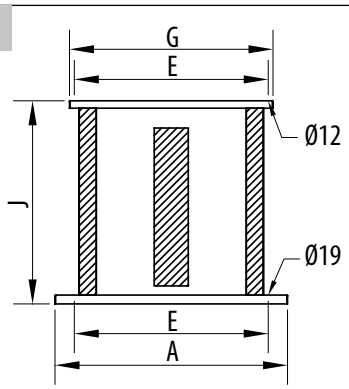
TCDZ 05: Adapter plate
The adapter plate allows to connect the casing to a circular duct. This part allows the aeraulic connection and it is not intended to bear the weight of the casing. It is incompatible with the use of the TCDZ 03 energy-saving component and the TCDZ 09 acoustic upstand.

TCDZ 08



200 mm upstand lift
Allows to increase the height of the casing by 200 mm, allows to insert a TCDZ 05 adapter plate between the casing and the TCDZ 03 energy-saving component or to mount a TCDZ 03 energy-saving component onto a TCDZ 02 sealing frame.

SILS



Sound absorber
Take into account 80Pa pressure drop.

DRAIN (KITCHEN OPTION)
To install the drain at the bottom of the casing, make a 22 mm hole, position the drain with its seal and attach it with 2 3.5 x 19 screws (recommendation, screws not supplied).

Casing size	Accessory size	A	E	G	J	S
355/400	2	540	450	478	630	30
450/500	3	660	570	598	700	40
560/630	4	800	668	698	700	40
710/800	5	930	830	866	700	40

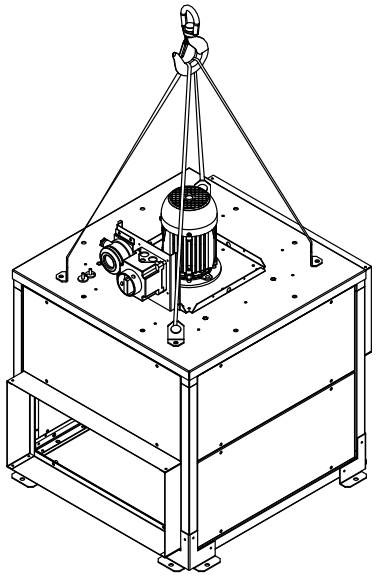
Casing size	Accessory size	M	N	K	R	Ø D	T
355/400	2	145	678	400	300/500/700	315/355/400/450*	50/65/80/80
450/500	3	170	798	490	300/500/700	400/450/500/560*	80/80/80/80
560/630	4	170	898	605	300/500/700	450/500/560/630	80/80/80/90
710/800	5	190	1066	730	300/500/700	560/630/710	80/90/120

* These adapter plates can only be mounted with the following accessories: TCDZ02, 04, 07 and 08

Accessory	TCDZ 02	TCDZ 03	TCDZ 05		SILS
Size	Weight (Kg)	Weight (Kg)	ØD	Weight (Kg)	Weight (Kg)
355/400	2.5	5.0	315/355/400/450*	1.8/1.5/1.2/0.8	23.0
450/500	4.0	6.0	400/450/500/560*	3.6/3.1/2.5/1.7	37.0
560/630	4.5	8.0	450/500/560/630	5.1/4.5/3.7/2.7	45.0
710/800	6.0	11.0	560/630/710	11.8/10.3/8.3	65.0

Accessory	TCDZ 04		TCDZ 07 (30°)	TCDZ 09	TCDZ 08
Size	R	Weight (Kg)	Weight (Kg)	Weight (Kg)	Weight (Kg)
355/400	300/500/700	11.0/15.5/20.0	11.2	34.0	6.2
450/500	300/500/700	13.5/19.0/25.0	14.8	51.0	10.5
560/630	300/500/700	20.5/29.5/38.0	24.2	65.5	12.2
710/800	300/500/700	25.5/37.0/48.0	32.4	90.5	15.0

3.4 Handling



To keep people safe or prevent damage to property, use compliant handling equipment that is in a good condition.

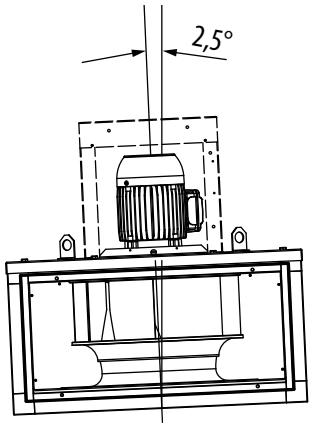
The casing must be lifted at the 4 lifting lugs.

Use slings with a length that is at least double the width of the casing. Make sure that the slings do not rub against the motor cowl or the electrical accessories.

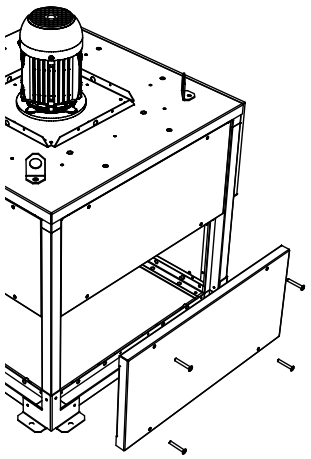
If in doubt, detach it to avoid any damage.

3.5 Casing assembly

The support surface that will support the base of the casing must be as flat as possible (sealing frame or roof adapter supplied on demand). A seal of foam or similar material (not supplied) is recommended between the support surface and the base of the casing. A maximum incline of 2.5° is tolerated between the motor axis and the vertical axis (see diagram below).



Make sure that the support is adapted to the weight of the whole machine and its various accessories. Attach the casing at the Ø20 holes provided for this purpose. You are advised to use a LL washer. Any screws that are not properly tightened may make noises and cause harmful vibrations. Once the machine has been correctly set up, make sure that the motor turbine is able to rotate freely without any friction or noise. Vibration isolating devices are available: KUBZ 05.



Detaching and re-assembling casing panels
The smooth side panels are easy to detach by loosening their screws. They are repositioned in the same way.

