

# MODIS 2

## stainless exhaust hoods

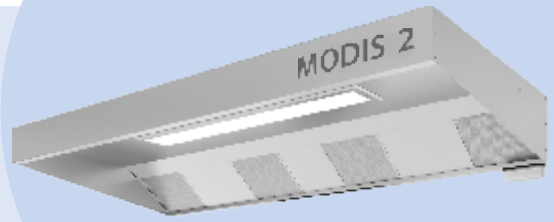
### with lighting

The unique structural design based on the modular system provides the customer with the possibility of selecting a delivery of the hood disassembled without a branch, disassembled with a branch (the hood assembled on-site whether on a self-help basis or by the manufacturer), or delivery of the hood assembled. To create a longer unit, they can be assembled side-to-side, or to create the central unit above the cooking unit, they can be suspended back-to-back. The MODIS 2 hoods provide an effective exhaust with filtration of effluent air above the cooking facilities, such as deep fryers, grill plates, frying pans, and other facilities without an increased steam generation. Inner partitions, front and side walls of the MODIS 2 hoods are made of ČSN 17240 (AISI 304) stainless steel sheet. Filtration of exhaust air is ensured by coffered fat filters with dimensions of 400 x 400 mm from a multilayer expanded metal. The hoods are delivered with type dimensions according to the table, the hoods with atypical dimensions can be delivered custom-built in the specified range.

The built-in fluorescent lighting (T5 with more economic operation) is standard part of the hood, having ingress protection IP 54, thermal resistance up to 60 °C. A terminal board for lighting connection is located on an upper surface of the hood.

For flow and pressure losses of the fat filters, see the dimensioning chart. A residual space between the fat filters is covered with gap-filling plates. **The exhaust branches for HVAC distributions are not part of the hood, they can be optionally ordered additionally with a circular or a rectangular section, with location from above as standard, see the dimensional chart.**

The hoods are provided with holes for suspension. They are exclusively anchored to a ceiling structure using M8 thread bars. A plasterboard cover of area above the hood can alternatively be installed.



