

Box

Centrifugal fans for rectangular ducts

Use

- Supply and exhaust ventilation systems installed in various premises.
- Compatible with 400x200 up to 1000x500 mm rectangular air ducts.



Air flow:
up to 15 000 m³/h
4167 l/s



Power:
from 136 W



Noise level:
from 50 dBA



Design

- Atmospheric resistant galvanized steel casing and impeller.
- The fan is rated for continuous operation.
- Fitted with standard 20 mm connecting flanges for connection to rectangular air ducts.
- Access cover on the casing for inspection and maintenance operations.
- The fan is equipped with a built-in terminal box with a leaded outside sealed electrical lead-in for connection to power mains.

Motor

- Two- or four-pole asynchronous motor with external rotor and centrifugal impeller with backward curved blades.
- Single-phase (**E**) or three-phase (**D**) motor modifications.
- Equipped with ball bearings for longer service life.
- Dynamically balanced turbine.
- Overheating protection by built-in thermal switches with automatic restart or with leaded outside terminals for connection to external protecting controls.
- The thermal switch terminal leads are designed for connection to respective circuit of the contactor, overload relay or respective terminals of the autotransformer or thyristor speed controller.

Speed control

- Smooth speed control with an external thyristor controller or step speed control with an external auto transformer (both available upon separate order).

Mounting

- The fan is designed for mounting inside rectangular air ducts and can be installed in any position.
- The fan flanges are connected to the air ducts through the bolts inserted into the flange holes.
- The fan is suitable for mounting into round duct at intake flange with a round reducer (available upon separate order).
- If vibration-absorbing flexible connectors are used to connect the fan to the air ducts provide their fixation to mounting structures with supports or brackets.
- While mounting provide enough space for accessing the cover for service operations.

Designation key

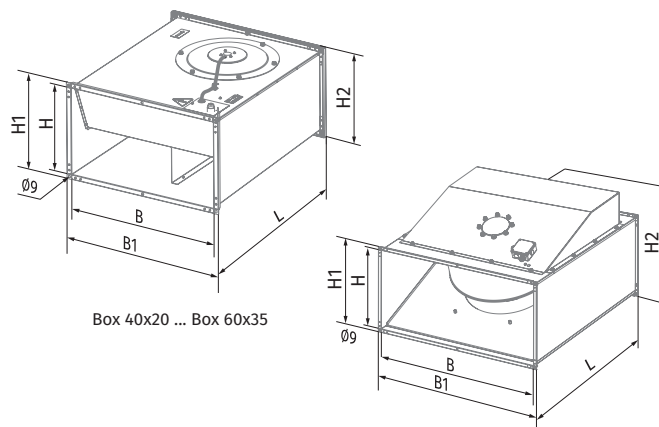
Series	Flange size (width x height) [cm]	Motor Number of poles	Phase
Box	40x20; 50x25; 50x30; 60x30; 60x35; 100x50	2, 4	E: single-phase D: three-phase

Accessories

Silencer	Filter box	Filter box with pocket filter	Electric heater	Water heater	Air damper	Gravity damper	Flexible antivibration connector	Speed controller
								
SD	KFBK	KFBT	EKH	WKH	SL	VG	EVA	CDTE 1.8

Overall dimensions [mm]

Type	B	B1	H	H1	H2	L	Weight [kg]
Box 40x20 2E	400	440	200	240	240	500	11.25
Box 50x25 2E	500	540	250	290	290	640	17.88
Box 50x30 4E	500	540	300	340	340	680	19.80
Box 50x30 4D	500	540	300	340	340	680	19.80
Box 60x30 4E	600	640	300	340	342	680	27.77
Box 60x30 4D	600	640	300	340	342	680	27.77
Box 60x35 4E	600	640	350	390	390	735	36.38
Box 60x35 4D	600	640	350	390	390	735	36.38
Box 100x50 4D	1000	1040	500	540	720	1150	126.0



