

Iso Box-F ES (V2)

Sound-insulated inline centrifugal fans with electrostatic filters

Use

- Supply ventilation systems installed in premises with high requirements to clean air and the noise level.
- Suitable for limited mounting space.
- Compatible with Ø 100 up to 200 mm round air ducts.



Air flow:
up to 645 m³/h
179 l/s



Power:
from 34 W



Noise level:
from 14 dBA



Design

- The casing is made of polymer-coated steel, internally filled with sound-insulating layer.
- Internal airtight terminal box for power supply.
- Easy access for filter maintenance.

Motor

- Iso Box-F ES** series: four-pole asynchronous motor with external rotor and centrifugal impeller with forward curved blades.
- Iso Box-F ES V2** series: two-speed asynchronous motor with external rotor and centrifugal impeller with forward curved blades.
- Equipped with ball bearings for longer service life.
- Integrated thermal protection with automatic restart.
- Dynamically balanced turbine.

Speed control

- Iso Box-F ES** series: smooth speed control with an external **CDT E1.8** thyristor controller (available upon separate order).
- Iso Box-F ES V2** series: two-speed control with the external **CDP-2/10** speed switch (available upon separate order).

Mounting

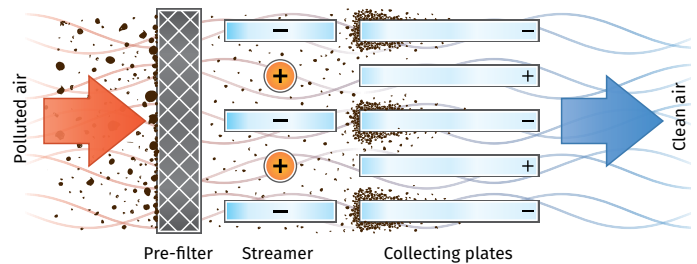
- Due to compact design is the ideal solution for mounting in limited spaces, including the space behind false ceiling.
- Any mounting position.
- Wall or ceiling mounting with fixing brackets supplied as a standard.

Air filtration

- G4** filter provides primary filtration.
- Fine filtering with an electrostatic filter.
- Quick access to replaceable filters through service panel.

Electrostatic filter

- Electrostatic filter enables purification of air from fine dust and soot, spray, smoke and other particles with the size 0.01 microns and less.
- Max. filter cleaning efficiency 98 %.
- The electrostatic filters rely on gravity of oppositely charged objects.
- The polluted air stream flows through the spray charging unit for the particles ionization.
- Ionized particles are moved by the airstream and accumulated on the collecting plates which are oppositely charged.



- The filter cleaning interval depends on the inlet air pollution density and may vary from 7 up to 21 days.
- The filter cleaning interval is determined by the visual inspection of the filters.
- Vacuum cleaning is allowed.

Designation key

| Series | Duct diameter [mm] | Filters | Motor modification | Speed |
|-----------|--------------------|--------------------------|--|-------------------------------|
| Iso Box-F | 100; 150; 200 | ES: electrostatic filter | _: standard type L: low-powered motor | _: one speed V2: two-speed |

Accessories

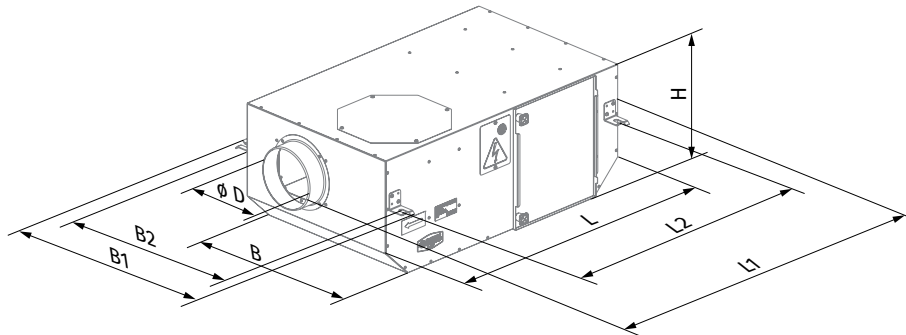
| Air disc valves | Duct system | Flexible air ducts | Grilles and hoods | Speed controllers | Clamps |
|-----------------|-------------|--------------------|-------------------|---------------------|--------|
| VPR / VSR / VMR | BlauPlast | BlauFlex | Decor / GM | CDT E1.8 / CDP-2/10 | K / KZ |

