KITCHEN LINE

LARGE-SCALE HOODS

large-size modular kitchen hoods with integrated fresh air supply as an option

Large-scale modular hoods provide efficient exhaust with waste air filtration, possibly also controlled supply of fresh heated air over large cooking centres in kitchens of all sizes and types, optionally with automatic operation control.

The hoods are modular, with dimensions according to the requirements, i.e. dimensions where standard hoods (e.g. the GRANDE or VARIANT type) cannot be used due to dimensional limitations.

Large-scale kitchen hoods are made of stainless steel sheet CSN 17240 (AISI 304), with cassette grease separators of 500 × 175 mm made of stainless material with high separation efficiency.

As standard large-scale kitchen hoods include LED lighting 1×18 to 58 W / 230 V, in IP 65 protection rating with temperature resistance up to 60 °C.

Exhaust or supply outlets, circular or rectangular, are located exclusively on the top. The size and location of the air outlets is determined by the air flow rate and the size of the hood. The connected ductwork is recommended to be thermally and acoustically insulated (preferably using Pitre or ALP systems) for cleaning and maintenance.

Large-scale kitchen hoods are always supplied as components to be assembled on site. They are suspended from an anchoring grid (optional) attached to the ceiling by means of M8 threaded rods (number of pieces depending on the size of the hood), anchored to the ceiling with expansion bolts. The anchoring points are determined by the design of the anchor grid.

The standard height of the hood is 435 mm, with a plasterboard cover installed in the remaining part of the ceiling to prevent contamination of the upper inaccessible area of the hood.

Large-scale kitchen hoods are advantageously combined with DUPLEX compact heat recovery units, located outside the kitchen area, or alternatively with stand-alone fans and filtration, reheating and cooling systems.

Advantages of using large-scale kitchen hoods:

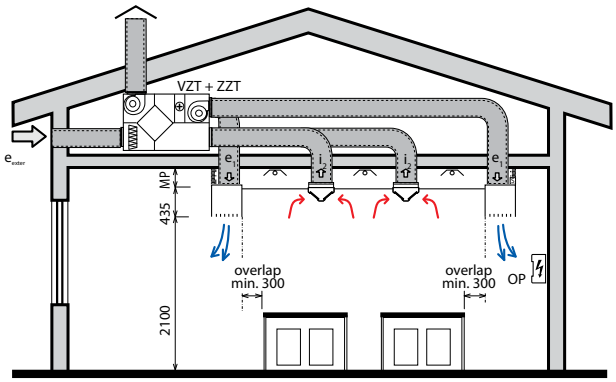
- Even extraction and fresh air supply
- Extraction of air from cooking centres with large floor plan dimensions by a single hood
- Elimination of esthetically unpleasant pipes in the kitchen area
- The impressive appearance of modular hoods
- Low purchase costs compared to using individual hoods

Automatic operation control:

Automatic control ensures economical ventilation depending on the immediate heat production of the kitchen equipment. Only when there is an increased temperature difference between the air temperature under the hood and in the kitchen area do the exhaust and supply fans start running at a reduced speed. If the temperature differential increases further, both fans start running at a maximum speed. When this adjustable differential is reduced, the fan speed is automatically lowered or the fans might even be stopped.

LEGEND

VZT+ZZT	…	DUPLEX compact ventilation unit with heat recovery
i_1	…	exhaust air inlet
i_2	…	exhaust air outlet
e_{exter}	…	outdoor air inlet
e_1	…	fresh heated air supply
e_2	…	fresh heated air outlet
MP	…	manipulation space
S	…	connection terminal board
OP	…	control panel for automatic control
RG	…	automatic control panel



Selection software

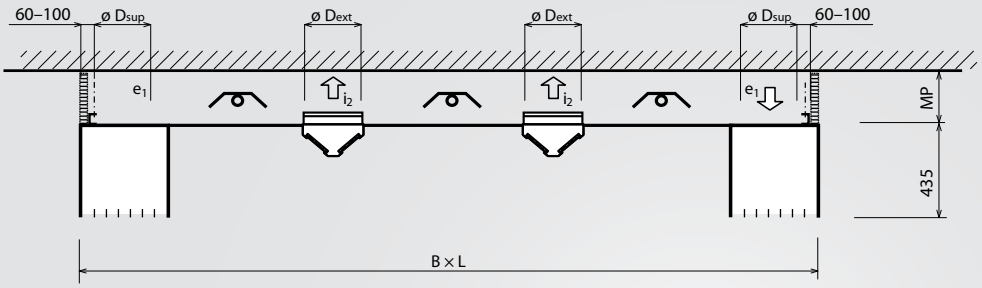
For the detailed selection of ventilated ceilings, kitchen hoods, accessories and control systems we recommend using our specialised selection software.

You will find it on our website **www.atrea.eu**.