Box 100x50 4D

Technical data

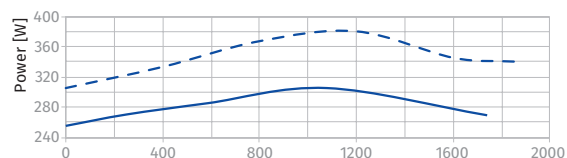
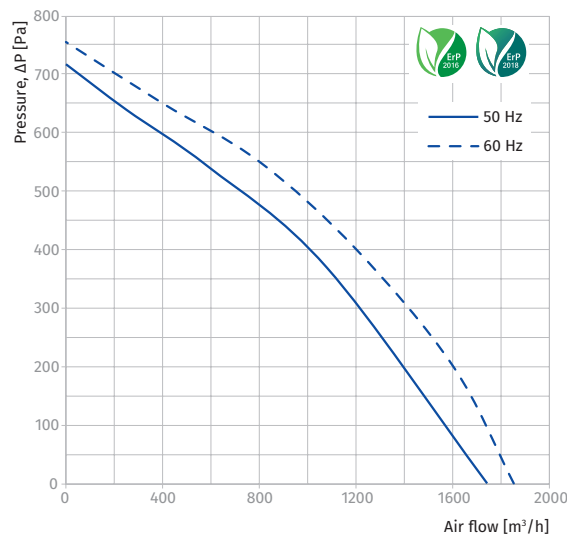
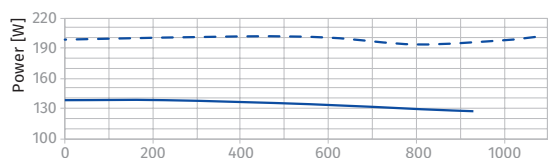
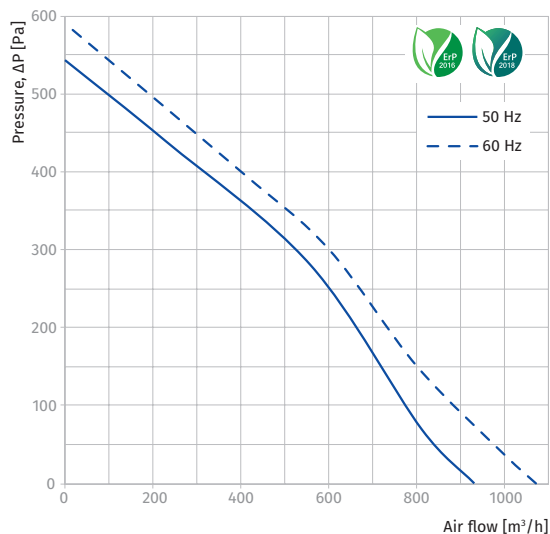
Parameters	Box 40x20 2E		Box 50x25 2E	
Voltage [V]	1 ~ 230		1 ~ 230	
Frequency [Hz]	50	60	50	60
Power [W]	138	200	305	380
Current [A]	0.6	0.88	1.32	1.65
Maximum air flow [m³/h (l/s)]	930 (258)	1070 (297)	1720 (478)	1850 (514)
RPM [min⁻¹]	2600	2850	2550	2830
Sound pressure at 3 m [dBA]	50	52	57	58
Transported air temperature [°C]	-25...+45		-25...+45	
Ingress protection rating	IPX4		IPX4	
Motor IP rating	IP44		IP44	
ErP	2016, 2018		2016, 2018	

BOX 40x20 2E

Sound power level, A-weighted	Octave frequency bands [Hz]									LpA, 3 m [dBA]	LpA, 1 m [dBA]
	Gen.	63	125	250	500	1000	2000	4000	8000		
LWA to inlet [dBA]	78	67	74	74	69	63	63	61	53	58	68
LWA to outlet [dBA]	82	69	74	76	75	72	72	71	63	61	71
LWA to environment [dBA]	71	46	58	66	65	66	56	51	41	50	60

