

## Installation configurations for 400 series island/wall hoods with 400 series blowers

### Planning example 1

1x AI 442 with AR 400 743 internal blower

∅ 6" round duct

#### Good to know

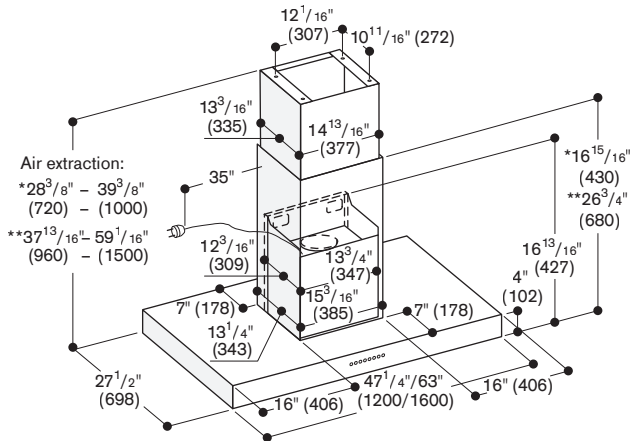
- The AR 400 743 internal blower is ideal for space-saving installation for assembly in the AI 442 island hood duct cover.
- Two duct cover lengths are available depending on the height of the room.
- The minimum distance to the cooktop is 30" for gas and induction appliances.
- The necessary mounting kits are included as accessories with the duct cover.
- The appropriate installation accessories are available for air extraction and air recirculation, see the list of accessories.

#### List of required components (air extraction)

- 1x AR 400 743 (internal blower for AI 442 / AW 442 duct cover installation)
- 1x AD 442 016 (stainless steel duct cover for air extraction, suitable for ceiling heights of 7.9 ft. (2.35 m) to 8.6 ft. (2.60 m)).  
or 1x AD 442 026 (stainless steel duct cover for air extraction, suitable for ceiling heights of 8.6 ft. (2.60 m) to 10.2 ft. (3.10 m))
- 1x AD 751 010 (aluflex pipe round, ∅ 6" (DN 150))
- Optional: 1x AD 442 396 (stainless steel ceiling collar for island hood)

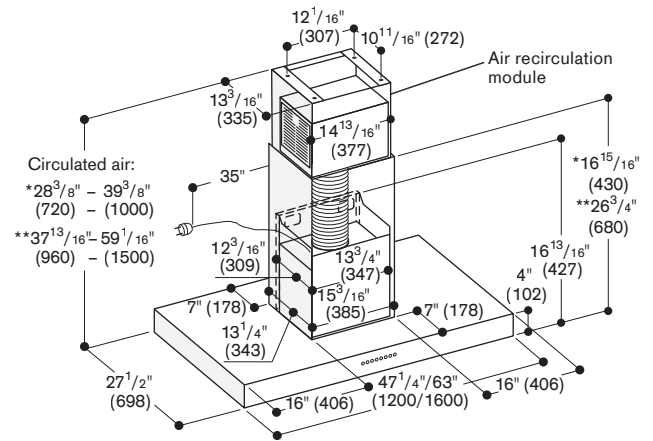
#### List of required components (air recirculation)

- 1x AR 400 743 (internal blower for AI 442 / AW 442 duct cover installation)
- 1x AA 442 810 (air air recirculation module with activated charcoal filter)
- 1x AD 442 116 (stainless steel duct cover, suitable for ceiling heights of 7.9 ft. (2.35 m) to 8.6 ft. (2.60 m))  
or 1x AD 442 126 (stainless steel duct cover for air extraction suitable for ceiling heights of 8.6 ft. (2.60 m) to 10.2 ft. (3.10 m))
- Optional: 1x AD 442 396 (stainless steel ceiling collar for island hood)



\* With the air extraction duct cover AD 442 016 suitable for ceiling heights of 7' 9" (2.35 m) to 8' 6" (2.60 m).

\*\*With the air extraction duct cover AD 442 026 suitable for ceiling heights of 8' 6" (2.60 m) to 10' 2" (3.10 m); specifications refer to a distance from floor to lower extractor hood edge of 5' 2" (1.60 m).



\* With the air recirculation duct cover AD 442 116 suitable for ceiling heights of 7' 9" (2.35 m) to 8' 6" (2.60 m).

