



LRE/D Centrifugal Fan Series



RECTANGULAR CABINET FAN (LRE / D)

The Lti Rectangular Cabinet Fan units are the result of long experience in the development and manufacturing of ventilation systems. The partnership between highly motivated Lti employees and world known component suppliers guarantees quality products on the highest technical level and precise reliability.

The Lti advantages:

- modular system: Casings can be disassembled, if required. Easy installation.
- Minimum 25 mm perforated panels manufactured from pregalvanized mild steel sheet with non-flammable mineral wool infill, for thermal and acoustic insulation for LRE/D model
- All units are fitted with fans from the Lti range, with external rotor motors for the direct driven units
- Compact Design
- Low-Level Noise

The Lti quality:

Plug fans are installed in the Rectangular Cabinet Fans. The Lti - impeller with backward curved blades are driven by a speed controllable external rotor motor (IP 44 or IP 54) steel & aluminum impeller for all sizes except 190 to 250 with polyamide impeller.

These plug fans are mounted on a motor supporting frame; the motor and impeller assembly is balanced dynamically in two levels according to VDI 2060, quality 0 2,5.

Tolerances in accordance with technical conditions of supply of fans DIN 24166, class 3.

Panel insulation is provided by non flammable (A1) mineral fibre slab in accordance with DIN 4102.

Thermal insulation $K = 0,89 \text{ W/m}^2\text{K}$ in acc. with DIN 52210.

Sound insulation $RW = \text{appr. } 25 \text{ dB}$ in acc. with DIN 52210.

The Lti accessories:

- Speed controllers
- flexible connections
- counter flanges
- shutters

The Lti performance curves

Have been tested using a duct test chamber in accordance with DIN 24153. The values refer to an air density of $1,2 \text{ kg/m}^3$ at 20° C .

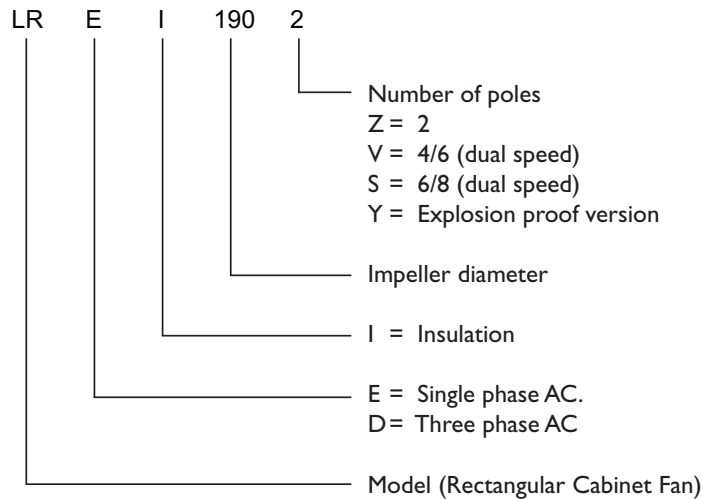
Noise Levels:

The technical data show the A-rated sound pressure levels LPA Tolerances in accordance with technical conditions of supply of fans DIN 24166, class 3. noise level $\text{ca. } 0,5 \times \text{LPA max}$.

The Lti selection criteria:

- Size
- Air volume
- Static pressure
- Sound requirements

Reference Code



Rated Data:

P₁ : Absorbed power at motor shaft [kW]
 P₂ : Power at shaft [kW]
 I_N : Rated current [A]
 n : Rated speed [l/min]
 C_{„°} : Operating capacitor [pF]
 t_R : Ambient temperature [°C] max.
 t_T : Medium temperature [°C] max.
 Iso.kl. : Insulation class motor
 I_A/ I_N : Proportion starting / rated current
 Gewicht : Total weight

GENERAL INFORMATION (LRE / D)

Amount of air exchanges / sound pressure (reference values)		
Room	Amount of LPA	
	Air Exchanges Max. Per Hour	[dB]
Toilets - private	5	40
Toilets - public	10-15	50
Bath rooms	5-8	45
Libraries	5	40
Offices	5-8	45
Dyeworks (Ex)	10-15	70
Colour spray	30-50	70
Works (Ex)		
Garages, public	5	70
Restaurants	10-12	55
Casinos	7	40
Class rooms	7	40
Cinemas	5-8	35
Conference rooms	8	45
Kitchens, private	20-25	50
Kitchens, public	25-30	60
Assembly works	5-8	65
Welding shops	20-30	80
Gymnasiums	5	50
Sales rooms	4-8	55
Assembly halls	5-10	45
Waiting rooms	6	45
Laundries	15-20	65
Work shops with polluted air		
highly polluted	10-20	70
lowly polluted	5	70
Living rooms		
day	3-6	40
night	3-6	30

Noise Levels

Influence of noise on the neighbourhood acc. to German standard TA Noise § 16.
The following sound pressure levels may not be exceeded:

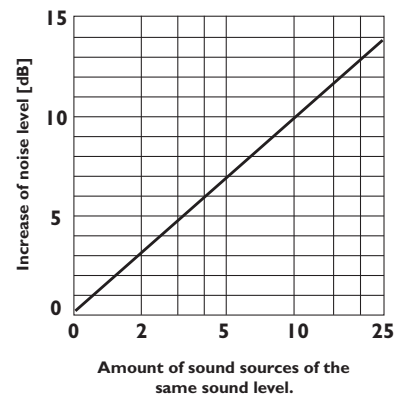
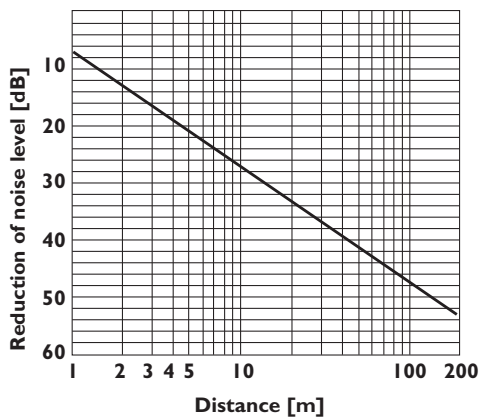
Area Noise level [dB(A)]		
	day	night
Industrial zones		
pure	70	70
mainly	65	50
Mixed area	60	45
Residential areas		
pure	55	30
mainly	55	40
Spa areas	45	35

Noise Level

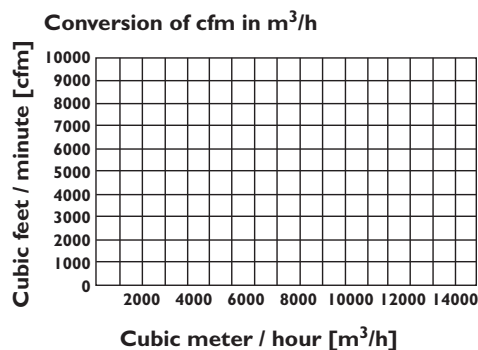
The approximate A-rated sound pressure level LPA in 1 m distance is obtained by deducting approx. 7 dB from the A-rated sound pressure level LWA .

This is valid for rooms with medium acoustic conditions. The real noise level during operation may deviate from the calculated values due to reflexions, special acoustic conditions etc.

Difference between sound pressure level and sound pressure level depending on the distance. Free sound spreading according to DIN 45 635 page 2.



Airflow Conversion Chart



$$\begin{aligned}
 1000 \text{ m}^3/\text{h} &= 588,5 \text{ cfm} \\
 1000 \text{ cfm} &= 1700 \text{ m}^3/\text{h} \\
 1 \text{ cfm} &= 1.7 \text{ m}^3/\text{h}
 \end{aligned}$$

SAFETY AND WARRANTY

Please note the following advice for installation and operation of Lti fans:

1. Safety rules:

- Before you do any work on the fan you must disconnect the electrical supply.
- The buyer is responsible that the local codes are being followed.
- During all maintenance work, also the electrical connections must be checked.

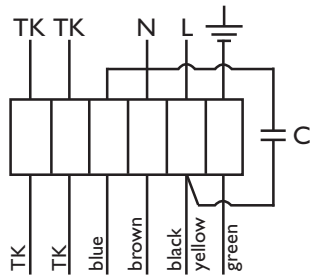
2. Warranty rules:

- The buyer is responsible for the selection and operation of the fan.
- The warranty is only valid for fans which are operating under normal conditions.
Warranty is valid only when thermal protection (TK) are used
- If the delivered goods show failures the customer can claim the exchange of the product or parts of it up to the amount of the buying price.
- Claims for secondary damages are not accepted.
- We reserve the right to change construction and design without notice, for the purpose of technical progress.

