





## Installation configurations for 400 series AL 400 retractable downdraft and 400 series blowers

### Planning example 5

#### 1x 47 1/4" AL 400 721 with 2x AR 400 742 inline blowers RIGHT

Connection downward with flat and round duct, DN 150; cellar installation

#### Combination

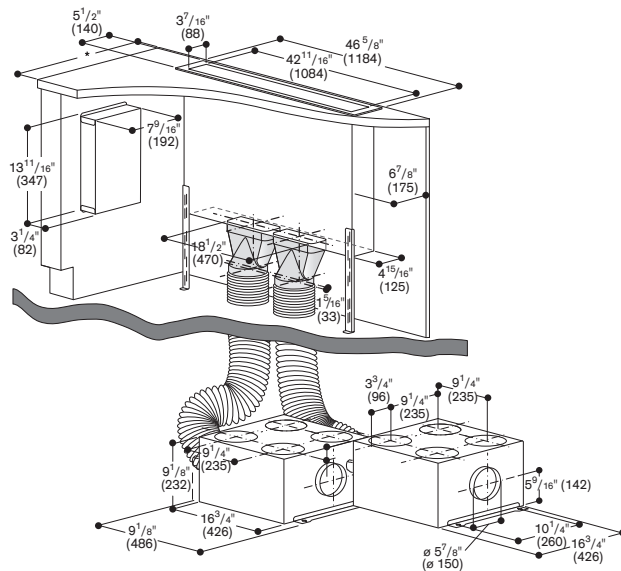
1x AL 400 retractable downdraft combined with 2x AR 400 742 blowers

#### Good to know

- The AR 400 742 blower can also be installed in an adjoining room, for example a cellar, as an alternative to cabinet installation
- Suitable threaded rods or suspension elements must be used for this configuration on the customer side; these can be attached to the retaining brackets, which are included with the blower.

#### List of accessories

- 1x AD 854 050 Connecting pieces flat duct
- 2x AR 400 742 Blower in DN150/out DN150
- 2x AD 854 041 Flat Duct adapter Round
- 2x AD 751 010 Aluflex pipe DN150
- 2x AD 854 000 Flat Duct bend Connecting piece
- 1x AD 990 091 Adhesive tape for duct components Aluminium



\* All cooktops with cut-out depth 19 3/8" (492): min. 29 1/8" (750)

### Planning example 6

#### 1x 36" AL 400 791 with AR 401 742 remote blower

Connection downward with ø 6" round ducts; installation on outside wall

#### Combination

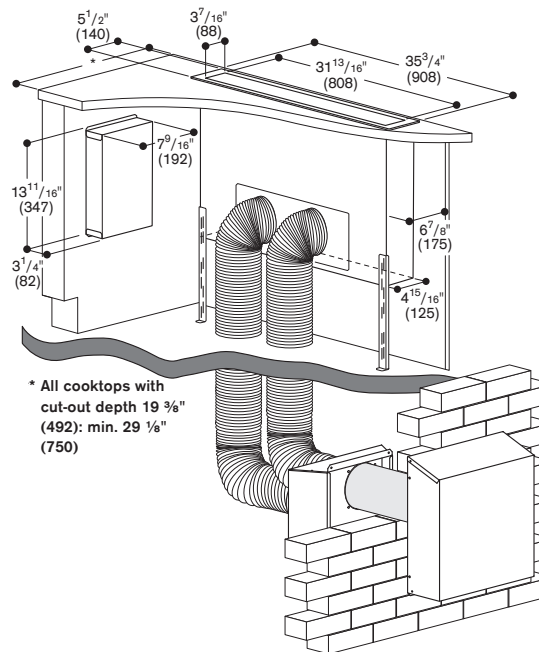
1x AL 400 retractable downdraft combined with 1x AR401742 remote blower

#### Good to know

- The AR401742 remote blower for installation on the outside wall is the ideal solution for compact air extraction.
- The ducting can be directed to the outside via the basement in this case. A minimum distance of 39 inches should be maintained for the air exhaust downwards on the AR401742 remote blower.
- Local building regulations must be observed for the basement breakout (especially with respect to the topic of fire safety).

#### List of required installation components

- 1x AD 754 049 (connection piece to 2x ø 6" round ducts)
- 2x AD 751 010 (aluflex pipe round, ø 6" (DN 150))
- 1x AD 704 048 (air collector box for AL 400)
- 1x AD 702 052 (telescopic wall duct, ø 8" round)
- 1x AR 401 742 remote blower



\* All cooktops with cut-out depth 19 3/8" (492): min. 29 1/8" (750)

## Planning example 7

1x 47 1/4" AL 400 721 with 2x AR 410 710 recirculation blowers

### Combination

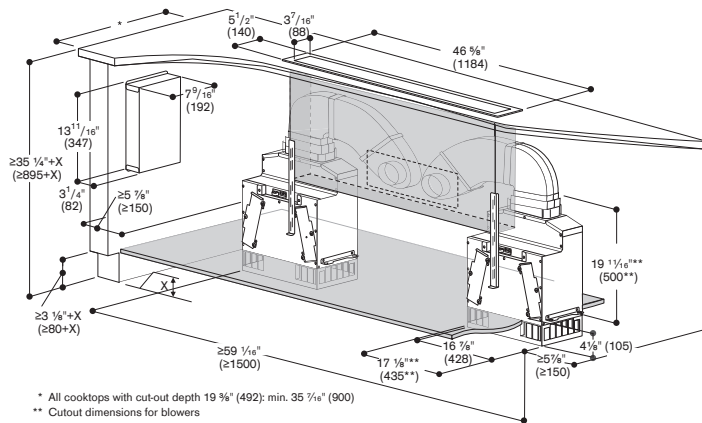
1x AL 400 retractable downdraft combined with 2x AR 410 710 recirculation blower

### Good to know

- Allow accessibility to the regenerable activated charcoal filters in the base cabinet for their replacement.
- Use of the VR 414 electric grill is not recommended in recirculation.
- Additionally, if the toe-kick is higher than 3 1/8" (80 mm), the external blower has to be elevated to enable access to the filters. If the toe-kick is 3 1/8" (80 mm) high, the blower can be placed directly on the floor.
- For optimum performance, the recirculated air requires sufficient space to escape. Recommend AA 010 410 air exhaust grill (or custom grill).

### List of accessories

- 1x AD 754 049 Connecting piece for Aluflexpipe round
- 2x AD 854 032 Flat Duct adapter Round 90°
- 2x AD 858 010 Flat Duct flex pipe L 1000mm
- 2x AD 854 031 Flat Duct bend 90° horizontal
- 2x AD 854 000 Flat Duct bend Connecting piece
- 1x AD 751 010 Aluflex pipe DN150
- 2x AA 010 410 Air exhaust grill (or custom grill)
- 1x AD 990 091 Adhesive tape for duct components Aluminium



- \* All cooktops with cut-out depth 19 3/8" (492): min. 35 7/16" (900)
- \*\* Cutout dimensions for blowers

## 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.