

# Turbo

## Inline mixed-flow fans

### Use

- Supply and extract ventilation systems installed in various premises.
- Mounting in kitchens, bathrooms and other humid premises.
- Ventilation air ducts requiring high pressure, powerful air flow and low noise level.
- Compatible with Ø 100 up to 315 mm round air ducts.



**Air flow:**  
up to 1750 m³/h  
486 l/s



**Power:**  
from 23 W



**Noise level:**  
from 27 dBA



### Design

- The casing is made of low-flammable polypropylene.
- Ventilation unit with terminal box. Can be turned to any position.
- Special design of the casing permits easy dismantling of the impeller and motor block for fan servicing without dismantling the air duct.

### Motor

- Two-speed single-phase motor on ball bearings.
- Equipped with thermal overheating protection.

### Speed control

- The control (minimum speed, maximum speed and shutdown) is executed with the integrated three-position switch (**US** modification) or with the external switch for multi-speed fans (specially ordered accessory).
- Smooth speed control is possible with a built-in speed controller (**FR1** modification) or an external thyristor speed controller (available upon separate order).

### Mounting

- Due to the compact design the fan is the ideal solution for mounting in limited spaces, including space behind a false ceiling.
- The fan can be installed in any section of the ventilation system from intake to the end of the ductworks.
- Wall or ceiling mounting with a mounting plate.
- TD:** mounting kit for installation of one diameter fans in parallel (for boosting capacity)



- TL:** mounting kit for installation of one diameter fans in series (for boosting pressure).



### Accessories

| Silencers                                                                           | Filter boxes                                                                        | Electric heaters                                                                    | Water heaters                                                                       | Backdraft air dampers                                                               | Air dampers                                                                         | Clamps                                                                               | Temperature controllers                                                               | Speed controllers                                                                     | Timers/Sensors                                                                        |
|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
|  |  |  |  |  |  |  |  |  |  |
| SD                                                                                  | KFBK / KFBT                                                                         | EKH                                                                                 | WKH                                                                                 | VRV                                                                                 | VK / VKA                                                                            | K                                                                                    | MLCD E2                                                                               | CDT / CDP                                                                             | TE(TI) / HSE(HSI) / LSE(LSI) / IRSE(IRSI)                                             |

## Modifications

- **T:** turn-off delay timer adjustable from 2 to 30 minutes.
- **US:** three-position 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.

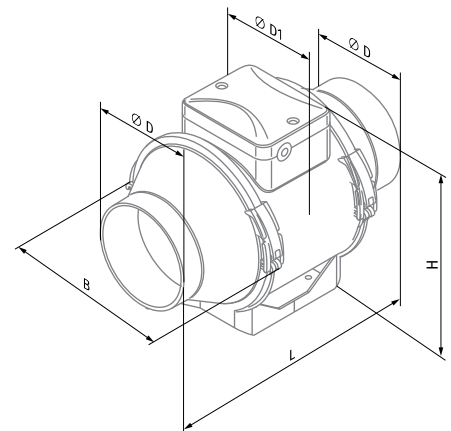


- **GT1:** speed controller, temperature controller with external temperature sensor (cable length 4 m), 5 min timer switch and power cable with mains plug.
- **GI1:** speed controller, temperature controller with integrated temperature sensor and power cable with mains plug.
- **GTI1:** speed controller, 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.

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

## Overall dimensions [mm]

| Model            | Ø D | Ø D1 | B   | H   | L     | Weight [kg] |
|------------------|-----|------|-----|-----|-------|-------------|
| <b>Turbo 100</b> | 97  | 164  | 196 | 241 | 303   | 1.68        |
| <b>Turbo 125</b> | 123 | 164  | 196 | 241 | 258   | 1.79        |
| <b>Turbo 150</b> | 148 | 187  | 220 | 251 | 289   | 3.18        |
| <b>Turbo 160</b> | 158 | 187  | 220 | 251 | 289   | 3.23        |
| <b>Turbo 200</b> | 199 | 209  | 239 | 261 | 295.5 | 3.8         |
| <b>Turbo 250</b> | 247 | 257  | 287 | 323 | 383   | 7.83        |
| <b>Turbo 315</b> | 310 | 323  | 362 | 408 | 445   | 11.7        |