LRE

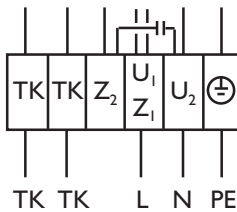
(External Rotor wiring Diagram)

Single Phase AC Motor 230V with operating capacitor and thermal contact.



Size 190 - 355

Clockwise – Rotation



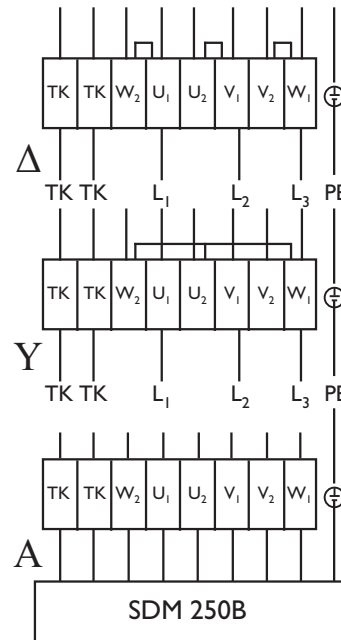
Size 400 - 500

- U1 = brown
- U2 = blue
- Z1 = black
- Z2 = orange
- TK = white
- PE = yellow

LRD

(External Rotor wiring Diagram)

Three phase Motor 400V, Three phase motor with 2 speeds by Δ / Y connection



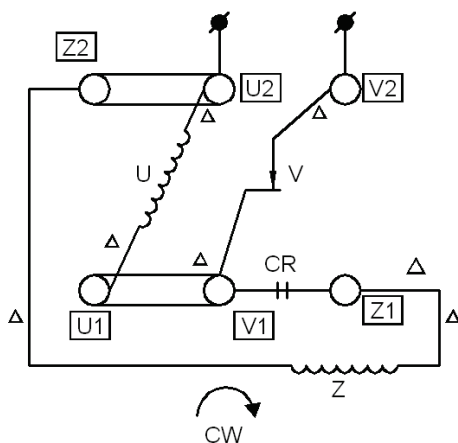
Size 400 - 500

- U1 = brown
- V1 = blue
- W1 = black
- U2 = red
- V2 = grey
- W2 = orange
- Δ = Connection for high speed
- Y = Connection for low speed
- A = Utilisation of SDM 250B

LRE

(Induction Motor Connection Diagram)

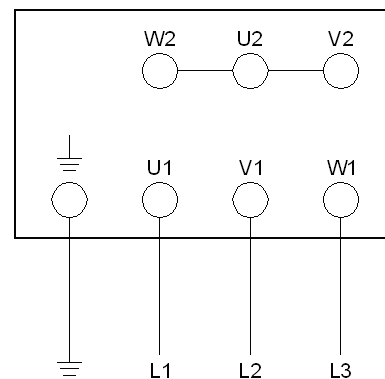
Single Phase AC Motor 230V



LRD

(Induction Motor Connection Diagram)

Three Phase AC Motor With Cage Rotor



STAR CONNECTION

TERMINAL BLOCK CONNECTION DIAGRAMS

IRRTUM UND TECHNISCHE ANDERUNGEN VORBEHALTEN!
NO LIABILITY FOR ERRORS!-SUBJECT TO TECHNICAL MODIFIOICATION

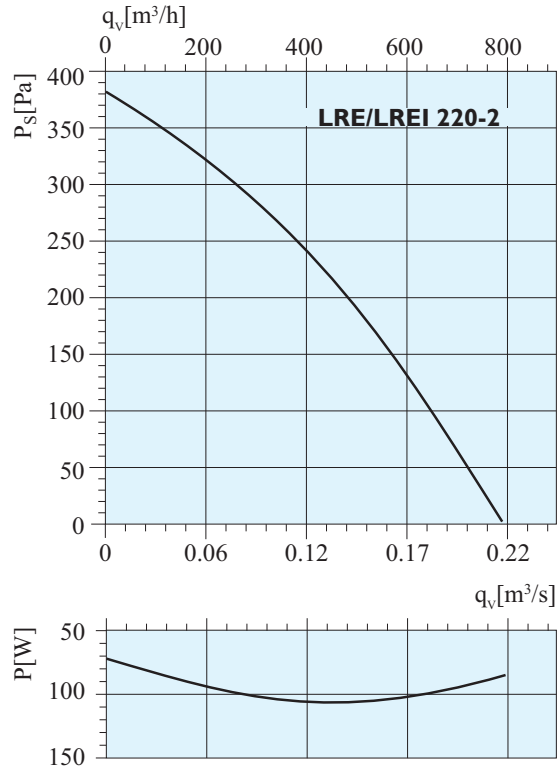
LRE 220-2 / LREI 220-2

- Speed-controllable
- Integral thermal contact
- Can be installed in any position
- I-Series with acoustic insulation for super quiet operation
- Maintenance-free and reliable
- Low level sound
- Backward curve centrifugal impeller

The LR series is designed for installation in ducts whereby the fans have backward curved blades and external rotor motors. The fans can be speed controlled via a stepless thyristor or a 5-step transformer.

LRE/I220-2 comes with polyamide backward curve centrifugal impeller gives high static pressure, high efficiency and very low sound level.

To protect the motor from overheating both models have integral thermal contacts with automatic reset. The casing is manufactured from galvanized sheet steel. The casing of LRE/I220-2 is made of galvanized steel sheet and 25 mm mineral wool with surface layer.



LRE220-2/LREI220-2

Voltage/Frequency	V/50 Hz	230
Phase	-	I
Power	W	105
Current	A	0.46
Maximum air flow	m³/s (m³/h)	0.22 (800)
R.p.m	min-I	2585
Max. temp. of transported air	°C	70
when speed-controlled	°C	70
Sound Pressure Level at 3m	dB(A)	43
Insulated Sound Pressure Level at 3m	dB(A)	35
Weight	Kg	7/8
Insulation class, motor		B
Enclosure class, motor		IP 44
Capacitor	uF	3
Motor protection		Aut.th.cont.
Speed control, five-step	Transformer	RE I.5
Speed control, five-step high/low	Transformer	REU I.5
Speed control, stepless	Thyristor	KB25

LRE220-2/LREI220-2

	Mid-Frequency band, Hz							
	63	125	250	500	1K	2K	4K	8K
L_{wA} Duct	47	56	64	63	66	65	59	49
$L_{v,A}$ Surrounding	30	33	31	42	44	46	39	31
With Insulation	22	25	23	34	36	38	31	21

Measuring point: $q_v = 0,167 \text{ m}^3/\text{s}$, $P_s = 130 \text{ Pa}$

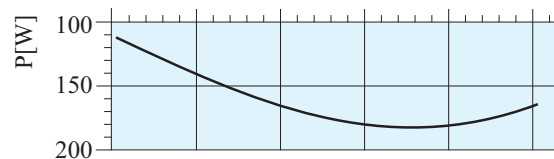
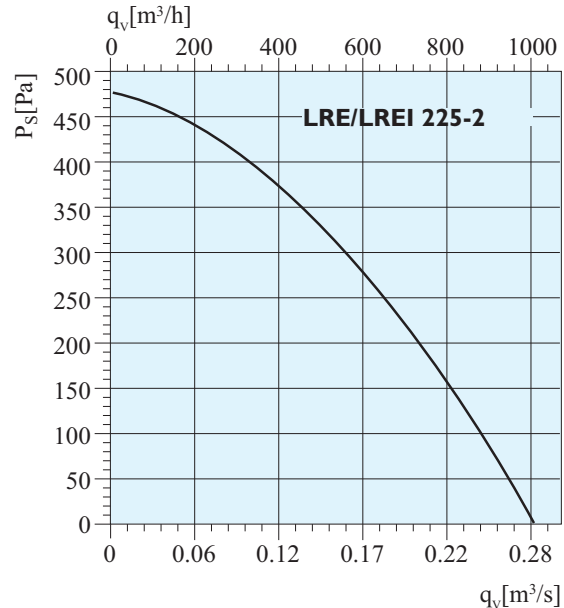
LRE/I 225-2

- Speed-controllable
- Integral thermal contact
- Can be installed in any position
- I-Series with acoustic insulation for super quiet operation
- Maintenance-free and reliable
- Low level sound
- Backward curve centrifugal impeller

The LR series is designed for installation in ducts whereby the fans have backward-curved blades and external rotor motors. The fans can be speed controlled via a stepless thyristor or a 5-step transformer.

