

# RATIONAL

## CombiMaster



100°C



180°C





# The world's no. 1 – in cooking expertise and state of the art technology

With the invention of the Combi-Steamer in 1976 RATIONAL revolutionised the catering industry.

For proof just consider the fact that over 300,000 RATIONAL Combi-Steamers are in daily use all over the world. Today virtually every second unit installed is made by RATIONAL.

RATIONAL is the chefs' company and for 30 years has deployed the largest development team in our market, comprising chefs, nutritionists, physicists and engineers.

Over 200 patents and patent applications represent lasting innovative strength.

RATIONAL technology stands for outstanding quality and durability, maximum diversity of use and, above all, simple operational application.





# RATIONAL CombiMaster – Limitless culinary variety

With the CombiMaster you can relax in the knowledge that the demanding daily kitchen routine is under control. With 5 cooking modes – Hot Air, Steam, Combination, Vario-Steam and Finishing – the limitless culinary variety of the RATIONAL CombiMaster is at your disposal. Baking, roasting, grilling, steaming, braising, blanching, poaching and much more, all in a single unit.

The CombiMaster replaces or relegates to minimal floor space 40-50 % of all conventional cooking appliances such as hot air ovens, stoves, boiling pans, steamers and deep-fryers. The CombiMaster cooks up to 15 % faster than conventional Combi-Steamers, saving you both time and money.

There is no taste transfer, even when widely differing products are loaded at the same time. Vitamins, minerals and nutrients are conserved. Outstanding, consistently high food quality inspires confidence day after day.





# Five cooking modes selected using only one knob



## Moist Heat at 100 °C

Moist Heat mode is ideal for blanching, boiling, steaming, simmering and soaking. The powerful fresh steam generator constantly produces hygienic fresh steam – and with extremely short heating-up times. The constant cooking cabinet temperature and maximum possible steam saturation ensure an even, very gentle cooking process, thus guaranteeing appetising colour, firm bite and the conservation of important nutrients. There is absolutely no taste transfer, even when widely differing products are loaded at the same time.



## Dry Heat 30 °C-300 °C

Dry heat is best suited to roasting, grilling, gratinating or baking. You can cook tender fillets, crispy cutlets and even light bakery products with an evenness which sets new standards. At the same time the temperature range up to 300 °C gives you the necessary reserve power, particularly for the preparation of frozen convenience foods.



## Combination 30 °C-300 °C

The combination of Moist Heat and Dry Heat prevents food drying out, minimises cooking shrinkage and at the same time ensures even browning. You get up to 50 % less cooking shrinkage compared with traditional cooking methods, with considerably shorter cooking times. You use the combination of Moist Heat and Dry Heat for roasting, stewing, braising and glazing. Even dense-textured vegetables like carrots can be force-steamed at 130 °C.



### **Vario-Steam 30 °C-99 °C**

Gentle cooking below 100 °C with maximum steam saturation. Effortlessly successful, even for large quantities of extremely sensitive foods such as crème caramel, vegetable flans, delicate fish or mousselines. The cabinet temperature is maintained to within one degree accuracy, important for perfect food quality, excellent consistency, and for conserving the intrinsic taste of the food. Vario-Steam is the cooking mode for poaching, simmering, scalding and even vacuum cooking.



### **Finishing-Function**

Today it is standard practice to keep food warm. This frequently leads to loss of quality, with unwanted cell fusion being the inevitable consequence. Finishing with the CombiMaster does away once and for all with the need to keep food hot. Finishing allows you to prepare food to perfection in a relaxed, stress-free atmosphere – whether it's 1, 5, 20 or several thousand meals. You start with the mise en place of all the requisite products whenever you have the time. Shortly before serving Finishing finishes the food off to your requirements.



### **Core temperature probe**

Spot on cooking. Using the core temperature probe eliminates overcooking, significantly reduces cooking shrinkage. The CombiMaster switches off automatically after reaching the core temperature.



### **Cool down**

The Cool down Function ensures fast, gentle cooling of the cooking cabinet.

# Low rack height for maximum working safety

Working above eye level with full, hot containers can be very dangerous. That's why trade associations and insurers stipulate a height restriction for the top rack.