Atrea®

LARGE-SCALE KITCHEN HOODS

BASIC TECHNICAL PARAMETERS OF LARGE-SCALE KITCHEN HOODS



Legend:

i_1	...	exhaust air inlet
i_2	...	exhaust air outlet
e_1	...	fresh heated air inlet
e_2	...	fresh heated air outlet
B × L	...	hood width × length
MP	...	manipulation space
$øD_{exh}$	...	exhaust outlet (circular or rectangular)
$øD_{sup}$	...	inlets (circular or rectangular)
	...	fluorescent lighting
S	...	connection terminal board

Extraction filters

The number of extraction filters is selected according to the extraction air rate – see the chart on the last page. The remaining space is filled with stainless steel inserts. The positioning of the filters in the hood can be individually changed according to the positioning of the appliances.

Lighting

Lighting is a standard feature of large hoods; the number of lights is based on the minimum lighting level according to DIN 360450 and the hygiene requirements in the kitchen working area of at least 500 lx at a height of 850 mm above the floor.

Chimney and column passages

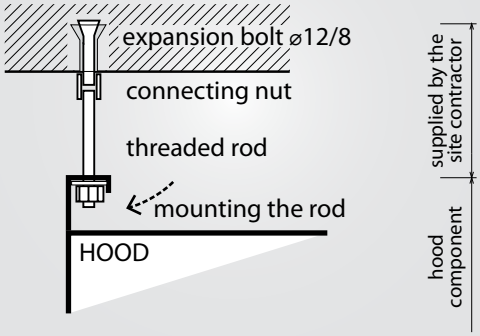
Smoke flues and exhaust pipes for gas appliances can be routed through large hoods. However, their passage must not be in the area of the filter troughs.

Connections to air ducts

Connection points for the air ducts are located exclusively on the top side of the hoods. In the case of lower rooms, the hoods are supplied with a manifold piece between the hood and the ceiling, and the connection to the HVAC ducts is near the hood's outline.

ANCHORING TO THE CEILING

Large hoods are anchored to the ceiling with expansion bolts ø 12 / 8 mm and are suspended on M8 threaded rods. The bolts, suspension rods and suspnesion grid are included in the delivery and installation of the hood.



IMPORTANT NOTICES

- Class B gas appliances must be ducted into the chimney and under no circumstances should be ducted into the hood
- the possible passage of the flue pipe through the hood must be consulted
- when designing the size of the hood, ensure that there is sufficient overhang over the outline of the appliances

SUSPENSION BRACKETS

Number of hinges: 1 to 2 pcs / m^2 of the area of the hood.
The exact spacing of the hinges is included in the production documentation of the cooker hood.

HINGES

G_{hood} =~ L × B × (20 to 30 kg / m^2 of plan)

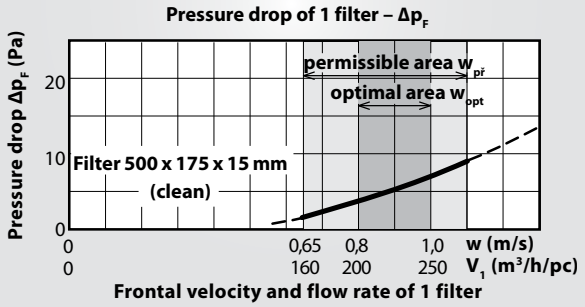
G_{filter} =~ 1,6 kg / pc

ORDERING DATA

Large-scale kitchen hoods L × B (mm) – V_{exh} / V_{sup} (m^3/h) – ø D_{exh} / ø D_{sup} (mm), number of filters, number and location of supply outlets, information on the kitchen ceiling structure – automatic control YES / NO – OP, RG distribution box – type, power consumption and type of EC supply and exhaust fan.

MECHANICAL FILTRATION – SEPARATORS

Cartridge separators are fitted laterally into the extraction air ducts. They are made of stainless steel and fitted in a 500 × 175mm stainless frame. The space between the filters is filled with stainless steel plugs. The number of grease filters shall be calculated from the extracted air quantity so that the flow rate through one filter is in the optimum wopt range according to the graph (i.e. Vopt = 200 to 250 m³/h). The positioning of the grease filters in the kitchen area should match the location of the kitchen appliances. It might be useful to relocate the filters along the length of the extraction ducts after the layout of the kitchen appliances changes..



DIGITAL CONTROL aMotion

The automatic control is characterized by highly economical operatio and a short rate of return and significantly helps to ensure perfect hygienic conditions in kitchens.

The automatic control system consists of the following elements:

– switchboard **RGa**

– microprocessor module **aM-XK**

– **CP10RT** or **aTouch** control panel

The RGa switchboard is supplied in a wall-mounted version, with IP 54 protection rating, and is installed in the HVAC plant room, corridors, warehouses, etc., always outside the kitchen area near the fans.

The CP10RT control panel is equipped with continuous control of ventilation power and temperature and an operation LED indicator.

