# Iso-Mix

## Sound-insulated inline mixed-flow fans

### Use

- Supply and extract ventilation systems installed in various premises with high requirements to the noise level.
- For ventilation air ducts requiring high pressure, powerful air flow and low noise level.
- Compatible with ∅ 100 up to ∅ 315 mm air ducts.

**Air flow:**
up to 1920 m³/h
533 l/s

**Power:**
from 9 W

**Noise level:**
from 16 dBA

ErP 2018

### Design

- The casing is made of polymer-coated steel, internally filled with 50 mm mineral wool thermal- and sound-insulating layer.
- Special inner perforation of the casing and sound-insulating material are designed for wide-frequency sound absorbing.
- Mixed-flow impeller made of high-quality plastic.
- The diffusor, the specially profiled impeller and directing vanes provide high performance and powerful pressure combined with low noise operation.
- External airtight terminal block on the fan casing for power supply.
- Mounting brackets on the fan casing for mounting to the floor, to the wall or ceiling.

### Motor

- Double- or three-speed (only for Iso-Mix 100, Iso-Mix 125, Iso-Mix 200) single-phase high-efficient motor with low energy demand on ball bearings.
- Overheating protection due to built-in thermal switches.
- Motor ingress protection rating IPX4.

### Speed control

- Speed selection with a built-in speed switch (US option) or an external multi-speed controller (specially ordered accessory).
- Smooth speed control is possible either with an integrated speed controller (**FR1** option), an external thyristor or transformer speed controller (specially ordered accessory) when connected to the maximum speed terminal.

### Mounting

- Due to its compact design the fan is the ideal solution for mounting in limited spaces.
- The fan is suitable for mounting in any section of the ventilation system from intake to the end of the ductwork.
- Wall or ceiling mounting with a special mounting plate on the fan casing.

### Modifications and options

- **T:** turn-off delay timer adjustable from 2 to 30 minutes.
- **US:** speed switch.
- **FR1:** smooth speed controller adjustable from 0 to 100 % and power cable with mains plug.

- **G1:** speed controller, temperature controller with external temperature sensor (cable length 4 m), power cable with mains plug.

- **GT1:** speed controller, temperature controller with external temperature sensor (cable length 4 m), 5 min timer switch and power cable with mains plug.
- **GI1:** speed controller, temperature controller with integrated temperature sensor and power cable with mains plug.
- **GTI1:** speed controller, temperature controller with integrated temperature sensor, 5 min timer switch and power cable with mains plug.
- The **G1** and **GI1** modifications enable automatic speed control depending on indoor temperature. The optimal ventilation solution for premises requiring permanent temperature control as greenhouses, orangeries, etc.
- **W1:** power cable with mains plug.

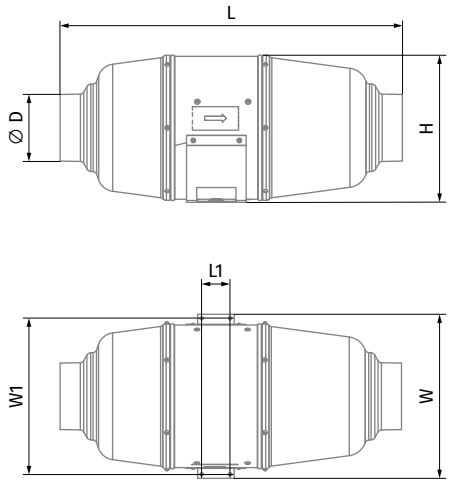
**Accessories**

| Silencers | Filter boxes | | Electric heaters | Water heaters | Backdraft air dampers | Air dampers | Clamps | Speed switches | | Speed controllers | | Timers/Sensors |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | | |
| SD | KFBK | KFBT | EKH | WKH | VRV | VK / VKA | K | CDP-2/5 | CDP-3/5 | CDT1 E | CDT E1.8 | TE(TI) / HSE(HSI) / LSE(LSI) / IRSE(IRSI) |