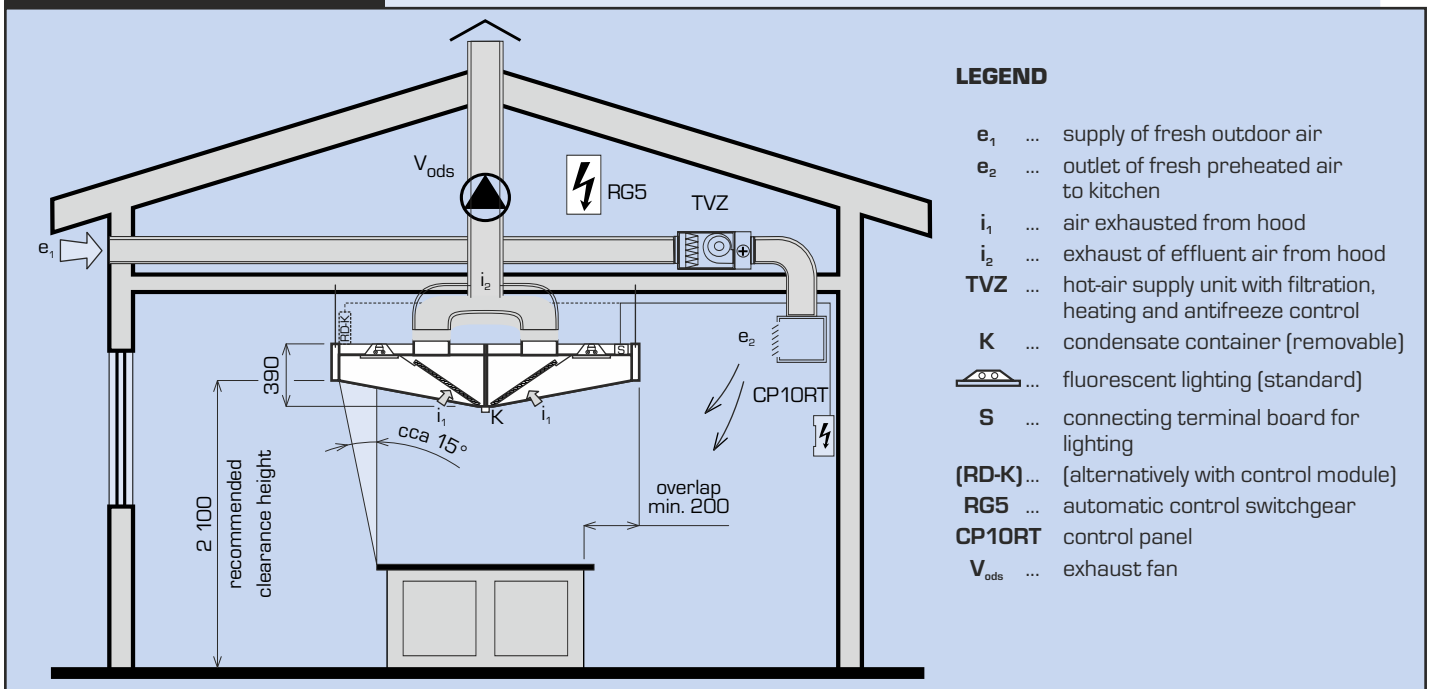
MODIS 2

### RD5 Automatic Control of Operation


If ordered, the MODIS 2 hoods can be equipped with the complete digital control system of operation ensuring the economic ventilation operation depending on momentary heat production of cooking facilities and thus preventing uneconomic run of fans at time when no cooking takes place or at a reduced thermal load.

The basic principle of automatic control is temperature sensing in areas above cooking facilities and in the kitchen area. Unless temperatures are different, the minimum speed of fans is switched on to ensure the basic air exchange within the kitchen and operation of gas appliances is enabled. When a temperature difference between temperature sensors increases, the exhaust fan as well as the supply fan automatically switch on to a higher output. When a temperature difference continues to increase, speed of both fans continuously increases up to the maximum output. When this difference decreases, output is automatically decreased or the basic minimum air exchange is set.

### FUNCTIONAL DIAGRAM



### LEGEND

- e<sub>1</sub> ... supply of fresh outdoor air
- e<sub>2</sub> ... outlet of fresh preheated air to kitchen
- i<sub>1</sub> ... air exhausted from hood
- i<sub>2</sub> ... exhaust of effluent air from hood
- TVZ ... hot-air supply unit with filtration, heating and antifreeze control
- K ... condensate container (removable)
-  ... fluorescent lighting (standard)
- S ... connecting terminal board for lighting
- (RD-K) ... [alternatively with control module]
- RG5 ... automatic control switchgear
- CP10RT ... control panel
- V<sub>ods</sub> ... exhaust fan

### SELECTION SOFTWARE



A special selection software can also be used for designing the hoods, created in compliance with VDI 2052 directive (Germany).

You can find this program on our website [www.atrea.eu](http://www.atrea.eu).