4. ELECTRICAL CONNECTION

4.1 Preliminary precautions

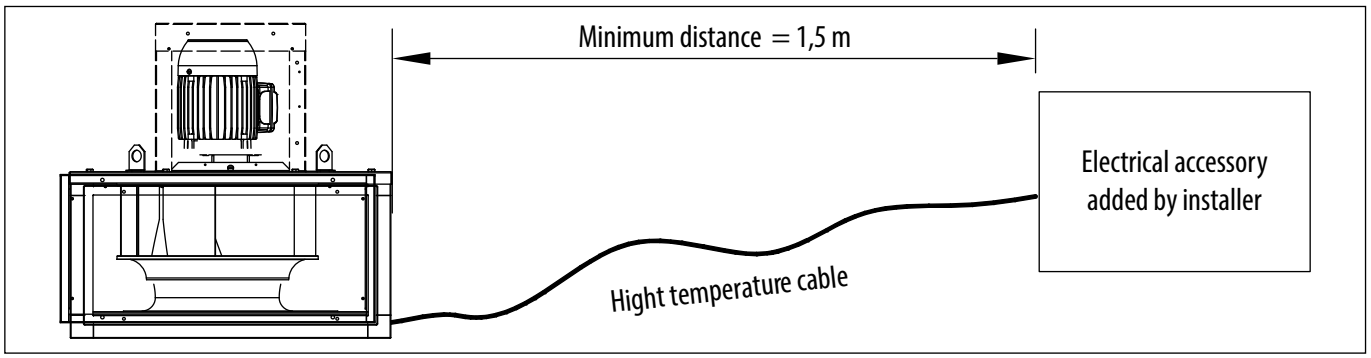
Electrical connections must be set up by qualified staff. Do not forget the earthing connection.

In addition, the cables routing must be protected from mechanical aggressions when the connection is made to the motor's terminal box or to the unit's safety switch.

If used for comfort application, the electric motor must be protected by a suitable magnetothermal protection device.

WARNING: before performing any operations, make sure that there is no power.

Routing the power cable of the casing for any versions without INTZ or with INTZ.
Cables must be protected against any mechanical stress when they are routed.



4.2 Technical Characteristics

Model	Rated P. (kW)	Nom. I. (A) 230V	Id / In	Start-up time(s)	Circuit-breaker 230V	VARZ voltage variator	VAPZ coordinated voltage variator
SINGLE-PHASE MOTOR WITH 1 SPEED AND 4 POLES							
355	0.25	2.5	2.7	4	DIJZ 05 4	VARZ 3A200	VAPZ 3A200
400	0.55	3.9	3.2	3	DIJZ 05 4	VARZ 6A200	VAPZ 5A200
SINGLE-PHASE MOTOR WITH 1 SPEED AND 6 POLES							
355	0.18	1.6	1.8	3	DIJZ 05 2.5	VARZ 3A200	VAPZ 3A200
400	0.25	2.3	2.0	2	DIJZ 05 2.5	VARZ 3A200	VAPZ 3A200
450	0.25	2.3	2.0	6	DIJZ 05 2.5	VARZ 3A200	VAPZ 3A200
500	0.37	3.0	2.0	6	DIJZ 05 4	VARZ 6A200	VAPZ 5A200

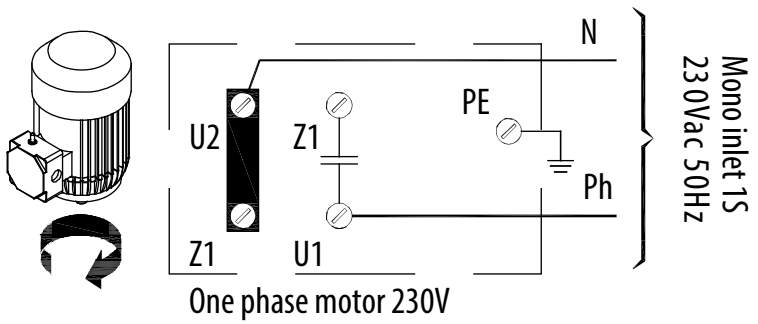
Model	Rated P. (kW)	Efficiency category	Nom. I. (A) 230V	Nom. I. (A) 400V	Id / In	Start-up time(s)	VFTM Mono calibre (kW)	VFTM Tri calibre (kW)	VFKB Mono Calibre (kW)	VFKB Tri Calibre (kW)
THREE-PHASE MOTOR WITH 1 SPEED AND 4 POLES										
355	0.25	IE1	1.4	0.81	3.5	3	0.37	0.37	0.37	0.37
355	0.25	IE2	1.36	0.78	4.5	3	0.18	0.37	0.37	0.37
355	0.25	IE3	1.22	0.70	4.5	3	0.18	0.37	0.37	0.37
400	0.55	IE1	2.47	1.42	4.7	3	0.37	0.55	0.55	0.37
400	0.55	IE2	2.28	1.31	6.0	2	0.37	0.37	0.55	0.37
400	0.55	IE3	2.17	1.25	6.6	2	0.37	0.37	0.37	0.37