RATIONAL is already setting new standards with the CombiMaster: the top rack in every CombiMaster is at a height of only 1.60 m (5' 3").

# Significantly less space requirement – maximum capacity/minimum footprint

RATIONAL engineers have achieved a breakthrough in the reduction of space required for both electric and gas models. Enjoy the same large oven capacity along with greatly improved performance in a smaller footprint.

The CombiMaster fits into any space. Now it couldn't be easier to replace old convection ovens, steamers, etc. Overall height is so low that you can conveniently install either the floor model or the Combi-Duo under your existing ventilation hoods.

**1,60 m  
(5' 3")**

**maximum  
rack height**  
in all CombiMaster

**28 %**

**less floor space  
required**  
for the CombiMaster 202



# RATIONAL Combi-Duo – double the flexibility with no extra space

Simply combining two table-top CombiMasters or one CombiMaster with one table-top SelfCooking Center® one above the other opens up tremendous additional potential, especially if space is at a premium in your kitchen.

You will be able to work simultaneously in different modes with no need for extra space – giving you maximum flexibility. For instance, you can produce your roasts automatically in the bottom CombiMaster and in parallel can steam the vegetables for your side dishes in the top one.

For your safety the maximum rack height in the Combi-Duo is only 1.60 m (5' 3").

## The right combination for every kitchen



# Descaling made easy

Now you can even descale the steam generator yourself. The automatic descaling program ensures perfect results – at the touch of a button.

## Cleanliness and hygiene – at the touch of a button

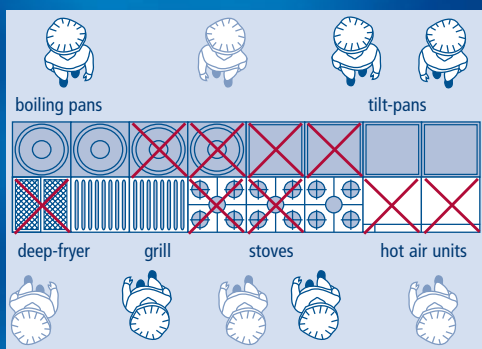
It's child's play to clean the RATIONAL CombiMaster and takes next to no time. The automatic cleaning program gives no quarter to even the toughest dirt. You simply spray the cooking cabinet with RATIONAL Cleaner and start the cleaning program. After the program has run you just rinse the cabinet with water and that's it. The hand shower, available as an optional extra, adds further to the convenience.





# Earn more on each meal

Your RATIONAL CombiMaster not only automatically recoups your investment in a very short time, but from day one it earns you more profit. By instantly cutting down on raw materials, energy, working hours, investment and space, it saves significantly more than it costs. So your earnings increase with each extra meal per day.



Kitchen block with conventional units for 1200 meals per day (105 m<sup>2</sup> floor space).

With the CombiMaster the floor space required is reduced to 75 m<sup>2</sup>.

Example: Staff restaurant serving Ø 200 meals per day with two CombiMaster 101s.

Your profit	Amount budgeted	Your extra earnings
<b>Meat</b> significantly less cooking shrinkage means Ø <b>10 %*</b> less spent on raw materials	Conventional product input £ 4,000 /month - Product input with CombiMaster £ 3,600/month	= £ 400/month
<b>Fat</b> becomes virtually unnecessary. Your purchase cost reduced by up to <b>95 %*</b>	Conventional product input £ 100/month - Product input with CombiMaster £ 5/month	= £ 95/month
<b>Energy</b> Thanks to modern control technology Consumption down Ø <b>60 %</b> (£ 0,05 per kWh)	Consumpt: conventional. 6,300 kWh = £ 315/month with CombiMaster 2,520 kWh = £ 126/month	= £ 189/month
<b>Working hours</b> Profits from pre-production, simplicity of use, etc.	120 min./day = 56 hrs./month x hourly rate £ 10**	= £ 560/month
<b>Your extra earnings</b> minus £ 247 depreciation per month over 5 years		
<b>Per month</b>	=	<b>£ 997</b>
<b>Per year</b>	=	<b>£ 11,964</b>
<b>After 10 years</b>	=	<b>£ 119,640</b>