Replaceable filters

| Model | Iso Box-F 100 ES | Iso Box-F 150 ES | Iso Box-F 150 ES L | Iso Box-F 200 ES | Iso Box-F 100 ES V2 | Iso Box-F 150 ES V2 | Iso Box-F 150 ES L V2 | Iso Box-F 200 ES V2 |
|-----------------|------------------|------------------|--------------------|------------------|---------------------|---------------------|-----------------------|---------------------|
| G4 Panel filter | FP 220x400x47 G4 | FP 270x425x47 G4 | FP 220x400x47 G4 | FP 270x590x47 G4 | FP 220x400x47 G4 | FP 270x425x47 G4 | FP 220x400x47 G4 | FP 270x590x47 G4 |

Overall dimensions [mm]

| Type | Ø D | L | H | B | L1 | B1 | L2 | B2 | Weight [kg] |
|-------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-------------|
| Iso Box-F 100 ES (V2) | 100 | 755 | 250 | 458 | 855 | 551 | 700 | 502 | 16.5 |
| Iso Box-F 150 ES L (V2) | 150 | 755 | 250 | 458 | 855 | 551 | 700 | 502 | 16.5 |
| Iso Box-F 150 ES (V2) | 150 | 785 | 300 | 458 | 855 | 551 | 730 | 502 | 18.5 |
| Iso Box-F 200 ES (V2) | 200 | 785 | 300 | 658 | 855 | 751 | 730 | 702 | 20.5 |



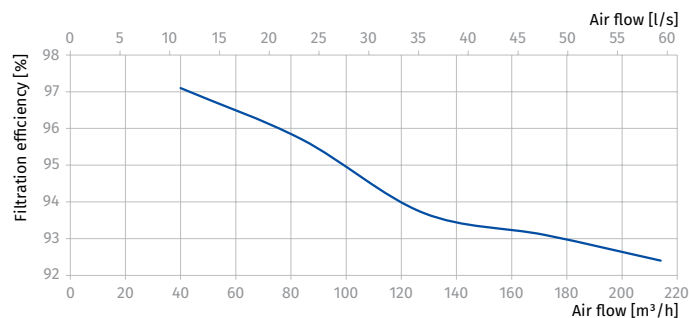
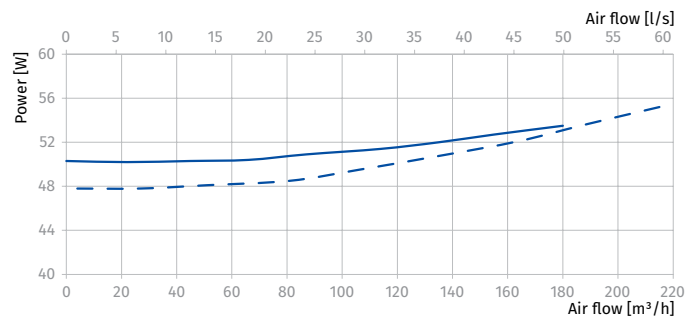
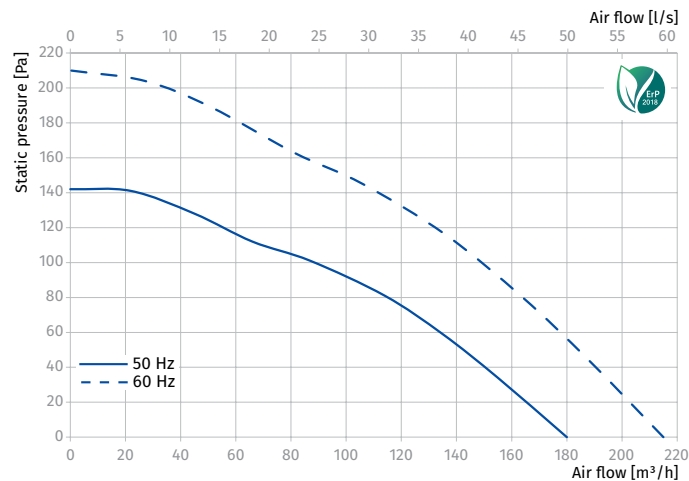
Technical data