Model	Rated P. (kW)	Efficiency category	Nom. I. (A) 230V	Nom. I. (A) 400V	Id / In	Start-up time(s)	VFTM Mono calibre (kW)	VFTM Tri calibre (kW)	VFKB Mono Calibre (kW)	VFKB Tri Calibre (kW)
450	1.1	IE2	4.33	2.49	6.5	3	0.75	1.1	0.75	0.75
450	1.1	IE3	4.07	2.34	7.6	2	0.75	1.1	0.75	0.75
500	1.5	IE2	5.67	3.26	6.3	3	1.1	1.5	1.1	1.1
500	1.5	IE3	5.48	3.15	7.4	3	1.1	1.5	1.1	1.1
560	2.2	IE2	8.29	4.80	7.0	3	2.2	2.2		2.2
560	2.2	IE3	7.93	4.56	7.4	3	2.2	2.2		2.2
THREE-PHASE MOTOR WITH 1 SPEED AND 6 POLES										
355	0.18	IE1	1.28	0.74	3.3	2	0.18	0.37	0.37	0.37
355	0.18	IE2	1.26	0.72	3.2	2	0.18	0.37	0.37	0.37
355	0.18	IE3	1.21	0.70	3.2	2	0.18	0.37	0.37	0.37
400	0.37	IE1	1.97	1.13	3.6	2	0.37	0.37	0.37	0.37
THREE-PHASE MOTOR WITH 1 SPEED AND 6 POLES										
400	0.37	IE2	1.83	1.05	3.9	2	0.37	0.37	0.37	0.37
400	0.37	IE3	1.77	1.02	4.5	2	0.37	0.37	0.37	0.37
450	0.37	IE1	1.97	1.13	3.6	4	0.37	0.37	0.37	0.37
450	0.37	IE2	1.83	1.05	3.9	4	0.37	0.37	0.37	0.37
450	0.37	IE3	1.77	1.02	4.5	4	0.37	0.37	0.37	0.37
500	0.55	IE1	2.82	1.62	0.4	5	0.37	0.55	0.55	0.37
500	0.55	IE2	2.59	1.49	4.1	4	0.37	0.55	0.55	0.37
500	0.55	IE3	2.52	1.45	4.8	4	0.37	0.55	0.55	0.37
560	0.75	IE2	3.39	1.95	4.5	5	0.55	0.75	0.55	0.55
560	0.75	IE3	3.36	1.93	5.2	5	0.55	0.75	0.55	0.55
630	1.1	IE2	4.83	2.78	4.7	5	1.1	1.1	1.1	1.1
630	1.1	IE3	4.68	2.69	4.9	5	1.1	1.1	1.1	0.75
710	3.0	IE2	12.7	7.30	5.7	6		4.0		3.0
710	3.0	IE3	12.0	6.91	6.0	6		4.0		3.0
800	4.0	IE2	16.5	9.46	6.0	7		5.5		
800	4.0	IE3	15.6	8.99	6.5	7		5.5		
THREE-PHASE MOTOR WITH 1 SPEED AND 8 POLES										
450	0.18	IE1	1.50	0.86	2.8	4	0.37	0.37	0.37	0.37
450	0.18	IE2	1.26	0.73	3.1	4	0.18	0.37	0.37	0.37
450	0.18	IE3	1.19	0.68	3.3	4	0.18	0.37	0.37	0.37
500	0.18	IE1	1.50	0.86	2.8	6	0.37	0.37	0.37	0.37
500	0.18	IE2	1.26	0.73	3.1	6	0.18	0.37	0.37	0.37
500	0.18	IE3	1.19	0.68	3.3	6	0.18	0.37	0.37	0.37
560	0.37	IE1	2.53	1.45	0.3	6	0.37	0.55	0.55	0.37
560	0.37	IE2	2.42	1.39	3.5	6	0.37	0.55	0.55	0.37
560	0.37	IE3	2.28	1.31	3.7	6	0.37	0.55	0.55	0.37
630	0.55	IE1	3.49	2.01	3.3	3	0.75	0.75	0.55	0.75
630	0.55	IE2	3.27	1.88	3.5	3	0.55	0.75	0.55	0.55
630	0.55	IE3	3.10	1.78	3.6	3	0.55	0.75	0.55	0.55
710	2.2	IE1	9.30	5.35	6.1	3	2.2	3.0		2.2
710	2.2	IE2	9.46	5.44	5.5	4	2.2	3.0		2.2
710	2.2	IE3	9.29	5.34	6.2	4	2.2	3.0		2.2
800	2.2	IE1	9.30	5.35	6.1	6	2.2	3.0		2.2
800	2.2	IE2	9.46	5.44	5.5	7	2.2	3.0		2.2
800	2.2	IE3	9.29	5.34	6.2	7	2.2	3.0		2.2

Model	Rated P. GV/PV (kW)	Nom. I. (A) GV 400V	Nom. I. (A) PV 400V	Id / In GV/PV	Start-up time(s)	Starter
THREE-PHASE MOTOR WITH 2 SPEEDS - SEPARATE WINDINGS 4/6 POLES						
355	0.3/0.1	0.99	0.72	5/3.5	2/2	DEMZ BI 0.74/1.3
400	0.55/0.2	1.75	1.05	5/3.7	3/3	DEMZ BI 1.3/2.3
450	1.1/0.3	2.84	1.49	5.4/5.1	3/4	DEMZ BI 1.7/3.1
500	1.5/0.37	3.65	1.62	5.5/4.5	4/6	DEMZ BI 1.7/4.2
560	2.2/0.7	4.91	2.48	6/5.5	5/4	DEMZ BI 3.1/5.7
THREE-PHASE MOTOR WITH 2 SPEEDS - SEPARATE WINDINGS 6/8 POLES						
450	0.37/0.2	1.40	0.99	3.6/3.3	5/5	DEMZ BI 1.3/1.7
500	0.55/0.37	1.89	1.79	3.8/3.3	6/7	DEMZ BI 2.3/2.3
560	0.75/0.37	2.42	1.44	4.1/3.2	6/6	DEMZ BI 1.7/3.1
630	1.1/0.55	3.54	2.63	5.8/5.1	6/4	DEMZ BI 3.1/4.2
710	3/0.75	8.04	3.78	6.6/5	5/7	
800	4/1.1	16.2	4.45	6.5/5	5/9	
THREE-PHASE MOTOR WITH 2 SPEEDS - DAHLANDER WINDINGS 4/8 POLES						
355	0.6/0.15	1.82	0.81	5.5/3.1	1/1	DEMZ DA 1/2.3
400	0.6/0.15	1.82	0.81	5.5/3.1	2/2	DEMZ DA 1/2.3
450	1.2/0.3	2.92	1.29	5.5/3.1	3/3	DEMZ DA 1.3/3.1
500	1.6/0.4	3.85	1.45	5.7/3.2	3/3	DEMZ DA 1.7/4.2
560	2.2/0.55	4.84	2.00	6.9/3.5	3/3	DEMZ DA 2.3/5.7
THREE-PHASE MOTOR WITH 2 SPEEDS - DAHLANDER WINDINGS 6/12 POLES						
630	1.1/0.22	4.00	1.36	6/2.4	5/2	DEMZ DA 1.7/4.2
710	4/1	12.6	5.13	6/2.5	3/4	
800	4/1	12.6	5.13	6/2.5	6/7	

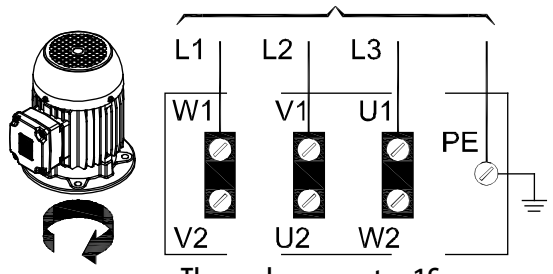
4.3 Wiring of versions without INTZ safety switch

