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Conservatory Ventilation

Living in harmony with the sun is becoming more and more popular, making a conservatory the perfect home extension. Improved sections, windows, ventilation technology and shade systems make your conservatory an even more comfortable addition to your home. The pleasure of having an oasis of green in your home can quickly turn into frustration and disappointment if the room is too hot, too humid or stuffy. Both people and plants require a constant exchange of air, with natural and automatic ventilation systems as options when it comes to managing the air quality. When planning your conservatory, it is important to

incorporate sun protection in addition to the appropriate ventilation system.

No other room provides the opportunity to enjoy every season like a conservatory. A careful selection of plants adds additional value to a conservatory, transforming the extension into a true oasis of relaxation and comfort. If left without shade protection in the summer, a conservatory can quickly become overheated through the greenhouse effect. Shortwave rays enter through the glass panes and warm the enclosed area, which in turn give off thermal rays. Because they are longwave and reflected

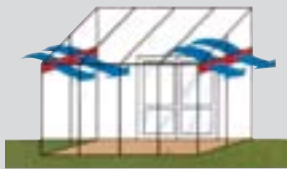

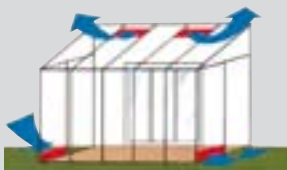
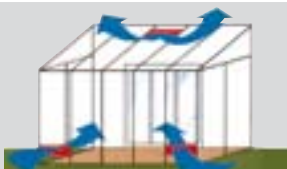
by glass, they are not able to escape the enclosure. A second problem is insufficient or improper ventilation, which leads to an increase in the room's humidity, which in turn can stimulate the growth of mold and mildew. A conservatory thrives when it is properly ventilated and thus creates a truly comfortable environment. emco offers an extensive range of ventilation products that are effective and useful for regulating air intake and exhaust. This creates in turn regular air exchange and protects against overheating and excess humidity.



A conservatory thrives when properly ventilated.

Quick Selection Table

Which volume of air (measured in m³/h) for which room volume (taking Fc-values into consideration)

| Ventilation Type | Air Exhaust Device | *Panel Dimensions(b/h) | Air Intake Device* |
|---|-------------------------|------------------------|--------------------|
| Cross Ventilation | | | |
|  | WIGA.vent 250 HF | 1000 x 250 mm | WIGA.vent 250 HN |
| | WIGA.vent 400 HF | 1250 x 250 mm | WIGA.vent 400 HN |
| | LHR 16.1 FA | 1000 x 250 mm | |
| | LHR 16.2 FA | 1250 x 250 mm | |
| | LHR 16.3 FA | 1750 x 250 mm | |
| Diagonal Ventilation | | | |
|  | LHR 16.1 FA | 1000 x 250 mm | WIGA.vent 250 HN |
| | LHR 16.2 FA | 1250 x 250 mm | WIGA.vent 400 HN |
| | LHR 16.3 FA | 1750 x 250 mm | |
| Roof Vent | | | |
|  | WIGA.vent 250 DF | 1000 x 400 mm | WIGA.vent 250 HN |
| | WIGA.vent 350 DF | 1250 x 400 mm | WIGA.vent 400 HN |
| | LDR 16.1 FA | 1000 x 400 mm | |
| | LDR 16.2 FA | 1250 x 400 mm | |
| | LDR 16.3 FA | 1750 x 400 mm | |
| WIGA.top Roof Vent | | | |
|  | WIGA.top 450.1 | 1000 x 600 mm | WIGA.vent 250 HN |
| | WIGA.top 450.2 | 1200 x 600 mm | WIGA.vent 400 HN |
| | WIGA.top 700.1 | 1000 x 600 mm | |

*Special dimensions available

Quick Selection Table

Which volume of air (measured in m³/h) for which room volume (taking Fc-values into consideration)



| R _{vol} | up to 20 m ³ | up to 30 m ³ | up to 40 m ³ | up to 50 m ³ | up to 60 m ³ | up to 70 m ³ | up to 80 m ³ | up to 100 m ³ |
|----------------------------|-------------------------|-------------------------|-------------------------|-------------------------|-------------------------|-------------------------|-------------------------|--------------------------|
| F_c 0,3 ⇒ | 200 | 250 | 300 | 400 | 450 | 550 | 650 | 800 |
| F_c 0,4 ⇒ | 250 | 350 | 450 | 550 | 700 | 800 | 900 | 1400 |
| F_c 0,5 ⇒ | 450 | 700 | 900 | 1200 | 1400 | 1600 | 2000 | 2500 |

All specifications are approximate values and depend on the type of material selected as well as the location of the conservatory

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WIGA.top

LDR

Benefits of the WIGA.top, LDR and LHR

- Quick and easy installation
- High quality aluminium sections and pulled roof dust cover (with LHR 16 dust hood)
- Easy to clean surface
- Good insulation
- Powerful pressure-stable ventilating equipment
- Serial roof dust cover (with all roof installed equipment)
- External electric lock
- Integrated air guidance profile
- High sound-absorbing capacity (WIGA.top-Serie)
- Energy efficient through control
- Low maintenance
- Thermally separated sections
- Available in all RAL-colours standard (similar to RAL 9016)
- Ideal for high volume of air and when the situation calls for specialised firms, architects, planners and contractors.

