

# Spec sheet



## iHexagon® CombiDuo 6-half size +6-half size E with stand



### Capacity

- > Six (6) Half-size sheet pans or Six (6) Steam table pans or Six (6) 1/1 GN accessories
- > Removable standard hinging rack with 2 5/8 inch rack spacing (68 mm)
- > Large selection of accessories for various cooking procedures, such as grilling, braising or baking
- > For use with 1/1, 1/2, 2/3, 1/3 GN accessories

### Manual combi-steamer mode

- > 86°F – 266°F steaming (with Powersteam function)
- > Hot air 86°F – 572°F
- > Combi-steam 86°F – 572°F
- > Optionally microwave-accelerated within the range of 86 °F – 500 °F

### Description

Intelligent, network-compatible cooking system with poultry, meat, fish, egg dishes/ desserts, side dishes/vegetables, baked goods, and Finishing modes as well as pan frying, grilling, steaming, and baking cooking methods.

- > Combi steamer as per DIN 18866 (in manual mode).
- > For most cooking processes used in commercial kitchens.
- > For using steam and convection, individually, sequentially, or in combination, either with or without microwave acceleration.

Ventilation approvals: The electrical appliance conforms to the EPA 202 test in accordance with ANSI/NFPA 96 "Ventilation Control and Fire Protection of Commercial Cooking Operations".

Refer to UL Listing KNLZ.E148536 (America) or KNLZ7.E148536 (Canada).

The following intelligent assistants are available:

### Intelligent assistant

iClimateBoost  iCookingSuite  iProductionManager  iCareSystem   
AutoDose

#### iClimateBoost

iClimateBoost is the iHexagon's intelligent climate management. Sensors, the high-performance heating system, the steam generator, active dehumidification, and the microwave work together to ensure a consistently perfect cooking climate. Intelligent air circulation and uniform microwave distribution across all 6 levels ensure optimized energy input into each product. This allows extraordinary productivity while ensuring excellent-quality results, even cooking, and minimum energy consumption.

#### iCookingSuite

The iCookingSuite is the cooking intelligence in the iHexagon. The user starts by selecting the right cooking path for the food, choosing from among 6 operating modes and / or 5 cooking methods. Users also specify the desired cooking result. The unit suggests settings for browning and degree of doneness. Intelligent sensors detect the size, quantity, and condition of the food. While the cooking path is in progress, the system adjusts key parameters like cooking cabinet temperature, air speed, microwave energy, and cooking time accurately to the second. The desired results are achieved, yielding the best possible quality in the shortest possible time. Users have the option of intervening in the cooking process to adjust their target results. Users can change to iProductionManager or manual mode at any time. The iHexagon's iCookingSuite offers significant time savings with no monitoring, making uniformly excellent results easier than ever to achieve.

#### iProductionManager

iProductionManager intelligently and flexibly organizes the production process. It indicates which products can be prepared together on different racks, suggests an ideal sequence of dishes, and monitors the cooking process. ProductionManager supports users by prompting them to load or unload dishes. Depending on their needs, users can place tickets freely or have them organized to be ready at a specific target time. iProductionManager sequences dishes accordingly and automatically applies the correct settings. The iHexagon can also bring individual portions up to serving temperature rapidly and in quick sequence. Routine monitoring becomes unnecessary, which saves labor hours, and the productivity boost makes even peak traffic periods easy to cover.

#### iCareSystem AutoDose

The iCareSystem AutoDose is the intelligent cleaning and descaling system in the iHexagon. It detects the system's current cleaning and descaling requirements and suggests one of nine cleaning programs, including the ideal quantity of cleaning chemicals. Ultra-fast interim cleaning cleans the cooking system in just 17 minutes. All cleaning programs can also run unsupervised overnight. The cooking system will then switch off automatically if desired. With its low consumption of phosphate-free and microplastic-free care products, water and energy, the iCareSystem Autodose is particularly economical and environmentally friendly. The cooking system is always hygienically clean with no manual labor and at minimal expense. The iCareSystem Autodose cleaning system also enables completely autonomous cleaning with minimal contact with cleaning substances.