| Parameters | Iso Box-F 100 ES | | Iso Box-F 150 ES L | | Iso Box-F 150 ES | | Iso Box-F 200 ES | |
|----------------------------------|------------------|----------|--------------------|-----------|------------------|-----------|------------------|-----------|
| Voltage [V] | 1 ~ 230 | | 1 ~ 230 | | 1 ~ 230 | | 1 ~ 230 | |
| Frequency [Hz] | 50 | 60 | 50 | 60 | 50 | 60 | 50 | 60 |
| Power [W] | 53 | 55 | 68 | 78 | 112 | 131 | 135 | 157 |
| Current [A] | 0.27 | 0.24 | 0.3 | 0.34 | 0.51 | 0.57 | 0.59 | 0.68 |
| Maximum air flow [m³/h (l/s)] | 180 (50) | 215 (60) | 350 (97) | 390 (108) | 460 (128) | 530 (147) | 640 (178) | 645 (179) |
| RPM [min⁻¹] | 1300 | 1480 | 1300 | 1475 | 1250 | 1430 | 1250 | 1315 |
| Sound pressure at 3 m [dBA] | 23 | 24 | 25 | 26 | 25 | 27 | 34 | 35 |
| Transported air temperature [°C] | -25...+40 | | -25...+40 | | -25...+40 | | -25...+40 | |
| Ingress protection rating | IPX4 | | IPX4 | | IPX4 | | IPX4 | |
| PM2.5 Ratio [%] | 97.1 | | 97 | | 95.6 | | 97.4 | |
| SEC class | D | | C | | C | | C | |
| ErP | 2018 | | 2018 | | 2018 | | 2018 | |