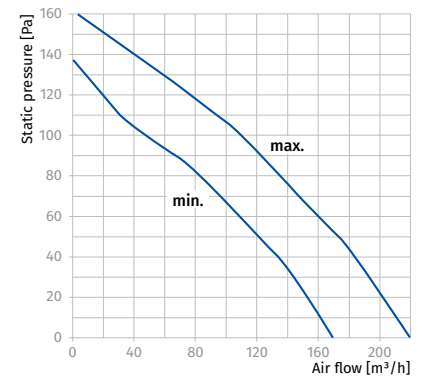
## Technical data

| Parameters                            | Turbo 100 |          | Turbo 125 |          | Turbo 150 / Turbo 160 |           |
|---------------------------------------|-----------|----------|-----------|----------|-----------------------|-----------|
| Speed                                 | min       | max      | min       | max      | min                   | max       |
| Voltage [V]                           | 1 ~ 230   | 1 ~ 230  | 1 ~ 230   | 1 ~ 230  | 1 ~ 230               | 1 ~ 230   |
| Frequency [Hz]                        | 50/60     | 50/60    | 50/60     | 50/60    | 50/60                 | 50/60     |
| Power [W]                             | 23        | 25       | 25        | 29       | 42                    | 50        |
| Current [A]                           | 0.10      | 0.11     | 0.11      | 0.13     | 0.19                  | 0.22      |
| Maximum air flow [m³/h (l/s)]         | 170 (47)  | 220 (61) | 230 (64)  | 345 (96) | 430 (119)             | 560 (156) |
| RPM [min⁻¹]                           | 1980      | 2545     | 1535      | 2265     | 1940                  | 2620      |
| Sound pressure level at 3 m [dBA]     | 27        | 32       | 29        | 34       | 32                    | 44        |
| Max. transported air temperature [°C] | +60       |          | +60       |          | +60                   |           |
| SEC class                             | C         |          | B         |          | B                     |           |
| IP rating                             | IPX4      |          | IPX4      |          | IPX4                  |           |
| Motor IP rating                       | IPX4      |          | IPX4      |          | IPX4                  |           |
| ErP                                   | -         |          | -         |          | 2018                  |           |

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

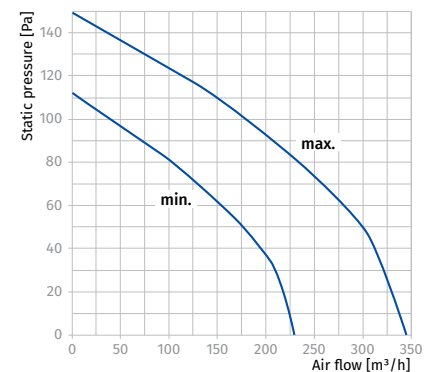
### TURBO 100

| Sound power level,<br>A-weighted | Total | Octave frequency bands [Hz] |     |     |     |      |      |      |      | LpA 3 m | LpA 1 m |
|----------------------------------|-------|-----------------------------|-----|-----|-----|------|------|------|------|---------|---------|
|                                  |       | 63                          | 125 | 250 | 500 | 1000 | 2000 | 4000 | 8000 |         |         |
| Min speed                        |       |                             |     |     |     |      |      |      |      |         |         |
| LWA to inlet [dBA]               | 54    | 19                          | 35  | 50  | 49  | 44   | 37   | 25   | 17   | 33      | 43      |
| LWA to outlet [dBA]              | 53    | 17                          | 34  | 50  | 49  | 48   | 36   | 24   | 17   | 32      | 42      |
| LWA to environment [dBA]         | 47    | 14                          | 29  | 43  | 43  | 39   | 33   | 22   | 15   | 27      | 37      |
| Max speed                        |       |                             |     |     |     |      |      |      |      |         |         |
| LWA to inlet [dBA]               | 59    | 24                          | 34  | 53  | 54  | 53   | 48   | 37   | 26   | 38      | 48      |
| LWA to outlet [dBA]              | 57    | 23                          | 33  | 52  | 52  | 52   | 47   | 37   | 26   | 37      | 47      |
| LWA to environment [dBA]         | 52    | 18                          | 29  | 46  | 48  | 47   | 43   | 33   | 23   | 32      | 42      |