## Unit description and functions

### Intelligent functions

- > Intelligent climate management that measures, adjusts and controls the humidity down to the exact percentage
- > The actual measured humidity in the cooking cabinet can be adjusted and viewed
- > Automatically adjusts cooking steps and cooking parameters such as temperature, time, air speed and microwave power
- > Dynamic air circulation in the cooking cabinet thanks to intelligent, reversible, high-performance five-speed fan with intelligent activation and manual programming capabilities
- > Intelligent regulation of cooking paths achieves user-defined results (e.g., browning, degree of doneness) reliably, efficiently and as quickly as possible – regardless of food size, load quantity, or who is operating the cooking system. Automatically adjusts cooking steps and cooking parameters such as temperature, time, air speed, and microwave power
- > Intelligent microwave power regulation to the exact percent
- > Dynamic microwave distribution within the cooking cabinet using two microwave generators and intelligent power supply units
- > Monitoring and calculation of browning to the second based on the Maillard reaction and the internal cooking process, in order to achieve optimal cooking results in a reproducible manner
- > Adjust intelligent cooking methods or switch between iCookingSuite and iProductionManager for maximum flexibility
- > Intelligent cooking step to proof baked goods
- > Individual, intuitive programming of up to 1,200 cooking programs with up to 30 steps using drag-and-drop
- > iProductionManager, the automated, intelligent planning and controlling tool, organizes multiple cooking processes and mixed loads perfectly. Schedule gaps are closed automatically. Automatically optimize time and energy consumption in planning, or use target time preparation to start or finish dishes simultaneously. Full microwave power mode can be activated for maximum speed during peak traffic periods.
- > Visual indication of loading and removal requests using energy-saving LED lighting
- > Automatically resumes and optimally completes cooking processes following power outages lasting less than 15 minutes
- > Intelligent cleaning system suggests cleaning programs and the required amount of care products based on the degree of soiling within the cooking system
- > Display of the current cleaning and descaling status
- > Easily create and transmit programs (cooking programs and cleaning programs for iCareSystem AutoDose) and shopping carts to and from other RATIONAL cooking systems thanks to secure ConnectedCooking cloud connection or via USB stick
- > Recirculating hood (accessory) adjusts extraction power to each situation and transmits service notifications

### Cooking functions

- > High-performance steam generator for optimal steaming performance even at low temperatures below 212°F – Fastest possible cooking thanks to the combination of microwave power, high thermal heating power and steam – Five levels of microwave support can be selected manually for convection cooking, steaming or combi-steaming
- > Fastest possible cooking by combining high thermal heating power, microwave power, and steam
- > Five levels of accelerated manual convection cooking, steaming or combi-steaming with microwave support
- > Power-steam function: increased continuous steaming power, particularly for regional applications such as dim sum
- > Integrated, maintenance-free fat separation system without an additional grease filter
- > Cool-down function cools the cooking cabinet quickly; water nozzle provides additional fast cooling
- > Core temperature probe with six measuring points and automatic error correction in the event of incorrect positioning
- > Delta-T cooking for extremely gentle preparation with minimal cooking losses
- > Precise burst-steam injection; water quantities can be set to 4 different levels within a temperature range of 85°F – 500°F for convection or steam-convection combination modes
- > Digital temperature display, can be set to °C or °F, displays target and actual values
- > Cooking cabinet humidity and time displayed digitally; displays target and actual values
- > Time can be set to display in 12- or 24-hour format
- > 24-hour real-time clock with automatic adjustment for daylight savings time when connected to ConnectedCooking
- > Automatic pre-selected starting time with variable date and time
- > Integrated hand shower with automatic retraction and switchable spray/jet function
- > Energy-saving, long-lasting LED lighting in the cooking cabinet, with excellent color fidelity to allow quick determination of cooking progress

### Operation

- > High-resolution 10.1 inch TFT color display and capacitive touchscreen with self-explanatory icons for simple, intuitive operation with gestures like swiping and dragging
- > Acoustic prompts and visual messages when user action is required
- > Central dial with Push function for intuitive selection and confirmation of entries
- > User interface and help function can be set to over 55 languages
- > Basic national cuisine preferences can be selected regardless of language settings. Possible to select additional, local cuisine
- > Specially adapted cooking parameters for international or country-specific dishes can be selected and started regardless of unit language settings
- > Search assistant helps users quickly find cooking functions, application examples, programs, schedules, and settings
- > Simple selection of cooking paths using six operating modes and/or five cooking methods
- > Cockpit function to display information about the processes within a cooking path
- > Customize and manage user profiles and access rights via MyDisplay to ensure safe, easy operation while minimizing user error
- > Messenger provides interactive notifications regarding cooking paths, prompts, intelligent functions, and warnings