\* Compared with conventional cooking methods

\*\* Compound calculation based on an hourly rate for chefs/cleaning staff

# RATIONAL CombiMaster ...



## Integral sealing mechanism for floor units

- No energy loss when used without mobile oven racks
- No extra sealing plate necessary
- No escape of steam



## Ease of installation

- No separate funnel needed, as pipe isolating section integral with appliance
- DVGW- and SVGW-approved



## Core temperature probe

- Measurement range from -30-99 °C



## High-performance gas heat exchanger

- Large, smooth surface for ease of cleaning
- Long service life

## Lengthwise loading

- Accommodates 1/3 and 2/3 GN containers
- Narrow door for small pivot range
- Minimal energy loss when door is opened

## Innovative airflow technology

- No downtime caused by unnecessary change in rotational direction
- Cooking times up to 15 % less than with conventional autoreverse operation
- Optimum evenness

## Hand shower (optional)

- Continuously variable jet volume control
- Ergonomic layout
- Automatic water shut-off for safety
- Integral automatic retraction system
- DVGW-approved

## Airflow optimised cooking cabinet

- Rounded cabinet corners
- Seamless cabinet with quality welded seam
- Optimum evenness

**PATENT applied for**

## Integral fan impeller brake

- Fan impeller stops just 5 seconds after door is opened
- Improved operating safety.

## Centrifugal grease extraction without grease filter

- No cleaning or changing conventional filters
- Automatic grease extraction gives clean cooking cabinet air
- Pure taste sensation

**RATIONAL PATENT**

## Hinging racks

- Easy access for manual cleaning
- Hinging racks changed effortlessly

## Integral door drip pan

- Stops puddles forming, improves safety
- Continuous drainage, even when door open

## Appliance door with back-ventilated double panes

- Easy to clean
- Safe to touch



... because details makes the difference!



# The "Minis" among professionals in gas or electric

Gas and electric RATIONAL CombiMasters have absolutely identical dimensions, features and performance.

Special versions are available for ships and prisons. Please use the enclosed reply card to send for our special brochure.

## Technical data for electric and gas

Models CombiMaster	61	62	101	102	201	202
Capacity:	6 x 1/1 GN	6 x 2/1 GN	10 x 1/1 GN	10 x 2/1 GN	20 x 1/1 GN	20 x 2/1 GN
Number of meals per day:	30-80	60-160	80-150	150-300	150-300	300-500
Lengthwise loading for	1/1, 1/2, 2/3, 1/3, 2/8 GN	2/1, 1/1 GN	1/1, 1/2, 2/3, 1/3, 2/8 GN	2/1, 1/1 GN	1/1, 1/2, 2/3, 1/3, 2/8 GN	2/1, 1/1 GN
Width:	847 mm (33 1/4")	1,069 mm (42")	847 mm (33 1/4")	1,069 mm (42")	879 mm (34 1/2")	1,084 mm (42 1/2")
Depth:	771 mm (30 3/8")	971 mm (30 3/8")	771 mm (30 3/8")	971 mm (38 1/4")	791 mm (31 1/8")	996 mm (39 2/8")
Height:	757 mm (29 3/4")	757 mm (29 3/4")	1,017 mm (40")	1,017 mm (40")	1,782 mm (70 1/8")	1,782 mm (70 1/8")
Water supply:	R 3/4"	R 3/4"	R 3/4"	R 3/4"	R 3/4"	R 3/4"
Water drain:	DN 50	DN 50	DN 50	DN 50	DN 50	DN 50
Water pressure:	in each case 150-600 kPa or 0.15-0.6 Mpa					
Electric						
Weight:	99 kg	133 kg	124.5 kg	175.5 kg	251.5 kg	326 kg
Connected load:	10 kW	21 kW	19 kW	37 kW	37 kW	62 kW
Fuse protection:	3 x 16 A	3 x 32 A	3 x 32 A	3 x 63 A	3 x 63 A	3 x 100 A
Mains connection:	3 NAC 400 V	3 NAC 400 V	3 NAC 400 V	3 NAC 400 V	3 NAC 400 V	3NAC 400 V
"Hot Air" connection:	9 kW	20 kW	18 kW	36 kW	36 kW	60 kW
"Steam" connection:	9 kW	18 kW	18 kW	36 kW	36 kW	54 kW
Gas						
Weight:	121 kg	158,5 kg	148 kg	189,5 kg	261 kg	369,5 kg
Height incl. gas draft diverter:	996 mm	996 mm	1,256 mm	1,256 mm	2,021 mm	2,021 mm
Connected electric load:	0.3 kW	0.4 kW	0.39 kW	0.6 kW	0.7 kW	1.1 kW
Fuse protection:	1 x 16 A	1 x 16 A	1 x 16 A	1 x 16 A	1 x 16 A	1 x 16 A
Mains connection:	1 NAC 230 V	1 NAC 230 V	1 NAC 230 V	1 NAC 230 V	1 NAC 230 V	1NAC 230 V
Gas supply/connection:	R 3/4"	R 3/4"	R 3/4"	R 3/4"	R 3/4"	R 3/4"
Natural gas/Liquid gas LPG						
Max. rated thermal load:	11 kW/12 kW	21.5 kW/23 kW	21.5 kW/23 kW	32 kW/34 kW	43 kW/46 kW	64 kW/67 kW
"Hot air" connection:	11 kW/12 kW	21.5 kW/23 kW	21.5 kW/23 kW	32 kW/34 kW	43 kW/46 kW	64 kW/67 kW
"Steam" connection:	11 kW/12 kW	20 kW/21 kW	20 kW/21 kW	32 kW/34 kW	32 kW/33.5 kW	51 kW/53 kW