Benefits WIGA.vent

- Quick and easy mounting
- High quality aluminium system dust hood
- Easy to clean surface
- Good insulation
- Ventilating equipment
- External electric lock
- Integrated air guidance profile
- Energy efficient through control
- Low maintenance
- Thermally separated sections
- Available in all RAL-colours
- Ideal for applications with challenging ventilating situations and smaller sized conservatories.

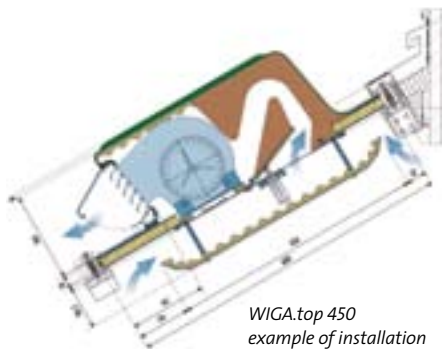
| Models | WIGA.top 450.1 | WIGA.top 450.2 | WIGA.top 700.1 | LDR 16.1 | |
|--|-------------------------------|----------------|----------------|----------|--|
| Height (exterior) mm | 174 | 174 | 174 | 140 | |
| Height (interior) mm | 87 | 87 | 87 | 240 | |
| Panel width mm | 1000 | 1200 | 1000 | 1000 | |
| Panel height mm | 600 | 600 | 600 | 400 | |
| Panel depth mm | 28 | 28 | 28 | 28 | |
| Max. shortening dimensions width mm | 790 | 790 | 790 | 610 | |
| k-value W/m ² k* | 1,6 | 1,6 | 1,6 | 2,3 | |
| Sound pressure level min./max. dB (A)** | 28 - 52 | 28 - 52 | 28 - 55 | 32 - 53 | |
| Volume of Air m ³ /h*** | 450 | 450 | 715 | 350 | |
| Cable connection | | | | | |
| Lead cross section and number of wires mm ² | 5 x 1,0 | 5 x 1,0 | 5 x 1,0 | 5 x 1,0 | |
| Capacity from - to (watt) | 27 - 145 | 27 - 145 | 36 - 210 | 55 | |
| Revision | over exhaust interior profile | | | | |
| Colour (Standard) similar to RAL 9016 Verkehrsweiß | 9016 | | | | |

* calculated according to DIN 4108

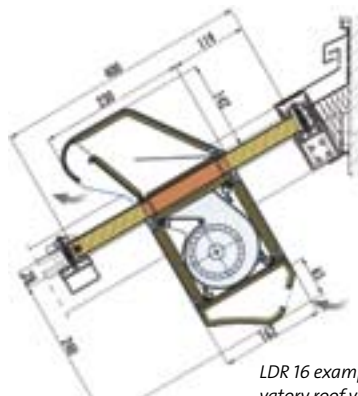
** according to DIN 52219/IEC 651

*** according to DIN prEN 13141/DIN 5167; Δp o Pa

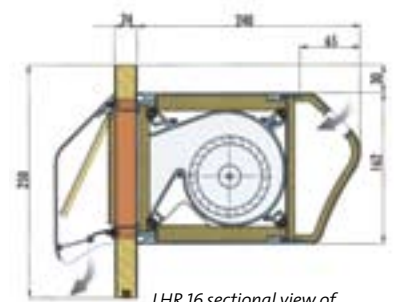
Models WIGA.vent 250 HN and WIGA.vent 400 HN are equipped with class PPI 10 filters.



WIGA.top 450
example of installation
of roof ventilation device



LDR 16 example of conservatory roof vent series



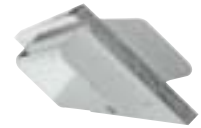
LHR 16 sectional view of conservatory air exhaust device