Single-phase motors

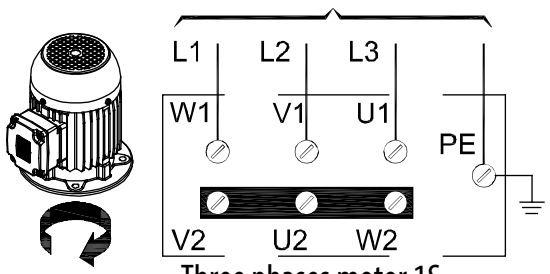


One phase motor 230V

Three-phase motors with 1 speed

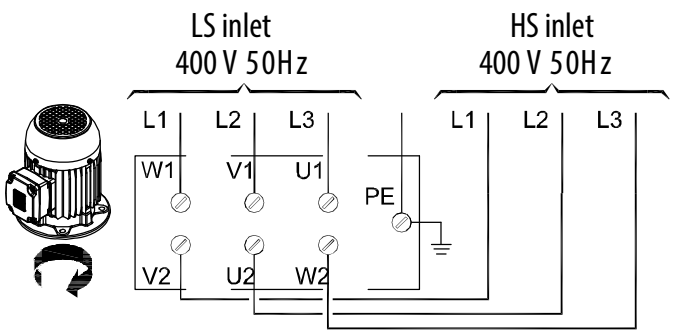


Three phases motor 1S
Y230 /D 400 V

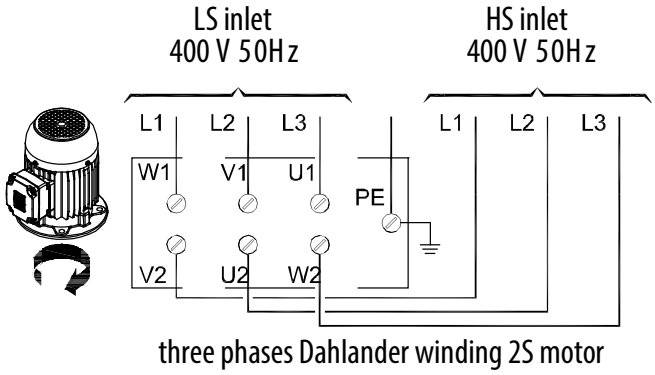


Three phases motor 1S
Y230 /D 400 V

Three-phase motors with 2 speeds



three phases 2 windings 2S motor



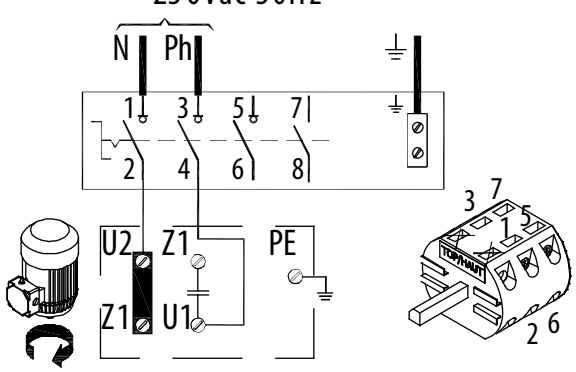
three phases Dahlander winding 2S motor

Note : Please respect the state of the art for Dahlander motor connection to avoid motor destruction

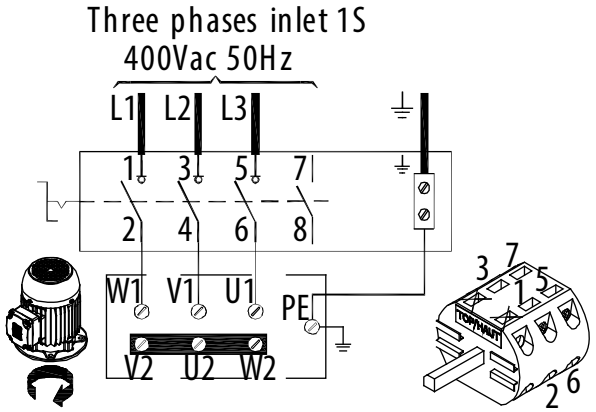
4.4 Wiring of versions with INTZ safety switch

Version with safety switch which is delivered already assembled and wired in the factory.
Comment: the safety switch is dimensioned for use in smoke extraction for a 400 V three-phase or 230 V single-phase network connection.