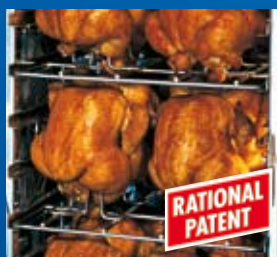


# Accessories make the perfect complement

Only with original RATIONAL accessories can you use your CombiMaster to its best advantage. A perfect match for the units, top quality, designed for hard use. Here is a selection from our extensive range:



**Gastronorm containers and grids**  
RATIONAL CNS containers and grids in 2/1, 1/1, 1/2, 1/3 and 2/8 GN sizes. Granite enamelled trays for outstanding baking results and perforated, teflon-coated baking trays, also in 400 x 600 mm baking size.



**Patented special accessories**  
We stock a wide variety of special accessories, from special Superspikes for chicken and duck and CombiFry® for the preparation of deep-fried foods through to Griddle grids for the perfect grill pattern on pan fries.



**Stands and base cabinets**  
4 versions available to provide a stable base for table-top units. The RATIONAL Thermocabinet allows flexible control up to 80 °C. All stands and base cabinets comply with current hygiene regulations.



**Finishing System for banquets**  
The Finishing System comprises a mobile plate rack and a Thermocover. The mobile plate racks take plates of up to 31 cm in diameter and can accommodate up to 120 plates. The RATIONAL Thermocover allows food to stand for up to 20 minutes between Finishing and serving. For more information please ask for our Finishing brochure.



**Mobile oven racks and transport trolleys**  
Faster load changing when you use several oven racks. Mobile oven racks for floor units load from both sides, unload and lock. Mobile oven racks with run-in rails are available as an option for table-top units.



**RATIONAL Special Cleaner and Grill Cleaner**  
Only original RATIONAL products are specially developed and approved for optimum cleaning performance. The Grill Cleaner removes particularly stubborn deposits which can form when temperatures over 200 °C are used.



**UltraVent® exhaust hood with condensation system for CombiMaster 61/62/101/102/201**  
The condensation technology used in the UltraVent® absorbs and draws off steam and vapour. No more need for expensive extraction systems. No external connection needed. Easy to install and retrofit.

For further information please ask for our accessories brochure.

