



Insulated Duct Fans

IRE • CAU • IFK • IFA

web-version

HIGH PRESSURE - LOW SOUND LEVEL

The insulated duct fans are fitted with an inlet radial fan, providing high pressure with a low sound level. Both motor and impeller are easy to clean thanks to the swing-out design. The maximum permitted temperature of transported air is shown in the diagrams for each fan.

IRE

Insulated Duct Fan

IRE is equipped with a single or double inlet radial fan. All IRE fans could be speed controlled from 0–100 % by voltage variation.

All sizes have an approved thermo-contact protector as standard. All 3-phase fans has ready-fitted thermo-contact leads, e.g. for alarm function, as standard.



Strong galvanized steel housing.

Very good sound and fire insulation provided by a 50 mm pad of mineral wool.

Reliable maintenance-free ballbearing-mounted external rotor motor of the very highest quality.

Easy to clean thanks to the swing-out design of motor and impeller*.



Mech-Elec

IRE 125 A / B / C

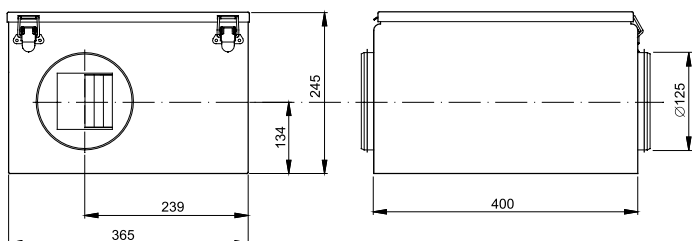
SINGLE INLET RADIAL FAN WITH FORWARD CURVED IMPELLER



Mech-Elec



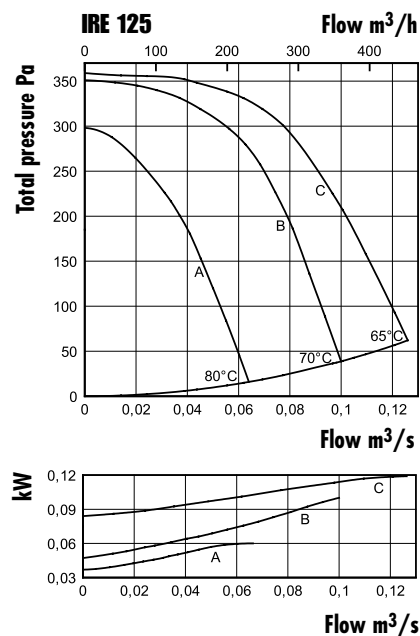
Measurements



Technical data

Insulated duct fan	IRE 125 A	IRE 125 B	IRE 125 C
Curve no	A	B	C
Voltage, V/Hz	230/50	230/50	230/50
Current, A	0,27	0,42	0,53
Power, W	61	99	122
Speed, Rpm	1130	1650	1850
Wiring diagram nr:	4040002	4040001	4040001
Weight, kg	12	12	12

Pressure and flow



Sound data

		L _{pA}	L _{WA} tot dB(A)	63	125	250	500	1k	2k	4k	8k
IRE 125 A 45 l/s 150 Pa	Environment	28	35	26	28	28	27	27	25	26	27
	Inlet		53	36	51	48	43	38	33	29	17
	Outlet		61	48	53	54	55	56	50	43	30
IRE 125 B 65 l/s 280 Pa	Environment	35	42	34	34	39	34	32	28	27	28
	Inlet		59	42	56	55	51	44	40	37	27
	Outlet		68	55	60	61	64	62	60	53	43
IRE 125 C 75 l/s 300 Pa	Environment	37	44	28	35	42	36	33	29	28	28
	Inlet		62	43	59	57	54	46	44	40	30
	Outlet		70	56	62	63	65	64	62	55	46

IRE 160 B / C / D

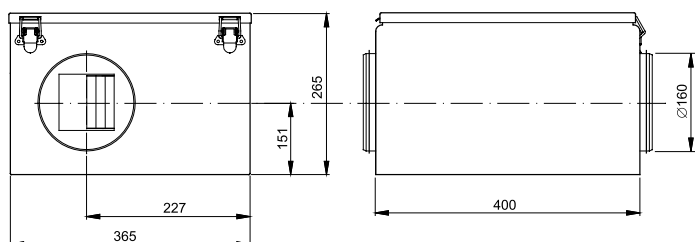
SINGLE INLET RADIAL FAN WITH FORWARD CURVED IMPELLER



Mech-Elec



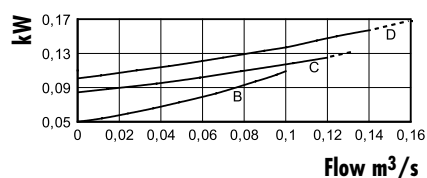
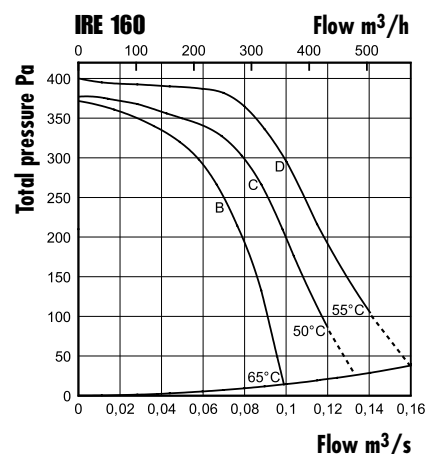
Measurements



Technical data

Insulated duct fan	IRE 160 B	IRE 160 C	IRE 160 D
Curve no	B	C	D
Voltage, V/Hz	230/50	230/50	230/50
Current, A	0,46	0,55	0,68
Power, W	105	127	157
Speed, Rpm	1650	1850	2200
Wiring diagram nr:	4040001	4040001	4040001
Weight, kg	13	13	13

Pressure and flow



Sound data

		L _{pA}	L _{wA} tot dB(A)	63	125	250	500	1k	2k	4k	8k
IRE 160 B 75 l/s 215 Pa	Environment	36	43	29	40	39	34	32	28	27	27
	Inlet		61	44	59	56	50	44	39	35	26
	Outlet		68	56	61	61	62	61	58	53	44
IRE 160 C 80 l/s 300 Pa	Environment	37	44	29	37	41	36	34	30	28	28
	Inlet		62	46	60	57	53	46	42	38	29
	Outlet		71	58	63	64	65	63	62	56	47
IRE 160 D 90 l/s 340 Pa	Environment	39	46	33	40	42	41	36	34	30	28
	Inlet		65	47	63	61	57	50	48	45	37
	Outlet		72	59	64	65	67	65	64	57	51