BOX 50x25 2E

Sound power level, A-weighted	Octave frequency bands [Hz]									LpA, 3 m [dBA]	LpA, 1 m [dBA]
	Gen.	63	125	250	500	1000	2000	4000	8000		
LWA to inlet [dBA]	83	69	77	79	67	70	74	71	66	62	72
LWA to outlet [dBA]	85	69	74	77	76	80	77	77	71	65	75
LWA to environment [dBA]	77	43	60	73	73	70	64	58	48	57	67



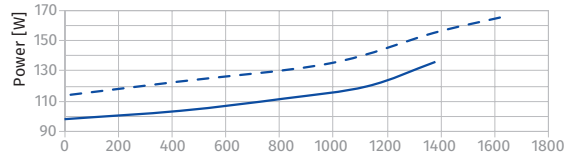
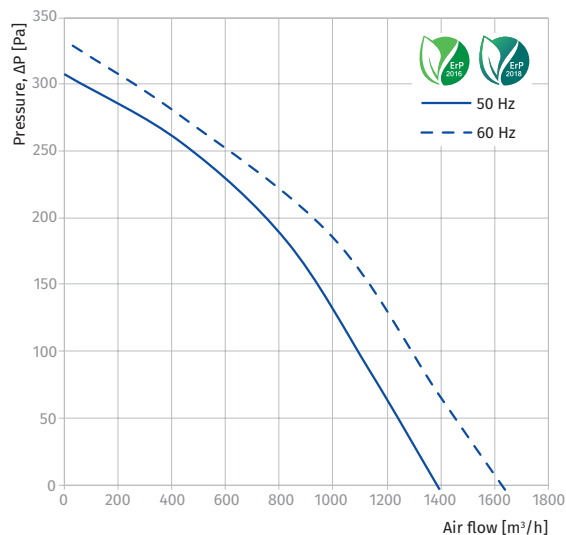
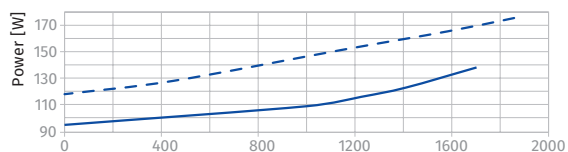
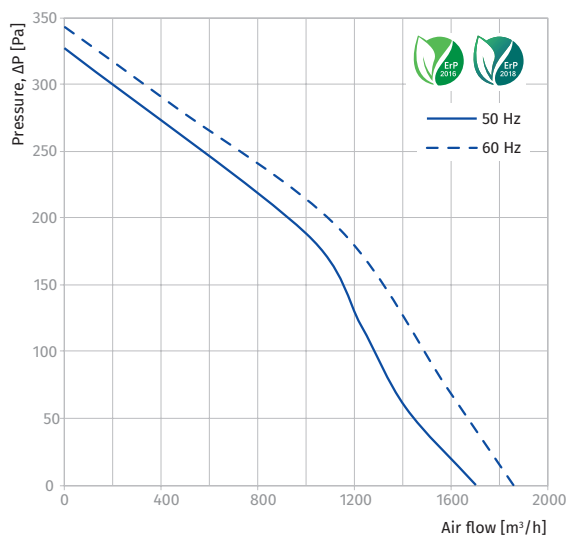
Parameters	Box 50x30 4E		Box 50x30 4D	
Voltage [V]	1 ~ 230		3~ 400	
Frequency [Hz]	50	60	50	60
Power [W]	140	175	136	165
Current [A]	0.57	0.73	0.34	0.53
Maximum air flow [m³/h (l/s)]	1700 (472)	1855 (515)	1380 (383)	1620 (450)
RPM [min⁻¹]	1390	1530	1360	1600
Sound pressure at 3 m [dBA]	53	55	52	55
Transported air temperature [°C]	-25...+45	-25...+50	-25...+65	-25...+55
Ingress protection rating	IPX4		IPX4	
Motor IP rating	IP44		IP44	
ErP	2016, 2018		2016, 2018	

