



WAREWASHING
RACK-TYPE DISHWASHER

PREMAX CP

EFFICIENT - RELIABLE - INNOVATIVE



PREMAX
GENERATION 2012


made in germany

MADE IN GERMANY

„Made in Germany“ has been synonymous with quality and reliability in the premium segment for a long time and still is today. A company can only maintain its hold on the market by keeping its promise to continually deliver high quality.

WORLDWIDE

Whether you need a completely new kitchen or a replacement item our competent subsidiaries and partners all over the world would be pleased to support you. It's nice to know we are always there.



1883 Mr. Charles Clarence Hobart builds his first engines and generators in Middletown, Ohio.

1886 J.C. Cochran receives the patent for the first dishwasher.

1897 The HOBART ELECTRICAL MANUFACTURING COMPANY was founded in Troy Ohio, through the acquisition of the engine and generator factory of the HOBART family.

1903 HOBART builds the first food processor (a self-contained powered coffee mill).

1926 HOBART purchases The Crescent Washing Machine Company, and enters the commercial warewashing market: the first warewashing machine carrying a HOBART label.

1930 Foundation of the HOBART MASCHINEN GESELLSCHAFT in Hamburg, Germany.

1953 HOBART receives the patent for the first flight-type dishwasher.

1960 Acquisition of the dishwashing department of the company K. Martin, Offenburg, Germany.

1980 Production plant in Elgersweier, Germany, was newly built.

1986 PREMARK INTERNATIONAL GROUP was formed in Deerfield, Illinois.

1997 HOBART CORPORATION'S 100th anniversary.

1999 Integration of PREMARK into ITW.

2004 HOBART relocates to Elgersweier

2006 Launch of HOBART's export activities

2007 HOBART's PREMAX line begins a new chapter in the annals of dishwashing technology. The PREMAX FTP flight-type dishwasher cuts water use by up to 50%, energy use by up to 30%, and use of chemicals by up to 80%.

2009 HOBART introduces the SENSOTRONIC, the world's first intelligent dishwashing technology

2010 Tenth record year in succession for HOBART



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THE COMPANY

Based in Offenburg, Germany, HOBART leads the world market in industrial warewashing technology. We serve customers such as hotels, restaurants and caterer, bakeries and butcheries as well as supermarkets, airlines and cruise ships across the world.

HOBART develops, produces and sells warewash, cooking, food preparation and waste treatment appliances and systems, and employs around 6,865 staff members across the world, 903 of them in Germany. HOBART is a subsidiary of the US Illinois Tool Works (ITW) Group, which manufactures and sells a variety of products; the group has a staff of 65,000 employees in 875 autonomous companies in 49 countries.

OUR VISION

WASH WITHOUT WATER

Our intensive market research has shown unequivocally that our customers require appliances that are economical and ecological while still producing first-class results. We have addressed this demand and worked out our vision, *Wash Without Water*. The resulting areas of focus – innovation, economy, ecology – set the direction. Our vision means leaving no stone unturned when it comes to reducing water, energy and detergent consumption.

UTOPIAN?

Everything begins with a vision. Many of the products that make everyday life easier today began as the ideas of a visionary; many of these ideas would have seemed utopian at the time. There can be no progress without a vision – and that applies to warewashing as much as anything else. Before the introduction of PREMAX, a dishwasher with a 50% water saving technology would have been utopia. Today, PREMAX has set new standards, and we by now know that whenever the dishwasher that washes without water will come, it'll be a PREMAX.

made in germany



FOCUS

INNOVATION

Innovation means more than just turning an idea into reality. We at HOBART see innovation as a continuous process. In fact, we've put more than 30 innovative products onto the market since the PREMAX launch. All these innovations share one single goal – to generate real value added for our customers.

We have a global network of more than 300 research and development engineers to make this possible, plus marketing teams out on every continent to identify customer preferences and requirements. We have a group technology centre in the US with more than a 1,000 patent applications a year, together with an innovation centre for warewashing in Offenburg, Germany.

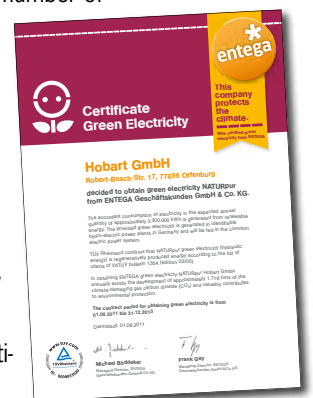
ECONOMY

Already in the early 1980s our energy-formula set benchmarks in energy saving and recovery which are still unique today. This innovative spirit found its fulfillment in the PREMAX line. The PREMAX flight-type dishwasher saves up to 50% water, 30% energy, and 80% chemicals in comparison to conventional technologies, making HOBART a pioneer in terms of efficiency and economy.

ECOLOGY

The HOBART environmental protection program CO₂NSEQUENT has been in existence for some time.

The program includes a large number of measures that are all related to protecting the environment. These measures are implemented in production, purchasing, the development and sale of products and in additional projects. As an example, you might like to know that all HOBART products are manufactured using regenerative energy only.



1

2

3

4

1 "The constant rise in operating costs has been accompanied by savings in the catering area. With the PREMAX CP, we can save up to 50% in water and 80% in detergent consumption. This allows us to reinvest the money we save for our residents."