IRE 200 B / D

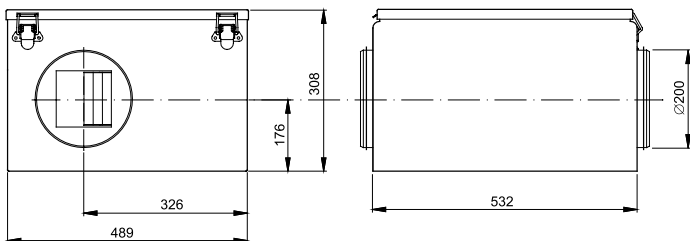
SINGLE INLET RADIAL FAN WITH BACKWARD CURVED IMPELLER



Mech-Elec



Measurements

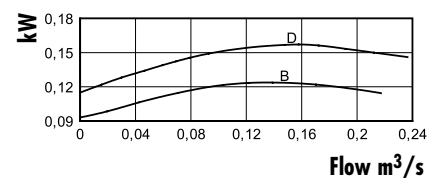
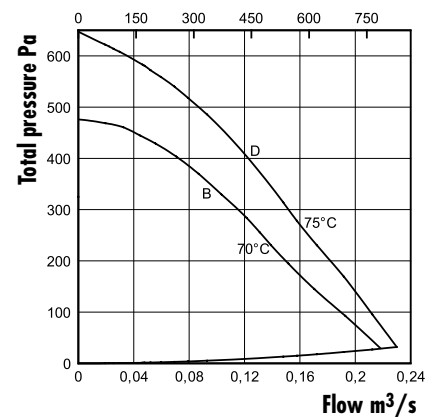


Technical data

Insulated duct fan	IRE 200 B	IRE 200 D
Curve no	B	D
Voltage, V/Hz	230/50	230/50
Current, A	0,55	0,69
Power, W	124	157
Speed, Rpm	2540	2600
Wiring diagram nr:	4040001	4040001
Weight, kg	22	22

Pressure and flow

IRE 200 B / 200 D Flow m³/h



Sound data

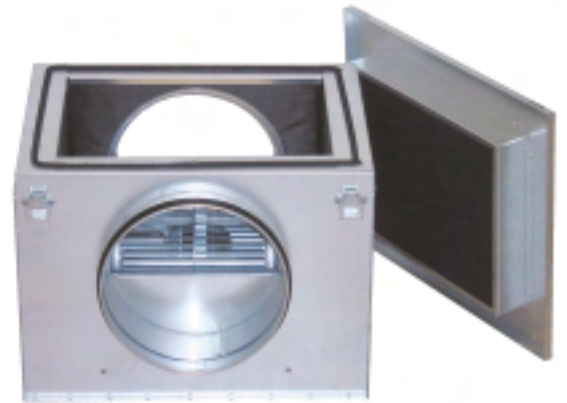
		L _{pA}	L _{wA} tot dB(A)	63	125	250	500	1k	2k	4k	8k
IRE 200 B 120 l/s 290 Pa	Environment	42	49	37	36	44	46	37	37	38	40
	Inlet		61	46	52	57	57	51	45	38	27
	Outlet		73	56	60	65	70	67	64	57	44
IRE 200 D 160 l/s 280 Pa	Environment	42	49	40	38	44	47	38	36	30	27
	Inlet		62	46	54	59	57	51	45	42	33
	Outlet		74	55	63	67	71	68	65	58	47

IRE 200 C / IRE 250 C

DOUBLE INLET RADIAL FAN WITH FORWARD CURVED IMPELLER

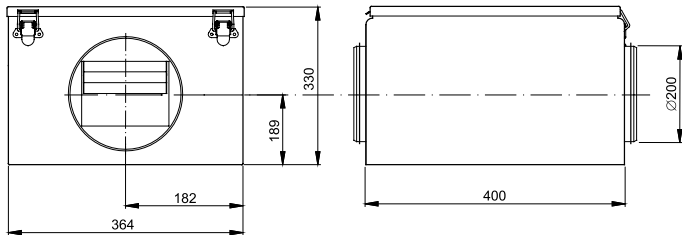


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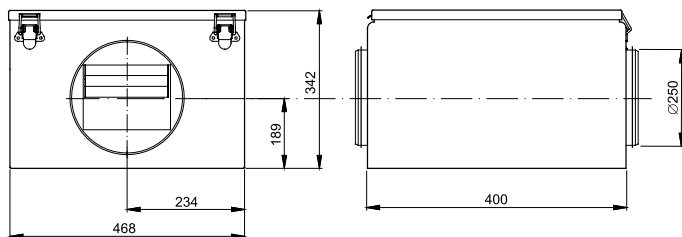


Measurements

IRE 200 C

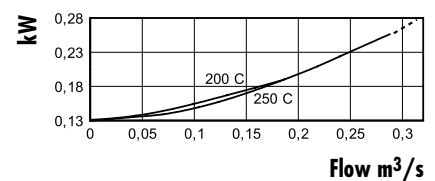
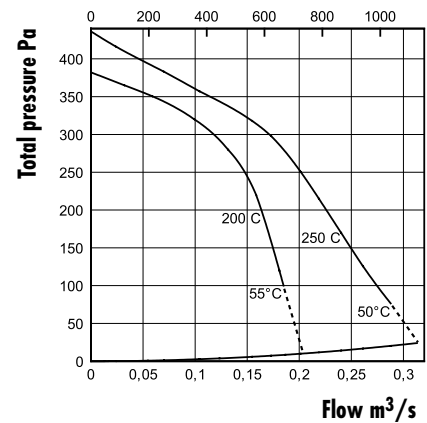


IRE 250 C



Pressure and flow

IRE 200 C / 250 C Flow m³/h



Technical data

Insulated duct fan	IRE 200 C	IRE 250 C
Curve no	200 C	250 C
Voltage, V / Hz	230/50	230/50
Current, A	0,83	1,13
Power, W	188	256
Speed, Rpm	1800	2120
Wiring diagram nr:	4040001	4040001
Weight, kg	14	18

Sound data

		L _{pA}	L _{wA} tot dB(A)	63	125	250	500	1k	2k	4k	8k
IRE 200 C 130 l/s 240 Pa	Environment	38	45	36	42	39	40	34	32	30	27
	Inlet		63	51	58	58	58	53	54	50	39
	Outlet		71	57	62	62	63	66	66	60	52
IRE 250 C 160 l/s 320 Pa	Environment	40	47	41	38	45	39	34	36	35	36
	Inlet		63	53	59	58	55	50	47	46	44
	Outlet		70	58	61	60	63	62	63	61	58