LRE/I225-2 comes with polyamide backward curve centrifugal impeller gives high static pressure, high efficiency and very low sound level.

To protect the motor from overheating both models have integral thermal contacts with automatic reset. The casing is manufactured from galvanized sheet steel. The casing of LRE/I225-2 is made of galvanized steel sheet and 25 mm mineral wool with surface layer.



LRE/I225-2

Voltage/Frequency	V/50 Hz	230
Phase	-	I
Power	W	180
Current	A	0.84
Maximum air flow	m³/s (m³/h)	0.28 (1005)
R.p.m	min-I	2580
Max. temp. of transported air	°C	70
when speed-controlled	°C	70
Sound pressure level at 3 m	dB(A)	47
Insulated Sound Pressure Level at 3m	dB(A)	39
Weight	Kg	7/8
Insulation class, motor		B
Enclosure class, motor		IP 44
Capacitor	uF	4
Motor protection		Aut.th.cont.
Speed control, five-step	Transformer	RE I.5
Speed control, five-step high/low	Transformer	REU I.5
Speed control, stepless	Thyristor	KB25

LRE/I225-2

	Mid-Frequency band, Hz							
	63	125	250	500	1K	2K	4K	8K
L_{wA} Duct	56	61	68	67	65	64	58	52
$L_{v,A}$ Surrounding	53	40	43	51	55	51	47	41
With Insulation	45	32	35	43	47	43	39	33

Measuring point: $q_v = 0,238$ m³/s, $P_s = 106$ Pa

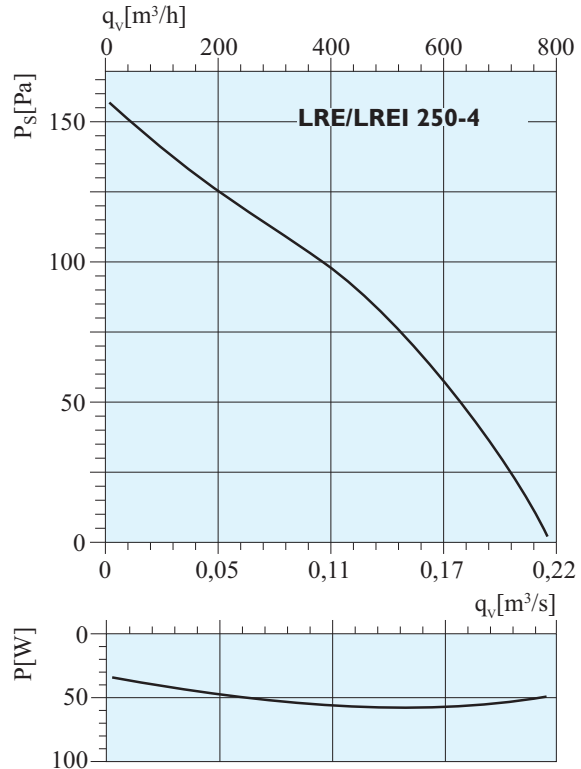
LRE 250-4 /LREI 250-4

- Speed-controllable
- Integral thermal contact
- Can be installed in any position
- I-Series with acoustic insulation for super quiet operation
- Maintenance-free and reliable
- Low level sound
- Backward curve centrifugal impeller

The LR series is designed for installation in ducts whereby the fans have backward-curved blades and external rotor motors. The fans can be speed-controlled via a stepless thyristor or a 5-step transformer.

LRE/I250-4 comes with polyamide backward curve centrifugal impeller gives high static pressure, high efficiency and very low sound level.

To protect the motor from overheating both models have integral thermal contacts with automatic reset. The casing is manufactured from galvanized sheet steel. The casing of LRE/I250-4 is made of galvanized steel sheet and 25 mm mineral wool with surface layer.



LRE250-4/LREI250-4

Voltage/Frequency	V/50 Hz	230
Phase	-	I
Power	W	43
Current	A	0.20
Maximum air flow	m^3/s (m^3/h)	0.216 (780)
R.p.m	min-I	1400
Max. temp. of transported air	$^{\circ}C$	70
when speed-controlled	$^{\circ}C$	70
Insulated Sound Pressure Level at 3m	dB(A)	38
Sound pressure level at 3m	dB(A)	30
Weight	Kg	9/10
Insulation class, motor		B
Enclosure class, motor		IP 44
Capacitor	μF	1.5
Motor protection		Aut.th.cont.
Speed control, five-step	Transformer	RE 1.5
Speed control, five-step high/low	Transformer	REU 1.5
Speed control, stepless	Thyristor	KB25

LRE250-4/LREI250-4

	Mid-Frequency band, Hz							
	63	125	250	500	1K	2K	4K	8K
L_{wA} Duct	57	62	69	68	66	65	59	53
$L_{v,A}$ Surrounding	49	36	39	47	51	47	43	37
With Insulation	41	28	31	39	43	39	35	29

Measuring point: $q_v = 0,238 m^3/s$, $P_s = 106 Pa$

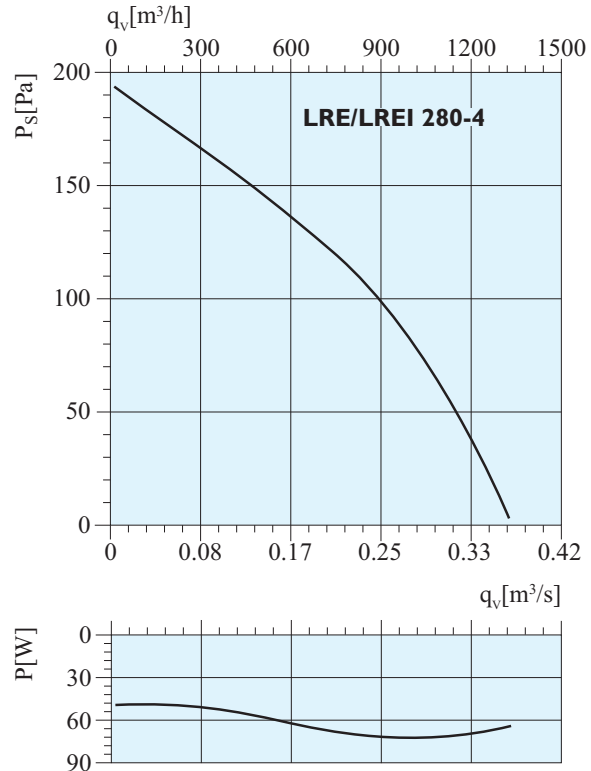
LRE 280-4 /LREI 280-4

- Speed-controllable
- Integral thermal contact
- Can be installed in any position
- I-Series with acoustic insulation for super quiet operation
- Maintenance-free and reliable
- Low level sound
- Backward curve centrifugal impeller

The LR series is designed for installation in ducts whereby the fans have backward-curved blades and external rotor motors. The fans can be speed controlled via a stepless thyristor or a 5-step transformer.

LRE/I280-4 comes with polyamide backward curve centrifugal impeller gives high static pressure, high efficiency and very low sound level.

To protect the motor from overheating both models have integral thermal contacts with automatic reset. The casing is manufactured from galvanized sheet steel. The casing of LRE/I280-4 is made of galvanized steel sheet and 25 mm mineral wool with surface layer.