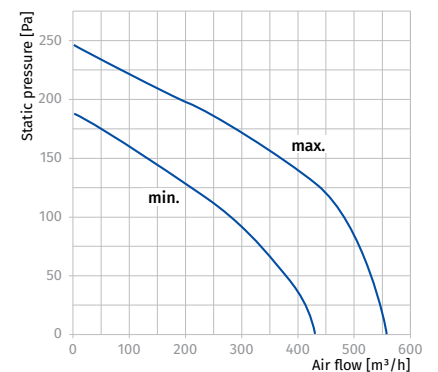
### TURBO 125

| Sound power level,<br>A-weighted | Total | Octave frequency bands [Hz] |     |     |     |      |      |      |      | LpA 3 m | LpA 1 m |
|----------------------------------|-------|-----------------------------|-----|-----|-----|------|------|------|------|---------|---------|
|                                  |       | 63                          | 125 | 250 | 500 | 1000 | 2000 | 4000 | 8000 |         |         |
| Min speed                        |       |                             |     |     |     |      |      |      |      |         |         |
| LWA to inlet [dBA]               | 54    | 26                          | 38  | 52  | 50  | 44   | 38   | 27   | 17   | 34      | 44      |
| LWA to outlet [dBA]              | 54    | 25                          | 37  | 51  | 49  | 43   | 38   | 28   | 18   | 33      | 43      |
| LWA to environment [dBA]         | 49    | 21                          | 32  | 46  | 45  | 40   | 35   | 25   | 16   | 29      | 39      |
| Max speed                        |       |                             |     |     |     |      |      |      |      |         |         |
| LWA to inlet [dBA]               | 60    | 20                          | 31  | 57  | 51  | 51   | 50   | 39   | 27   | 39      | 49      |
| LWA to outlet [dBA]              | 59    | 20                          | 31  | 56  | 51  | 51   | 49   | 39   | 26   | 38      | 48      |
| LWA to environment [dBA]         | 54    | 16                          | 27  | 51  | 46  | 47   | 45   | 36   | 24   | 34      | 44      |



### TURBO 150 / 160

| Sound power level,<br>A-weighted | Total | Octave frequency bands [Hz] |     |     |     |      |      |      |      | LpA 3 m | LpA 1 m |
|----------------------------------|-------|-----------------------------|-----|-----|-----|------|------|------|------|---------|---------|
|                                  |       | 63                          | 125 | 250 | 500 | 1000 | 2000 | 4000 | 8000 |         |         |
| Min speed                        |       |                             |     |     |     |      |      |      |      |         |         |
| LWA to inlet [dBA]               | 59    | 31                          | 45  | 54  | 52  | 54   | 48   | 35   | 29   | 38      | 48      |
| LWA to outlet [dBA]              | 63    | 37                          | 49  | 56  | 56  | 60   | 48   | 39   | 30   | 42      | 52      |
| LWA to environment [dBA]         | 52    | 21                          | 30  | 48  | 48  | 45   | 42   | 34   | 23   | 32      | 42      |
| Max speed                        |       |                             |     |     |     |      |      |      |      |         |         |
| LWA to inlet [dBA]               | 69    | 38                          | 51  | 57  | 62  | 60   | 66   | 49   | 44   | 48      | 58      |
| LWA to outlet [dBA]              | 72    | 42                          | 55  | 66  | 67  | 68   | 65   | 53   | 45   | 52      | 62      |
| LWA to environment [dBA]         | 65    | 23                          | 37  | 56  | 59  | 57   | 61   | 47   | 35   | 44      | 54      |

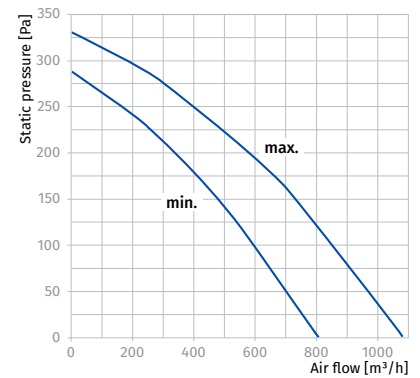


| Parameters                            | Turbo 200 |            | Turbo 250  |            | Turbo 315  |            |
|---------------------------------------|-----------|------------|------------|------------|------------|------------|
| Speed                                 | min       | max        | min        | max        | min        | max        |
| Voltage [V]                           | 1 ~ 230   | 1 ~ 230    | 1 ~ 230    | 1 ~ 230    | 1 ~ 230    | 1 ~ 230    |
| Frequency [Hz]                        | 50/60     | 50/60      | 50/60      | 50/60      | 50/60      | 50/60      |
| Power [W]                             | 76        | 108        | 125        | 177        | 227        | 315        |
| Current [A]                           | 0.34      | 0.48       | 0.54       | 0.79       | 0.99       | 1.42       |
| Maximum air flow [m³/h (l/s)]         | 805 (224) | 1080 (300) | 1070 (297) | 1360 (378) | 1420 (394) | 1750 (486) |
| RPM [min⁻¹]                           | 1915      | 2380       | 1955       | 2440       | 2115       | 2505       |
| Sound pressure level at 3 m [dBA]     | 39        | 45         | 44         | 51         | 41         | 52         |
| Max. transported air temperature [°C] | +60       |            | +60        |            | +60        |            |
| SEC class                             | B         |            | -          |            | -          |            |
| IP rating                             | IPX4      |            | IPX4       |            | IPX4       |            |
| Motor IP rating                       | IPX4      |            | IPX4       |            | IPX4       |            |
| ErP                                   | 2018      |            | 2018       |            | 2018       |            |