BOX 50x30 4E

Sound power level, A-weighted	Octave frequency bands [Hz]									LpA, 3 m	LpA, 1 m
	Gen.	63	125	250	500	1000	2000	4000	8000	[dBA]	[dBA]
LWA to inlet [dBA]	81	62	70	73	64	77	75	70	64	60	70
LWA to outlet [dBA]	85	59	70	75	75	80	79	77	72	65	75
LWA to environment [dBA]	74	50	63	70	66	66	65	61	55	53	63

BOX 50x30 4D

Sound power level, A-weighted	Octave frequency bands [Hz]									LpA, 3 m [dBA]	LpA, 1 m [dBA]
	Gen.	63	125	250	500	1000	2000	4000	8000		
LWA to inlet [dBA]	80	61	69	72	63	75	74	69	63	59	69
LWA to outlet [dBA]	83	58	69	74	74	78	77	75	71	63	73
LWA to environment [dBA]	73	50	62	69	65	65	64	60	54	52	62



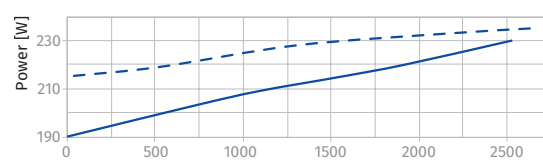
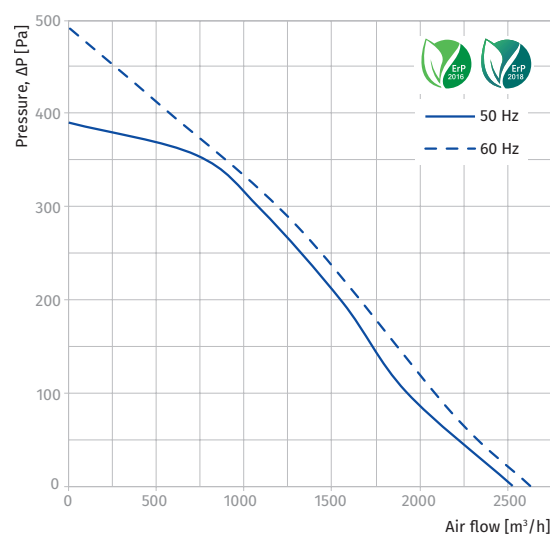
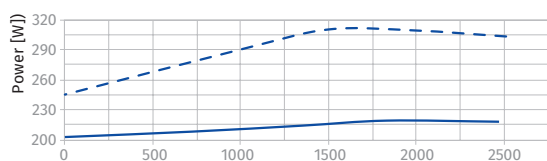
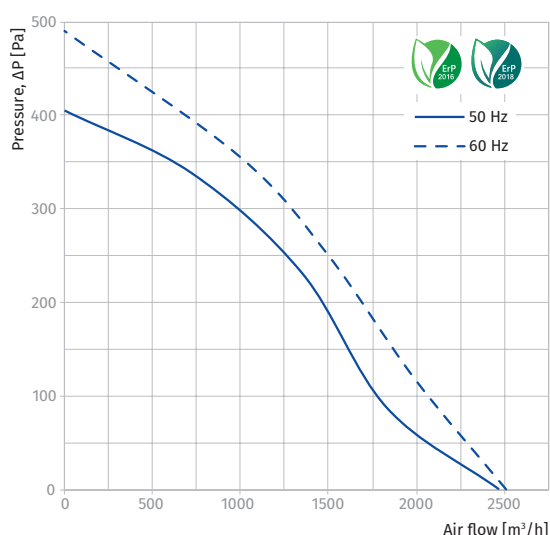
Parameters	Box 60x30 4E		Box 60x30 4D	
Voltage [V]	1 ~ 230		3~ 400	
Frequency [Hz]	50	60	50	60
Power [W]	220	310	230	235
Current [A]	0.9	1.38	0.52	0.53
Maximum air flow [m³/h (l/s)]	2470 (686)	2510 (697)	2530 (703)	2630 (731)
RPM [min⁻¹]	1400	1450	1360	1600
Sound pressure at 3 m [dBA]	52	52	51	53
Transported air temperature [°C]	-25...+45	-25...+40	-25...+70	-25...+65
Ingress protection rating	IPX4		IPX4	
Motor IP rating	IP44		IP44	
ErP	2016, 2018		2016, 2018	

