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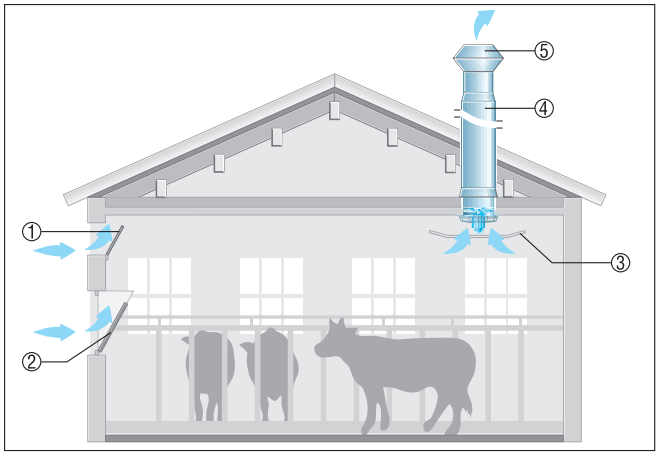
Stable air extraction via the roof: Recommendations for measures and accessories to be used by the customer

- A good stable climate is an important pre-requisite for healthy livestock, better food utilization, efficient working animal performance and quicker fattening.
- Long-term humidity and harsh stable vapours can cause serious damage to buildings.
- Natural ventilation through open windows and doors as well as gravity ventilation through shafts is uncertain and insufficient as it is dependent on atmospheric influences.
- **Advantages of a mechanical ventilation device:**
- Sufficient ventilation at all times as output and effectiveness are adapted to the size of the stable and the stocking.
- Independent of atmospheric influences.
- The air volume is adjusted to the corresponding area by output control.
- Prevention of draughts.
- Air flow rates are adjusted to seasonal conditions (summer/winter operation).



① Supply air shutter
② Tilting window
③ Baffle plate
④ Insulated folded spiral-seams duct
⑤ Deflector hood

Stable ventilation via exterior wall: Recommendations for measures and accessories to be used by the customer

- Winter operation: Supply air using adjustable shutter in the cornice
- Summer operation: Supply air using tiltable windows with lateral panel

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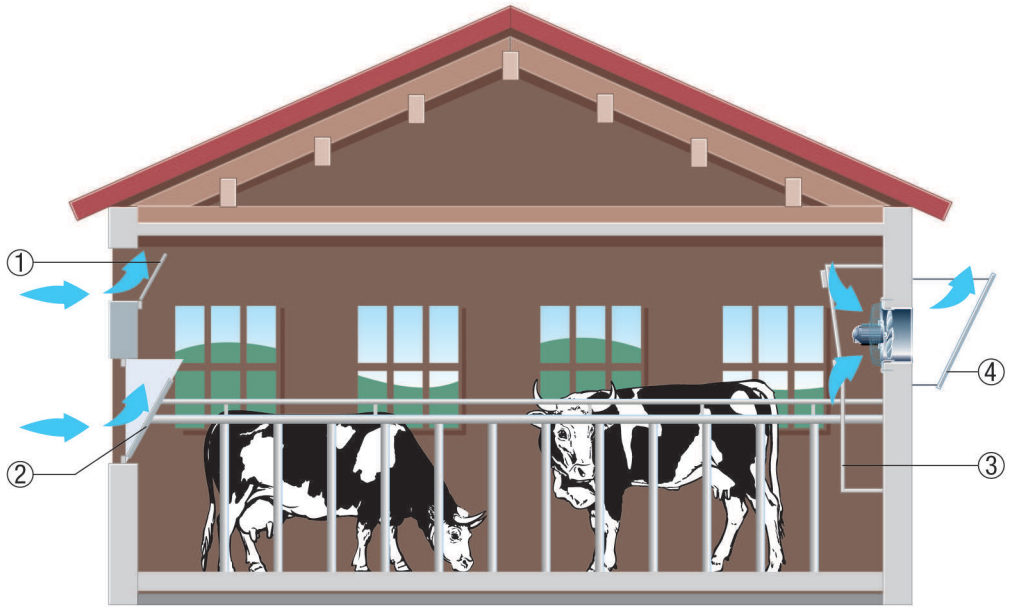

① Adjustable shutter
② Tilting window
③ Exhaust air box
④ Wind deflector

Determination of the required air volume

- Determination of the minimum air volume/animal according to air flow rate table DIN 18910. An extract is shown below.
- Maximum air volume/hour = minimum air volume / animal x number of animals

Buildings for cattle	Summer temperature above 25°C	Summer temperature below 25°C
Weight of individual animal kg	Minimum air quantity per animal m³/h	Minimum air volume m³/h
60	65	48
100	94	70
150	129	97

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Buildings for cattle	Summer temperature above 25°C	Summer temperature below 25°C
200	163	122
300	223	167
400	275	206
500	319	239
600	354	266
800	400	300

Buildings for pigs	Summer temperature above 25°C	Summer temperature below 25°C
Weight of individual animal kg	Minimum air quantity per animal m³/h	Minimum air volume m³/h
10	25	17
20	37	25
30	47	31
60	75	50
100	106	71
150	145	97
200	184	123
300	263	175

Poultry houses	Summer temperature above 25°C	Summer temperature below 25°C
Weight of individual animal kg	Minimum air flow rate per animal m³/ h	Minimum air volume m³/ h
0,055	0,6	0,38
0,165	1,7	1,06
0,310	2,8	1,75
0,520	4,1	2,56

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Poultry houses	Summer temperature above 25°C	Summer temperature below 25°C
0,700	5,1	3,19
1,130	7,0	4,38
1,630	8,9	5,56
2,200	10,2	6,38