ISO BOX-F 100 ES

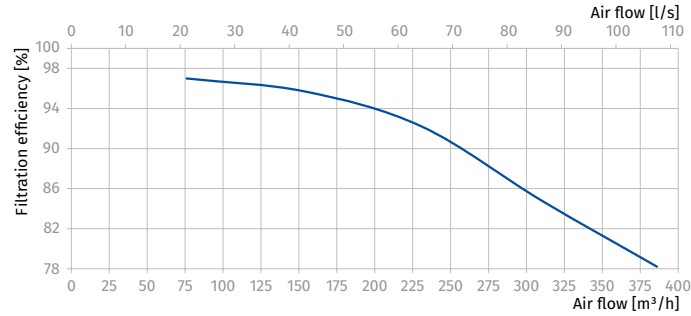
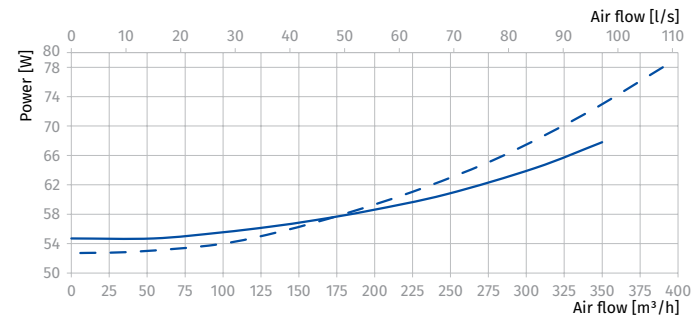
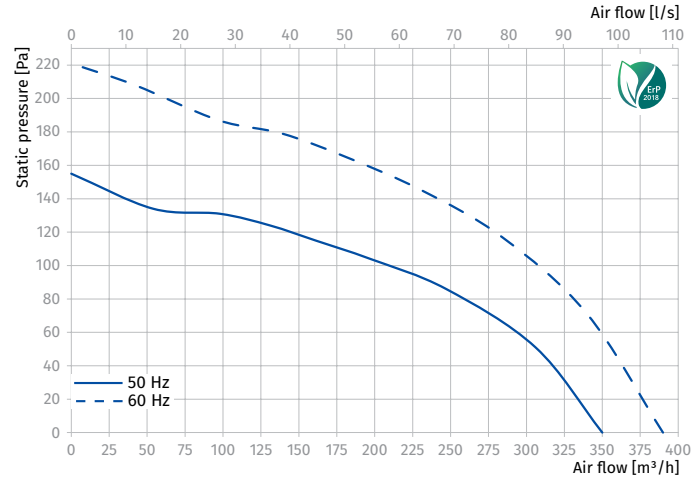
| Sound power level, A-weighted | Total | Octave frequency band [Hz] | | | | | | | | LpA, 3 m | LpA, 1 m |
|--------------------------------------|-------|----------------------------|-----|-----|-----|------|------|------|------|----------|----------|
| | | 63 | 125 | 250 | 500 | 1000 | 2000 | 4000 | 8000 | | |
| L _{WA} to inlet [dBA] | 48 | 32 | 34 | 40 | 42 | 43 | 40 | 34 | 26 | 27 | 37 |
| L _{WA} to outlet [dBA] | 51 | 27 | 42 | 47 | 45 | 44 | 32 | 24 | 13 | 30 | 40 |
| L _{WA} to environment [dBA] | 43 | 31 | 34 | 35 | 38 | 36 | 34 | 31 | 26 | 23 | 33 |

SOUND-INSULATED FANS



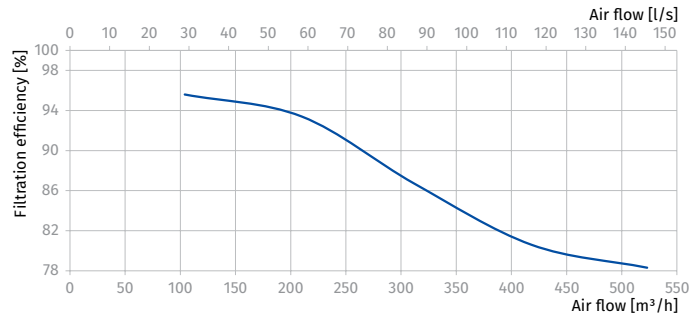
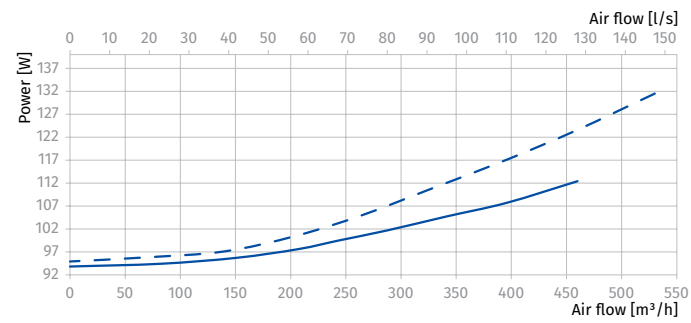
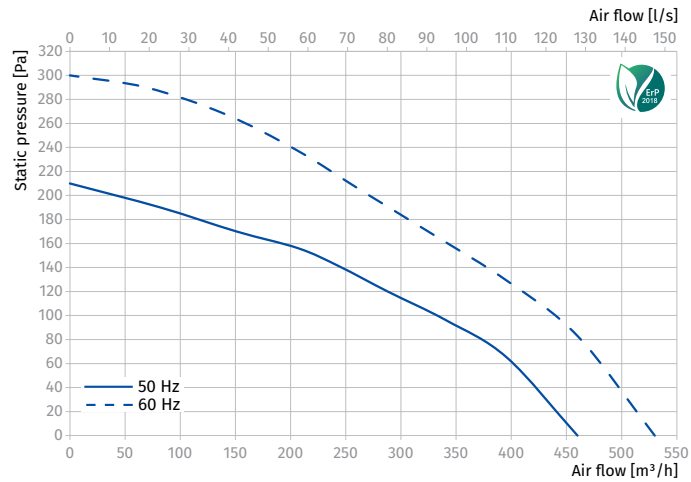
ISO BOX-F 150 ES L

