

suction blowers



Type 150 complete suction unit



Type 150 ready to install module



Type 230 ready to install module

ATB suction blowers represent a specially designed system for wood and pellet fuelled boilers, consist of a motor including heat conduction, impeller, housing (not with ready to install modules) and controls. In order to achieve high overall unit efficiency levels, modern boilers require very low waste gas temperatures, generally below 200°C, and therefore, the flue draught is reduced accordingly. Defined underpressure in the boiler is essential to guarantee optimum combustion. Therefore, the pressure increase and the flow volume of the blower vary on cold and warmer days.

We have adopted maximum energy efficiency and sustainable energy use as our guiding principles and assist as a partner in the complex matter of system selection and the correct control of the blower under all conditions. Even faults, which can nonetheless frequently occur, e.g. with waste gas media temperatures of up to 500°C, are not a lasting problem for the system. This guarantees the highest levels of overall unit availability.

Our systems offer very low throughflow resistance in a stationary mode and can therefore be simply switched off when there is sufficient flue draught. Switching off and higher levels of operational efficiency mean sizeable annual energy savings. The use of performance adjustment involving voltage regulation, motor pole switching or frequency inverter ensures maximum efficiency and low noise emissions even during partial load running. We also occasionally use the system for in exhaust gas extractor units, for smoke chamber extraction and bakery ovens, etc. One of our strengths is the ability to provide customised items for SMEs, even if batch sizes are relatively small.

The **impeller** is calculated and designed by ATB. The prototypes and pilot batch components are subjected to intensive checks on our air flow test stand, which conforms with DIN 24163 (ventilator chamber test stand). These tests are aimed at determining the characteristics of the system with regard to pressure increase, flow volume, efficiency and long-term behaviour, etc. On the one hand, the intention is to verify the theoretical calculations and on the other, to be able to carry out the improvements needed to meet customer specifications. In the case of

impellers of up to Ø 170 mm, stainless steel 1.4301 is used as a standard material. For impellers larger than Ø170 mm, St360C structural steel is employed, or if requested, austenitic 1.4301/1.4571.

The **housing** can be supplied with different diameters of suction and pressure connections, is standardly made out of St360 St coated with heat-resistant paint, or available on request in stainless steel. Above that we offer some ready to install units without housing.

The experience gathered as an established **motor** manufacturer of long-standing, particularly with regard to drives subject to high temperatures, makes us an ideal partner. Standard features include ball bearings with deep groove C3 and hot grease lubrication, a stainless steel shaft and all fastenings in stainless steel. If necessary, we use additional aluminium heat deflectors (12 Watt heat conduction at 300°C media temperature). The systems are generally available with drive voltages of 1~ 230 V or 3 ~ 400 V. As we produce the motors ourselves, we can provide an extremely flexible response to special customer requests concerning the drives (e.g. special windings).

For **controls** we offer different possibilities:

- Economy transformer 1~ for 2-pole motors, 5-level (230/200/170/140V/110V) with 120VA or 600VA, at 110V approx. 1000min⁻¹

Advantages: large control range, extremely favourably priced, high efficiency level.

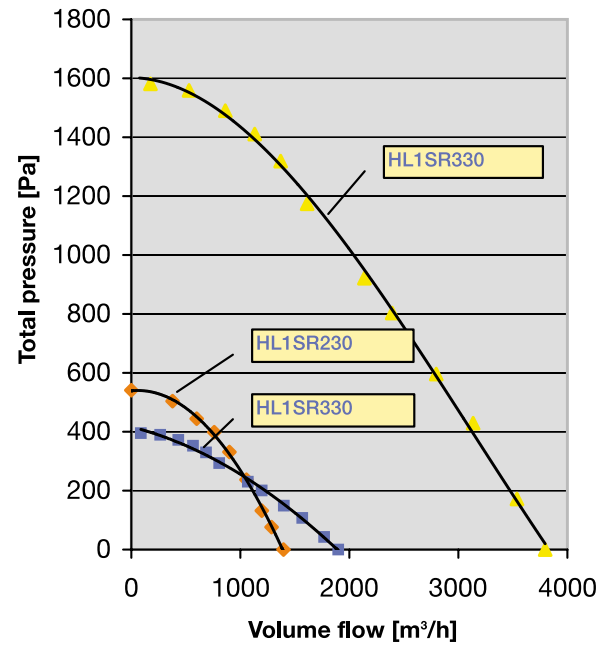
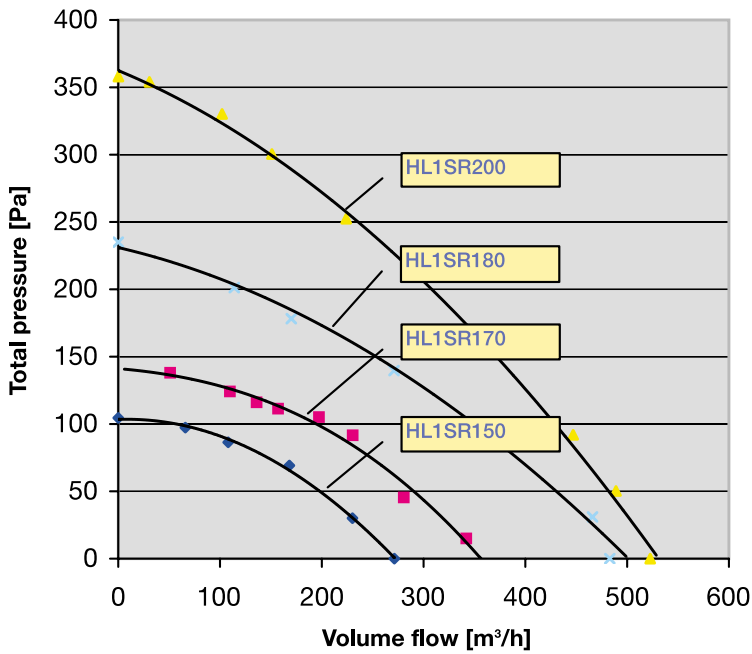
- Changeable pole motor 2/4-pole ; 4/8-pole ; 4/6-pole ; 2/6-pole.
- Frequency inverter for 2- and 4-pole motors cover the entire ventilator performance range.