IRE 250 B / D

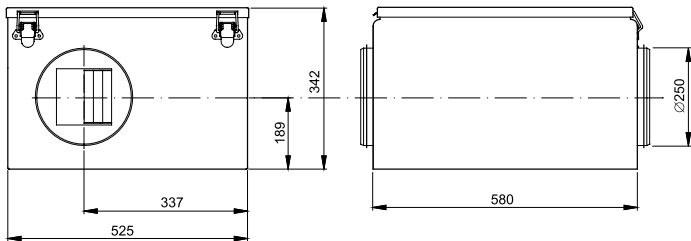
IRE 40x20

SINGLE INLET RADIAL FAN WITH FORWARD CURVED IMPELLER

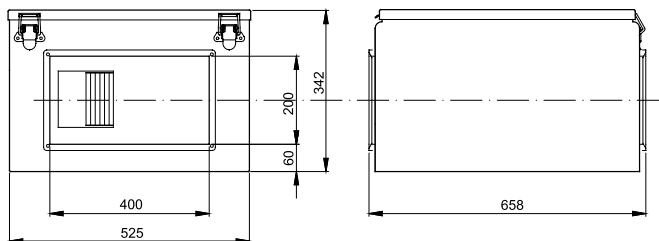


Measurements

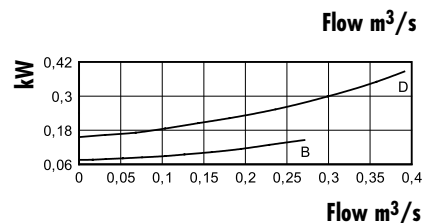
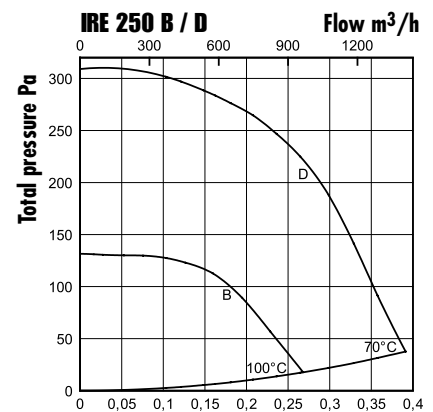
IRE 250



IRE 40x20



Pressure and flow



Technical data

Insulated duct fan	IRE 250 B IRE 40x20 B	IRE 250 D IRE 40x20 D
Curve no	B	D
Voltage, V/Hz	230/50	230/50
Current, A	0,63	1,72
Power, W	138	378
Speed, Rpm	900	1300
Wiring diagram nr:	4040005	4040005
Weight, kg	30	30

Sound data

		L_{pA}	L_{WA} tot dB(A)	63	125	250	500	1k	2k	4k	8k
IRE 250 B 160 l/s 110 Pa	Environment	37	44	31	39	37	32	31	33	35	39
	Inlet		57	50	55	50	45	40	38	32	24
	Outlet		65	54	55	57	61	59	54	51	40
IRE 250 D 200 l/s 270 Pa	Environment	45	52	43	48	48	42	38	36	37	39
	Inlet		63	55	59	59	52	48	47	42	34
	Outlet		73	59	60	64	68	68	64	62	53

IRE 250 A / E IRE 40x20



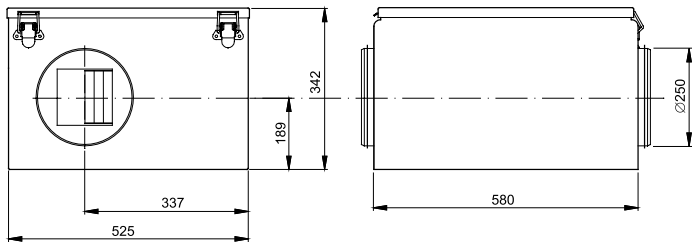
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SINGLE INLET RADIAL FAN WITH
BACKWARD CURVED IMPELLER

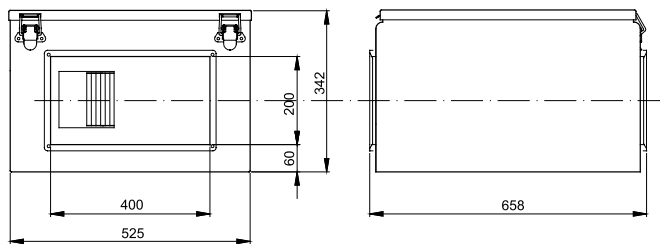


Measurements

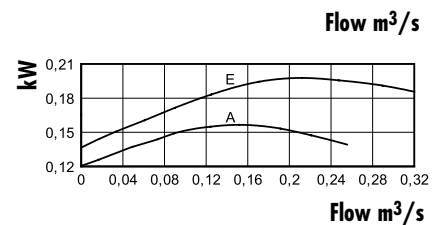
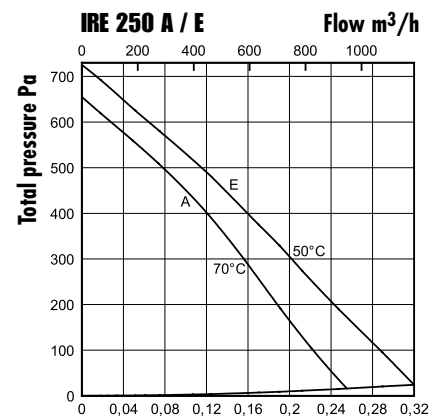
IRE 250



IRE 40x20



Pressure and flow



Technical data

Insulated duct fan **IRE 250 A** **IRE 250 E**
 IRE 40x20 A **IRE 40x20 E**

Curve no	A	E
Voltage, V/Hz	230/50	230/50
Current, A	0,67	0,89
Power, W	154	201
Speed, Rpm	2540	2420
Wiring diagram nr:	4040001	4040001
Weight, kg	27	27

Sound data

		L _{pA}	L _{wA} tot dB(A)	63	125	250	500	1k	2k	4k	8k
IRE 250 A 120 l/s 400 Pa	Environment	43	50	37	39	44	46	39	39	38	40
	Inlet		60	47	54	54	57	50	46	44	37
	Outlet		73	51	59	62	71	67	63	58	49
IRE 250 E 150 l/s 430 Pa	Environment	44	51	36	41	48	44	36	40	37	39
	Inlet		62	48	55	60	56	50	45	43	36
	Outlet		74	52	61	67	71	67	63	58	48