| Sound power level, A-weighted | Total | Octave frequency band [Hz] | | | | | | | | LpA, 3 m | LpA, 1 m |
|-------------------------------|-------|----------------------------|-----|-----|-----|------|------|------|------|----------|----------|
| | | 63 | 125 | 250 | 500 | 1000 | 2000 | 4000 | 8000 | | |
| LWA to inlet [dBA] | 53 | 28 | 44 | 49 | 47 | 46 | 34 | 25 | 14 | 33 | 43 |
| LWA to outlet [dBA] | 56 | 39 | 41 | 48 | 51 | 52 | 48 | 41 | 32 | 36 | 46 |
| LWA to environment [dBA] | 45 | 26 | 35 | 41 | 39 | 37 | 34 | 30 | 23 | 25 | 35 |



ISO BOX-F 150 ES

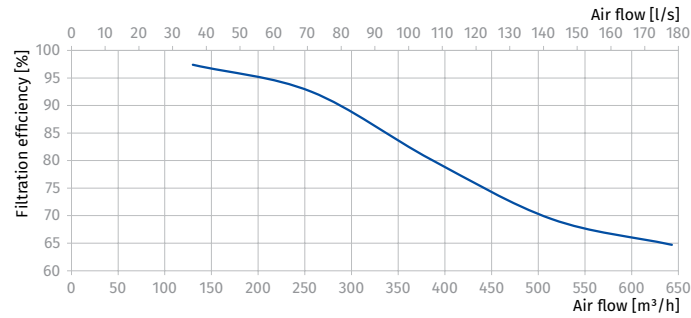
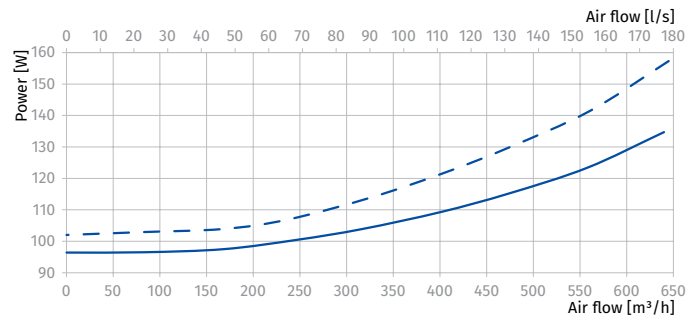
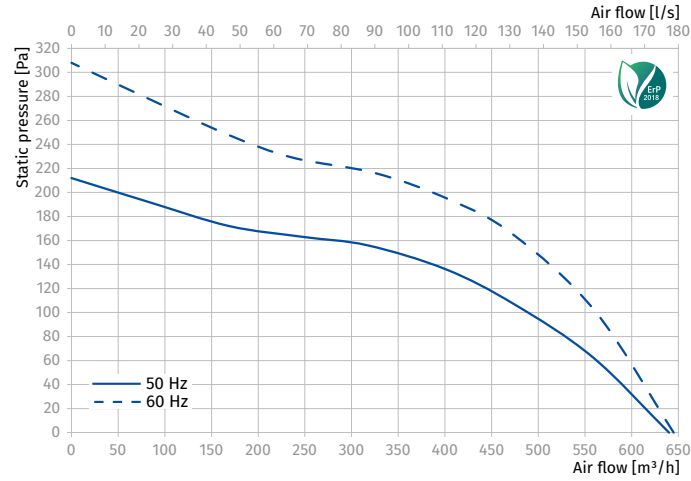
| Sound power level, A-weighted | Total | Octave frequency band [Hz] | | | | | | | | LpA, 3 m | LpA, 1 m |
|--------------------------------------|-------|----------------------------|-----|-----|-----|------|------|------|------|----------|----------|
| | | 63 | 125 | 250 | 500 | 1000 | 2000 | 4000 | 8000 | | |
| L _{WA} to inlet [dBA] | 53 | 39 | 40 | 47 | 50 | 41 | 40 | 38 | 27 | 33 | 43 |
| L _{WA} to outlet [dBA] | 58 | 42 | 39 | 47 | 54 | 50 | 51 | 45 | 35 | 37 | 47 |
| L _{WA} to environment [dBA] | 46 | 36 | 38 | 39 | 42 | 34 | 28 | 27 | 23 | 25 | 35 |