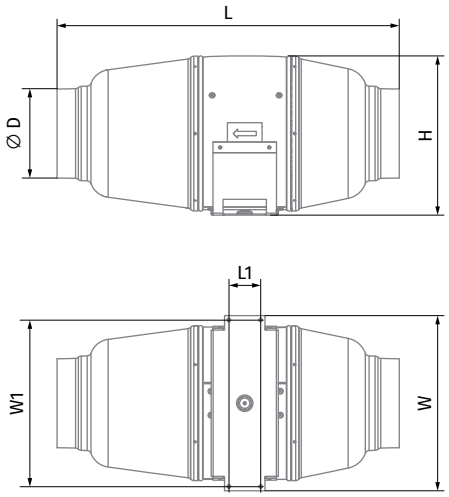
| Designation key | | |
|---|---|---|
| **Series** | **Duct diameter [mm]** | **Options** |
| **Iso-Mix** | **100; 125; 150; 160; 200; 250; 315** | **T:** turn-off delay timer adjustable from 2 to 30 minutes<br>**US:** speed switch<br>**FR1:** smooth speed controller adjustable from 0 to 100 % and power cable with mains plug<br>**G1:** speed controller, temperature controller with external temperature sensor, power cable with mains plug<br>**GT1:** speed controller, temperature controller with external temperature sensor, 5 min timer switch and power cable with mains plug<br>**GI1:** speed controller, temperature controller with integrated temperature sensor and power cable mains plug<br>**GTI1:** speed controller, temperature controller with integrated temperature sensor, 5 min timer switch and power cable with mains plug<br>**W1:** power cable with mains plug |

## Dimensions [mm]

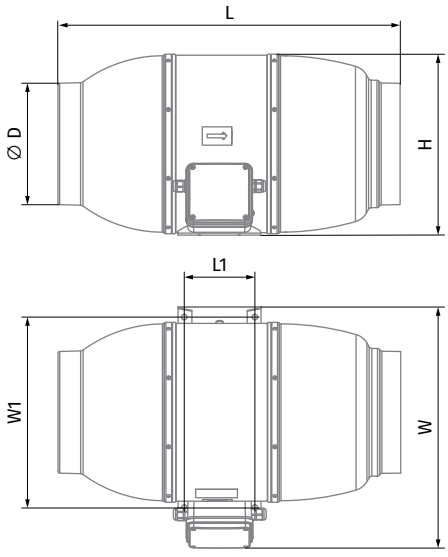
| Type | ∅ D | H | L | L1 | W | W1 |
|---|---|---|---|---|---|---|
| **Iso-Mix 100** | 98 | 220 | 505 | 42 | 243 | 231 |
| **Iso-Mix 125** | 123 | 220 | 474 | 42 | 243 | 231 |
| **Iso-Mix 150** | 148 | 249 | 581 | 44 | 314 | 261 |
| **Iso-Mix 160** | 157 | 263 | 580 | 44 | 273 | 231 |
| **Iso-Mix 200** | 198 | 295 | 560 | 115 | 392 | 310 |
| **Iso-Mix 250** | 248 | 360 | 665 | 130 | 445 | 370 |
| **Iso-Mix 315** | 313 | 434 | 785 | 180 | 526 | 450 |