# CombiMaster Features

## Unit sizes

- Table-top units: 6 x 1/1 GN, 6 x 2/1 GN, 10 x 1/1 GN, 10 x 2/1 GN, electric or gas
- Floor units: 20 x 1/1 GN, 20 x 2/1 GN, electric or gas

## Cooking modes

- Steam 100 °C
- Hot Air 30 °C-300 °C
- Vario-Steaming 30 °C-99 °C
- Combination of Steam and Hot Air 30-300 °C
- Finishing®

## Additional functions

- Cool down – rapid cabinet cooling
- Manual cleaning program
- SelfClean-Automatic for steam generator
- Demand-responsive energy supply
- Automatic vapour quenching system
- ServiceDiagnose-System (SDS)
- Temperature unit adjustable in °C or °F
- Descaling program

## Features

- Rotary switch for On/Off and selection of cooking modes
- Easy to use knob for setting temperature, core temperature and time
- Status and warning displays, e.g. low water level
- Core temperature probe
- Digital temperature displays
- Digital timer, 0-24 hrs with permanent setting
- Low-noise high-performance blower-burner system (gas only)
- Safety temperature limiter for steam generator and hot air heating
- Powerful fresh steam generator with automatic water refill
- RATIONAL air conduction system
- Swivel air baffle with quick-release locks
- Integrated fan impeller brake
- Hand shower with automatic retracting system and infinitely variable jet strength
- Centrifugal grease extraction, without additional grease filter
- Cooking cabinet doors with integral sealing mechanism (floor units), no steam escape when operated without mobile oven rack
- Door with rear-ventilated double glass panel for comfortable touch temperature and hinged inner pane for easy cleaning
- Door handle for one-handed operation with slam function and patented right/left-hand function for table-top units
- Door handle for one-handed operation with slam function and locking for floor units
- Safety door lock (2-stages)
- Door drip pan with continuous drainage even when door open (table-top units)
- Unit drip pan with connection to unit drain (table-top units)
- Left hinged door (table-top units)
- Door locking positions at 120°/180°
- Proximity door contact switch
- Press-fit, easy-change door gasket
- Material inside and out stainless steel DIN 1.4301
- Side runner guides for mobile oven racks (floor units)
- Lengthwise loading 6 x 1/1, 10 x 1/1, 20 x 1/1 suitable for 1/1, 1/2, 1/3, 2/3, 2/8 GN containers, Lengthwise loading 6 x 2/1, 10 x 2/1, 20 x 2/1 suitable for 2/1, 1/1 GN containers
- Hygienic seamless cooking cabinet with rounded corners
- Trough-shaped cooking cabinet to prevent splashing
- Halogen cabinet lighting with Ceran glass, shockproof
- Service door with front access
- U-shaped rack rails, notched for easy loading
- Removable hinging racks (table-top units), with additional rail for fat collection tray
- Mobile oven rack with run-in rails (table-top units)
- Mobile oven rack (floor units) with GN container lock on both sides, built-in drip pan with drainage, tandem steering casters (2 with locking brake) wheel diameter 125 mm (all metal parts CNS)

## Connection and installation, marks of conformity

- CE
- Electrical safety: VDE, UL, CUL, KEMA
- Gas Safety: Gastec/QA, AGA, CSA, SVGW, JIA, PCT
- User safety: GS
- General hygiene: NSF
- Drinking water protection: DVGW, SVGW, KIWA
- Facility for connection to soft and/or hot water

- Table-top units with connecting cable
- DVGW-compliant fixed waste water connection permitted, as unit incorporates integral pipe isolating section
- Spray- and hoseproof to IPX 5
- Can be connected to Sicotronic (other energy optimisation systems on request)
- Adjustable feet (table and floor units)
- Can be installed on a table 700 mm (27 1/2") deep (6 x 1/1 GN and 10 x 1/1 GN)
- Floor locking for floor units
- Special voltages on request
- Town gas on request
- VDE approved for unsupervised operation

## Special versions

- Marine version
- Mobile with casters Model 201 and 202 (4 casters with locking brakes)
- Lockable control panel
- Security/prison version (floor units)
- Sousvide core temperature probe for vacuum cooking
- Table-top units 6 x 1/1 GN, 10 x 1/1 GN with hinging racks or mobile oven rack (table-top units) for standard 400 x 600 mm baking trays
- Floor unit 20 x 1/1 GN mobile oven rack for standard 400 x 600 mm baking trays
- Potential-free contact for user display
- US version incorporates both GN and US standard containers