SOUND-INSULATED FANS

ISO BOX-F 200 ES

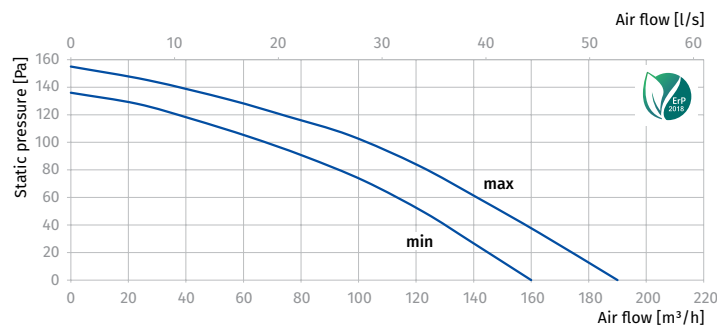
| Sound power level, A-weighted | Total | Octave frequency band [Hz] | | | | | | | | LpA, 3 m | LpA, 1 m |
|-------------------------------|-------|----------------------------|-----|-----|-----|------|------|------|------|----------|----------|
| | | 63 | 125 | 250 | 500 | 1000 | 2000 | 4000 | 8000 | | |
| LWA to inlet [dBA] | 67 | 55 | 56 | 58 | 60 | 58 | 59 | 57 | 55 | 46 | 56 |
| LWA to outlet [dBA] | 71 | 58 | 56 | 68 | 63 | 61 | 59 | 55 | 47 | 50 | 60 |
| LWA to environment [dBA] | 55 | 41 | 45 | 50 | 51 | 37 | 32 | 28 | 33 | 34 | 44 |



| Parameters | Iso Box-F 100 ES V2 | | Iso Box-F 150 ES L V2 | | Iso Box-F 150 ES V2 | | Iso Box-F 200 ES V2 | |
|--|---------------------|----------|-----------------------|----------|---------------------|-----------|---------------------|-----------|
| | min | max | min | max | min | max | min | max |
| Speed | | | | | | | | |
| Voltage [V] | 1 ~ 230 | | 1 ~ 230 | | 1 ~ 230 | | 1 ~ 230 | |
| Frequency [Hz] | 50 | | 50 | | 50 | | 50 | |
| Power [W] | 34 | 42 | 44 | 52 | 92 | 117 | 106 | 123 |
| Current [A] | 0.15 | 0.19 | 0.19 | 0.23 | 0.41 | 0.55 | 0.47 | 0.59 |
| Maximum air flow [m ³ /h (l/s)] | 160 (44) | 190 (53) | 230 (64) | 340 (94) | 320 (89) | 430 (119) | 390 (108) | 630 (175) |
| RPM [min ⁻¹] | 700 | 1200 | 700 | 1200 | 700 | 1200 | 700 | 1200 |
| Sound pressure at 3 m [dBA] | 14 | 23 | 15 | 25 | 16 | 27 | 22 | 38 |
| Transported air temperature [°C] | -25...+40 | | -25...+40 | | -25...+40 | | -25...+40 | |
| Ingress protection rating | IPX4 | | IPX4 | | IPX4 | | IPX4 | |
| PM2.5 Ratio [%] | 98 | 97 | 98 | 97 | 97 | 96 | 98 | 97 |
| SEC class | C | | C | | C | | C | |
| ErP | 2018 | | 2018 | | 2018 | | 2018 | |