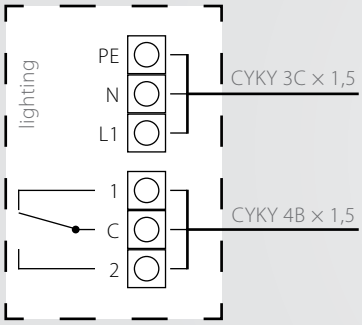
For touch control, the aTouch panel must be fitted, but must not be fitted in the kitchen area.

The CP10RT panels are supplied in a plastic wall mounted box with IP 43 protection rating. They are to be installed in the kitchen area.

* The aMotion control systém must only be used with a heat recovery system.

ELECTRICAL WIRING

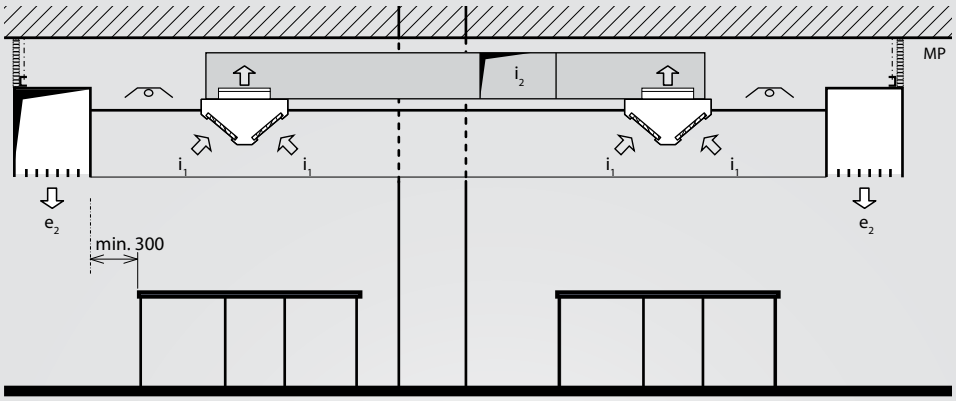
a) a terminal board with basic controls (without automatic control)

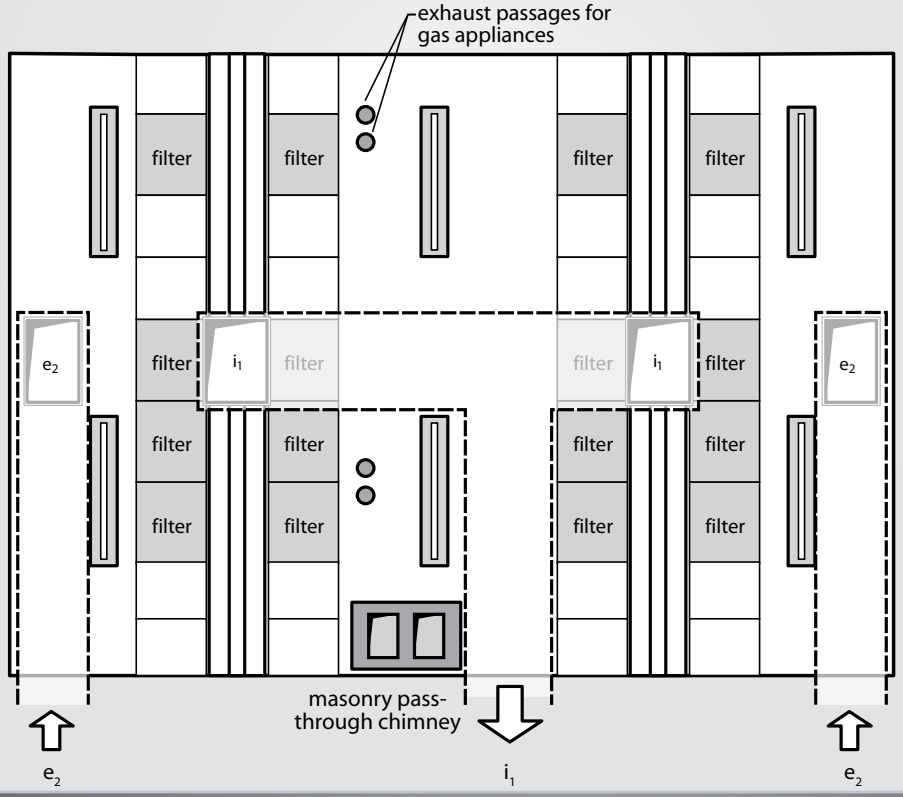


CYKY 3C × 1,5 — lighting ~230 V / 50 Hz

CYKY 4B × 1,5 — a frost protection thermostat for the heat recovery exchanger max. ~230 V / 16 (1.5) A (optional accessory)

EXAMPLE OF A KITCHEN VENTILATION DESIGN SOLUTION USING LARGE-SCALE KITCHEN HOODS





EXAMPLES OF LARGE-SCALE KITCHEN HOODS USE PROJECTS

Army catering facility Vyškov