\*\*With the air recirculation duct cover AD 442 126 suitable for ceiling heights of 8' 6" (2.60 m) to 10' 2" (3.10 m); specifications refer to a distance from floor to lower extractor hood edge of 5' 2" (1.60 m).

## Planning example 2

### 1x AW 442 with AR 400 743 internal blower

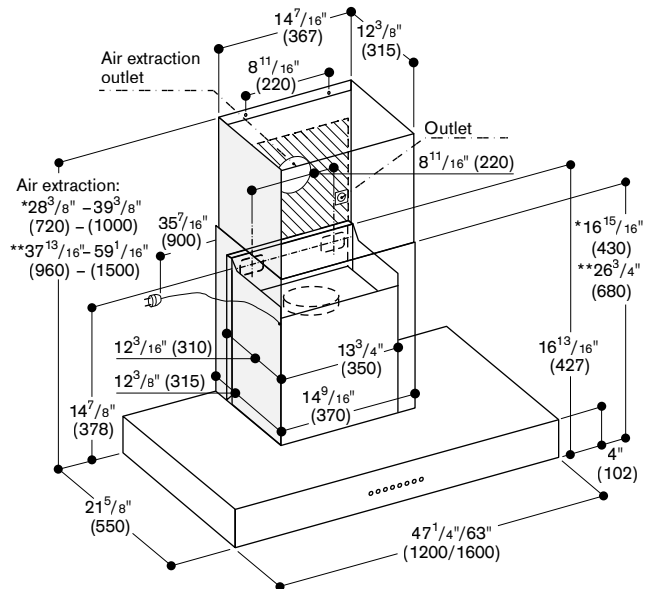
∅ 6" round duct

#### Good to know

- The AR 400 743 internal blower is ideal for space-saving installation for assembly in the AW 442 wall hood duct cover.
- Two duct cover lengths are available depending on the height of the room.
- The minimum distance to the cooktop is 30" for gas and induction appliances.
- The necessary mounting kits are included as accessories with the duct cover.
- The appropriate installation accessories are available for air extraction and air recirculation, see the list of accessories.

#### List of required components (air extraction)

- 1x AR 400 743 (internal blower unit for AI 442 / AW 442 duct cover installation)
- 1x AD 442 012 (stainless steel duct cover for air extraction, suitable for ceiling heights of 7.9 ft. (2.35 m) to 8.6 ft. (2.60 m)).  
or 1x AD 442 022 (stainless steel duct cover for air extraction, suitable for ceiling heights of 8.6 ft. (2.60 m) to 10.2 ft. (3.10 m));
- 1x AD 751 010 (aluflex pipe round, ∅ 6" (DN 150))
- Optional: 1x AD 442 392 (stainless steel ceiling collar for wall-mounted hood)

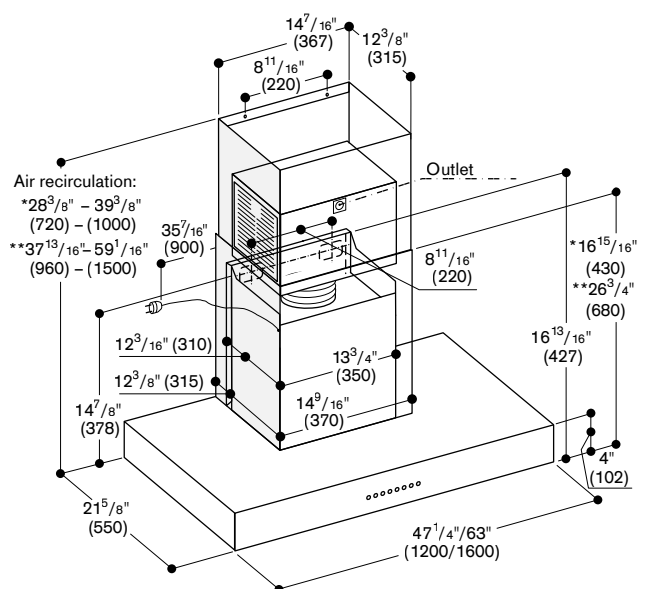


\* With air extraction duct cover AD 442 012 suitable for ceiling heights of 7' 9" (2.35 m) to 8' 6" (2.60 m).

\*\* With air extraction duct cover AD 442 022 suitable for ceiling heights of 8' 6" (2.60 m) to 10' 2" (3.10 m); Specifications refer to a distance from floor to lower chimney edge of 5' 2" (1.60 m).