LRE280-4/LREI280-4

Voltage/Frequency	V/50 Hz	230
Phase	-	I
Power	W	78
Current	A	0.35
Maximum air flow	m³/s (m³/h)	
R.p.m	min-I	1420
Max. temp. of transported air	°C	40
when speed-controlled	°C	45
Insulated Sound Pressure Level at 3m	dB(A)	39
Sound pressure level at 3m	dB(A)	31
Weight	Kg	12/13
Insulation class, motor		B
Enclosure class, motor		IP 44
Capacitor	uF	2.5
Motor protection		Aut.th.cont.
Speed control, five-step	Transformer	RE 1.5
Speed control, five-step high/low	Transformer	REU 1.5
Speed control, stepless	Thyristor	KB25

LRE280-4/LREI280-4

	Mid-Frequency band, Hz							
	63	125	250	500	1K	2K	4K	8K
L_{wA} Duct	60	65	72	71	69	68	62	56
$L_{v,A}$ Surrounding	51	38	41	49	53	49	45	39
With Insulation	43	30	33	41	45	41	37	31

Measuring point: $q_v = 0,238$ m³/s, $P_s = 106$ Pa

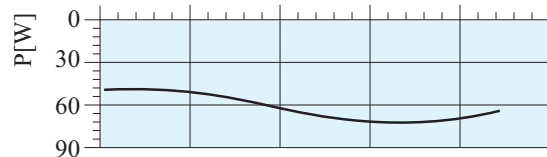
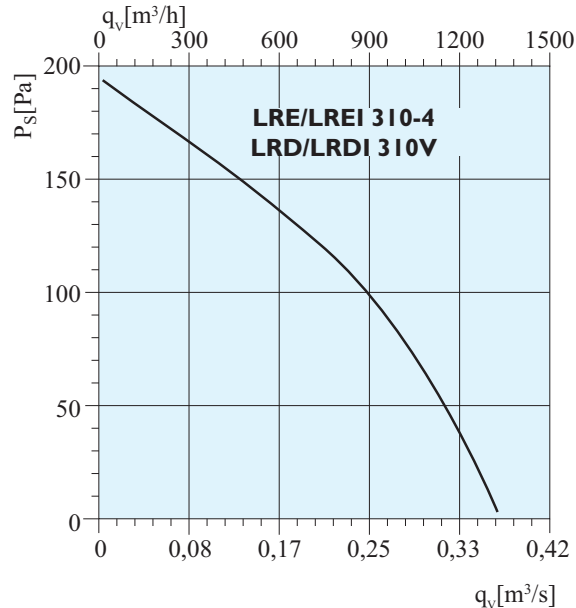
LRE/I 310-4 / LRD/I 310V (Dual Speed)

- Speed-controllable
- Integral thermal contact
- Can be installed in any position
- I-Series with acoustic insulation for super quiet operation
- Maintenance-free and reliable
- Low level sound
- Backward curve centrifugal impeller

The LR series is designed for installation in ducts whereby the fans have backward-curved blades and external rotor motors. The fans can be speed controlled via a stepless thyristor for single phase or a 5-step transformer for all models.

LR 310 series comes with aluminium backward curve centrifugal impeller gives high static pressure, high efficiency and very low sound level.

To protect the motor from overheating both models have integral thermal contacts. The casing is manufactured from galvanized sheet steel. The casing of LR 310 series is made of galvanized steel sheet and 25 mm rockwool with surface layer for the I model.



LRE310-4/LREI310-4/LRD310V(DualSpeed)

Voltage/Frequency	V/50 Hz	230V	400V
Phase	-	I	3
Power	W	150	180/110
Current	A	0.65	0.26/0.15
Maximum air flow	m ³ /h	1500	1116/ 1500
R.p.m	min-I	1390	1340/1030
Max. temp. of transported air	°C	45	45
when speed-controlled	°C	45	45
Sound pressure level at 3m	dB(A)	47	47/41
Insulated Sound Pressure Level at 3m	dB(A)	39	39/33
Weight	Kg	15/16	15/16
Insulation class, motor		B	B
Enclosure class, motor		IP 44	IP 44
Capacitor	Uf	4	-
Motor protection		STET I0B	STDT I6
Speed control, five-step	Transformer	RTRE I,5.	RTRD 2
Speed control, five-step high/low	Transformer	REU I.5	RTRDU 2
Two speed switch max 16A			SDM 250B
Speed control, stepless	Thyristor	KB25	
Speed control, electronic	Regular	REP,RET, REPT 6	CXET/AV+ PKDT 5

LRE310-4/LREI310-4 LRD310V(DualSpeed)

	Mid-Frequency band, Hz							
	63	125	250	500	1K	2K	4K	8K
L _{WA} Duct	41	54	55	56	56	52	50	40
L _{v,A} Surrounding	39	49	50	45	41	37	35	38
With Insulation	31	41	42	37	33	29	27	30

Measuring point: $q_v = 0,28 \text{ m}^3/\text{s}$, $P_s = 169 \text{ Pa}$

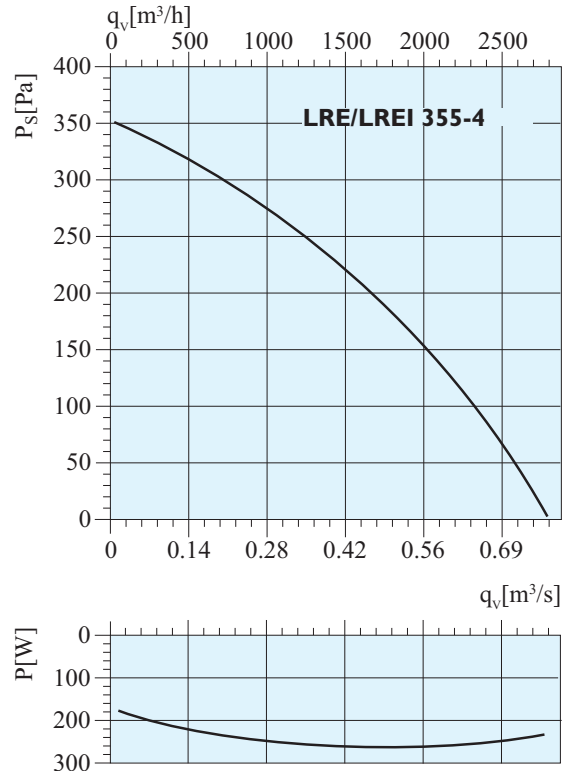
LRE/I 355-4

- Speed-controllable
- Integral thermal contact
- Can be installed in any position
- I-Series with acoustic insulation for super quiet operation
- Maintenance-free and reliable
- Low level sound
- Backward curve centrifugal impeller

The LR series is designed for installation in ducts whereby the fans have backward-curved blades and external rotor motors. The fans can be speed-controlled via a stepless thyristor or a 5-step transformer.

LRE/I355-4 comes with aluminium backward curve centrifugal impeller gives high static pressure, high efficiency and very low sound level.

To protect the motor from overheating both models have integral thermal contacts with automatic reset. The casing is manufactured from galvanized sheet steel. The casing of LRE/I355-4 is made of galvanized steel sheet and 25 mm rockwool with surface layer for the I model.



LRE/I355-4

Voltage/Frequency	V/50 Hz	230
Phase	-	I
Power	W	260
Current	A	1.14
Maximum air flow	m³/h	2800
R.p.m	min-I	1380
Max. temp. of transported air	°C	50
when speed-controlled	°C	50
Sound Pressure Level at 3m	dB(A)	53
Insulated Sound Pressure Level at 3m	dB(A)	45
Weight	Kg	20
Insulation class, motor		B
Enclosure class, motor		IP 44
Capacitor	uF	6
Motor protection		STET 10B
Speed control, five-step	Transformer	RTRE 1.5
Speed control, five-step high/low	Transformer	REU 1.5
Speed control, D/Y two step 400 V	Transformer	-
Speed control, stepless	Thyristor	KB25
Speed control, electronic		EFTV, RET, REP, REPT 6

LRE/I355-4

	Mid-Frequency band, Hz							
	63	125	250	500	1K	2K	4K	8K
L_{wA} Duct	45	58	61	63	62	60	55	48
$L_{v,A}$ Surrounding	38	52	54	48	55	52	47	44
With Insulation	30	44	46	40	47	44	39	40