LHR

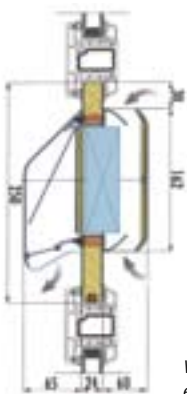


WIGA.vent DF

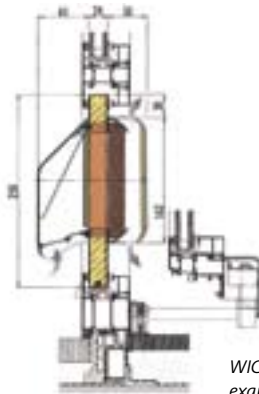


WIGA.vent HF / HN

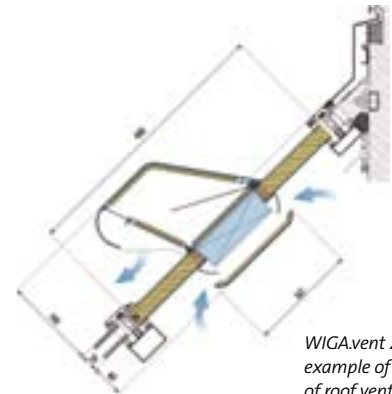
| | LDR 16.2 | LDR 16.3 | LHR 16.1 | LHR 16.2 | LHR 16.3 | WIGA.vent 250 HF | WIGA.vent 400 HF | WIGA.vent 250 DF | WIGA.vent 350 DF | WIGA.vent 250 HN | WIGA.vent 400 HN |
|--------------------------------|-------------------------------|----------|----------|----------|----------|-------------------------------|------------------|------------------|------------------|------------------|------------------|
| | 140 | 140 | 65 | 65 | 65 | 65 | 65 | 140 | 140 | 65 | 65 |
| | 240 | 240 | 240 | 240 | 240 | 60 | 60 | 60 | 60 | 50 | 50 |
| | 1250 | 1750 | 1000 | 1250 | 1750 | 1000 | 1250 | 1000 | 1250 | 1000 | 1250 |
| | 400 | 400 | 250 | 250 | 250 | 250 | 250 | 400 | 400 | 250 | 250 |
| | 28 | 28 | 24 | 24 | 24 | 24 | 24 | 28 | 28 | 24 | 24 |
| | 960 | 1410 | 600 | 950 | 1400 | 750 | 970 | 760 | 980 | 750 | 970 |
| | | | | | | | | | | | |
| | 2,4 | 2,6 | 2,4 | 2,5 | 2,7 | 1,6 | 1,6 | 1,4 | 1,4 | 1,6 | 1,6 |
| | 34 - 54 | 38 - 56 | 30 - 52 | 31 - 54 | 34 - 55 | 26 - 57 | 23 - 57 | 31 - 59 | 26 - 60 | | |
| | 700 | 1050 | 350 | 700 | 1050 | 290 | 380 | 270 | 370 | | |
| 230 Volt, 50 Hz with lead wire | | | | | | | | | | | |
| | 5 x 1,0 | 5 x 1,0 | 5 x 1,0 | 5 x 1,0 | 5 x 1,0 | 5 x 1,0 | 5 x 1,0 | 5 x 1,0 | 5 x 1,0 | 5 x 1,0 | 5 x 1,0 |
| | 110 | 165 | 55 | 110 | 165 | 57 | 76 | 57 | 76 | 10 | 10 |
| | over exhaust interior profile | | | | | over exhaust interior profile | | | | | |
| | 9016 | | | | | 9016 | | | | | |



*WIGA.vent 250/400 HF
example of air exhaust device*

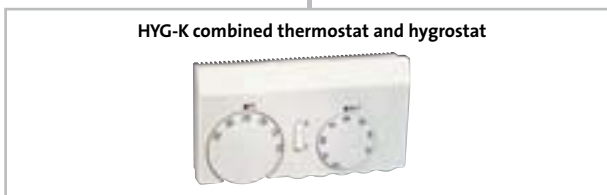
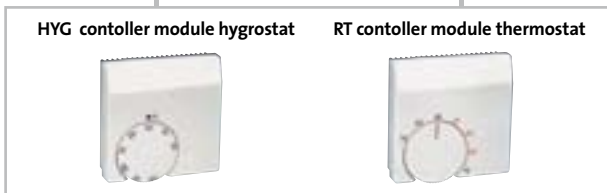


*WIGA.vent 250/400 HN
example of installation*

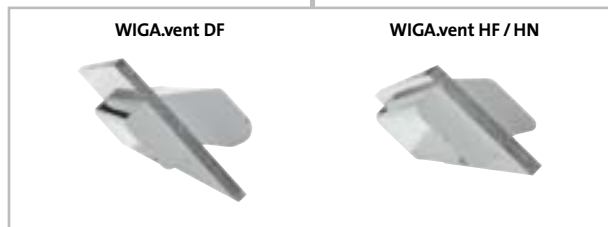
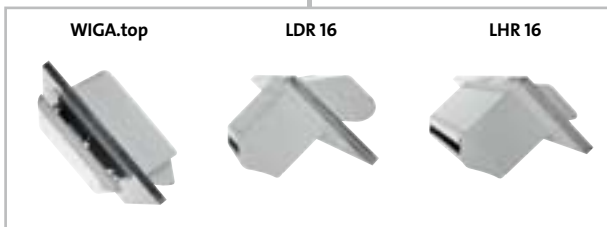


*WIGA.vent 250/350 DF
example of installation
of roof ventilation device*

Controls, control modules and optional accessories



Anschluss-Varianten



emcotherm floor convectors

heating, cooling and ventilating in standard and purpose-made solutions. Whether cold air protection, total, secondary or quick heating is desired, owners and architects value our versatile product portfolio for economical comfort air conditioning.

For more information, please request our catalogue "emcotherm Convectors".