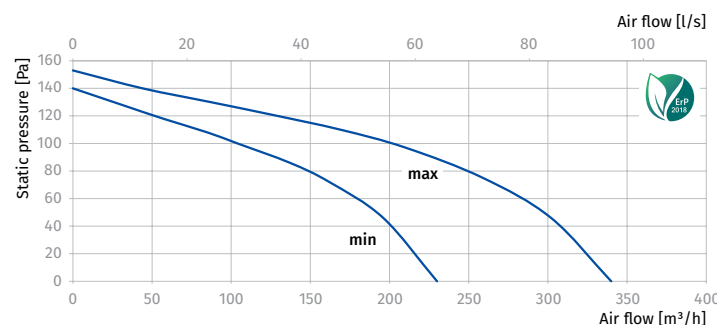
ISO BOX-F 100 ES V2

| Sound power level, A-weighted | Total | Octave frequency band [Hz] | | | | | | | | LpA, 3 m | LpA, 1 m | |
|-------------------------------|--------------------------------------|----------------------------|-----|-----|-----|------|------|------|------|----------|----------|----|
| | | 63 | 125 | 250 | 500 | 1000 | 2000 | 4000 | 8000 | | | |
| min | L _{WA} to inlet [dBA] | 41 | 26 | 28 | 33 | 35 | 36 | 33 | 28 | 22 | 20 | 30 |
| | L _{WA} to outlet [dBA] | 43 | 22 | 35 | 39 | 37 | 37 | 27 | 20 | 11 | 23 | 33 |
| | L _{WA} to environment [dBA] | 35 | 23 | 26 | 26 | 29 | 27 | 26 | 23 | 20 | 14 | 24 |
| max | L _{WA} to inlet [dBA] | 48 | 32 | 34 | 40 | 42 | 43 | 40 | 34 | 26 | 27 | 37 |
| | L _{WA} to outlet [dBA] | 51 | 27 | 42 | 47 | 45 | 44 | 32 | 24 | 13 | 30 | 40 |
| | L _{WA} to environment [dBA] | 43 | 31 | 34 | 35 | 38 | 36 | 34 | 31 | 26 | 23 | 33 |