Measuring point: $q_v = 0,33 \text{ m}^3/\text{s}$, $P_s = 270 \text{ Pa}$

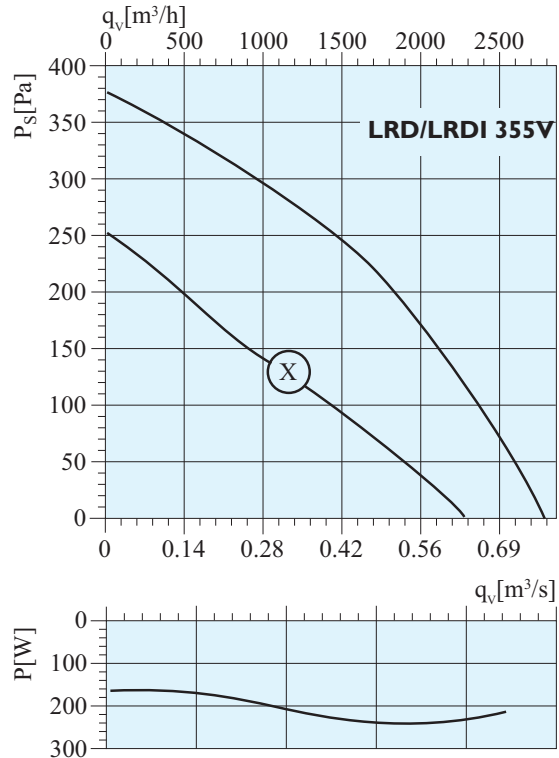
LRD/I355V(DualSpeed)

- Speed-controllable
- Two speed selection (4 / 6 pole)
- Integral thermal contact and acoustic insulation
- Can be installed in any position
- I-Series with acoustic insulation for super quiet operation
- Maintenance-free and reliable
- Low level sound
- Backward curve centrifugal impeller

The LR series is designed for installation in ducts whereby the fans have backward-curved blades and external rotor motors. The fans can be speed-controlled via a 5-step transformer.

LRE/I355V comes with aluminium backward curve centrifugal impeller gives high static pressure, high efficiency and very low sound level.

To protect the motor from overheating both models have integral thermal contacts. The casing is manufactured from galvanized sheet steel. The casing of LRD/I 355V is made of galvanized steel sheet and 25 mm rockwool with surface layer for the I model.



(X) 2-Speed version: Low speed

LRD/I355V(DualSpeed)

Voltage/Frequency	V/Hz	400
Phase	-	3
Power	W	335
Current	A	0.52
Maximum air flow	m ³ /h	2800/2450
R.p.m	min-I	1380/970
Max. temp. of transported air	°C	50
when speed-controlled	°C	50
Sound pressure level at 3m	dB(A)	53 / 37
Insulated Sound Pressure Level at 3m	dB(A)	45 / 29
Weight	Kg	20/21
Insulation class, motor		B
Enclosure class, motor		IP 44
Capacitor	Uf	-
Motor protection		STDT I6
Speed Control, five speed	Transformer	RTRD 2
Speed control, stepless	Thyristor	-
Speed control, electronic	Regular	CXET/ AV+PKDT5

LRD/I355V

	Mid-Frequency band, Hz							
	63	125	250	500	1K	2K	4K	8K
L _{wA} Duct	45	58	61	63	62	60	55	48
L _{v,A} Surrounding	38	52	54	48	55	52	47	44
With Insulation	30	44	46	40	47	44	39	40

Measuring point: q_v = 0,42 m³/s, P_s = 250 Pa

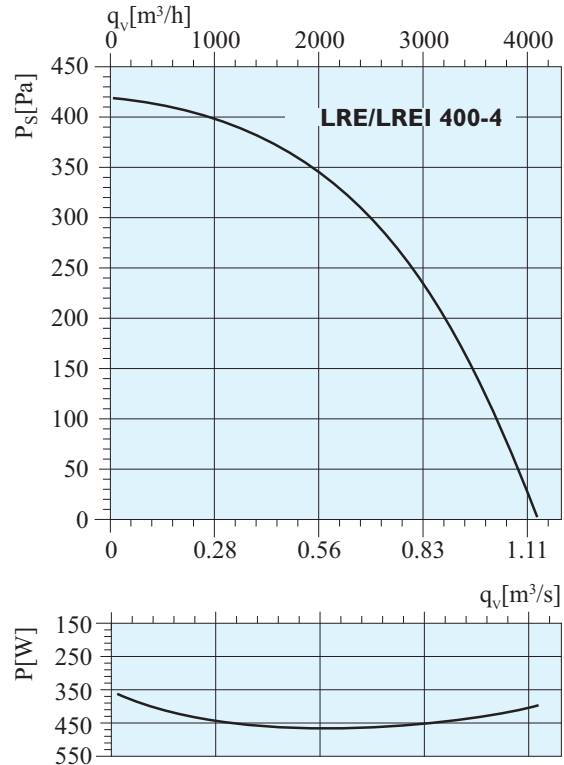
LRE/I 400-4

- Speed-controllable
- Integral thermal contact
- Can be installed in any position
- I-Series with acoustic insulation for super quiet operation
- Maintenance-free and reliable
- Low level sound
- Backward curve centrifugal impeller

The LR series is designed for installation in ducts whereby the fans have backward-curved blades and external rotor motors. The fans can be speed-controlled via a stepless thyristor or a 5-step transformer.

LRE/I 440-4 comes with aluminium backward curve centrifugal impeller gives high static pressure, high efficiency and very low sound level.

To protect the motor from overheating both models have integral thermal contacts. The casing is manufactured from galvanized sheet steel. The casing of LRE/I 400-4 is made of galvanized steel sheet and 25 mm rockwool with surface layer for the I model.



LRE/I400-4

Voltage/Frequency	V/50 Hz	230
Phase	-	I
Power	W	520
Current	A	2.2
Maximum air flow	m^3/h	3900
R.p.m	min-I	1360
Max. temp. of transported air	$^{\circ}C$	40
when speed-controlled	$^{\circ}C$	40
Sound pressure level at 3m	dB(A)	57
Insulated Sound Pressure Level at 3m	dB(A)	49
Weight	Kg	25
Insulation class, motor		F
Enclosure class, motor		IP 54
Capacitor	μF	10
Motor protection		STET 10B
Speed control, five-step	Transformer	RE 3
Speed control, five-step high/low	Transformer	REU 3
Speed control, D/Y two step 400V	Transformer	-
Speed control, stepless	Thyristor	KB25
Speed control, electronic		EFTV, RET, REP, REPT 6

LRE/I400-4

	Mid-Frequency band, Hz							
	63	125	250	500	1K	2K	4K	8K
L_{wA} Duct	48	63	65	66	65	64	60	52
$L_{v,A}$ Surrounding	35	53	57	59	58	55	50	43
With Insulation	27	45	49	51	50	47	42	35

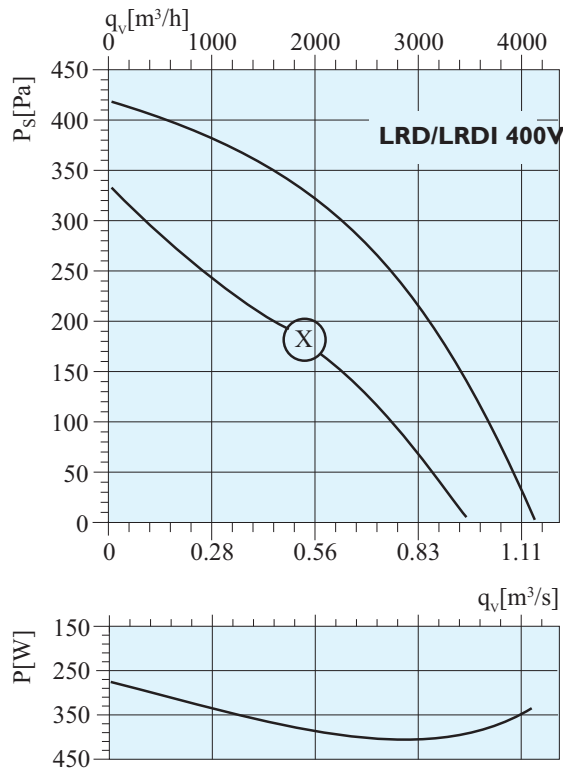
Measuring point: $q_v = 0,48 m^3/s$, $P_s = 365 Pa$

LRD/I 400V

- Speed-controllable
- Two speed selection (4/6 pole)
- Integral thermal contact and acoustic insulation
- Can be installed in any position
- I-Series with acoustic insulation for super quiet operation
- Maintenance-free and reliable
- Low level sound
- Backward curve centrifugal impeller

The LR series is designed for installation in ducts whereby the fans have backward-curved blades and external rotor motors. The fans can be speed-controlled via 5-step transformer.

LRE/I 400V comes with aluminium backward curve centrifugal impeller gives high static pressure, high efficiency and very low sound level. To protect the motor from overheating both models have integral thermal contacts. The casing is manufactured from galvanized sheet steel. The casing of LRD/I400V is made of galvanized steel sheet and minimum 25 mm rockwool with surface layer for the I model.