BOX 60x30 4E

Sound power level, A-weighted	Octave frequency bands [Hz]									LpA, 3 m [dBA]	LpA, 1 m [dBA]
	Gen.	63	125	250	500	1000	2000	4000	8000		
LWA to inlet [dBA]	86	74	81	81	76	69	69	67	58	65	75
LWA to outlet [dBA]	89	76	81	84	83	79	79	78	69	69	79
LWA to environment [dBA]	73	47	60	68	67	68	58	53	42	52	62

BOX 60x30 4D

Sound power level, A-weighted	Octave frequency bands [Hz]									LpA, 3 m	LpA, 1 m
	Gen.	63	125	250	500	1000	2000	4000	8000	[dBA]	[dBA]
LwA to inlet [dBA]	84	73	79	79	74	68	68	66	57	63	73
LwA to outlet [dBA]	88	74	79	82	81	77	77	76	68	67	77
LwA to environment [dBA]	72	47	59	67	66	67	57	52	42	51	61



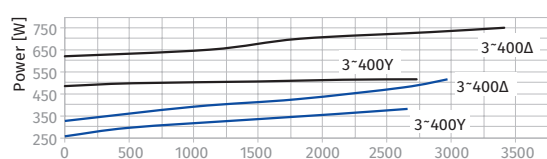
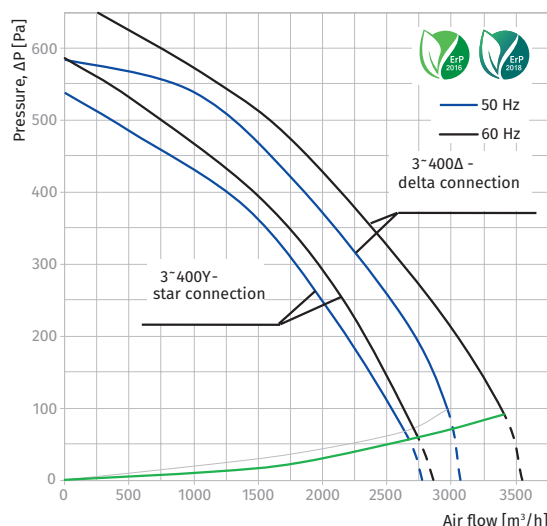
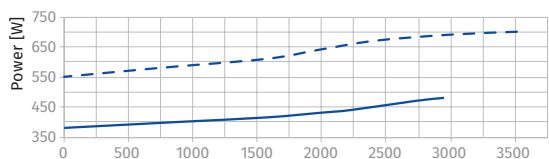
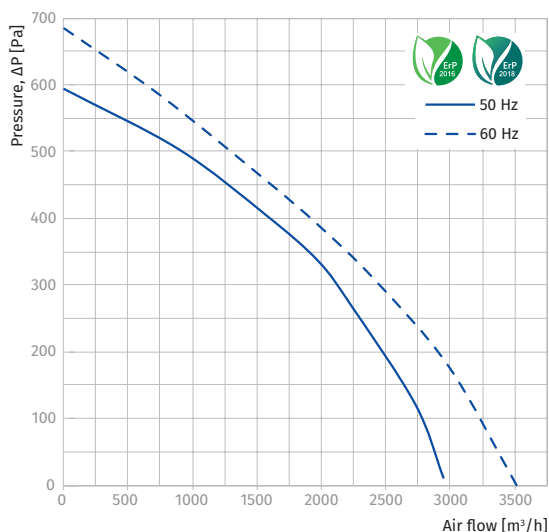
Parameters	Box 60x35 4E		Box 60x35 4D			
Voltage [V]	1 ~ 230		3~ 400 Δ		3~ 400 Y	
Frequency [Hz]	50	60	50	60	50	60
Power [W]	470	700	510	750	380	515
Current [A]	2.37	3.15	1.41	1.44	0.7	0.93
Maximum air flow [m³/h (l/s)]	2950 (820)	3515 (976)	2970 (825)	3410 (947)	2660 (739)	2730 (758)
RPM [min⁻¹]	1370	1460	1415	1610	1235	1220
Sound pressure at 3 m [dBA]	52	53	51	53	50	50
Transported air temperature [°C]	-40...+80	-40...+55	-40...+60	-40...+60	-40...+80	-40...+40
Ingress protection rating	IPX4		IPX4		IPX4	
Motor IP rating	IP44		IP44		IP44	
ErP	2016, 2018		2016, 2018		2016, 2018	