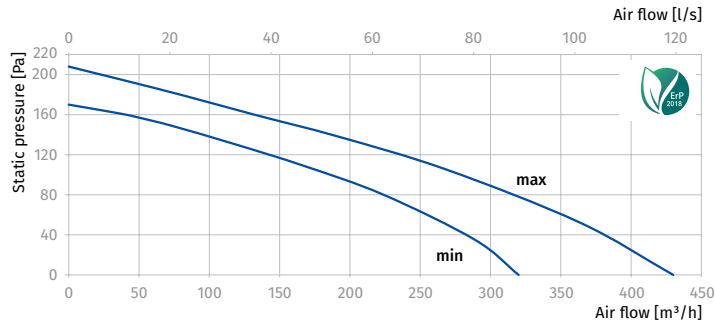
ISO BOX-F 150 ES L V2

| Sound power level, A-weighted | Total | Octave frequency band [Hz] | | | | | | | | LpA, 3 m | LpA, 1 m | |
|-------------------------------|--------------------------------------|----------------------------|-----|-----|-----|------|------|------|------|----------|----------|----|
| | | 63 | 125 | 250 | 500 | 1000 | 2000 | 4000 | 8000 | | | |
| min | L _{WA} to inlet [dBA] | 45 | 24 | 37 | 41 | 39 | 38 | 28 | 21 | 11 | 25 | 35 |
| | L _{WA} to outlet [dBA] | 48 | 32 | 34 | 40 | 42 | 43 | 40 | 34 | 26 | 27 | 37 |
| | L _{WA} to environment [dBA] | 36 | 20 | 26 | 31 | 29 | 28 | 26 | 23 | 17 | 15 | 25 |
| max | L _{WA} to inlet [dBA] | 53 | 28 | 44 | 49 | 47 | 46 | 34 | 25 | 14 | 33 | 43 |
| | L _{WA} to outlet [dBA] | 56 | 39 | 41 | 48 | 51 | 52 | 48 | 41 | 32 | 36 | 46 |
| | L _{WA} to environment [dBA] | 45 | 26 | 35 | 41 | 39 | 37 | 34 | 30 | 23 | 25 | 35 |



ISO BOX-F 150 ES V2

| Sound power level, A-weighted | Total | Octave frequency band [Hz] | | | | | | | | LpA, 3 m | LpA, 1 m | |
|-------------------------------|--------------------------|----------------------------|-----|-----|-----|------|------|------|------|----------|----------|----|
| | | 63 | 125 | 250 | 500 | 1000 | 2000 | 4000 | 8000 | | | |
| min | LWA to inlet [dBA] | 44 | 31 | 32 | 38 | 41 | 33 | 32 | 31 | 22 | 24 | 34 |
| | LWA to outlet [dBA] | 48 | 34 | 32 | 38 | 44 | 41 | 41 | 36 | 28 | 28 | 38 |
| | LWA to environment [dBA] | 36 | 27 | 29 | 30 | 32 | 26 | 21 | 20 | 17 | 16 | 26 |
| max | LWA to inlet [dBA] | 53 | 39 | 40 | 47 | 50 | 41 | 40 | 38 | 27 | 33 | 43 |
| | LWA to outlet [dBA] | 58 | 42 | 39 | 47 | 54 | 50 | 51 | 45 | 35 | 37 | 47 |
| | LWA to environment [dBA] | 48 | 38 | 40 | 41 | 44 | 36 | 29 | 28 | 24 | 27 | 37 |



ISO BOX-F 200 ES V2

| Sound power level, A-weighted | Total | Octave frequency band [Hz] | | | | | | | | LpA, 3 m | LpA, 1 m | |
|-------------------------------|--------------------------|----------------------------|-----|-----|-----|------|------|------|------|----------|----------|----|
| | | 63 | 125 | 250 | 500 | 1000 | 2000 | 4000 | 8000 | | | |
| min | LWA to inlet [dBA] | 55 | 44 | 45 | 47 | 48 | 47 | 48 | 46 | 44 | 35 | 45 |
| | LWA to outlet [dBA] | 58 | 46 | 45 | 54 | 51 | 49 | 47 | 44 | 38 | 37 | 47 |
| | LWA to environment [dBA] | 43 | 31 | 34 | 38 | 39 | 28 | 24 | 21 | 25 | 22 | 32 |
| max | LWA to inlet [dBA] | 67 | 55 | 56 | 58 | 60 | 58 | 59 | 57 | 55 | 46 | 56 |
| | LWA to outlet [dBA] | 71 | 58 | 56 | 68 | 63 | 61 | 59 | 55 | 47 | 50 | 60 |
| | LWA to environment [dBA] | 58 | 44 | 48 | 54 | 55 | 40 | 34 | 30 | 36 | 38 | 48 |