(X) 2-Speed version: Low speed

LRD/I400V

Voltage/Frequency	V/50 Hz	400V
Phase	-	3
Power	W	460/310
Current	A	0.85/0.5
Maximum air flow	m^3/h	4050/3400
R.p.m	min-I	1340/1060
Max. temp. of transported air	$^{\circ}C$	40
when speed-controlled	$^{\circ}C$	40
Sound pressure level at 3m	dB(A)	57 / 43
Insulated Sound Pressure Level at 3m	dB(A)	49 / 35
Weight	Kg	25/26
Insulation class, motor		F
Enclosure class, motor		IP 54
Capacitor	Uf	-
Motor protection		STDT 16
Speed control, five-step	Transformer	RTRD 2
Speed control, five-step high/low	Transformer	RTRDU 2
Two speed switch 230V max I6A		SDM 250B
Speed control, stepless	Thyristor	-
Speed control, electronic	Regular	CXET/AV+ PKDT 5

LRD/I400V

	Mid-Frequency band, Hz							
	63	125	250	500	1K	2K	4K	8K
L_{wA} Duct	48	63	65	66	65	64	60	52
$L_{v,A}$ Surrounding	35	53	57	59	58	55	50	43
With Insulation	27	45	49	51	50	47	42	35

Measuring point: $q_v = 0,56 m^3/s$, $P_s = 323 Pa$

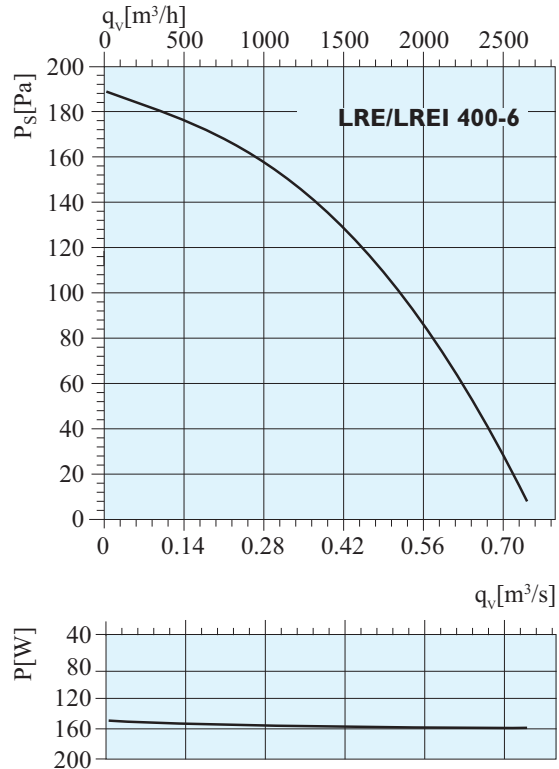
LRE/I 400-6

- Speed-controllable
- Integral thermal contact
- Can be installed in any position
- I-Series with acoustic insulation for super quiet operation
- Maintenance-free and reliable
- Low level sound
- Backward curve centrifugal impeller

The LR series is designed for installation in ducts whereby the fans have backward-curved blades and external rotor motors. The fans can be speed-controlled via a stepless thyristor or a 5-step transformer.

LRE/I 400-6 comes with aluminium backward curve centrifugal impeller gives high static pressure, high efficiency and very low sound level.

To protect the motor from overheating both models have integral thermal contacts with automatic reset. The casing is manufactured from galvanized sheet steel. The casing of LRE/I 400-6 is made of galvanized steel sheet and 25 mm rockwool with surface layer for the I model.



LRE/I400-6

Voltage/Frequency	V/50 Hz	230
Phase	-	I
Power	W	160
Current	A	0.75
Maximum air flow	m³/h	2500
R.p.m	min-I	860
Max. temp. of transported air	°C	40
when speed-controlled	°C	40
Sound Pressure Level at 3m	dB(A)	43
Insulated Sound Pressure level at 3m	dB(A)	35
Weight	Kg	25/26
Insulation class, motor		F
Enclosure class, motor		IP 54
Capacitor	uF	5
Motor protection		STET 10B
Speed control, five-step	Transformer	RTRE 1.5
Speed control, five-step high/low	Transformer	REU 1.5
Speed control, D/Y two step 400 V	Transformer	-
Speed control, stepless	Thyristor	KB25
Speed control, electronic		EFTV, RET, REP, REPT

LRE/I400-6

	Mid-Frequency band, Hz							
	63	125	250	500	1K	2K	4K	8K
L_{wA} Duct	48	63	65	66	65	64	60	52
$L_{v,A}$ Surrounding	35	53	57	59	58	55	50	43
With Insulation	27	45	49	51	50	47	42	35

Measuring point: $q_v = 0,44 \text{ m}^3/\text{s}$, $P_s = 125 \text{ Pa}$

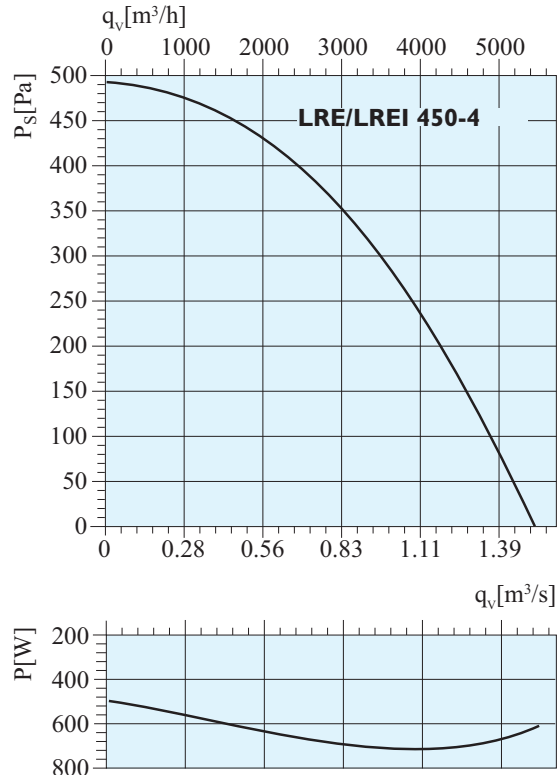
LRE/I 450-4

- Speed-controllable
- Integral thermal contact
- Can be installed in any position
- I-Series with acoustic insulation for super quiet operation
- Maintenance-free and reliable
- Low level sound
- Backward curve centrifugal impeller

The LR series is designed for installation in ducts whereby the fans have backward-curved blades and external rotor motors. The fans can be speed-controlled via a stepless thyristor or a 5-step transformer.

LRE/I 450-4 comes with aluminium backward curve centrifugal impeller gives high static pressure, high efficiency and very low sound level.

To protect the motor from overheating both models have integral thermal contacts. The casing is manufactured from galvanized sheet steel. The casing of LRE/I450-4 is made of galvanized steel sheet and minimum 25 mm rockwool with surface layer for the I model.



LRE/I450-4

Voltage/Frequency	V/50 Hz	230
Phase	-	I
Power	W	740
Current	A	3.50
Maximum air flow	m^3/h	5500
R.p.m	min-I	1280
Max. temp. of transported air	$^{\circ}C$	60
when speed-controlled	$^{\circ}C$	60
Sound Pressure Level at 3m	dB(A)	60
Insulated Sound Pressure Level at 3m	dB(A)	52
Weight	Kg	30
Insulation class, motor		F
Enclosure class, motor		IP 54
Capacitor	μF	16
Motor protection		STET 10B
Speed control, five-step	Transformer	RTRE 5
Speed control, five-step high/low	Transformer	REU 5
Speed control, D/Y two step 400 V	Transformer	-
Speed control, stepless	Thyristor	KB25
Speed control, electronic		EFTV, RET, REP, REPT

LRE/I450-4

	Mid-Frequency band, Hz							
	63	125	250	500	1K	2K	4K	8K
L_{wA} Duct	42	63	67	67	66	65	62	53
$L_{v,A}$ Surrounding	38	56	60	62	61	58	53	46
With Insulation	30	48	52	54	53	50	45	38

Measuring point: $q_v = 1,06 m^3/s$, $P_s = 250 Pa$

LRD/I 450V (DuafI Speed)