### Occupational and operating safety

- > Electronic safety temperature limiter on steam generator and convection heating
- > Safety door lock with sure shut function and manual locking for ergonomic, safe operation
- > Integrated fan wheel brake
- > iCareSystem Autodose cleaning system: uses cartridges for cleaning and care functions. No day-to-day contact with cleaning and care substances
- > Tested according to national and international standards for unsupervised operation
- > Maximum tray height must not exceed 63 inch when using a RATIONAL stand

**Networking**

- > Integrated, IP-protected Ethernet interface for wired connection to the cloud-based ConnectedCooking networking solution
- > Integrated Wi-Fi interface for wireless connection to the cloud-based networking solution ConnectedCooking
- > Integrated USB interface for local data exchange
- > Cloud-based ConnectedCooking solution allows central unit management; recipe, shopping cart and program management; HACCP data management; maintenance management

**Installation, maintenance and environment**

- > Professional installation by RATIONAL-certified technicians recommended
- > Fixed wastewater connection in accordance with applicable standards (SVGW, WRAS)
- > Automatic calibration ensures adaptation to individual installation sites (elevation)
- > No water softener or manual descaling required
- > Installation flush with the floor and wall through connection in the base area \*
- > Service diagnostic system with automatic notifications, self test function for actively testing cooking system functions
- > Certified RATIONAL service partners can use ConnectedCooking for remote diagnostics
- > 2-year RATIONAL warranty incl. parts, labor, and travel \*\*
- > Regular maintenance is recommended. Servicing by RATIONAL service partner according to manufacturer recommendations

\* For details, see installation and planning manual

\*\* Terms and conditions apply, see manufacturer warranty declaration at [www.rational-online.com](http://www.rational-online.com)

**Cleaning and care**

- > Automatic, water pressure-independent cleaning and maintenance system for cooking cabinet and steam generator
- > Nine cleaning programs for unsupervised cleaning, even overnight, including automatic cleaning and descaling of the steam generator
- > Ultrafast cleaning in only 17 minutes for practically uninterrupted, hygienic production
- > Automatic cleaning routine following power outages ensures that cooking cabinet remains free of cleaning agents even after cleaning process interruption
- > Hygienic setup that is flush with the counter without feet for simple, safe cleaning
- > Easy cleaning thanks to 3-pane glass cooking cabinet door with rear ventilation, special heat-reflective coating and swinging inner glass panes
- > Interior and exterior made of DIN 1.4301/ASTM 304 stainless steel; seamless, hygienic cooking cabinet with rounded corners and optimized air flow
- > Glass and stainless steel surfaces allow easy, safe external cleaning; IPX5-class protection against spraying water in all directions
- > Monitoring option for automatic cleaning using the cloud-based ConnectedCooking networking solution
- > iCareSystem AutoDose cleaning system with up to four cartridges for autonomous cleaning with minimal contact with cleaning substances

**Options**

- > Protection for control panel
- > Lockable control panel
- > Omission of hand shower

## Technical specifications

### Dimensions and weights

Dimensions (W x H x D)	
Cooking system (body)	38 x 33 5/8 x 36 5/8 inch
Cooking system (total)	38 x 80 x 39 1/4 inch
Cooking system with packaging	38 1/8 x 49 3/4 x 39 1/4 inch
Maximum working height of top level*	27 1/8 inch

\*when using an original RATIONAL stand

### Weights

Weights	
Maximum load size per level	34 lbs
Maximum total load capacity	67 lbs
Weight - electric unit without packaging	348 lbs
Weight - electric unit with packaging	414 lbs

### Electrical connection conditions (per cooking system)

Voltage 3 ph 400 V	
Connected loads - electric	20.6 kW
Steam power	9.2 kW
Convection power	17.5 kW
Microwave power	2.6 kW
Breaker	35 A
RCD Type	B
Voltage 3 ph 208 V	
Connected loads - electric	19.6 kW
Steam power	9.0 kW
Convection power	16.4 kW
Microwave power	2.8 kW
Breaker	60 A
RCD Type	B

### Connection conditions water (per cooking system)

Water inlet (pressure hose), each	3/4 inch
Water pressure (flow pressure), each	14.5 - 87.0 psi
Maximum flow rate per cooking system	3.2 gal/min
Water drain, each	2" OD inch
Max short-term amount of wastewater	0.11 gal/sec
Water inlet (pressure hose), each	3/4 inch

Use only high-temperature resistant drain pipe

### Installation conditions

- > Observe all local and country-specific standards and regulations regarding the installation and operation of commercial cooking appliances. The local standards and regulations for interior ventilation systems must also be considered.
- > To use ConnectedCooking, an RJ45 network socket or a WLAN connection option (IEEE 802.11 a/g/n) must be in place on-site. For optimal performance, a data rate of at least 100 MB/s is required.

