

Box-I

Centrifugal fans in sound-insulated casing for rectangular ducts

Use

- Supply and exhaust ventilation systems installed in various premises.
- Compatible with 400x200 up to 600x350 mm rectangular air ducts.



Air flow:
up to 3515 m³/h
976 l/s



Power:
from 136 W



Noise level:
from 45 dBA



Design

- Atmospheric resistant galvanized steel casing and impeller.
- The casing is heat- and sound-insulated with 50 mm mineral wool.
- 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 impeller.
- 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

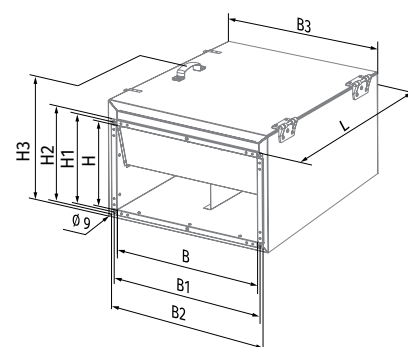
Series	Flange size (width x height) [cm]	Motor	Phase
Box-I	40x20; 50x25; 50x30; 60x30; 60x35	Number of poles 2; 4	E: single-phase D: three-phase

Accessories

Silencers	Filter boxes		Electric heaters	Water heaters	Air dampers	Gravity dampers	Flexible antivibration connectors	Speed controllers	
									
SD	KFBK	KFBT	EKH	WKH	SL	VG	EVA	CDTE E... TP	CDR5E D... M

Dimensions [mm]

Type	B	B1	B2	B3	H	H1	H2	H3	L	Weight [kg]
Box-I 40x20 2E	400	420	440	500	200	220	240	360	500	24.5
Box-I 50x25 2E	500	520	540	600	250	270	290	410	640	27.6
Box-I 50x30 4E	500	520	540	600	300	320	340	460	680	37.2
Box-I 50x30 4D	500	520	540	600	300	320	340	460	680	37.2
Box-I 60x30 4E	600	620	640	700	300	320	340	460	680	43.5
Box-I 60x30 4D	600	620	640	700	300	320	340	460	680	43.5
Box-I 60x35 4E	600	620	640	700	350	370	390	530	735	56.2
Box-I 60x35 4D	600	620	640	700	350	370	390	530	735	56.2



Technical data

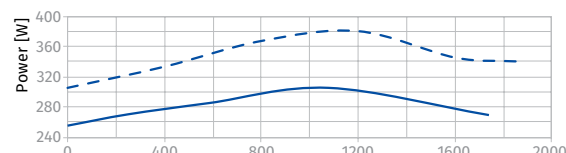
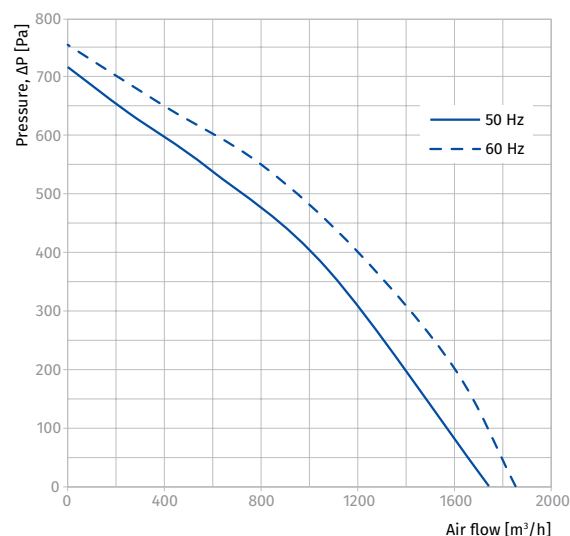
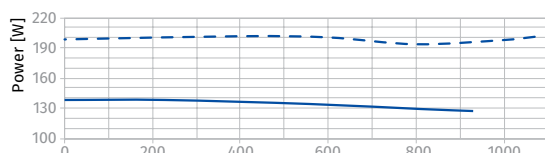
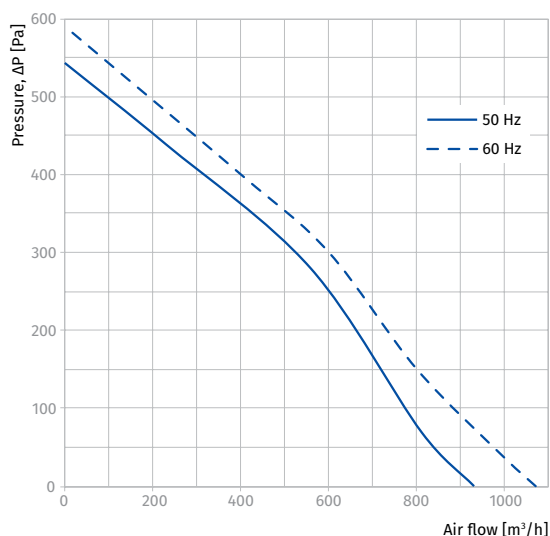
Parameters	Box-I 40x20 2E		Box-I 50x25 2E	
Voltage [V]	1 ~ 230		1 ~ 230	
Frequency [Hz]	50		60	
Power [W]	138		305	
Current [A]	0.6		1.32	
Maximum air flow [m³/h (l/s)]	930 (258)		1720 (478)	
RPM [min⁻¹]	2600		2550	
Sound pressure at 3 m [dBA]	45		51	
Transported air temperature [°C]	-25...+45		-25...+45	
IP rating	IPX4		IPX4	
Motor IP rating	IP44		IP44	
ErP	2018		2018	