#### List of required components (air recirculation)

- 1x AR 400 743 (internal blower for AI 442 / AW 442 duct cover installation)
- 1x AA 442 810 (air air recirculation module with activated charcoal filter)
- 1x AD 442 112 (stainless steel duct cover, suitable for ceiling heights of 7.9 ft. (2.35 m) to 8.6 ft. (2.60 m))  
or 1x AD 442 122 (stainless steel duct cover for air recirculation for 8.6 ft. (2.60 m) to 10.2 ft. (3.10 m))
- Optional: 1x AD 442 392 (stainless steel ceiling collar for wall-mounted hood)



\* With air recirculation duct cover AD 442 112 suitable for ceiling heights of 7' 9" (2.35 m) to 8' 6" (2.60 m).

\*\* With air recirculation duct cover AD 442 122 suitable for ceiling heights of 8' 6" (2.60 m) to 10' 2" (3.10 m); Specifications refer to a distance from floor to lower chimney edge of 5' 6" (1.60 m).

## General ventilation planning notes

The aim of good ventilation system planning is to extract cooking vapors out of the kitchen area as completely and quickly as possible. To help you plan and install your system correctly, here are a few important notes on system planning from our ventilation experts.

The planning of a ventilation system is significantly determined by the air requirement and air output. The air requirement must be contrasted with the corresponding air output that a ventilation appliance can produce, while taking the influence of all the ventilation components involved into account.

### Air requirement needed:

Please observe the local applicable building regulations when configuring ventilation solutions. The air output of a complete ventilation system must be designed according to the air requirement needed. For this, the size of the kitchen and a corresponding air change rate for the volume of space are often used as the basis for planning.

If the distance between the ventilation system and the cooktop is less than 4 feet, the factors listed below must be taken into account to ensure that most of the cooking vapors are trapped as soon as they rise from the cooktop:

- **The size and architecture of the kitchen:** As the size of the room increases, the movements of air in the room also increase and, as a result, the air requirement becomes greater.
- **The cooking appliances:** The choice of cooktop is the decisive influencing factor. Every cooktop produces different types and amounts of cooking vapors. The wider the cooktop, the higher the output of the ventilation system should be. Above all, the ventilation system must have a sufficient reserve capacity, if special Vario cooking appliances, such as a fryer, Teppan Yaki, wok or grill, are to be installed, because such appliances can be expected to produce a higher amount of cooking vapors. We therefore also recommend that these special cooking appliances are installed, if possible, in the centre of the cooktop configuration and not at the edge.
- **The type of ventilation system:** Every type of ventilation system has particular characteristics which influence the air requirement needed. Ventilation systems, such as downdraft ventilation, are characterized by extracting vapors directly from the cooktop. As they rise up, the cooking vapors can therefore not spread as far in the ambient air. In this case, the air output required is usually less than for those types of ventilation system that are 30" or further away from the cooktop.
- **The operation mode:** All Gaggenau ventilation systems can be operated both in exhaust air mode and air recirculation mode. It should be noted that, in air recirculation mode, the additional activated charcoal air filter leads to a reduction in air output in comparison to exhaust air mode. The larger the surface of the activated charcoal air filter, the more the ventilation system bears comparison in its extraction and noise behavior with an exhaust air solution. In air extraction mode, the actual air output depends not only on the blower output, but also significantly on the duct system.

### Important influencing factors on the air output/CFM rate:

- The blowers: Gaggenau ventilation systems can be combined with powerful blowers for exhaust air or air recirculation mode. These blowers are also very pressure-stable. They overcome possible pressure losses caused by a ducting system and work highly effectively at a low noise level.
- Ducting and installation: To achieve optimum results, the following points should be observed during installation:
  1. Install duct bends with a minimum clearance of 12" from the exhaust air opening.
  2. Avoid reductions in cross sections.
  3. For duct bends, use bends that are as wide as possible.
  4. For longer duct runs, preferably install ducts that have a smooth and flat inner surface.
  5. Use exhaust air pipes with a diameter of at least  $\varnothing$  5".
  6. Pay attention to the use of a short ducting path where possible.
  7. Fit wall outlets that have wide fins, wide-meshed grills and a low back-pressure.
  8. Ensure sufficient supply air.