### Approvals/declarations



### NSF Certification

iHexagon (LM400) is NSF-certified, as can be seen on the NSF list.

### Water quality requirements

Untreated water can be 0 to 24.5 gr/gal (0 to 420ppm) hardness. We do not recommend treated water hardness < 5 gr/gal (86ppm) because the water could be corrosive. Sodium ion exchangers are not recommended; H+ Ion exchange systems are recommended. Water that does not meet the following minimum standards will require the proper conditioning.

Contaminant	Water Requirements	If > than recommended
Sand / Particles	< 15 µm	Particle filter
Chlorine (Cl2)	< 0.012 gr/gal (0.2 ppm)	Active carbon filter
Chloride (Cl-)	< 4.68 gr/gal (80 ppm)	RO

### Connected loads – exhaust air and thermal load

Latent heat load	2,796 BTU/h
Sensible heat emission	3,393 BTU/h
Sound level (electric)	63 dB(A)

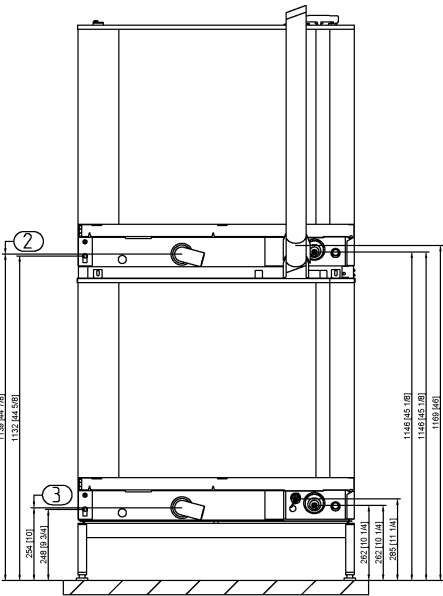
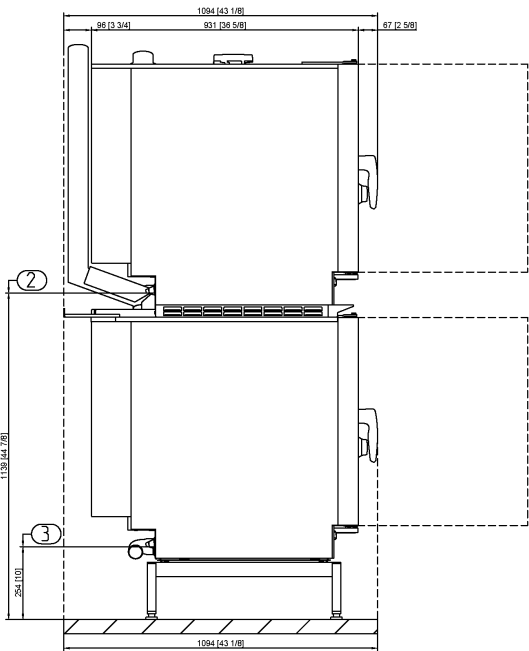
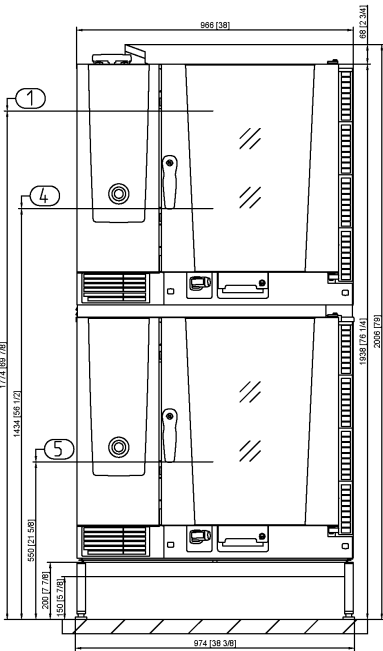
### Connectivity

LAN data interface	Ethernet RJ45, CAT6
WiFi data interface	WiFi 802.11 b/g/n (2,4 GHz)