**Atrea**<sup>®</sup>

KITCHEN VENTILATION

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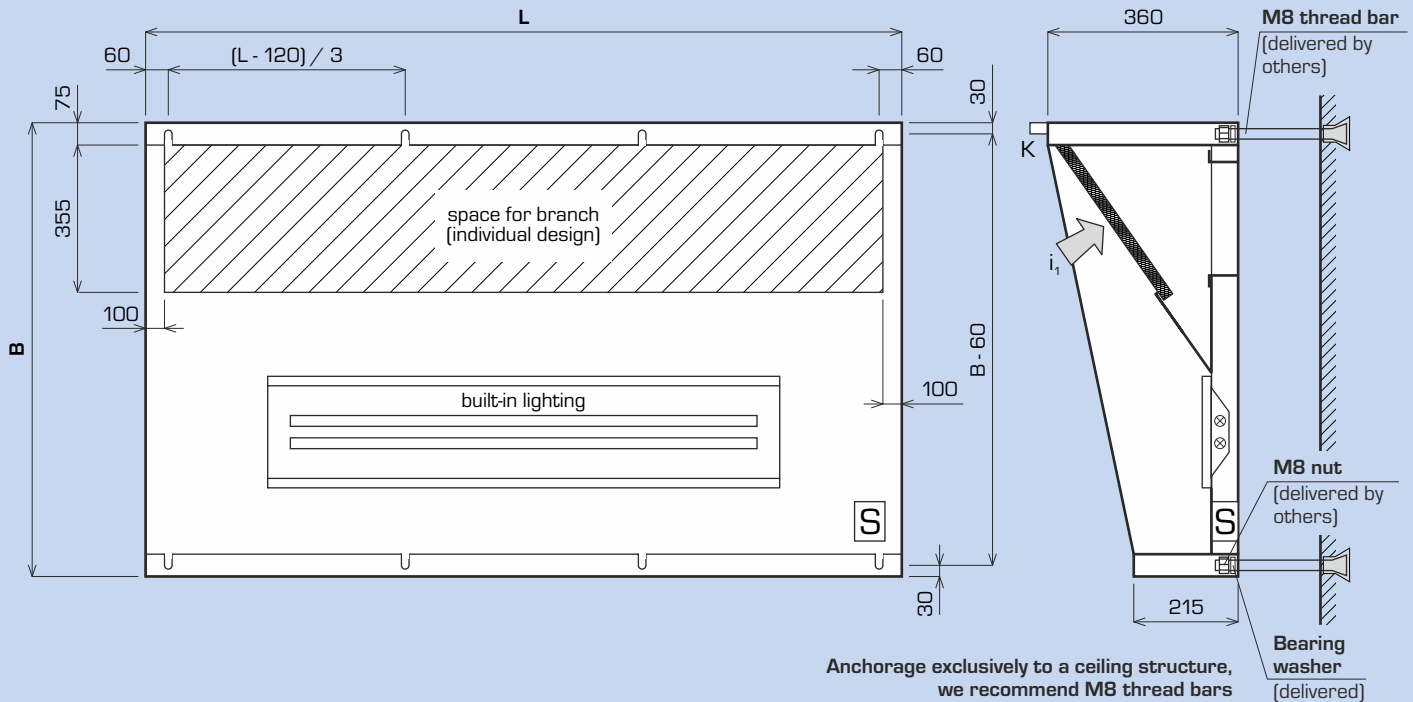


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# MODIS-N (WALL-MOUNTED)

## MODIS-N (WALL-MOUNTED)



### Notes:

- as standard, the hoods are delivered without mounted branches
- a branch can be optionally ordered and mounted to the hood, the branch is normally mounted in the centre of the branch area (unless specified otherwise in an order).
- we recommend to equip the  $L \geq 2\,500$  mm hoods with 2 branches located at  $1/4$  of length from edges to ensure uniform exhaust
- the hood can also be suspended in space – the rear side is visual as standard
- suspension points are determined according to the hood length. 4 suspension points (in the hood corners) are prepared for the hoods up to length of 2000 mm, 8 suspension points according to the chart are prepared for the hoods above length of 2000 mm.

### Legend:

- ☐ – terminal board for connection of lighting (on the right as standard)
- K – condensate container (on the left as standard)
- ⊗ – lighting tube