4.4.1 KUBAIR® F400 wiring with 1 speed and with INTZ 1V15 safety switch

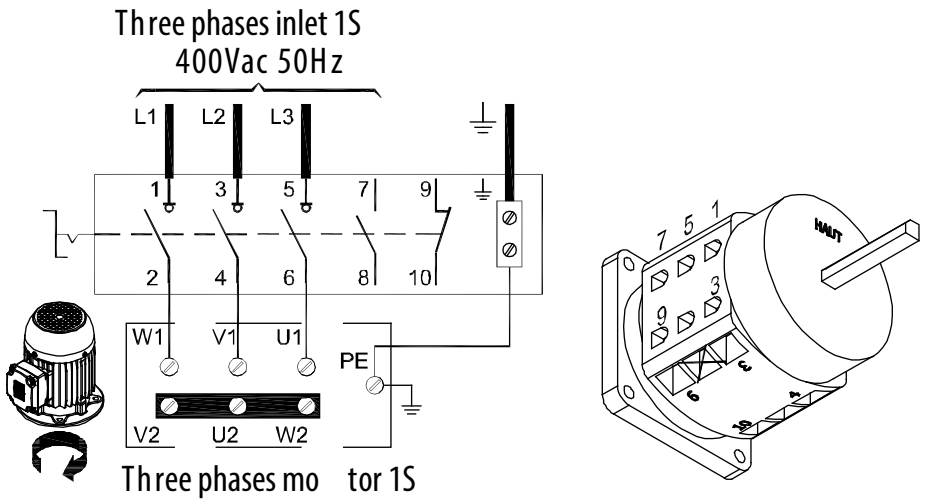


1 phase motor 230V



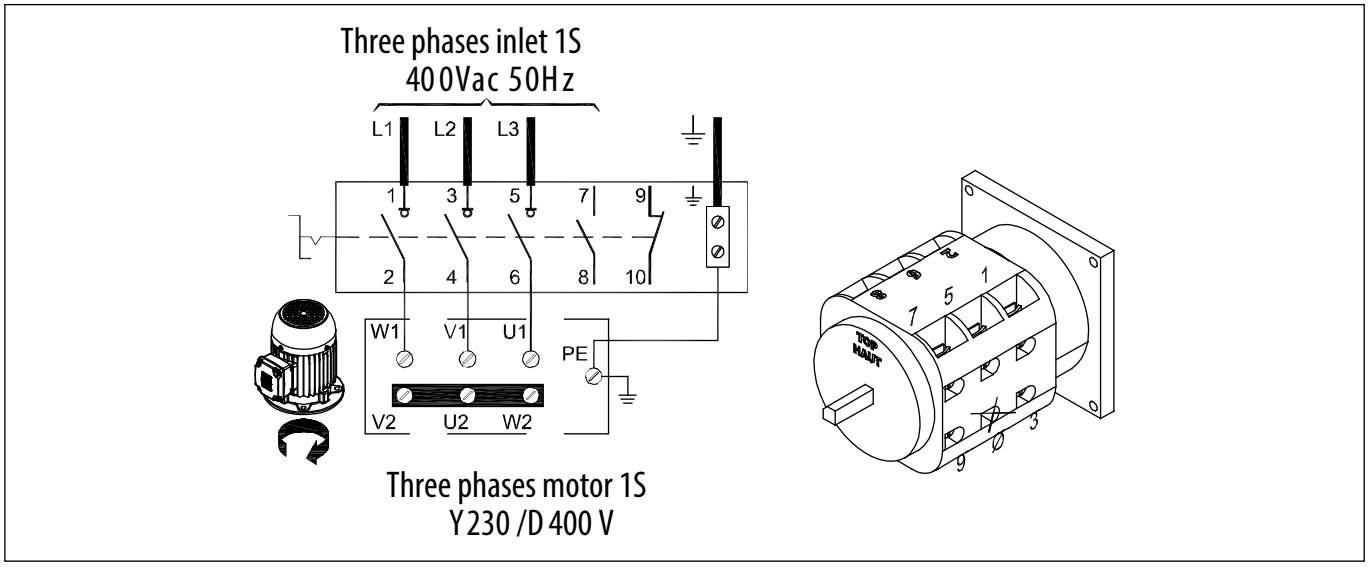
three phases motor 1S
Y230/D400V

4.4.2 KUBAIR® F400 wiring with 1 speed and with INTZ 1V22 or 1V29 safety switch

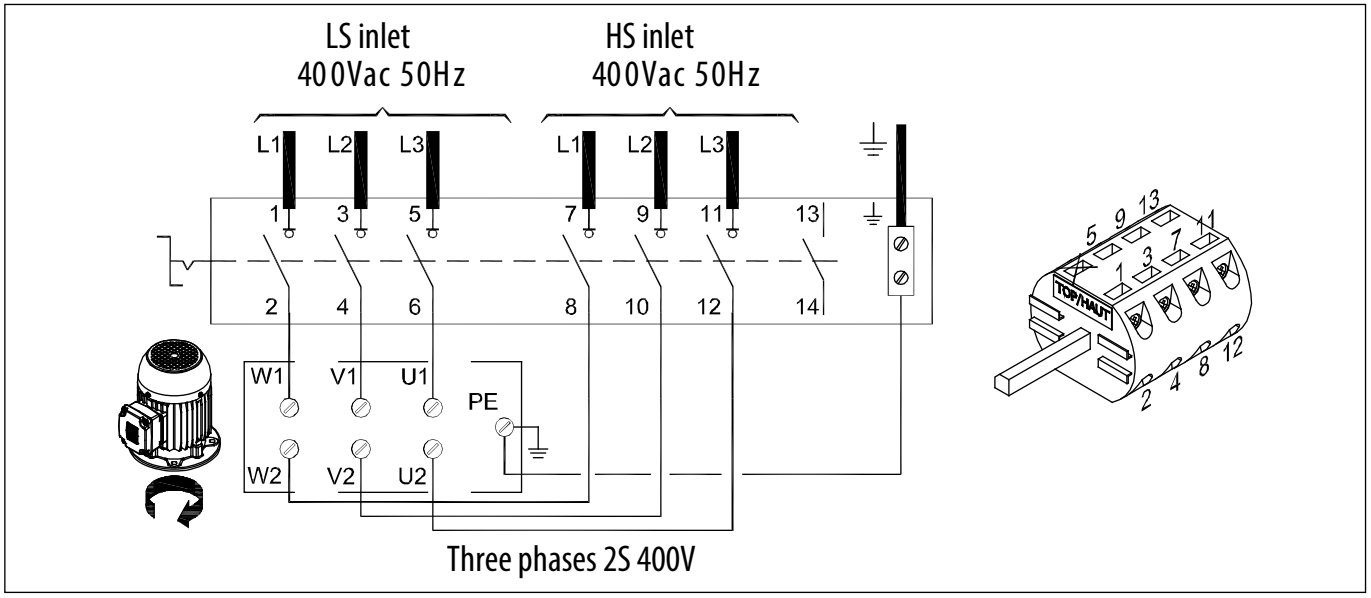


Three phases mo tor 1S
Y230/D400V

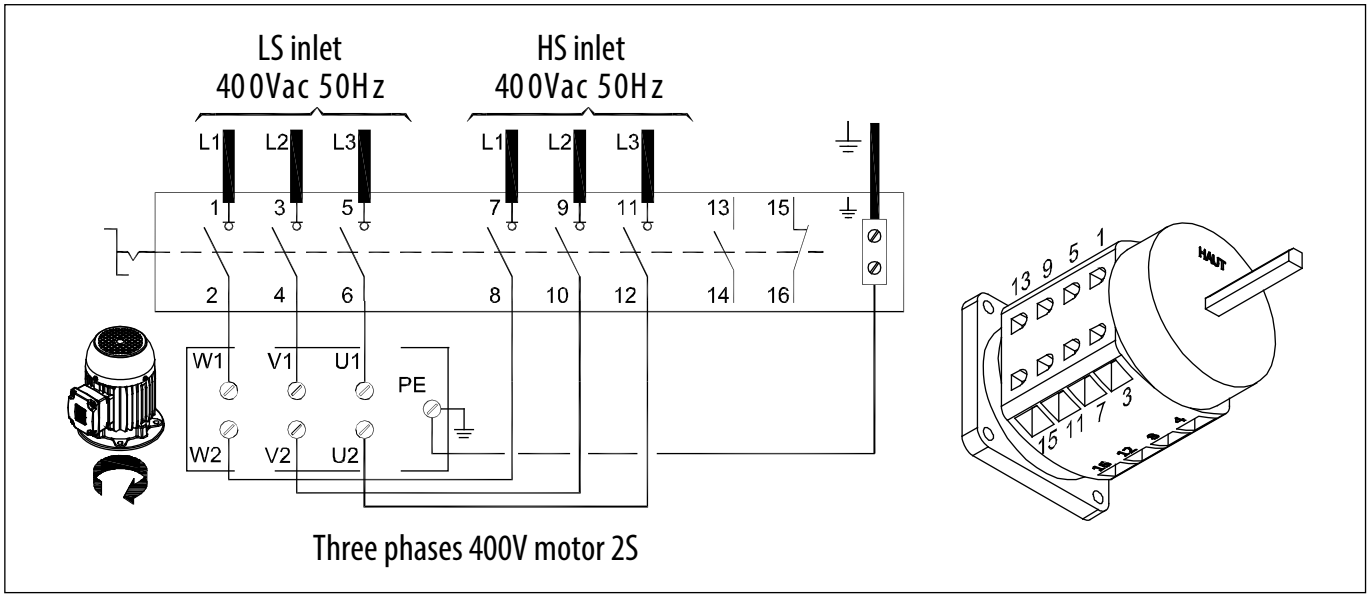
4.4.3 KUBAIR® F400 wiring with 1 speed and with INTZ 1V43 safety switch