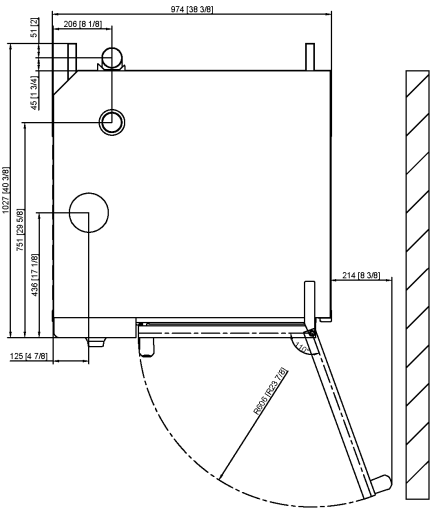
### Minimum distance at installation

#### Clearance Requirements

To facilitate servicing, we recommend leaving a 20" (500 mm) gap on the left-hand side of the unit. If there is not 20" (500 mm) left side clearance available, provisions for moving the unit to the left for service access must be made. Such provisions include, but are not limited to, having quick connections (water, wastewater) and lengthened electrical connections with flexible cords. If there are no external heat sources acting on the unit, there should be at least 2" (50 mm) of clearance on the left either side of the unit. On the back, single units and electric Combi-Duo vent pipe can be mounted flush with the wall. If a high temperature heat source is on the left side of the unit, clearance of at least 14" (350 mm) must be maintained on the respective side. This clearance may be reduced to 2" (50 mm) if a heat shield is used (see accessories). The clearance on the right side can be 2" (50 mm) in any case. Recommended clearance from unobstructed rear exhaust pipes and any surface collecting grease or flammable material; 10" (254 mm). It is recommended to have a hood overhang of 6" (150 mm) to 18" (450 mm) at the front of the unit and 6" (150 mm) on the sides if installed at the end of the cooking line. Please refer to the Installation Manual for additional technical data and for instructions on installation and setup.



Mindestabstand bei Wandaufstellung (rechts)  
Minimum distance for wall installation (right)  
Distance minimale pour l'installation murale (droite)



Information/Information/Information			Anschlussplan/Connection diagram/Plan de connexion	
Zeichnungsausdruck unterliegt nicht dem Änderungsdienst! Printed drawing is not automatically updated! La mise à jour n'est pas assurée sur les plans papier!			Combi-Duo iHexagon 6-11 E on iHexagon 6-11 E on stand UG I (200mm - feet) (master view)	
Datum/Date/Date			01.09.2023	
Ersteller/Creator/Créateur			RATIONAL AG 2023	
Maßstab/Scale/Echelle			1:1	
Revision/Revision/Révision			Abmessungen/Dimensions/Dimensions mm [inch]	
Index	Datum/Date/Date	Name/Name/Nom	Nr./No.	Beschreibung/Description/Description
1	01.02.2024	J. Schäfer	1	Hohe oberster Einschub / Height of top rail / Hauteur du niveau d'insertion supérieur
2			2	Hohe Wasserablauf oberes Gerät / Drain height upper unit / Hauteur évacuation des eaux usées de l'appareil supérieur
3			3	Hohe Wasserablauf unteres Gerät / Drain height lower unit / Hauteur évacuation des eaux usées de l'appareil inférieur
4			4	Einfahrtshöhe oberes Gerät / Height of drive in upper unit / Hauteur du seuil de chargement de l'appareil supérieur
5			5	Einfahrtshöhe unteres Gerät / Height of drive in lower unit / Hauteur du seuil de chargement de l'appareil inférieure
6				
7				
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## Accessories

Accessories	Item number
RATIONAL Active Green cartridges - superior cleaning performance guaranteed	56.01.912
RATIONAL Care cartridges - prevent limescale deposits effectively	56.01.914
Stands are available in various versions - standard, with casters, or with anchorable stainless-steel feet	See iHexagon documentation
Condensation breaker - diverts steam and vapors to an existing exhaust air system	60.72.592
RATIONAL USB stick - to securely transfer cooking programs and HACCP data	42.00.162
Hinging racks - Size 6-half size	60.61.769
Heat shield - for installing a unit near a heat source, e.g. a grill - iHexagon 6-half size	60.77.918
UltraVent recirculating hood - for iHexagon 6-half size	60.78.167
UltraVent Plus recirculating hood - for iHexagon 6-half size	60.78.164
Stackable Combi-Duo kit iHexagon 6-half size electric and iHexagon 6-half size electric	60.76.253
Stackable Combi-Duo kit iHexagon 6-half size electric (up) and iHexagon iCombi Pro (below)	60.77.031
Combi-Duo iHexagon on iCombi Pro - side covers	60.78.391
RATIONAL Single Water Filter	1900.1154US

We provide an ample range of cooking accessories to help you get your ideal cooking results. For more information, consult the accessories brochure, ask your dealer, or visit [www.rational-online.com](http://www.rational-online.com)

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