## BASIC DIMENSIONS AND DIMENSIONING

length L	hood dimensions				maximum number of filters	maximum flow (m <sup>3</sup> /h)	maximum pressure loss [Pa]	lighting power input	number of hangers
	width B								
1 000	800	1 000	1 200	1 400	2 pcs	1 280	75	1 pc - 2x 14 W	4 pcs
1 100	800	1 000	1 200	1 400	2 pcs	1 280	75	1 pc - 2x 14 W	4 pcs
1 200	800	1 000	1 200	1 400	2 pcs	1 280	75	1 pc - 2x 14 W	4 pcs
1 300	800	1 000	1 200	1 400	2 pcs	1 280	75	1 pc - 2x 14 W	4 pcs
1 400	800	1 000	1 200	1 400	3 pcs	1 920	75	1 pc - 2x 14 W	4 pcs
1 500	800	1 000	1 200	1 400	3 pcs	1 920	75	1 pc - 2x 28 W	4 pcs
1 600	800	1 000	1 200	1 400	3 pcs	1 920	75	1 pc - 2x 28 W	4 pcs
1 700	800	1 000	1 200	1 400	3 pcs	1 920	75	1 pc - 2x 28 W	4 pcs
1 800	800	1 000	1 200	1 400	4 pcs	2 560	75	1 pc - 2x 28 W	4 pcs
1 900	800	1 000	1 200	1 400	4 pcs	2 560	75	1 pc - 2x 28 W	4 pcs
2 000	800	1 000	1 200	1 400	4 pcs	2 560	75	1 pc - 2x 28 W	4 pcs
2 100	800	1 000	1 200	1 400	4 pcs	2 560	75	1 pc - 2x 49 W	8 pcs
2 200	800	1 000	1 200	1 400	5 pcs	3 200	75	1 pc - 2x 49 W	8 pcs
2 300	800	1 000	1 200	1 400	5 pcs	3 200	75	1 pc - 2x 49 W	8 pcs
2 400	800	1 000	1 200	1 400	5 pcs	3 200	75	1 pc - 2x 49 W	8 pcs
2 500	800	1 000	1 200	1 400	5 pcs	3 200	75	1 pc - 2x 49 W	8 pcs
2 600	800	1 000	1 200	1 400	6 pcs	3 840	75	1 pc - 2x 49 W	8 pcs
2 700	800	1 000	1 200	1 400	6 pcs	3 840	75	1 pc - 2x 49 W	8 pcs
2 800	800	1 000	1 200	1 400	6 pcs	3 840	75	1 pc - 2x 49 W	8 pcs

## ATYPICAL DIMENSIONS

The hood can be delivered with atypical dimensions in the range from:

- length  $L = 1\,000$  to  $2\,800$  mm (always by 50 mm).
- width  $B = 800$  to  $1\,400$  mm (always by 50 mm).

## WEIGHT FOR DESIGN

$$G_{\text{hood}} \approx L \times B \times (25 \text{ to } 35 \text{ kg} / \text{m}^2 \text{ of ground plan})$$

$$G_{\text{filter}} \approx 1,6 \text{ kg} / \text{pc}$$

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ordering number	hood dimensions		number of filters	recommended exhaust		recommended branch	recommendation
	width	depth	(pcs)	min. (m <sup>3</sup> /h)	max. (m <sup>3</sup> /h)	(DN)	
	1 000	1 000	2	800	1 280	250	For ventilation, e.g. of boiling plate cooker.
	1 500	1 000	3	1 200	1 920	315	For ventilation, e.g. of boiling plate cooker and deep fryer.
	2 000	1 000	4	1 800	2 560	355	For ventilation, e.g. of boiling plate cooker; deep fryer and grill.
	2 500	1 000	5	2 300	3 200	2x 280	For ventilation, e.g. of boiling plate cooker; deep fryer; grill and salamander.
	2 800	1 000	6	3 000	3 840	2x 315	For ventilation, e.g. of 2x boiling plate cooker; deep fryer; grill and salamander.
	1 000	1 200	2	800	1 280	250	For ventilation, e.g. of boiling plate cooker.
	1 500	1 200	3	1 200	1 920	315	For ventilation, e.g. of boiling plate cooker and deep fryer.
	2 000	1 200	4	1 800	2 560	355	For ventilation, e.g. of boiling plate cooker; deep fryer and grill.
	2 500	1 200	5	2 300	3 200	2x 280	For ventilation, e.g. of boiling plate cooker; deep fryer; grill and salamander.
	2 800	1 200	6	3 000	3 840	2x 315	For ventilation, e.g. of 2x boiling plate cooker; deep fryer; grill and salamander.
	1 000	1 400	2	800	1 280	250	For ventilation, e.g. of boiling plate cooker.
	1 500	1 400	3	1 200	1 920	315	For ventilation, e.g. of boiling plate cooker and deep fryer.
	2 000	1 400	4	1 800	2 560	355	For ventilation, e.g. of boiling plate cooker; deep fryer and grill.
	2 500	1 400	5	2 300	3 200	2x 280	For ventilation, e.g. of boiling plate cooker; deep fryer; grill and salamander.
	2 800	1 400	6	3 000	3 840	2x 315	For ventilation, e.g. of 2x boiling plate cooker; deep fryer; grill and salamander.