IRE 315 A / B IRE 50x25

SINGLE INLET RADIAL FAN WITH
FORWARD CURVED IMPELLER

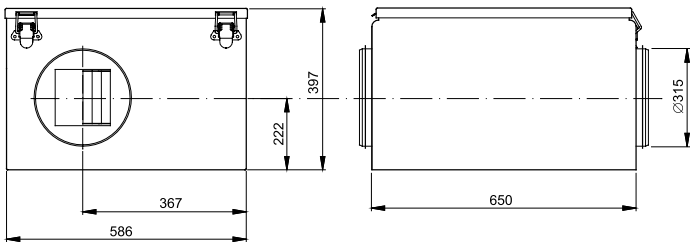


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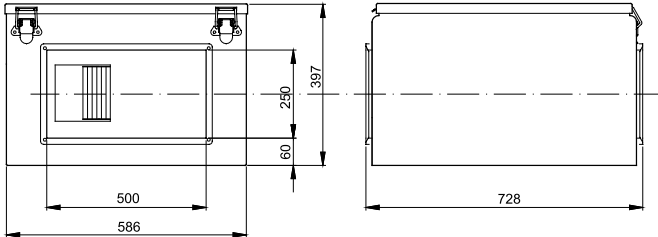


Measurements

IRE 315



IRE 50x25

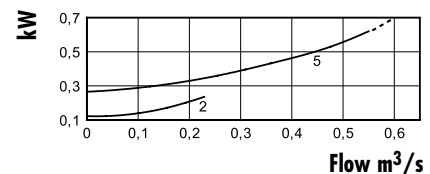
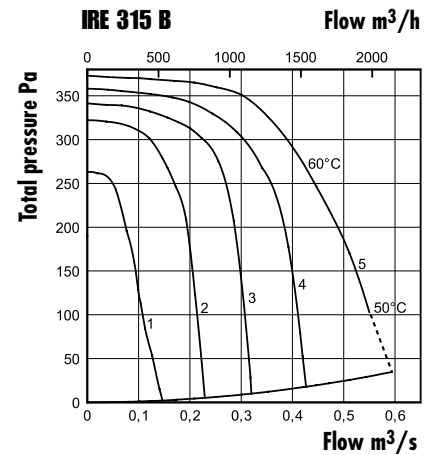
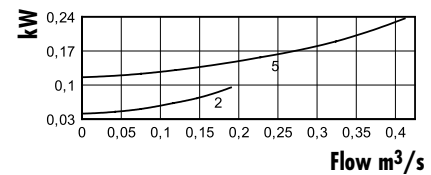
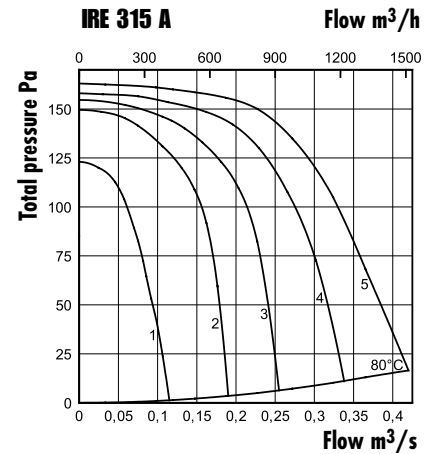


Technical data

Insulated duct fan	IRE 315 A IRE 50x25 A	IRE 315 B IRE 50x25 B
Voltage, V/Hz	230/50	230/50
Current, A	1,1	3,0
Power, kW	0,24	0,62
Speed, Rpm	880	1330
Wiring diagram nr:	4040005	4040005
Weight, kg	38	40

Pos. on transformer curve	1	2	3	4	5
1-phase, V	80	110	135	165	230

Pressure and flow



Sound data

		L _{pA}	L _{wA} tot dB(A)	63	125	250	500	1k	2k	4k	8k
IRE 315 A 230 l/s 150 Pa	Environment	39	46	32	42	39	38	38	32	35	37
	Inlet		61	53	56	57	48	49	46	45	39
	Outlet		69	56	59	62	63	62	62	61	52
IRE 315 B 310 l/s 340 Pa	Environment	45	52	42	46	48	46	40	38	37	37
	Inlet		71	60	67	66	58	55	59	59	54
	Outlet		79	65	67	69	72	72	72	73	66

IRE 400 D / F IRE 50x30 D / F

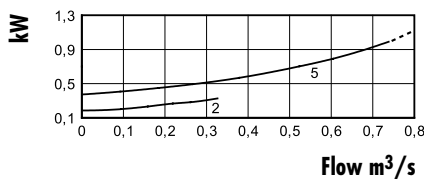
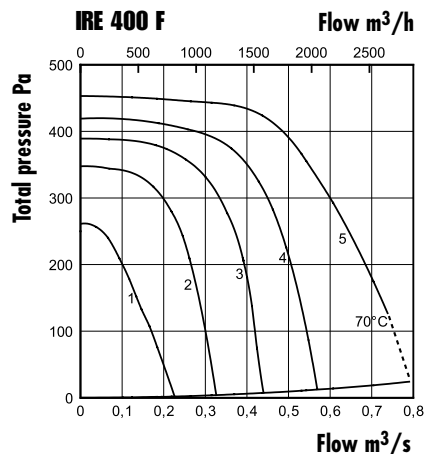
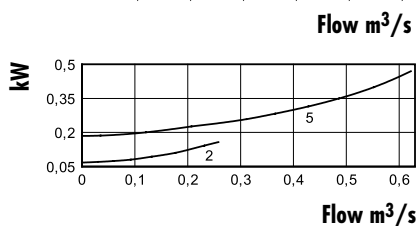
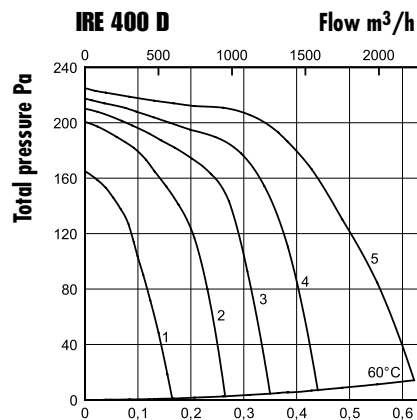
SINGLE INLET RADIAL FAN WITH FORWARD CURVED IMPELLER