4.4.4 KUBAIR® F400 wiring with 2 speeds and with INTZ 2V15 safety switch



4.4.5 KUBAIR® F400 wiring with 2 speeds and with INTZ 2V22 or INTZ 2V29 safety switch

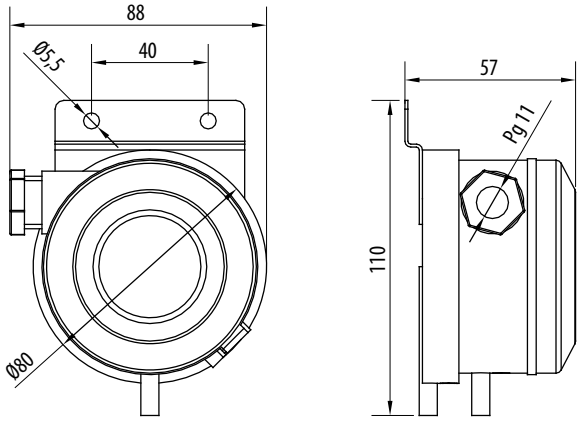


4.5 Wiring of PILOTAIR® control panel (French regulation)

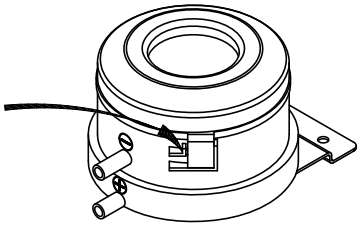
Refer to the instructions for use of the PILOTAIR® control panel (French regulation) which comes with the casing.

4.6 Electrical connection of pressure switch

A pressure switch is optional with the casing or supplied already assembled and air connected (INTZ + BDEZ version). In this case, it is mounted onto the motor support next to the INTZ. Make sure that it is adjusted to quite a high pressure so that the pressure switch is not triggered at an inopportune time. A (TDGZ) timer is optional to delay the ventilation failure.



A pressure switch is attached outside of the casing. Connection by a cable with a cross section of 0.75 mm² is advised.

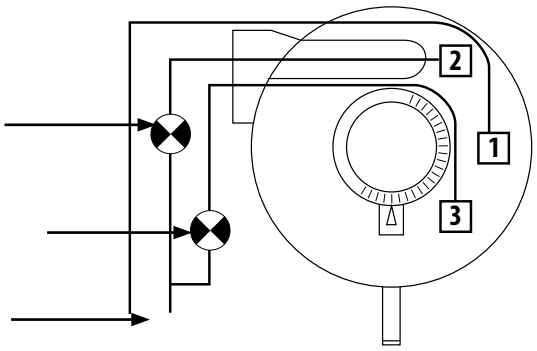


Access to terminals and for adjustment:
Slightly raise and then remove the lid of the base.

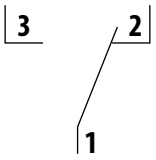
Flashing light for the **ventilation failure**

Flashing light for **normal operating mode**

Power supply compliant with NF C 15-100



Contact status in stand-by mode



Changes for a measure of pressure ΔP > threshold ΔP0 of the pressure switch adjustment

Cutoff power	Ohmic load (cos Φ =1)		Inductive load (cos Φ =0.6)		Mechanical life cycle	Cable gland	Protection index	Pressure connection	Mass
	Under 250Vac	Under 30Vdc	Under 250Vac	Under 30Vdc					
	5A	4A	0.8A	0.7A	> 10 million cycles	1xPg11	IP54 with cowel	Ø6.2mm	About 100g

5. START-UP

Before the turbine is started up, make sure that the whole motor and wheel are able to rotate freely and that there are no objects which may be projected by the turbine. The accessories must be attached to the casing to avoid any accidental contact with the rotating parts.
The machine must be attached to its support before it is powered on.
Switch on just an instant to check the direction of rotation of the turbine.

WARNING: The impeller rotating direction must correspond to each speed in the direction indicated by the arrow on the product. A centrifugal backward fan unit with an impeller that does not rotate in the right direction still creates a lowrate and a low pressure in the duct. An incorrect rotating direction can lead to an abnormal overheating of the motor, resulting in its destruction and cancelling our manufacturer's warranty.

If the rotating direction is incorrect, cut off the electrical power supply, make sure no power is present, and then reverse the two power supply phases at the level of the motor's terminal box for the three-phase motors, or make sure that the mains network connection conforms to the schematic diagram of § "4.2 Technical Characteristics" for the single-phase motors.
While running, make sure that the motor's absorbed current is not more than 10% above the name plate indicated current.

Once the installation and tests have ended, present the main points of the operating and maintenance manual to the user; the following should be explained:

- How to start up and shut down the device.
- How to change the operating modes.

Then hand over to the user with the technical instructions for use of the casing and assembled accessories (control panel, etc.) so that they can be accessed at all times.

6. MAINTENANCE

The maintenance frequency depends on the operating conditions. If the air is dirty (poor quality), the duration between two visits must be shortened.

WARNING: Before any maintenance operation, cut off the power supply upstream of the casing and make sure that it cannot be re-established during the intervention (lockout).

The motors used do not require any particular maintenance. They are fitted with sealed greased-for-life ball bearings.

6.1 Maintenance periodicity

Unit/Item	At commissioning	Every 6 months minimum
Turbine	Check the rotating direction ; make sure that the moving and fixed parts do not rub together	Clean, if necessary ; make sure that the moving and fixed parts do not rub together
Electric motor	Check the connections, in particular, the ground connection	Retighten the lugs, if necessary ; check the nominal current
Power switch	Check the connections, in particular, the ground connection	Retighten the lugs, if necessary
Pressure relief switch	Check the electrical/aeraulic connections	Check the operation
Control panel	Make sure that there are no defects ; check the connections, in particular, the ground connection	Make sure that there are no defects ; retighten the lugs, if necessary
Plastic dome	Make sure that the cooling holes are not obstructed	Check the general condition ; make sure that the cooling holes are not obstructed
Protection gratings	Make sure that they are present	Clean, if necessary
Duct networks	Make sure that there are no leaks	Clean, if necessary
Attachment	Check the mechanical tightness	Retighten the screws, if necessary