**Iso-Mix 100, Iso-Mix 125, Iso-Mix 160**




**Iso-Mix 150**




**Iso-Mix 200, Iso-Mix 250, Iso-Mix 315**

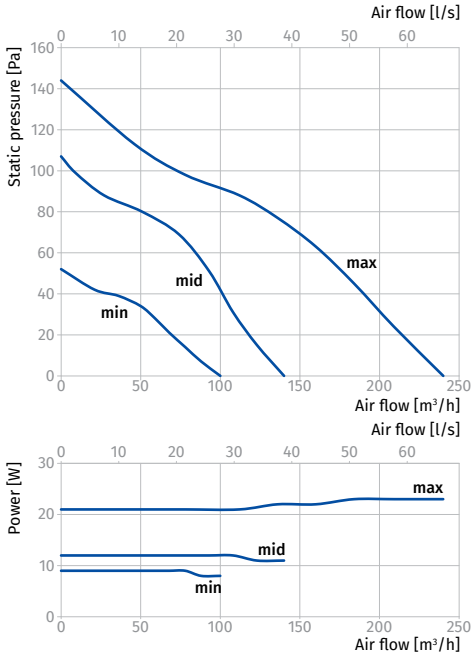
## Technical data

| Parameters | Iso-Mix 100 | | | Iso-Mix 125 | | |
|---|---|---|---|---|---|---|
| Speed | min | med | max | min | med | max |
| Voltage [V] | | 1 ~ 230 | | | 1 ~ 230 | |
| Frequency [Hz] | | 50/60 | | | 50/60 | |
| Power [W] | 9 | 12 | 23 | 9 | 12 | 23 |
| Current [A] | 0.08 | 0.09 | 0.10 | 0.08 | 0.09 | 0.10 |
| Maximum air flow [m³/h (l/s)] | 100 (28) | 140 (39) | 240 (67) | 155 (43) | 214 (59) | 340 (94) |
| RPM [min⁻¹] | 1695 | 2424 | 2785 | 1784 | 2473 | 2788 |
| Sound pressure at 3 m [dBA] | 16 | 21 | 27 | 16 | 21 | 25 |
| Max. transported air temperature [°C] | | +60 | | | +60 | |
| SEC class | | – | | | – | |
| IP rating | | IPX4 | | | IPX4 | |
| Motor IP rating | | IP44 | | | IP44 | |
| ErP | | – | | | – | |

To comply with ErP 2018 it is necessary to use a speed controller and local demand control typology (connect the sensor).

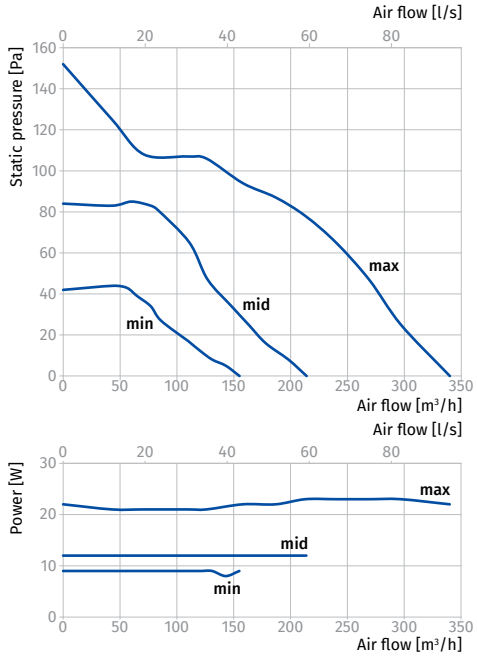
### ISO-MIX 100

| 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] | **56** | 36 | 49 | 53 | 49 | 47 | 43 | 36 | 29 | **36** | **46** |
| $L_{WA}$ to outlet [dBA] | **56** | 31 | 44 | 53 | 50 | 42 | 40 | 36 | 28 | **35** | **45** |
| $L_{WA}$ to environment [dBA] | **47** | 30 | 41 | 43 | 40 | 40 | 35 | 26 | 21 | **27** | **37** |




### ISO-MIX 125

| 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] | **56** | 36 | 49 | 53 | 49 | 46 | 42 | 36 | 28 | **36** | **46** |
| $L_{WA}$ to outlet [dBA] | **56** | 31 | 44 | 53 | 50 | 42 | 40 | 36 | 28 | **35** | **45** |
| $L_{WA}$ to environment [dBA] | **45** | 28 | 39 | 40 | 38 | 38 | 33 | 25 | 20 | **25** | **25** |

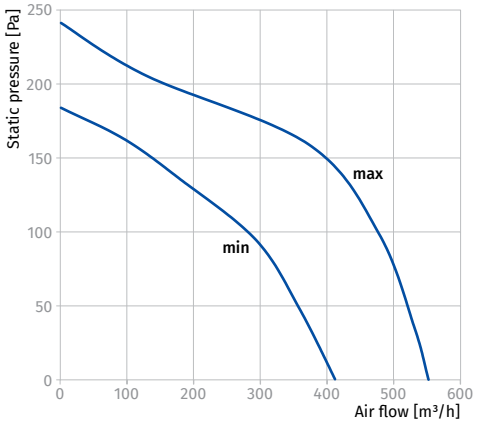


| Parameters | Iso-Mix 150, Iso-Mix 160 | | Iso-Mix 200 | | |
|---|---|---|---|---|---|
| Speed | min | max | min | med | max |
| Voltage [V] | 1 ~ 230 | | | 1 ~ 230 | |
| Frequency [Hz] | 50/60 | | | 50/60 | |
| Power [W] | 45 | 52 | 81 | 98 | 110 |
| Current [A] | 0.20 | 0.23 | 0.36 | 0.43 | 0.49 |
| Maximum air flow [m³/h (l/s)] | 410 (114) | 550 (153) | 779 (216) | 985 (274) | 1130 (314) |
| RPM [min⁻¹] | 1985 | 2640 | 2413 | 2709 | 2837 |
| Sound pressure at 3 m [dBA] | 26 | 33 | 30 | 34 | 36 |
| Max. transported air temperature [°C] | +60 | | | +60 | |
| SEC class | C | | | NRVU | |
| IP rating | IPX4 | | | IPX4 | |
| Motor IP rating | IP44 | | | IP44 | |
| ErP | 2018 | | | 2018 | |

To comply with ErP 2018 it is necessary to use a speed controller and local demand control typology (connect the sensor).