Mech-Elec

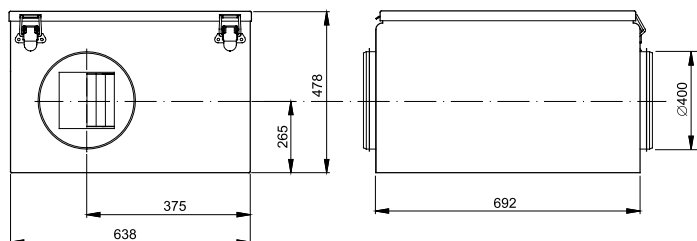


Pressure and flow

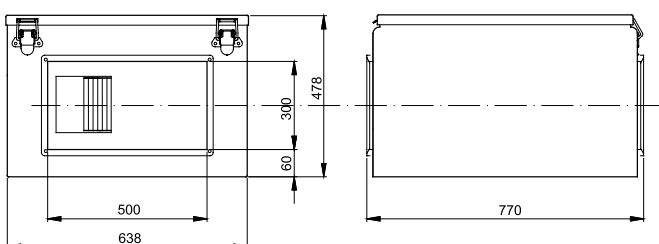


Measurements

IRE 400



IRE 50x30



Technical data

Insulated duct fan	IRE 400 D IRE 50x30 D	IRE 400 F IRE 50x30 F
Voltage, V/Hz	230/50	230/50
Current, A	2,1	4,7
Power, kW	0,47	1,00
Speed, Rpm	810	1200
Wiring diagram nr:	4040005	4040005
Weight, kg	50	50

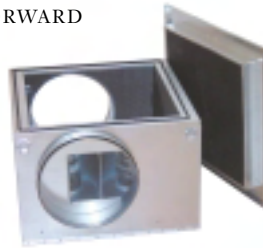
Pos. on transformer curve	1	2	3	4	5
1-phase, V	80	110	135	165	230

Sound data

		L _{pA}	L _{wA} tot dB(A)	63	125	250	500	1k	2k	4k	8k
IRE 400 D 370 l/s 190 Pa	Environment	39	46	42	36	40	40	39	35	36	37
	Inlet		62	54	57	56	53	52	50	47	37
	Outlet		71	62	65	63	65	65	60	60	49
IRE 400 F 440 l/s 430 Pa	Environment	46	53	46	46	49	45	45	43	43	41
	Inlet		68	58	63	65	58	57	56	53	45
	Outlet		78	67	67	69	71	74	69	68	60

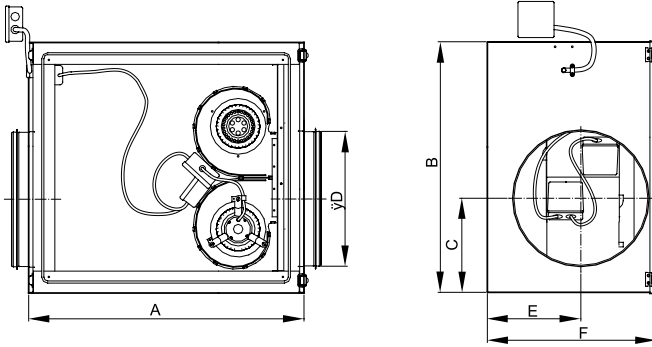
IRE 315 C, 355 C, 400 C

DOUBLE INLET RADIAL FANS WITH FORWARD CURVED IMPELLER



Measurements

IRE 315 C, 355 C, 400 C



Dimensions

	IRE 315 C	IRE 355 C	IRE 400 C
A	650	692	692
B	586	638	638
C	220	264	264
E	218	260	260
F	397	490	490
ØD	315	355	400

Technical data

Insulated duct fan

	IRE 315 C	IRE 355 C/400 C
Voltage, V/Hz	230/50	230/50
Current, A	1,7	2,3
Power, kW	0,39	0,54
Speed, Rpm	1450	1850
Wiring diagram nr:	4040021	4040021
Weight, kg	30	31

Pos. on transformer curve	1	2	3	4	5
1-phase, V	80	110	135	165	230

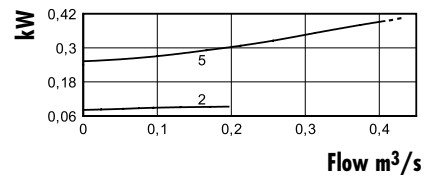
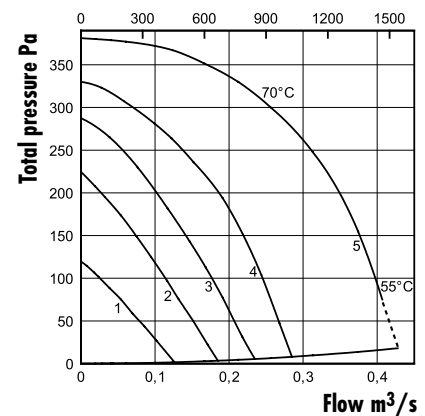
Sound data

		L _{pA}	L _{WA} tot dB(A)	63	125	250	500	1k	2k	4k	8k
IRE 315 C 310 l/s 250 Pa	Environment	37	44	29	36	37	41	35	31	39	36
	Inlet		63	46	56	55	54	54	55	52	44
	Outlet		72	51	58	59	61	65	69	64	57
IRE 355/ 400 C 450 l/s 250 Pa	Environment	39	46	32	37	38	42	39	34	33	27
	Inlet		67	54	61	61	57	55	58	54	48
	Outlet		76	59	64	63	65	69	73	68	60

Pressure and flow

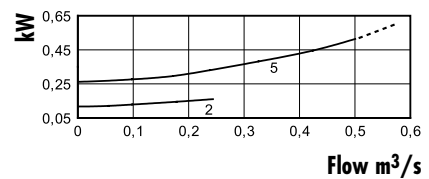
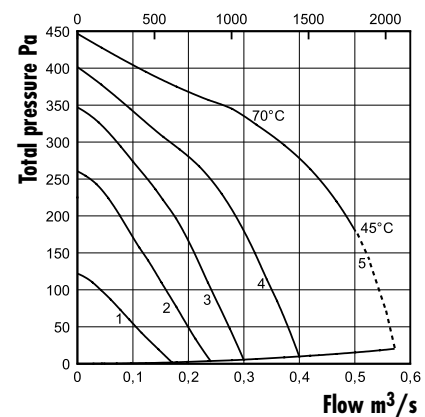
IRE 315 C