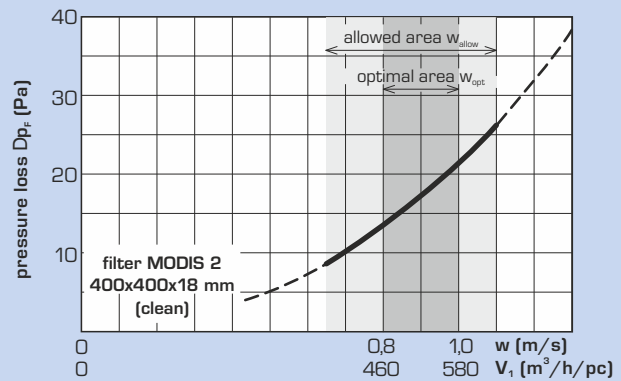
### Notes:

- 1) The MODIS 2 hoods are intended for ventilation of harmful pollutants with a high content of aerosols being produced, e.g. in deep fryers, grills, salamanders, etc.
- 2) The orientation example of a wall-mounted hood design (1,000 x 1,000 deep fryer – 200 mm overlap required = 1,500 x 1,200 hoods).
- 3) A branch and its preparation are not part of the hood. The branch must be realised together with HVAC pipeline (mounting of the branch can be purchased additionally).

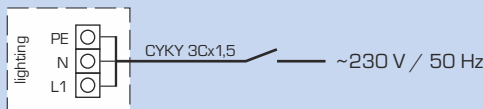
# MODIS 2

## FAT FILTERS - DIMENSIONING

As standard, the hoods are equipped with MODIS 2 type fat filters with dimensions of 400 x 400 mm. The fat filters are made of a multilayer expanded metal, built in a stainless frame. The number of filters is always determined based on the maximum anticipated flow rate in hoods using a diagram, so that the flow rate in a single filter is always within its optimum area. Finally, a check must be performed to see whether the calculated number of filters fits in the hood length physically.



## CONNECTION OF LIGHTING S



## IMPORTANT WARNINGS

- maximum temperature of exhausted air is 60 °C
- the B class gas appliances must be led to the stack and must not be led to the hood under any circumstances
- take care of sufficient overlapping of the hood over the outline of loads
- we recommend to always verify transport of the hood and consider the delivery method as assembled or disassembled
- lighting control is not part of the hood
- a branch and its preparation are not part of the hood, they must be realised together with HVAC pipeline (mounting of the branch can be purchased additionally)
- possible branches of the hood for connection to the HVAC pipeline are not equipped with flanges

## ORDERING DATA

### While ordering, specify the following data:

- MODIS 2 kitchen hood
- hood dimensions ..... L x B (mm)
- air flow  $V_{ext} =$  .....  $m^3/h$
- fat filter 400 x 400 ..... x pcs
- delivery..... disassembled without branch / disassembled with branch /  
assembled without branch / assembled with branch
- branch for HVAC connection ..... e.g. 2x  $\varnothing$  250
- assembling place address .....

\* standard delivery is the hood disassembled. However, it is possible to order erection by the manufacturer, for details, see the price list of MODIS 2 hoods.

## OPTIONAL ACCESSORIES

- the RD5 control system .....YES/NO if YES, it is necessary to specify a type of both fans or an HVAC unit) (RG5, CP10RT, space temperature sensor)
  - automatic operation .....YES/NO supplement to the RD5 control system) (RD-K, 1-5 load sensors)
- \* for more detailed information about the RD5 control system, see the separate catalog sheet of the RD5 control system for kitchens.