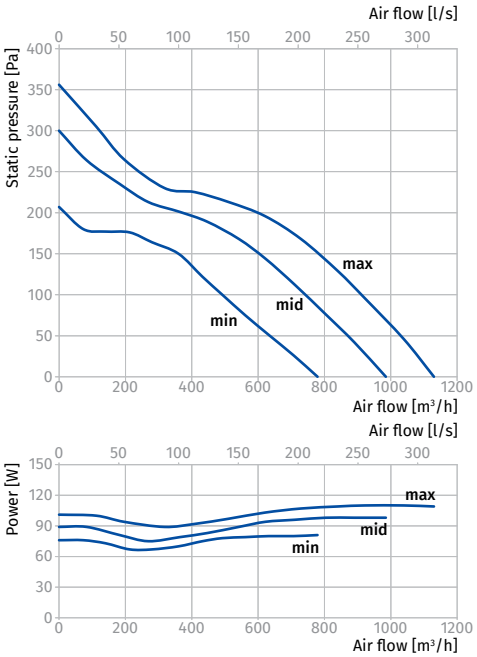
## ISO-MIX 150, ISO-MIX 160

| Sound power level, A-weighted | Total | Octave frequency bands [Hz] | | | | | | | | LpA 3 m | LpA 1 m |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 63 | 125 | 250 | 500 | 1000 | 2000 | 4000 | 8000 | | |
| **Min speed** | | | | | | | | | | | |
| $L_{WA}$ to inlet [dBA] | **59** | 32 | 49 | 55 | 53 | 52 | 38 | 28 | 15 | **38** | **48** |
| $L_{WA}$ to outlet [dBA] | **62** | 36 | 41 | 44 | 61 | 53 | 44 | 44 | 29 | **41** | **51** |
| $L_{WA}$ to environment [dBA] | **47** | 37 | 40 | 41 | 40 | 38 | 29 | 22 | 19 | **26** | **36** |
| **Max speed** | | | | | | | | | | | |
| $L_{WA}$ to inlet [dBA] | **68** | 37 | 58 | 65 | 62 | 61 | 44 | 33 | 18 | **48** | **58** |
| $L_{WA}$ to outlet [dBA] | **66** | 38 | 43 | 47 | 65 | 57 | 47 | 47 | 31 | **45** | **55** |
| $L_{WA}$ to environment [dBA] | **53** | 44 | 47 | 48 | 47 | 45 | 34 | 26 | 23 | **33** | **43** |




## ISO-MIX 200

| 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] | **69** | 38 | 59 | 66 | 63 | 62 | 45 | 34 | 18 | **49** | **59** |
| $L_{WA}$ to outlet [dBA] | **67** | 39 | 44 | 48 | 66 | 58 | 48 | 48 | 32 | **47** | **57** |
| $L_{WA}$ to environment [dBA] | **57** | 44 | 52 | 52 | 49 | 45 | 41 | 39 | 34 | **36** | **46** |