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

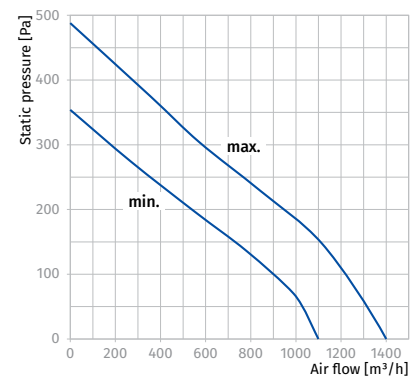
### TURBO 200

| Sound power level,<br>A-weighted | Total | Octave frequency bands [Hz] |     |     |     |      |      |      |      | LpA 3 m | LpA 1 m |
|----------------------------------|-------|-----------------------------|-----|-----|-----|------|------|------|------|---------|---------|
|                                  |       | 63                          | 125 | 250 | 500 | 1000 | 2000 | 4000 | 8000 |         |         |
| Min speed                        |       |                             |     |     |     |      |      |      |      |         |         |
| LwA to inlet [dBA]               | 66    | 38                          | 50  | 58  | 59  | 60   | 59   | 55   | 45   | 45      | 55      |
| LwA to outlet [dBA]              | 64    | 40                          | 50  | 54  | 58  | 59   | 57   | 51   | 44   | 43      | 53      |
| LwA to environment [dBA]         | 60    | 27                          | 42  | 49  | 54  | 55   | 54   | 46   | 34   | 39      | 49      |
| Max speed                        |       |                             |     |     |     |      |      |      |      |         |         |
| LwA to inlet [dBA]               | 71    | 41                          | 50  | 63  | 64  | 65   | 64   | 62   | 52   | 50      | 60      |
| LwA to outlet [dBA]              | 70    | 43                          | 52  | 61  | 66  | 64   | 63   | 58   | 51   | 50      | 60      |
| LwA to environment [dBA]         | 65    | 34                          | 43  | 54  | 60  | 60   | 60   | 53   | 41   | 45      | 55      |



### TURBO 250

| Sound power level,<br>A-weighted | Total | Octave frequency bands [Hz] |     |     |     |      |      |      |      | LpA 3 m | LpA 1 m |
|----------------------------------|-------|-----------------------------|-----|-----|-----|------|------|------|------|---------|---------|
|                                  |       | 63                          | 125 | 250 | 500 | 1000 | 2000 | 4000 | 8000 |         |         |
| Min speed                        |       |                             |     |     |     |      |      |      |      |         |         |
| LwA to inlet [dBA]               | 72    | 48                          | 57  | 63  | 66  | 69   | 64   | 54   | 45   | 52      | 62      |
| LwA to outlet [dBA]              | 75    | 48                          | 56  | 64  | 70  | 71   | 66   | 56   | 45   | 54      | 64      |
| LwA to environment [dBA]         | 65    | 32                          | 51  | 57  | 61  | 59   | 56   | 45   | 32   | 44      | 54      |
| Max speed                        |       |                             |     |     |     |      |      |      |      |         |         |
| LwA to inlet [dBA]               | 78    | 52                          | 62  | 66  | 71  | 75   | 72   | 62   | 52   | 58      | 68      |
| LwA to outlet [dBA]              | 81    | 52                          | 60  | 66  | 76  | 77   | 74   | 63   | 52   | 60      | 70      |
| LwA to environment [dBA]         | 72    | 35                          | 50  | 63  | 69  | 66   | 63   | 53   | 40   | 51      | 61      |



### TURBO 315

| Sound power level,<br>A-weighted | Total | Octave frequency bands [Hz] |     |     |     |      |      |      |      | LpA 3 m | LpA 1 m |
|----------------------------------|-------|-----------------------------|-----|-----|-----|------|------|------|------|---------|---------|
|                                  |       | 63                          | 125 | 250 | 500 | 1000 | 2000 | 4000 | 8000 |         |         |
| Min speed                        |       |                             |     |     |     |      |      |      |      |         |         |
| LwA to inlet [dBA]               | 72    | 43                          | 54  | 62  | 67  | 66   | 67   | 58   | 47   | 52      | 62      |
| LwA to outlet [dBA]              | 70    | 45                          | 57  | 59  | 64  | 66   | 63   | 56   | 46   | 50      | 60      |
| LwA to environment [dBA]         | 62    | 28                          | 51  | 53  | 57  | 57   | 54   | 46   | 36   | 41      | 51      |
| Max speed                        |       |                             |     |     |     |      |      |      |      |         |         |
| LwA to inlet [dBA]               | 80    | 50                          | 59  | 68  | 73  | 77   | 74   | 70   | 59   | 60      | 70      |
| LwA to outlet [dBA]              | 78    | 51                          | 60  | 66  | 70  | 75   | 71   | 66   | 57   | 58      | 68      |
| LwA to environment [dBA]         | 72    | 37                          | 51  | 66  | 66  | 67   | 65   | 58   | 48   | 52      | 62      |