BOX 60x35 4E

Sound power level, A-weighted	Octave frequency bands [Hz]									LpA, 3 m [dBA]	LpA, 1 m [dBA]
	Gen.	63	125	250	500	1000	2000	4000	8000		
LWA to inlet [dBA]	87	79	83	79	75	77	75	74	62	67	77
LWA to outlet [dBA]	90	78	78	79	81	85	83	81	68	69	79
LWA to environment [dBA]	72	44	59	65	68	67	61	58	50	52	62

BOX 60x35 4D

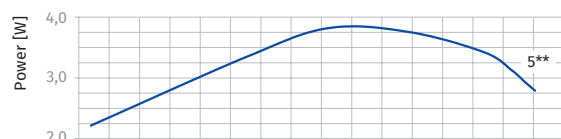
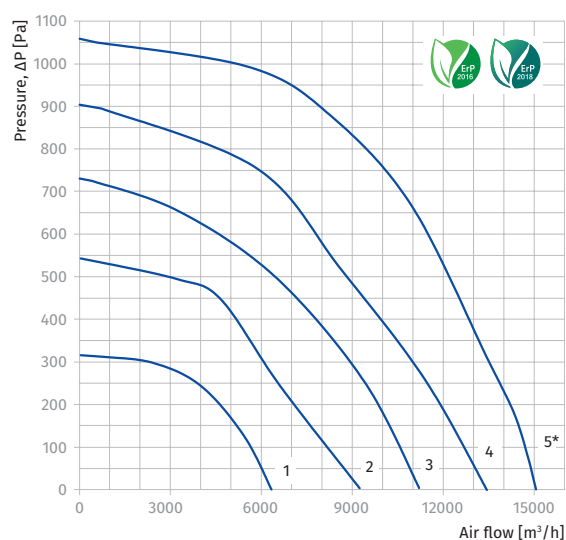
Sound power level, A-weighted	Octave frequency bands [Hz]									LpA, 3 m [dBA]	LpA, 1 m [dBA]
	Gen.	63	125	250	500	1000	2000	4000	8000		
LWA to inlet [dBA]	86	78	82	78	74	76	74	73	61	65	75
LWA to outlet [dBA]	88	77	77	78	79	83	82	79	67	68	78
LWA to environment [dBA]	72	43	58	65	67	66	61	57	50	51	61



Parameters	Box 100x50 4D
Voltage [V]	3~ 400
Frequency [Hz]	50
Power [W]	3800
Current [A]	6.6
Maximum air flow [m³/h (l/s)]	15000 (4167)
RPM [min⁻¹]	1360
Sound pressure at 3 m [dBA]	70
Transported air temperature [°C]	-20...+40
Ingress protection rating	IPX4
Motor IP rating	IP44
ErP	2016, 2018

BOX 100X50 4D

Sound power level, A-weighted	Octave frequency bands [Hz]								LpA, 3 m [dBA]	LpA, 1 m [dBA]
	Gen.	63	125	250	500	1000	2000	4000	8000	
L _{WA} to inlet [dBA]	99	92	96	92	87	89	87	86	72	79
L _{WA} to outlet [dBA]	98	86	86	87	89	93	92	89	74	77
L _{WA} to environment [dBA]	90	55	75	83	86	85	78	73	64	70



* performance characteristics for speed control with a five-step auto transformer

** power consumption curve for maximum air flow