6.2 Spare parts KUBAIR® F400

Model	Code	Designation
KUBAIR® F400 355 4PM 0,25kW	506154	Capacitor 30µF/400V for single-phase electric motor
KUBAIR® F400 355 6PM 0,18kW	506153	Capacitor 20µF/400V for single-phase electric motor
KUBAIR® F400 400 4PM 0,55kW	506153	Capacitor 20µF/400V for single-phase electric motor
KUBAIR® F400 400 6PM 0,25kW	506154	Capacitor 30µF/400V for single-phase electric motor
KUBAIR® F400 MV/CC SINGLE-PHASE - 1 SPEED		
KUBAIR® F400 355 4PM 0,25kW	646800	MTTE KUBAIR® 355 4PM 0,25kW Spare motor + impeller
KUBAIR® F400 355 6PM 0,18kW	646801	MTTE KUBAIR® 355 6PM 0,18kW Spare motor + impeller
KUBAIR® F400 400 4PM 0,55kW	646802	MTTE KUBAIR® 400 4PM 0,55kW Spare motor + impeller
KUBAIR® F400 400 6PM 0,25kW	646803	MTTE KUBAIR® 400 6PM 0,25kW Spare motor + impeller
KUBAIR® F400 450 6PM 0,25kW	646804	MTTE KUBAIR® 450 6PM 0,25kW Spare motor + impeller
KUBAIR® F400 500 6PM 0,37kW	646805	MTTE KUBAIR® 500 6PM 0,37kW Spare motor + impeller
KUBAIR® F400 MV/CC THREE-PHASE - 1 SPEED		
KUBAIR® F400 355 4PT IE1 0,25kW	646810	MTTE KUBAIR® 355 4PT IE1 0,25kW Spare motor + impeller
KUBAIR® F400 355 4PT IE2 0,25kW	646811	MTTE KUBAIR® 355 4PT IE2 0,25kW Spare motor + impeller
KUBAIR® F400 355 4PT IE3 0,25kW	646812	MTTE KUBAIR® 355 4PT IE3 0,25kW Spare motor + impeller
KUBAIR® F400 400 4PT IE1 0,55kW	646813	MTTE KUBAIR® 400 4PT IE1 0,55kW Spare motor + impeller
KUBAIR® F400 400 4PT IE2 0,55kW	646814	MTTE KUBAIR® 400 4PT IE2 0,55kW Spare motor + impeller
KUBAIR® F400 400 4PT IE3 0,55kW	646815	MTTE KUBAIR® 400 4PT IE3 0,55kW Spare motor + impeller
KUBAIR® F400 450 4PT IE2 1,1kW	646816	MTTE KUBAIR® 450 4PT IE2 1,1kW Spare motor + impeller
KUBAIR® F400 450 4PT IE3 1,1kW	646817	MTTE KUBAIR® 450 4PT IE3 1,1kW Spare motor + impeller
KUBAIR® F400 500 4PT IE2 1,5kW	646818	MTTE KUBAIR® 500 4PT IE2 1,5kW Spare motor + impeller
KUBAIR® F400 500 4PT IE3 1,5kW	646819	MTTE KUBAIR® 500 4PT IE3 1,5kW Spare motor + impeller
KUBAIR® F400 560 4PT IE2 2,2kW	646820	MTTE KUBAIR® 560 4PT IE2 2,2kW Spare motor + impeller
KUBAIR® F400 560 4PT IE3 2,2kW	646821	MTTE KUBAIR® 560 4PT IE3 2,2kW Spare motor + impeller
KUBAIR® F400 355 6PT IE1 0,18kW	646822	MTTE KUBAIR® 355 6PT IE1 0,18kW Spare motor + impeller
KUBAIR® F400 355 6PT IE2 0,18kW	646823	MTTE KUBAIR® 355 6PT IE2 0,18kW Spare motor + impeller
KUBAIR® F400 355 6PT IE3 0,18kW	646824	MTTE KUBAIR® 355 6PT IE3 0,18kW Spare motor + impeller
KUBAIR® F400 400 6PT IE1 0,37kW	646825	MTTE KUBAIR® 400 6PT IE1 0,37kW Spare motor + impeller
KUBAIR® F400 400 6PT IE2 0,37kW	646826	MTTE KUBAIR® 400 6PT IE2 0,37kW Spare motor + impeller
KUBAIR® F400 400 6PT IE3 0,37kW	646827	MTTE KUBAIR® 400 6PT IE3 0,37kW Spare motor + impeller
KUBAIR® F400 450 6PT IE1 0,37kW	646828	MTTE KUBAIR® 450 6PT IE1 0,37kW Spare motor + impeller
KUBAIR® F400 450 6PT IE2 0,37kW	646829	MTTE KUBAIR® 450 6PT IE2 0,37kW Spare motor + impeller
KUBAIR® F400 450 6PT IE3 0,37kW	646830	MTTE KUBAIR® 450 6PT IE3 0,37kW Spare motor + impeller
KUBAIR® F400 500 6PT IE1 0,55kW	646831	MTTE KUBAIR® 500 6PT IE1 0,55kW Spare motor + impeller
KUBAIR® F400 500 6PT IE2 0,55kW	646832	MTTE KUBAIR® 500 6PT IE2 0,55kW Spare motor + impeller
KUBAIR® F400 500 6PT IE3 0,55kW	646833	MTTE KUBAIR® 500 6PT IE3 0,55kW Spare motor + impeller
KUBAIR® F400 560 6PT IE2 0,75kW	646834	MTTE KUBAIR® 560 6PT IE2 0,75kW Spare motor + impeller
KUBAIR® F400 560 6PT IE3 0,75kW	646835	MTTE KUBAIR® 560 6PT IE3 0,75kW Spare motor + impeller
KUBAIR® F400 630 6PT IE2 1,1kW	646836	MTTE KUBAIR® 630 6PT IE2 1,1kW Spare motor + impeller
KUBAIR® F400 630 6PT IE3 1,1kW	646837	MTTE KUBAIR® 630 6PT IE3 1,1kW Spare motor + impeller
KUBAIR® F400 710 6PT IE2 3,0kW	646838	MTTE KUBAIR® 710 6PT IE2 3,0kW Spare motor + impeller
KUBAIR® F400 710 6PT IE3 3,0kW	646839	MTTE KUBAIR® 710 6PT IE3 3,0kW Spare motor + impeller