Source voltage: 1~ 230V, Output voltage 3~ 230V, Power 0.4/1.5 and 2.2 kW. Our frequency inverters are equipped with RS485 interfaces, 0-10V and 4-20mA control connections, rated value potentiometers and integrated PID governors. Supply as a complete system and perfectly matched to the blower and the motor.

Further data and type information is available on request.

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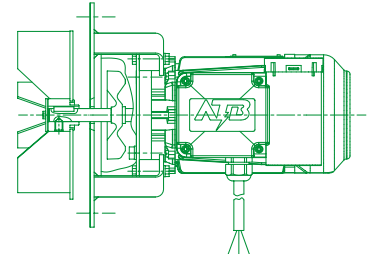
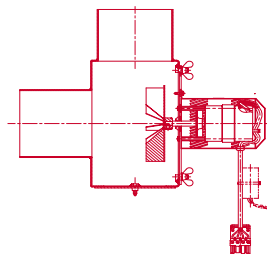
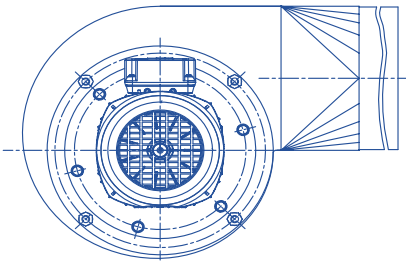
Lines and dimensions



Complete system with spiral housing

Complete system with angular housing

install module



Performance data & dimensions

| Type | Impeller diameter [mm] | High [mm] | V max. [m³/h] | Δp_{st} max. [Pa] | n [1/min] | Engine performance P2 [W] | Install module | Housing | Short rifle [mm] |
|----------|------------------------|-----------|---------------|---------------------------|-----------|---------------------------|----------------|---------|------------------|
| HL1SR150 | 150 | 32 | 270 | 104 | 2900 | 30 | | angular | 130/150/180 |
| HL2SR150 | 150 | 32 | 397 | 207 | 2900 | 30 | x | | |
| HL1SR170 | 170 | 32 | 281 | 114 | 2900 | 50 | | angular | 130/160/180 |
| HL2SR170 | 170 | 32 | 400 | 297 | 2900 | 50 | x | | |
| HL1SR180 | 180 | 52 | 504 | 228 | 2900 | 120 | | angular | 150/180 |
| HL2SR180 | 180 | 52 | 400 | 509 | 2900 | 120 | x | | |
| | 180 | 52 | 142 | 324 | 1450 | 50 | x | | |
| HL1SR200 | 200 | 76 | 518 | 408 | 2900 | 150 | | angular | 150/180/200 |
| | 200 | 76 | 147 | 42 | 980 | 30 | | angular | 150/180/200 |
| HL2SR200 | 200 | 76 | 792 | 397 | 2900 | 150 | x | | |
| | 200 | 76 | 324 | 140 | 1450 | 60 | x | | |
| | 200 | 76 | 214 | 63 | 980 | 30 | x | | |
| HL1SR230 | 230 | 85 | 1396 | 541 | 2900 | 300 | | spiral | 200/250 |
| HL2SR230 | 230 | 85 | 1625 | 480 | 2900 | 300 | x | | |
| | 230 | 85 | 813 | 120 | 1450 | 120 | x | | |
| HL1SR330 | 330 | 105 | 3600 | 1450 | 2900 | 1500 | | spiral | 300 |
| | 330 | 105 | 1900 | 400 | 1450 | 300 | | spiral | 300 |
| HL2SR330 | 330 | 105 | 1600 | 320 | 1450 | 300 | x | | |