- Speed-controllable
- Two speed selection (4/6 pole)
- Integral thermal contact and acoustic insulation
- Can be installed in any position
- I-Series with acoustic insulation for super quiet operation
- Maintenance-free and reliable
- Low level sound
- Backward curve centrifugal impeller

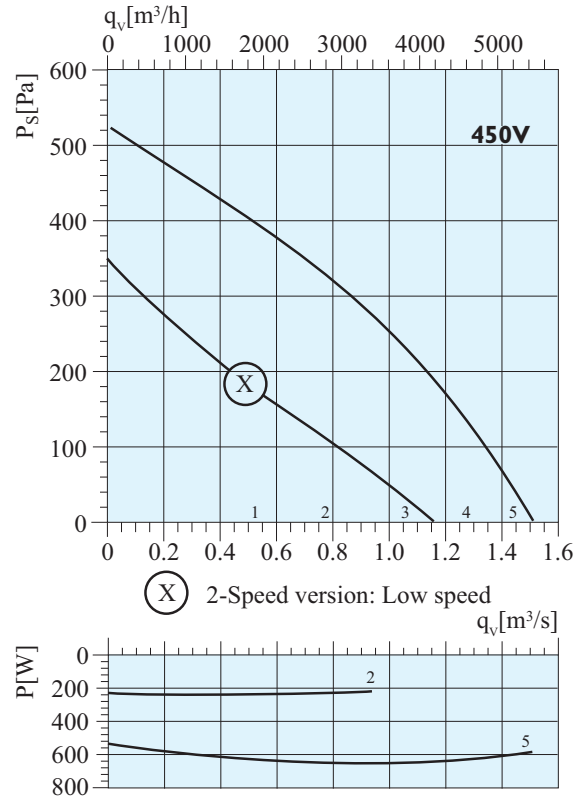
The LR series is designed for installation in ducts whereby the fans have backward-curved blades and external rotor motors. The fans can be speed-controlled via a 5-step transformer.

LRE/I 450V comes with aluminium backward curve centrifugal impeller gives high static pressure, high efficiency and very low sound level.

To protect the motor from overheating both models have integral thermal contacts. The casing is manufactured from galvanized sheet steel. The casing of LRD/I 450V is made of galvanized steel sheet and minimum 25 mm rockwool with surface layer for the I model.

LRD/I450V(DualSpeed)

Voltage/Frequency	V/50 Hz	400V
Phase	-	3
Power	W	690
Current	A	1.30
Maximum air flow	m ³ /h	5500/5000
R.p.m	min-I	1230/870
Max. temp. of transported air	°C	40
when speed-controlled	°C	40
Sound pressure level at 3m	dB(A)	60 / 44
Insulated Sound Pressure Level at 3m	dB(A)	52 / 36
Weight	Kg	30
Insulation class, motor		F
Enclosure class, motor		IP 54
Capacitor	Uf	-
Motor protection		STDT 16
Speed control, five-step	Transformer	RTRD 2
Speed control, five-step high/low	Transformer	RTRDU 2
Two speed switch max I6A		SDM 250B
Speed control, stepless	Thyristor	-
Speed control, electronic	Regular	CXET/AV+ PKDT 5



LRD/I450V(DualSpeed)

	Mid-Frequency band, Hz							
	63	125	250	500	1K	2K	4K	8K
L_{wA} Duct	42	63	67	67	66	65	62	53
$L_{v,A}$ Surrounding	38	56	60	62	61	58	53	46
With Insulation	30	48	52	54	53	50	45	38

Measuring point: $q_v = 0.81$ m³/s, $P_s = 325$ Pa

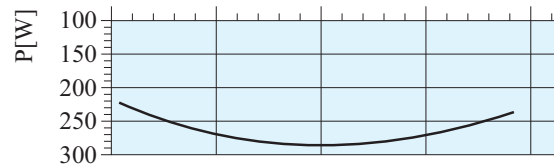
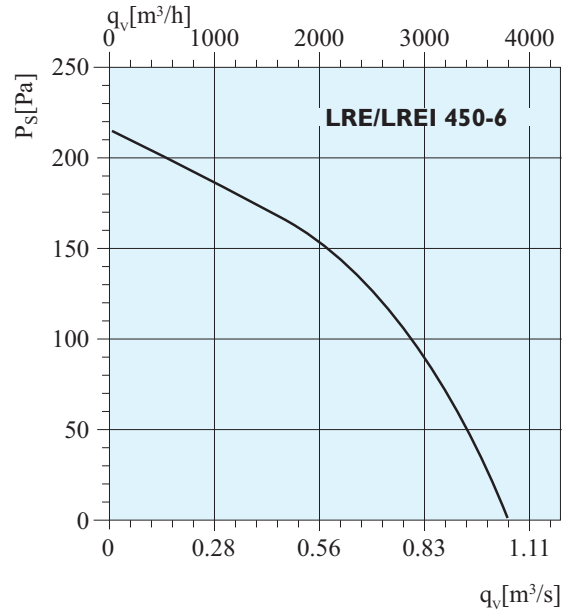
LRE 450-6

- Speed-controllable
- Integral thermal contact
- Can be installed in any position
- I-Series with acoustic insulation for super quiet operation
- Maintenance-free and reliable
- Low level sound
- Backward curve centrifugal impeller

The LR series is designed for installation in ducts whereby the fans have backward-curved blades and external rotor motors. The fans can be speed-controlled via a stepless thyristor or a 5-step transformer.

LRE/I 450-6 comes with aluminium backward curve centrifugal impeller gives high static pressure, high efficiency and very low sound level.

To protect the motor from overheating both models have integral thermal contacts with automatic reset. The casing is manufactured from galvanized sheet steel. The casing of LRE/I450-6 is made of galvanized steel sheet and minimum 25mm rockwool with surface layer for the I model.



LRE/I450-6

Voltage/Frequency	V/50 Hz	230
Phase	-	I
Power	W	300
Current	A	1.65
Maximum air flow	m³/h	3950/3550
R.p.m	min-I	840
Max. temp. of transported air	°C	50
when speed-controlled	°C	50
Sound Pressure Level at 3m	dB(A)	44
Insulated Sound Pressure Level at 3m	dB(A)	36
Weight	Kg	30
Insulation class, motor		F
Enclosure class, motor		IP 54
Capacitor	uF	8
Motor protection		STET I0B
Speed control, five-step	Transformer	RTRE 3
Speed control, five-step high/low	Transformer	REU 3
Speed control, D/Y two step 400 V	Transformer	-
Speed control, stepless	Thyristor	KB25
Speed control, electronic		EFTV, RET, REP, REPT

LRE/I450-6

	Mid-Frequency band, Hz							
	63	125	250	500	1K	2K	4K	8K
L_{wA} Duct	42	63	67	67	66	65	62	53
$L_{v,A}$ Surrounding	38	56	60	62	61	58	53	46
With Insulation	30	48	52	54	53	50	45	38

Measuring point: $q_v = 0,58 \text{ m}^3/\text{s}$, $P_s = 155 \text{ Pa}$

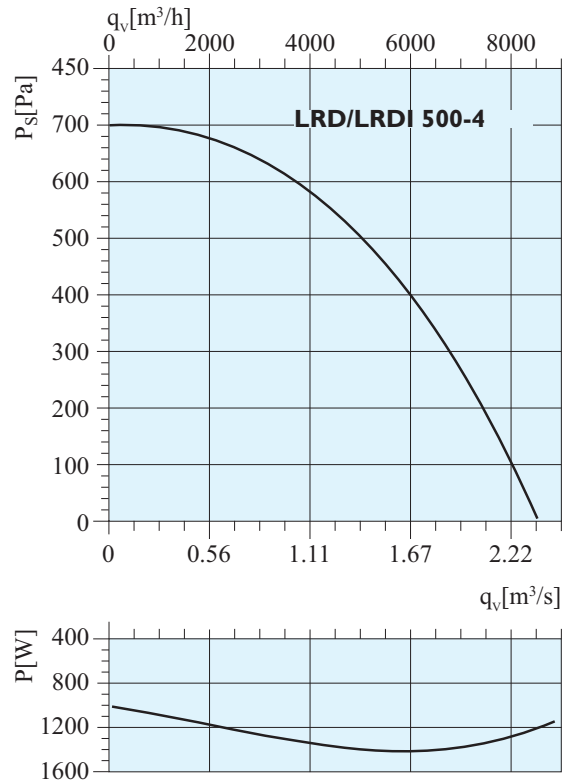
LRD/I 500-4

- Speed-controllable
- Dual speed motor possible
- Can be installed in any position
- I-Series with acoustic insulation for super quiet operation
- Maintenance-free and reliable
- Low level sound
- Backward curve centrifugal impeller

The LRD/I 500 series is designed for installation in ducts whereby the fans have backward-curved blades and external rotor motors. The motor has the option to be out of air stream using high efficiency induction motor. This version is best used for kitchen exhaust. The fan can be speed controlled via a frequency inverter

LRD/I 500 comes with aluminium backward curve centrifugal impeller which gives high static pressure, high efficiency and very low sound level.