Flow m³/h



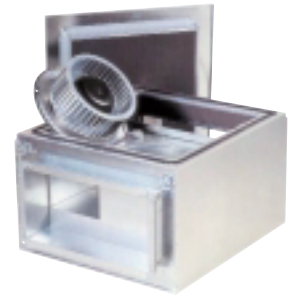
IRE 355 C / 400 C

Flow m³/h



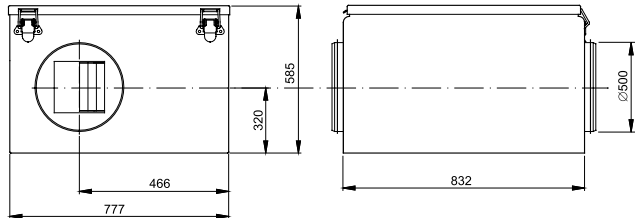
IRE 500 A / B / C / D / E / F IRE 60x35

SINGLE INLET RADIAL FAN WITH FORWARD CURVED IMPELLER

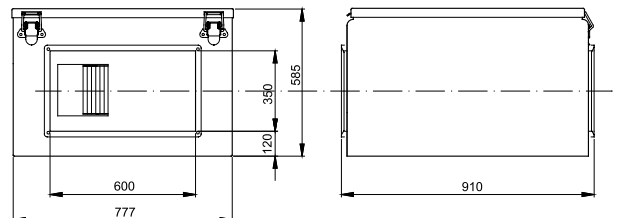


Measurements

IRE 500



IRE 60x35



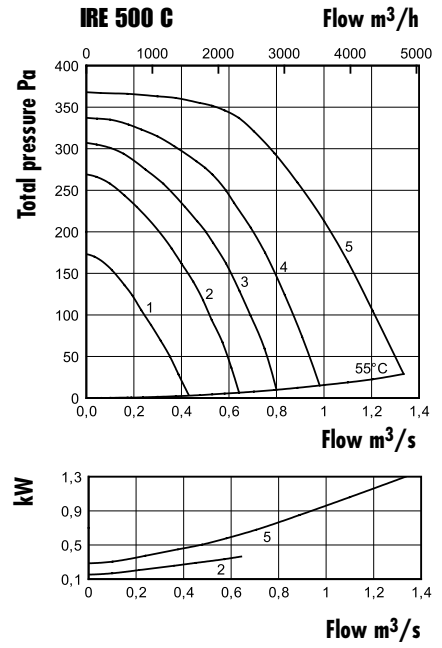
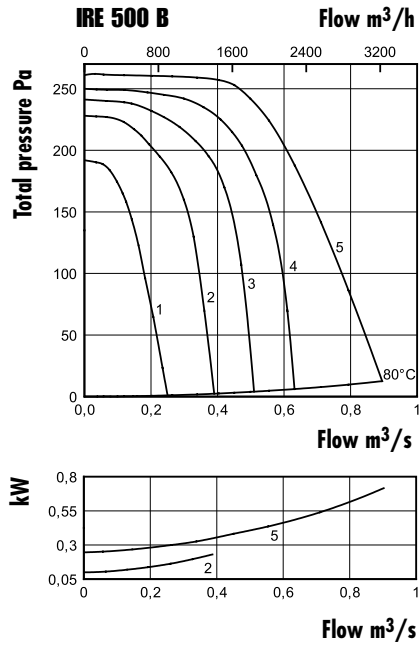
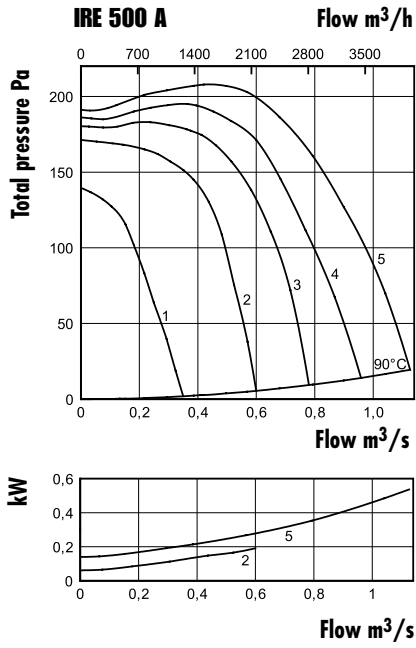
Technical data

Insulated duct fan	IRE 500 A IRE 60x35 A	IRE 500 B IRE 60x35 B	IRE 500 C IRE 60x35 C	IRE 500 D IRE 60x35 D	IRE 500 E IRE 60x35 E	IRE 500 F IRE 60x35 F
Voltage, V/Hz	400/50	230/50	400/50	230/50	400/50	400/50
Current, A	2,0	3,3	2,6	8,0	4,0	5,8
Power, kW	0,54	0,74	1,30	1,78	1,88	3,40
Speed, Rpm	690	850	800	1280	1380	1390
Wiring diagram nr:	4040004	4040005	4040004	4040005	4040004	4040004
Weight, kg	75	66	74	71	71	85

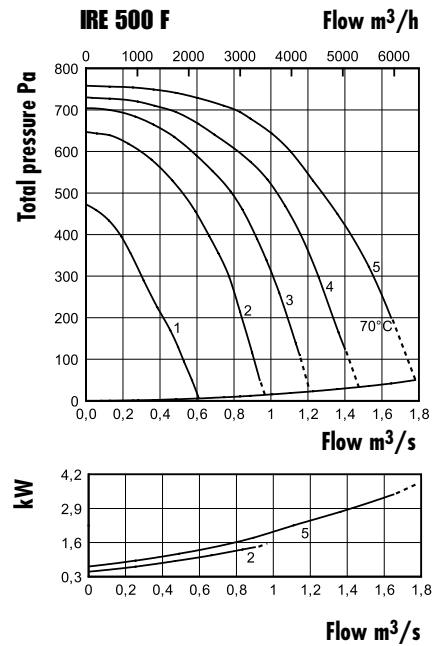
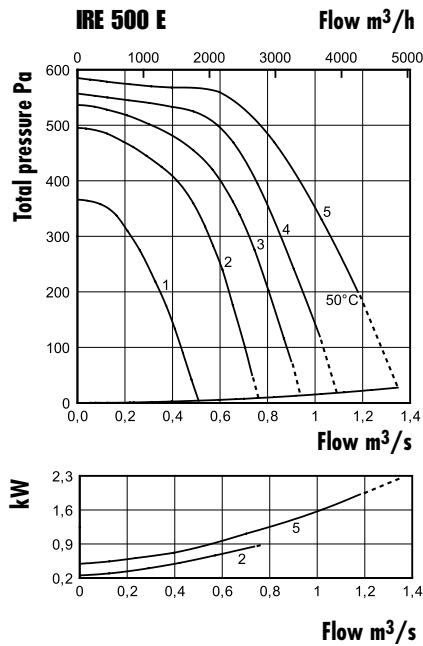
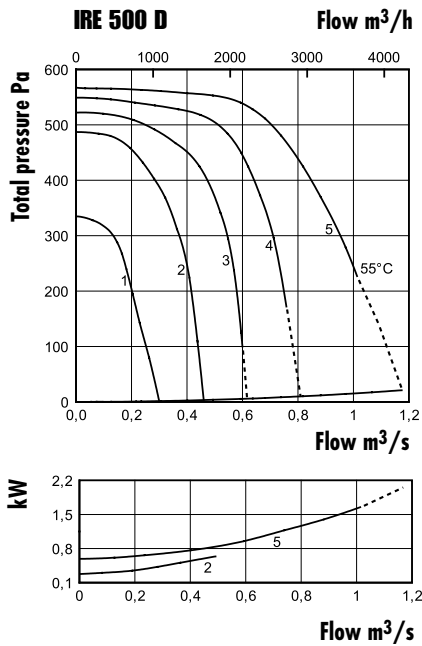
Sound data