BOX-I 40x20 2E

Sound power level, A-weighted	Total	Octave frequency bands [Hz]								LpA 3 m	LpA 1 m
		63	125	250	500	1000	2000	4000	8000		
LWA to inlet [dBA]	75	64	70	70	66	61	61	58	51	54	64
LWA to outlet [dBA]	79	66	70	73	72	69	69	68	61	58	68
LWA to environment [dBA]	66	42	54	61	60	61	51	47	37	45	55

BOX-I 50x25 2E

Sound power level, A-weighted	Total	Octave frequency bands [Hz]								LpA 3 m	LpA 1 m
		63	125	250	500	1000	2000	4000	8000		
LWA to inlet [dBA]	75	62	69	71	60	63	67	64	59	55	65
LWA to outlet [dBA]	79	63	68	71	70	74	71	71	65	59	69
LWA to environment [dBA]	72	40	55	67	67	64	59	53	44	51	61



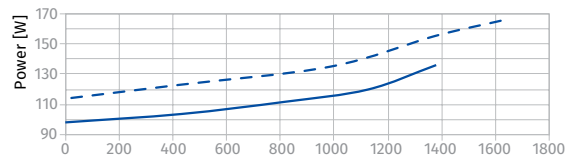
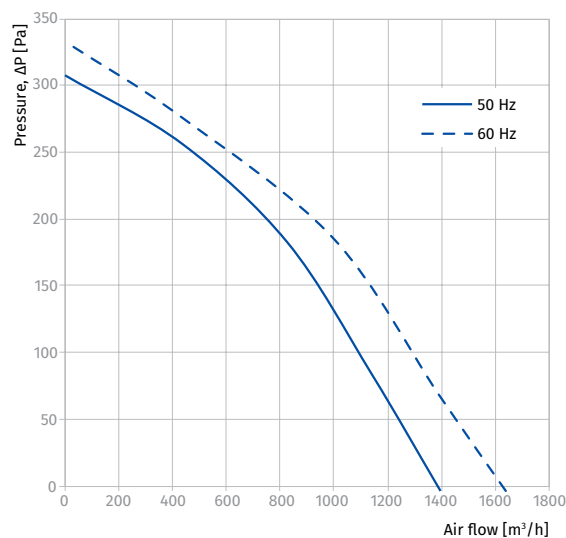
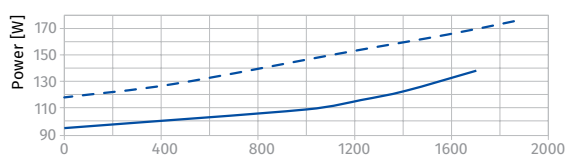
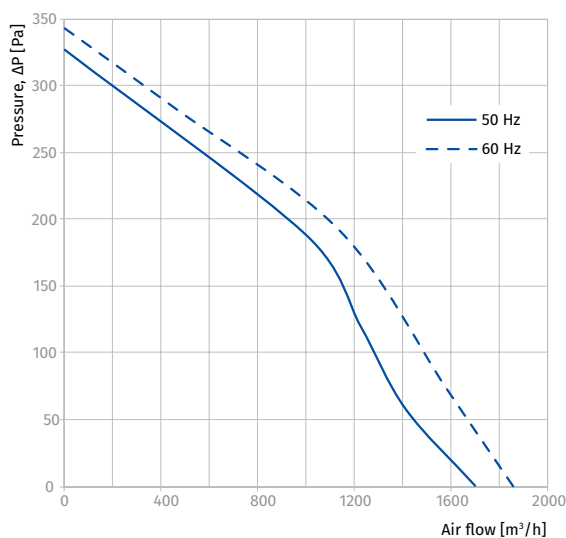
Parameters	Box-I 50x30 4E		Box-I 50x30 4D	
Voltage [V]	1 ~ 230		3 ~ 400	
Frequency [Hz]	50	60	50	60
Power [W]	140	175	136	165
Current [A]	0.57	0.73	0.34	0.53
Maximum air flow [m³/h (l/s)]	1700 (472)	1855 (515)	1380 (383)	1620 (450)
RPM [min⁻¹]	1390	1530	1360	1600
Sound pressure at 3 m [dBA]	48	50	47	50
Transported air temperature [°C]	-25...+45	-25...+50	-25...+65	-25...+55
IP rating	IPX4		IPX4	
Motor IP rating	IP44		IP44	
ErP	2018		2018	