Model	Code	Designation
KUBAIR® F400 800 6PT IE2 4,0kW	646840	MTTE KUBAIR® 800 6PT IE2 4,0kW Spare motor + impeller
KUBAIR® F400 800 6PT IE3 4,0kW	646841	MTTE KUBAIR® 800 6PT IE3 4,0kW Spare motor + impeller
KUBAIR® F400 450 8PT IE1 0,18kW	646842	MTTE KUBAIR® 450 8PT IE1 0,18kW Spare motor + impeller
KUBAIR® F400 450 8PT IE2 0,18kW	646843	MTTE KUBAIR® 450 8PT IE2 0,18kW Spare motor + impeller
KUBAIR® F400 450 8PT IE3 0,18kW	646844	MTTE KUBAIR® 450 8PT IE3 0,18kW Spare motor + impeller
KUBAIR® F400 500 8PT IE1 0,18kW	646845	MTTE KUBAIR® 500 8PT IE1 0,18kW Spare motor + impeller
KUBAIR® F400 500 8PT IE2 0,18kW	646846	MTTE KUBAIR® 500 8PT IE2 0,18kW Spare motor + impeller
KUBAIR® F400 500 8PT IE3 0,18kW	646847	MTTE KUBAIR® 500 8PT IE3 0,18kW Spare motor + impeller
KUBAIR® F400 560 8PT IE1 0,37kW	646848	MTTE KUBAIR® 560 8PT IE1 0,37kW Spare motor + impeller
KUBAIR® F400 560 8PT IE2 0,37kW	646849	MTTE KUBAIR® 560 8PT IE2 0,37kW Spare motor + impeller
KUBAIR® F400 560 8PT IE3 0,37kW	646850	MTTE KUBAIR® 560 8PT IE3 0,37kW Spare motor + impeller
KUBAIR® F400 630 8PT IE1 0,55kW	646851	MTTE KUBAIR® 630 8PT IE1 0,55kW Spare motor + impeller
KUBAIR® F400 630 8PT IE2 0,55kW	646852	MTTE KUBAIR® 630 8PT IE2 0,55kW Spare motor + impeller
KUBAIR® F400 630 8PT IE3 0,55kW	646853	MTTE KUBAIR® 630 8PT IE3 0,55kW Spare motor + impeller
KUBAIR® F400 710 8PT IE1 2,2kW	646854	MTTE KUBAIR® 710 8PT IE1 2,2kW Spare motor + impeller
KUBAIR® F400 710 8PT IE2 2,2kW	646855	MTTE KUBAIR® 710 8PT IE2 2,2kW Spare motor + impeller
KUBAIR® F400 710 8PT IE3 2,2kW	646856	MTTE KUBAIR® 710 8PT IE3 2,2kW Spare motor + impeller
KUBAIR® F400 800 8PT IE1 2,2kW	646857	MTTE KUBAIR® 800 8PT IE1 2,2kW Spare motor + impeller
KUBAIR® F400 800 8PT IE2 2,2kW	646858	MTTE KUBAIR® 800 8PT IE2 2,2kW Spare motor + impeller
KUBAIR® F400 800 8PT IE3 2,2kW	646859	MTTE KUBAIR® 800 8PT IE3 2,2kW Spare motor + impeller
KUBAIR® F400 MV/CC THREE-PHASE 2 SPEEDS - DALHANDER WINDINGS		
KUBAIR® F400 355 4/8PT 0,60/0,15kW	646870	MTTE KUBAIR® 355 4/8PT 0,60/0,15kW Spare motor + impeller
KUBAIR® F400 400 4/8PT 0,60/0,15kW	646871	MTTE KUBAIR® 400 4/8PT 0,60/0,15kW Spare motor + impeller
KUBAIR® F400 450 4/8PT 1,20/0,30kW	646872	MTTE KUBAIR® 450 4/8PT 1,20/0,30kW Spare motor + impeller
KUBAIR® F400 500 4/8PT 1,60/0,40kW	646873	MTTE KUBAIR® 500 4/8PT 1,60/0,40kW Spare motor + impeller
KUBAIR® F400 560 4/8PT 2,20/0,55kW	646874	MTTE KUBAIR® 560 4/8PT 2,20/0,55kW Spare motor + impeller
KUBAIR® F400 800 6/8PT 4,0/1,1kW	646875	MTTE KUBAIR® 800 6/8PT 4,0/1,1kW Spare motor + impeller
KUBAIR® F400 630 6/12PT 1,10/0,22kW	646876	MTTE KUBAIR® 630 6/12PT 1,10/0,22kW Spare motor + impeller
KUBAIR® F400 710 6/12PT 4,0/1,0kW	646877	MTTE KUBAIR® 710 6/12PT 4,0/1,0kW Spare motor + impeller
KUBAIR® F400 800 6/12PT 4,0/1,0kW	646878	MTTE KUBAIR® 800 6/12PT 4,0/1,0kW Spare motor + impeller
KUBAIR® F400 MV/CC THREE-PHASE 2 SPEEDS - SEPARATE WINDINGS		
KUBAIR® F400 355 4/6PT 0,30/0,10kW	646880	MTTE KUBAIR® 355 4/6PT 0,30/0,10kW Spare motor + impeller
KUBAIR® F400 400 4/6PT 0,55/0,20kW	646881	MTTE KUBAIR® 400 4/6PT 0,55/0,20kW Spare motor + impeller
KUBAIR® F400 450 4/6PT 1,10/0,30kW	646882	MTTE KUBAIR® 450 4/6PT 1,10/0,30kW Spare motor + impeller
KUBAIR® F400 500 4/6PT 1,50/0,37kW	646883	MTTE KUBAIR® 500 4/6PT 1,50/0,37kW Spare motor + impeller
KUBAIR® F400 560 4/6PT 2,20/0,70kW	646884	MTTE KUBAIR® 560 4/6PT 2,20/0,70kW Spare motor + impeller
KUBAIR® F400 450 6/8PT 0,37/0,20kW	646885	MTTE KUBAIR® 450 6/8PT 0,37/0,20kW Spare motor + impeller
KUBAIR® F400 500 6/8PT 0,55/0,37kW	646886	MTTE KUBAIR® 500 6/8PT 0,55/0,37kW Spare motor + impeller
KUBAIR® F400 560 6/8PT 0,75/0,37kW	646887	MTTE KUBAIR® 560 6/8PT 0,75/0,37kW Spare motor + impeller
KUBAIR® F400 630 6/8PT 1,10/0,55kW	646888	MTTE KUBAIR® 630 6/8PT 1,10/0,55kW Spare motor + impeller
KUBAIR® F400 710 6/8PT 3,00/0,75kW	646889	MTTE KUBAIR® 710 6/8PT 3,00/0,75kW Spare motor + impeller

7. WASTE MANAGEMENT

7.1 Treatment of Packagings and non dangerous wastes

The packagings (unconsigned pallets, cartons, films, wooden boxes) and other non dangerous wastes must be made reusable by an approved service provider. It is strictly prohibited to burn, bury or dump them in nature.

7.2 Treatment of a Professional WEEE

This product must not be dumped or treated with household refuse, but must be deposited in an appropriate collection point for waste electrical and electronic equipment (WEEE).

Document not contractual. Constantly concerned about improving his equipment, the manufacturer reserves the right to make all technical changes without notice.

VIM
Les prés de Mégy Sud – SOUDAN
CS 60120 - 79401 ST MAIXENT L'ECOLE CEDEX
Tél. : 05 49 06 60 38 ou 05 49 06 60 25 – Fax : 05 49 06 60 36
sav@vim.fr - www.vim.fr