		L _{pA}	L _{wA tot} dB(A)	63	125	250	500	1k	2k	4k	8k
IRE 500 A 570 l/s 200 Pa	Environment	42	49	42	36	44	46	41	39	39	37
	Inlet		62	55	57	56	53	52	53	50	38
	Outlet		73	58	59	63	68	68	67	65	51
IRE 500 B 560 l/s 220 Pa	Environment	43	50	42	38	46	45	41	41	40	37
	Inlet		63	54	57	59	54	54	53	51	40
	Outlet		74	57	59	64	68	69	68	66	54
IRE 500 C 700 l/s 320 Pa	Environment	44	51	43	41	44	45	46	39	38	38
	Inlet		69	59	62	59	59	62	61	62	55
	Outlet		80	59	64	66	70	75	74	74	67
IRE 500 D 820 l/s 430 Pa	Environment	52	59	53	48	54	53	52	52	50	43
	Inlet		73	64	67	69	62	65	65	61	53
	Outlet		86	67	72	75	77	82	81	78	68
IRE 500 E 830 l/s 470 Pa	Environment	52	59	53	47	52	52	53	53	51	45
	Inlet		73	64	68	65	64	66	66	63	55
	Outlet		87	67	72	75	78	83	81	78	68
IRE 500 F 830 l/s 700 Pa	Environment	55	62	55	51	56	54	55	56	55	49
	Inlet		77	67	72	68	64	69	71	67	59
	Outlet		88	67	73	75	78	85	82	79	69

Pressure and flow



Pos. on transformer curve	1	2	3	4	5
1-phase	80	110	135	165	230
3-phase, V	95	145	185	240	400

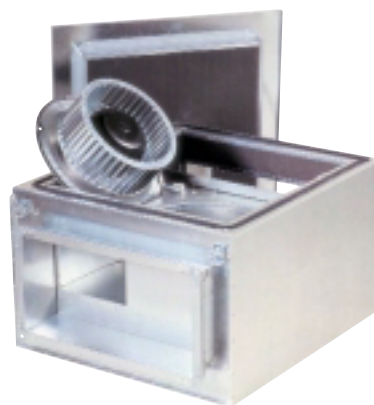


IRE 630 A, B, C, D, E IRE 80x50

SINGLE INLET RADIAL FAN WITH
FORWARD CURVED IMPELLER

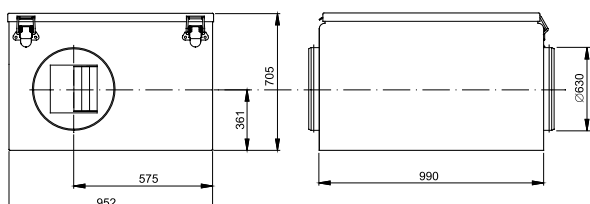


Mech-Elec

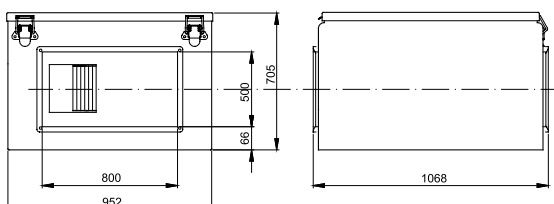


Measurements

IRE 630



IRE 60x35



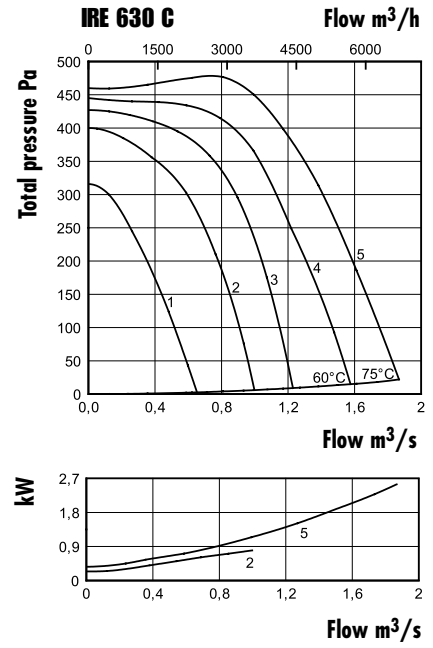
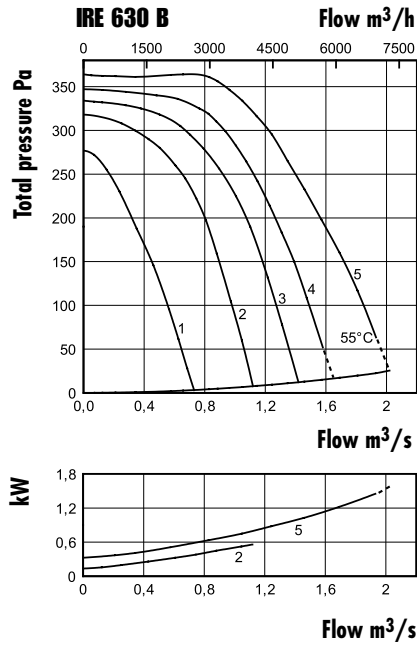
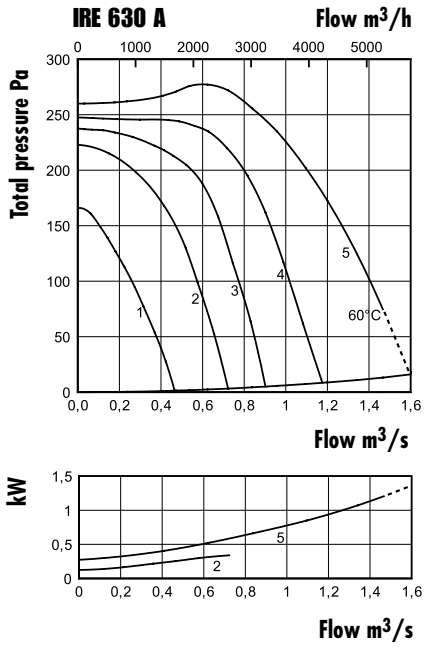
Technical data