BOX-I 50x30 4E

Sound power level, A-weighted	Total	Octave frequency bands [Hz]								LpA 3 m	LpA 1 m
		63	125	250	500	1000	2000	4000	8000		
L _{WA} to inlet [dBA]	78	60	68	70	62	74	72	68	62	58	68
L _{WA} to outlet [dBA]	83	57	68	72	72	77	77	75	70	62	72
L _{WA} to environment [dBA]	69	46	58	64	61	61	60	56	51	48	58

BOX-I 50x30 4D

Sound power level, A-weighted	Total	Octave frequency bands [Hz]								LpA 3 m	LpA 1 m
		63	125	250	500	1000	2000	4000	8000		
L _{WA} to inlet [dBA]	77	59	67	69	61	73	71	67	61	56	66
L _{WA} to outlet [dBA]	81	56	67	71	71	75	75	74	69	61	71
L _{WA} to environment [dBA]	68	46	57	63	60	60	59	55	50	47	57



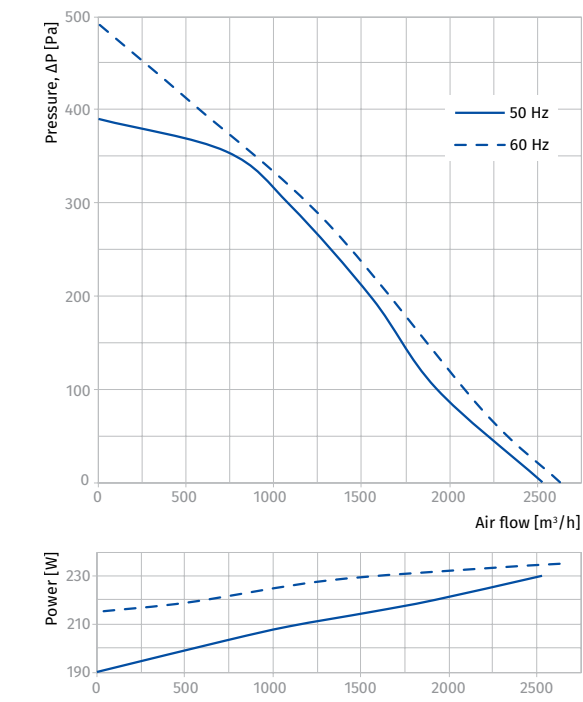
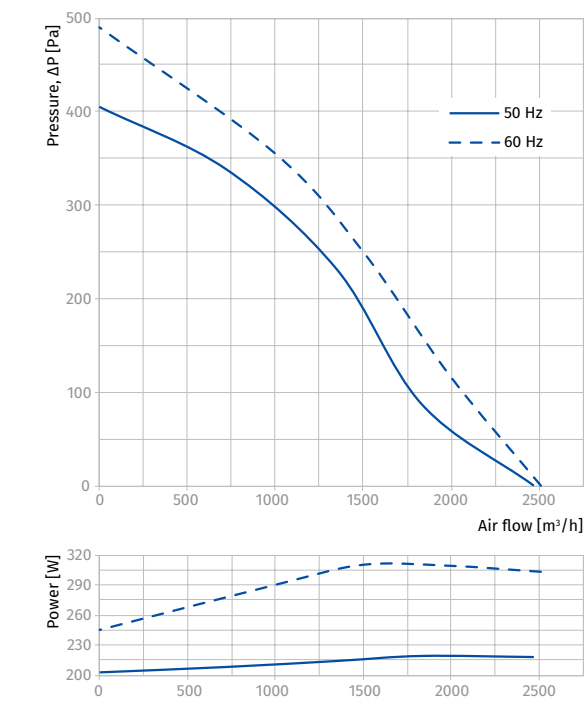
Parameters	Box-I 60x30 4E		Box-I 60x30 4D	
Voltage [V]	1 ~ 230		3 ~ 400	
Frequency [Hz]	50	60	50	60
Power [W]	220	310	230	235
Current [A]	0.9	1.38	0.52	0.53
Maximum air flow [m³/h (l/s)]	2470 (686)	2510 (697)	2530 (703)	2630 (731)
RPM [min⁻¹]	1400	1450	1360	1600
Sound pressure at 3 m [dBA]	46	46	45	47
Transported air temperature [°C]	-25...+45	-25...+40	-25...+70	-25...+65
IP rating	IPX4		IPX4	
Motor IP rating	IP44		IP44	
ErP	2018		2018	

BOX-I 60x30 4E

Sound power level, A-weighted	Total	Octave frequency bands [Hz]								LpA 3 m	LpA 1 m
		63	125	250	500	1000	2000	4000	8000		
LWA to inlet [dBA]	81	70	77	77	72	66	66	64	55	61	71