## Optional accessories

- Run-in rails for use with mobile oven racks (table-top units)
- Mobile oven racks (table-top units) with U-shaped rack rails and notched recesses for ease of loading, additional rail for fat collector
- Hinging racks for standard 400 x 600 mm (15 3/4" x 23 2/3") baking trays (6 x 1/1, 10 x 1/1 GN)
- Hinging racks for meat trays (6 x 1/1, 10 x 1/1 GN)
- Transport trolley for 2 mobile oven racks (table-top units) with tandem steering rollers, 2 of them lockable, wheel diameter 125 mm (5")
- Special mobile oven rack for standard 400 x 600 mm (15 3/4" x 23 2/3") baking trays (6 x 1/1 GN, 10 x 1/1 GN and 20 x 1/1 GN)
- Various stand designs, height-adjustable, hygienic design
- RATIONAL Special Cleaner and RATIONAL Grill Cleaner
- Combi-Duo set for 6 x 1/1 GN on 6 x 1/1 GN or 6 x 1/1 GN on 10 x 1/1 GN, 6 x 2/1 GN on 6 x 2/1 GN and 6 x 2/1 GN on 10 x 2/1 GN
- Mobile plate rack for: 15 or 20 plates (6 x 1/1 GN), 24 or 34 plates (6 x 2/1 GN), 26 or 32 plates (10 x 1/1 GN), 50 or 60 plates (20 x 1/1 GN), 42 or 52 plates (10 x 2/1 GN), 84, 100 or 120 plates (20 x 2/1 GN), all plates to 31 cm (12 1/4") Ø (in table-top units, for use with transport trolley only)
- GN containers in various sizes and versions
- Chicken Superspike grids for poultry
- Lamb and suckling pig spit for 101, 102, 201, 202
- Muffin and Timbale mould
- Potato Baker
- Finishing® System for banquets
- Thermocover for mobile oven racks and mobile plate racks, Combi-Duo
- Grease drip container with drain lock
- RATIONAL CombiLink® – your virtual assistant
- Service with RATIONAL CombiCheck® for RATIONAL service partners
- UltraVent® exhaust hood with condensation system 6 x 1/1 GN, 6 x 2/1 GN, 10 x 1/1 GN, 10 x 2/1 GN, 20 x 1/1 GN
- Exhaust hood 6 x 1/1 GN, 6 x 2/1 GN, 10 x 1/1 GN, 10 x 2/1 GN
- Ramp for mobile oven racks (floor units)
- RS 232 serial interface, e.g. for linking to RATIONAL CombiLink® and for HACCP data output
- RS 485 interface
- Griddle grid for pan fries, fish and vegetables
- CombiFry® for prefried products
- Extra unit and mobile rack height
- Heat shield for left side panel
- Gas diverter for gas units

- standard
- optional



# The test is in the taste

## **RATIONAL Service – always there for you**

An extensive service network of qualified RATIONAL SERVICE-PARTNERS is your guarantee of swift assistance with any problems. RATIONAL also offers its customers a technical Hotline, a guaranteed spares service and a nationwide weekend emergency service.

## **Chef@Line – expert chef-to-chef assistance**

Our Chef@Line is manned by experienced RATIONAL chefs 365 days a year. You can always rely on prompt, expert advice at the other end of the phone.

## **RATIONAL TeamCooking Live**

Attend a free TeamCooking Live seminar near you. Here you and your colleagues can cook "hands on" under the guidance of an experienced RATIONAL chef. Use the enclosed reply card to register for a TeamCooking Live session.

## **Free trial**

Try out the RATIONAL CombiMaster in your kitchen. Just give us a call!



**RATIONAL UK**

Unit 4 Titan Court  
Laporte Way, Portenway Business Parks  
Luton, Beds, LU 4 8EF



R E P L Y   C A R D



**RATIONAL UK**

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**RATIONAL TeamCooking Live**



80.21.022 · V-02 · MediaDesign and Services · Ger · 03/06 · We reserve the right to make technical improvements.

- ☐ Integral grease drainage
- ☐ Security and prison version
- ☐ Marine version

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