The casing of LRD/I 500 is made of galvanized steel sheet and minimum 25 mm rockwool with surface layer for the I model.



LRD/I500-4

Voltage/Frequency	V/50 Hz	400V
Phase	-	3
Power	W	1500
Current	A	3.8
Maximum air flow	m³/h	8500
R.p.m	min-l	1410
Max. temp. of transported air	°C	40
when speed-controlled	°C	40
Sound pressure level at 3m	dB(A)	63
Insulated Sound Pressure Level at 3m	dB(A)	56
Weight	Kg	60
Insulation class, motor		F
Enclosure class, motor		IP 55
Capacitor	Uf	-
Motor protection		Thermal Overload Frequency Inverter
Speed control, electronic	Regular	

LRD/I500-4

	Mid-Frequency band, Hz							
	63	125	250	500	1K	2K	4K	8K
L_{wA} Duct	42	60	64	66	65	62	57	50
$L_{v,A}$ Surrounding	40	58	62	63	63	60	55	48
With Insulation	34	52	56	58	57	54	49	42

Measuring point: $q_v = 1,35 \text{ m}^3/\text{s}$, $P_s = 380 \text{ Pa}$

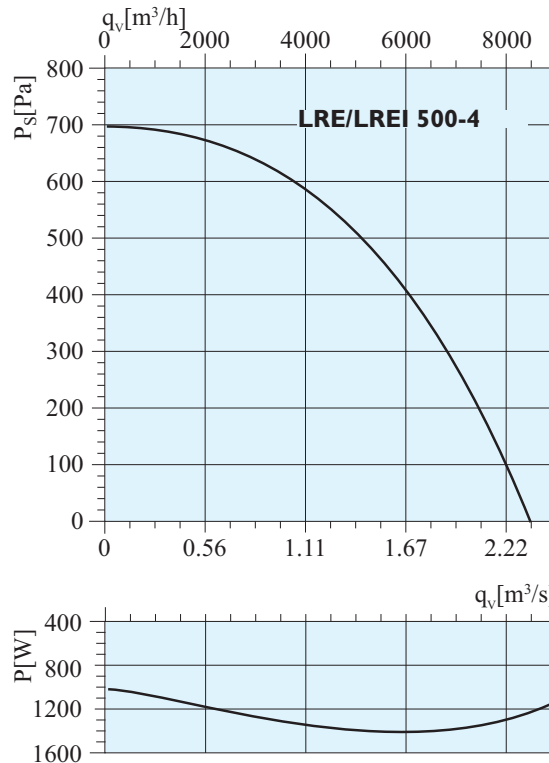
LRE/I 500-4

- Can be installed in any position
- I-Series with acoustic insulation for super quiet operation
- Maintenance-free and reliable
- Low level sound
- Backward curve centrifugal impeller

The LRE/I 500 series is designed for installation in ducts whereby the fans have backward-curved blades and external rotor motor. The motor has the option to be out of air stream using high efficiency induction motor. This version is best used for kitchen exhaust.

LRE/I 500-4 comes with aluminium backward curve centrifugal impeller whereby it gives high static pressure, high efficiency and very low sound level.

To protect the motor from overheating both models need to install external thermal overload protection. The casing is manufactured from galvanized sheet steel. The casing of LRE/I500-4 is made of galvanized steel sheet and minimum 25 mm rockwool with surface layer for the I model.



LRE/I500-4

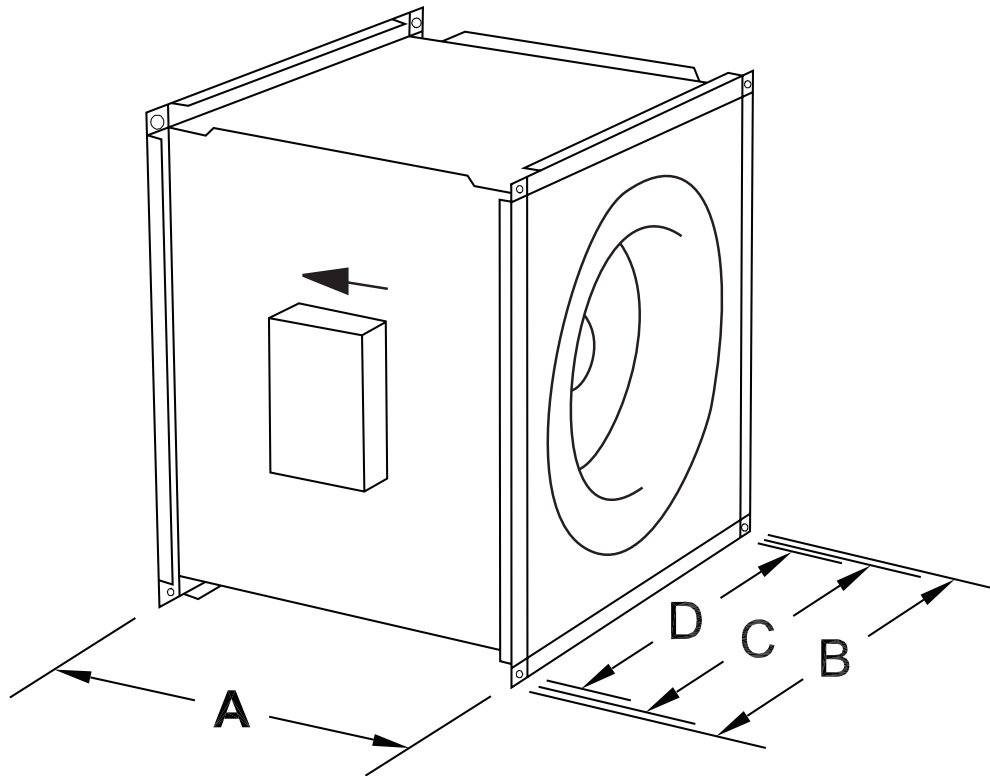
Voltage/Frequency	V/50 Hz	230
Phase	-	I
Power	W	1100
Current	A	7.00
Maximum air flow	m^3/h	8500
R.p.m	min-I	1410
Max. temp. of transported air	$^{\circ}C$	40
when speed-controlled	$^{\circ}C$	40
Sound Pressure Level at 1m	dB(A)	63
Insulated Sound Pressure Level at 3m	dB(A)	56
Weight	Kg	60
Insulation class, motor		F
Enclosure class, motor		IP 55
Capacitor	μF	25
Motor protection		Thermal Overload
Speed control		NA

LRE/I500-4

	Mid-Frequency band, Hz							
	63	125	250	500	1K	2K	4K	8K
L_{wA} Duct	42	60	64	66	65	62	57	50
$L_{v,A}$ Surrounding	40	58	62	63	63	60	55	48
With Insulation	34	52	56	58	57	54	49	42

Measuring point: $q_v = 1.35 m^3/s$, $P_s = 380 Pa$

DIMENSIONS



LRE/LRD	A	B	C	D	LREI/LRDI	A	B	C	D
190	250	400	375	350	190	250	400	375	350
220	250	400	375	350	220	250	400	375	350
225	250	400	375	350	225	250	400	375	350
250	250	400	375	350	250	250	400	375	350
280	400	450	425	400	280	400	450	425	400
310	400	450	425	400	310	500	550	525	500
355	500	550	525	500	355	500	550	525	500
400	600	650	625	600	400	600	650	625	600
450	600	650	625	600	450	600	650	625	600
500	650	710	680	650	500	650	710	680	650

Note:

Side discharge is possible upon request.

Please contact the nearest Lti Company for any special request.