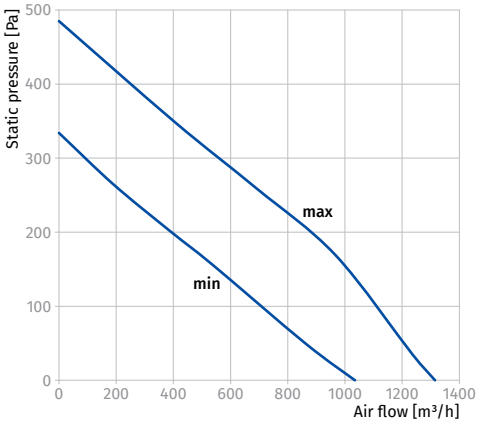


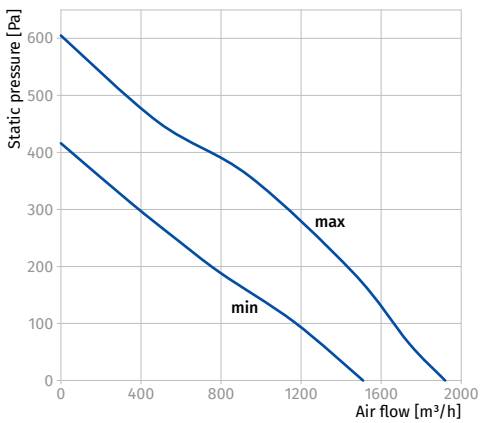
| Parameters | Iso-Mix 250 | | Iso-Mix 315 | |
|---|---|---|---|---|
| Speed | min | max | min | max |
| Voltage [V] | 1 ~ 230 | | 1 ~ 230 | |
| Frequency [Hz] | 50/60 | | 50/60 | |
| Power [W] | 127 | 178 | 230 | 330 |
| Current [A] | 0.52 | 0.79 | 0.93 | 1.41 |
| Maximum air flow [m³/h (l/s)] | 1035 (288) | 1315 (365) | 1510 (419) | 1920 (533) |
| RPM [min⁻¹] | 1960 | 2460 | 2120 | 2620 |
| Sound pressure at 3 m [dBA] | 34 | 38 | 36 | 40 |
| Max. transported air temperature [°C] | +60 | | +60 | |
| SEC class | – | | – | |
| IP rating | IPX4 | | IPX4 | |
| Motor IP rating | IP44 | | IP44 | |
| ErP | 2018 | | 2018 | |

To comply with ErP 2018 it is necessary to use a speed controller and local demand control typology (connect the sensor).

## ISO-MIX 250

| Sound power level, A-weighted | Total | Octave frequency bands [Hz] | | | | | | | | LpA 3 m | LpA 1 m |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 63 | 125 | 250 | 500 | 1000 | 2000 | 4000 | 8000 | | |
| **Min speed** | | | | | | | | | | | |
| $L_{WA}$ to inlet [dBA] | **66** | 36 | 56 | 63 | 60 | 59 | 43 | 32 | 17 | **45** | **55** |
| $L_{WA}$ to outlet [dBA] | **64** | 37 | 42 | 46 | 63 | 55 | 46 | 46 | 30 | **43** | **53** |
| $L_{WA}$ to environment [dBA] | **55** | 44 | 48 | 51 | 47 | 44 | 37 | 31 | 25 | **34** | **44** |
| **Max speed** | | | | | | | | | | | |
| $L_{WA}$ to inlet [dBA] | **69** | 38 | 59 | 66 | 63 | 62 | 45 | 34 | 18 | **49** | **59** |
| $L_{WA}$ to outlet [dBA] | **75** | 43 | 50 | 54 | 74 | 65 | 54 | 54 | 36 | **54** | **64** |
| $L_{WA}$ to environment [dBA] | **58** | 47 | 49 | 53 | 53 | 49 | 44 | 39 | 31 | **38** | **48** |




## ISO-MIX 315

| Sound power level, A-weighted | Total | Octave frequency bands [Hz] | | | | | | | | LpA 3 m | LpA 1 m |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 63 | 125 | 250 | 500 | 1000 | 2000 | 4000 | 8000 | | |
| **Min speed** | | | | | | | | | | | |
| $L_{WA}$ to inlet [dBA] | **67** | 36 | 57 | 63 | 61 | 59 | 43 | 32 | 18 | **46** | **56** |
| $L_{WA}$ to outlet [dBA] | **65** | 45 | 48 | 56 | 59 | 61 | 56 | 48 | 37 | **44** | **54** |
| $L_{WA}$ to environment [dBA] | **56** | 47 | 47 | 52 | 50 | 45 | 41 | 37 | 29 | **36** | **46** |
| **Max speed** | | | | | | | | | | | |
| $L_{WA}$ to inlet [dBA] | **70** | 38 | 60 | 67 | 64 | 62 | 45 | 34 | 18 | **49** | **59** |
| $L_{WA}$ to outlet [dBA] | **71** | 50 | 53 | 62 | 65 | 67 | 62 | 53 | 41 | **50** | **60** |
| $L_{WA}$ to environment [dBA] | **60** | 51 | 52 | 54 | 55 | 50 | 46 | 43 | 35 | **40** | **50** |