Insulated duct fan	IRE 630 A IRE 630 80x50 A	IRE 630 B IRE 80x50 B	IRE 630 C IRE 80x50 C	IRE 630 D IRE 80x50 D	IRE 630 E IRE 80x50 E
Voltage, V/Hz	400/50	400/50	400/50	400/50	400/50
Current, A	2,8	4,8	4,7	7,0	8,9
Power, kW	1,20	1,48	2,54	4,00	3,21
Speed, Rpm	660	680	890	870	1390
Wiring diagram nr:	4040004	4040004	4040004	4040004	4040004
Weight, kg	86	105	94	105	96

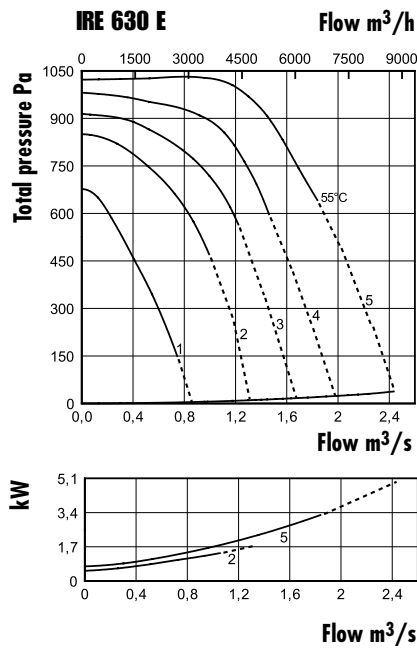
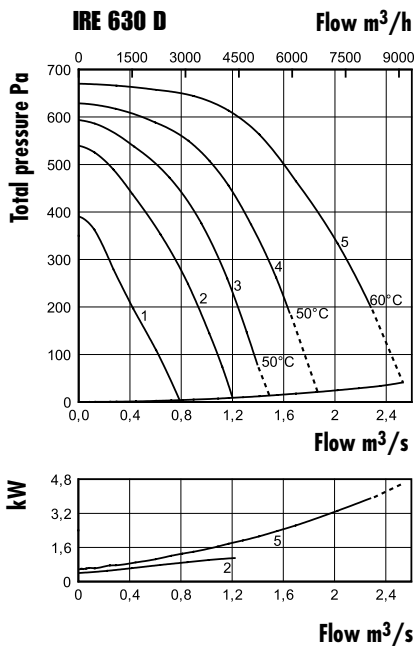
Sound data

		L _{pA}	L _{wA} tot dB(A)	63	125	250	500	1k	2k	4k	8k
IRE 630 A 960 l/s 230 Pa	Environment	45	52	44	43	47	48	41	43	39	37
	Inlet		64	56	58	55	53	57	56	53	41
	Outlet		79	66	67	69	73	73	73	69	57
IRE 630 B 960 l/s 350 Pa	Environment	48	55	46	44	49	52	46	48	43	38
	Inlet		67	59	62	58	56	61	60	57	46
	Outlet		79	65	66	68	73	74	74	69	58
IRE 630 C 810 l/s 480 Pa	Environment	45	52	46	45	46	47	43	45	42	39
	Inlet		68	60	63	57	56	61	61	57	47
	Outlet		79	63	66	67	72	74	74	70	58
IRE 630 D 1090 l/s 630 Pa	Environment	51	58	52	48	53	54	49	50	46	43
	Inlet		71	64	66	61	59	65	62	60	50
	Outlet		83	66	70	70	76	79	79	73	63
IRE 630 E 1180 l/s 1010 Pa	Environment	56	63	57	54	57	56	56	58	53	48
	Inlet		78	67	72	67	63	73	73	68	60
	Outlet		92	73	77	78	82	88	87	82	72

Pressure and flow



Pos. on transformer curve	1	2	3	4	5
3-phase, V	95	145	185	240	400



Directions for use

This directions for use contains following products: CK, CV, KV, RS, LPK, RK, RKC, IRE, IFK, IFA, TKK, TKS, TKC, RF, DF, CAU.

Description

- The fan is used for transportation of »clean« air, meaning not intended for fire-dangerous substances, explosives, grinding dust, soot, etc.
- The fan is equipped with an asynchronous external rotor induction motor with maintenance-free sealed ball-bearings.
- To achieve maximum life length for installations in damp or cold environments, the fan should be operating continuously.
- The fan can be installed outside or in damp environments. Make sure that the fan-house is equipped with drainage.
- All fans are as standard, single phase 230V, 50 Hz or 3-phase 230V/400V, 50 Hz.
- The fan can be installed vertically or horizontally.

Installation

- The fan must be installed according to the air direction label at the fan.
- The fan must be connected to duct or equipped with a safety grill.
- The fan should be installed in a safe way not to cause vibrations or risking the fan to fall of.
- The fan should be installed in a way that makes service and maintenance easy.
- To regulate the speed a transformer, a speed controller or a frequency converter can be connected.
- A wiring diagram is applied on the inside of the junction box.
- An external motor protection must be installed on products without connected thermo-protector, see wiring diagram.
- Electrical installations must be made by an authorized electrician.

Operation

Before starting, make sure that:

- the fan is installed and electrically connected in the correct way to ground and if possible equipped with a motor-protection.
- the current does not exceed more than +5 % of what is stated on the label.
- no foreign objects are placed in the fan and no noise appears when starting the fan.
- the rotation direction at 3-phase motors are according to the label.

How to handle

- The fan must be transported in its packing until installation. This prevents transport damages, scratches and the fan from getting dirty.

Maintenance

- Before service, maintenance or repair begins, the fan must be tension free and the impeller must have stopped.
- Consider the weight of the fan when removing larger fans to avoid jamming and contusions.
- The fan must be cleaned when needed, at least once per year to maintain the capacity and to avoid unbalance which may cause unnecessary damages on the bearings.
- The fan bearings are maintenance-free.
- When cleaning the fan, high-pressure cleaning or strong dissolvent must not be used. Cleaning should be done without dislodging or damaging the impeller.
- Make sure that there is no noise from the fan.

Fault detection

1. Make sure that there is tension to the fan.
2. Cut the tension and verify that the impeller is not blocked.
3. Check the thermo-contact/motor protector. If it is disconnected the cause of overheating must be taken care of, not to be repeated.
To restore the manual thermo-protector the tension will be cut for a couple of minutes. Larger motors than 1,6A may have manual resetting on the motor. If it has automatic thermo-protector the resetting will be done automatically when the motor is cold.
4. Make sure that the capacitor is connected, (single phase only) according to the wiring diagram.
5. If the fan still does not work, the first thing to do is to change the capacitor.
6. If nothing of this works, contact your fan supplier.
7. If the fan is returned to the supplier, it must be cleaned, the motor cable undamaged and a detailed nonconformity report enclosed.

Warranty

- The warranty is only valid under condition that the fan is used according to this »Directions for use«.