LWA to outlet [dBA]	85	72	77	80	79	75	75	74	66	65	75
LWA to environment [dBA]	67	43	55	62	61	62	53	48	38	46	56

BOX-I 60x30 4D

Sound power level, A-weighted	Total	Octave frequency bands [Hz]								LpA 3 m	LpA 1 m
		63	125	250	500	1000	2000	4000	8000		
LWA to inlet [dBA]	80	69	75	75	71	65	65	63	54	59	69
LWA to outlet [dBA]	84	71	75	78	77	74	74	73	65	63	73
LWA to environment [dBA]	66	43	54	61	60	61	52	48	38	45	55



INLINE FANS FOR RECTANGULAR DUCTS

Parameters	Box-I 60x35 4E		Box-I 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]	47	47	46	46	46	46
Transported air temperature [°C]	-40...+80	-40...+55	-40...+60	-40...+60	-40...+80	-40...+40
IP rating	IPX4		IPX4		IPX4	
Motor IP rating	IP44		IP44		IP44	
ErP	2018		2018		2018	

BOX-I 60x35 4E

Sound power level, A-weighted	Total	Octave frequency bands [Hz]								LpA 3 m	LpA 1 m
		63	125	250	500	1000	2000	4000	8000		
L _{WA} to inlet [dBA]	81	73	77	73	70	71	70	68	58	61	71
L _{WA} to outlet [dBA]	83	72	72	73	74	78	77	74	62	63	73
L _{WA} to environment [dBA]	68	40	55	61	63	62	57	54	46	47	57

BOX-I 60x35 4D

Sound power level, A-weighted	Total	Octave frequency bands [Hz]								LpA 3 m	LpA 1 m
		63	125	250	500	1000	2000	4000	8000		
L _{WA} to inlet [dBA]	80	73	76	73	69	70	69	68	57	60	70
L _{WA} to outlet [dBA]	83	71	71	73	74	77	76	74	62	62	72
L _{WA} to environment [dBA]	67	40	54	60	62	61	56	53	46	46	56