2 "Our customers have high expectations – and so do we. The PREMAX CP allows us to meet these expectations, leaving us free to dedicate ourselves to essential activities. Reliability is of primary importance."

3 "Our business is booming but our kitchen is quite small. With the PREMAX CP, HOBART offers a high-capacity dishwasher with low space requirements. This means that we are easily able to cope with busy periods and still have enough time to look after our guests."

4 "Our guests expect a quick and inexpensive catering service. Well, the CP is more expensive than a local machine. But it is an investment in the future, as the additional expense quickly amortizes. This means in the end we save money, which allows us to maintain stable prices."

Luca Marangoni
Old people's home,
Bologna, Italy

Olga Sergejewitsch
Hotel,
Moscow, Russia

Anike van Reenen
Restaurant,
Capetown, South Africa

José Rodriguez
Motorway Restaurant,
Madrid, Spain



INNOVATIVE – ECONOMICAL – INTELLIGENT – PREMAX

Constantly rising operating costs mean that economy has become a prime concern for users and buyers of warewashing equipment. HOBART has set new standards with innovative technologies unique to the world market in its PREMAX line.

DIN being thought out: Besides its economic efficiency PREMAX also sets new standards regarding hygiene. Independent studies have proven: PREMAX exceeds the requirements for hygienic wash results according to DIN 10510 – with considerably lower operating costs.

The SENSOTRONIC washing intelligence by HOBART has paved the way to a new future in warewashing. Innovative features in every PREMAX model not only automatically detect gaps in the washware and variation in washware items, but even automatically set the washing parameters while lowering consumption of resources to a necessary minimum. Once again, PREMAX has taken a pioneering position in providing the most economical industrial warewashing using innovative technology. Machine intelligence – saving you money.

„From the hygienic point of view the results show that with a modified temperature profile safe disinfection is achieved according to the regulation of the former German Public Health Department for the inspection of thermal disinfection. This regulation was one of the fundamentals for the formulation of DIN 10510.“

*PD Dr. med. M. Dettenkofer, Prof. Dr. med. F. Daschner
University Clinic Freiburg*





1 | ECONOMY

PATENT

FRESH WATER RINSE 50PERCENT

The task of the fresh water rinse is to remove detergent from the wash items. The distribution of the fresh water is decisive for the water volume used. The fresh water rinse 50PERCENT has special precision nozzles, which disperse the rinse water like a curtain to form a thin film of water on the wash items. As a result of the optimized water distribution this micro-thin film is sufficient to rinse off the wash water from the ware. In addition to the conventional rinsing from above and below the fresh water rinse 50PERCENT rinses the wash ware also laterally. The optimized arrangement of the nozzles achieve a precise spraying of the wash ware. The fresh water rinse 50PERCENT reduces water consumption by up to 60%, resulting in less rinse aid use and greater energy savings.

ECONOMICAL – CLEAN



The RADIUS pre-rinse nozzle pre-rinses detergent from the wash items.



Only 140 l/h for the fresh water rinse.

PREMAX CP

EFFICIENT – RELIABLE – INNOVATIVE

PATENT

DETERGENT SAVING SYSTEM LOW-CHEM

Detergent is dosed directly into the wash tank, which is continuously regenerated by fresh water from the rinse. Therefore detergent is added to maintain the concentration according to the added regeneration volume. The enhanced LOW-CHEM detergent saving system directs only 75 litres of fresh rinse water into the wash tank for regeneration. Ahead of the final rinse, detergent is flushed off the wash ware by the RADIUS pre-rinse nozzle and diverted back into the wash tank. The dosing of detergent depends on the regeneration water volume. As a result detergent consumption is reduced by up to 80% compared to conventional systems.

PATENT

ENERGY-MANAGEMENT TOP-TEMP

A conventional rack-type dishwasher loses about 40% of the energy available in the machine by sensible and latent heat emission. The hot fresh water rinsing has a considerable influence. The heat loss of the fresh water rinse takes place at the end of the machine. The heat energy escapes through the dryer to the outside. The energy-management TOP-TEMP prevents losses before they occur. The high temperature wash zone HOT-TEMP is embedded between the low temp pre-wash and 50PERCENT fresh water rinse zone. Here the prewash

zone and the rinsing have the effect of a temperature barrier. The temperature equalization takes place within the machine and so the heat energy can be saved. Energy loss - and costs are reduced by up to 20%.

PATENT

ENERGY-MANAGEMENT EFFICIENT

A conventional rack-type dishwasher loses 40% of the energy available in the machine via the exhaust system. The distribution of water and the air stream have a considerable influence. The new energy-management EFFICIENT reduces the evaporation loss. The improved arrangement of the wide angle nozzles FAN and the orientation of the wash arms reduce the air flow within the machine. The patented wide angle nozzle FAN spreads out a 65% wider and more even spray pattern. Therefore the recirculation of water can be reduced for the same wash result. In order to keep the system in balance less air/water steam has to be exhausted. The new energy-management reduces the energy loss of the rack-type dishwasher by up to 15%.



1 | ECONOMY



HOBART HEAT RECOVERY

HOBART's heat recovery system functions according to the countercurrent principle, using the energy from the extracted air to heat up the incoming water. The energy exchange takes place in the HOBART high-performance condenser. At the same time, the extracted air is cooled down and dehumidified. The HOBART heat recovery system reduces energy consumption by up to 8.5 kW and total connected load to 31,4 kW.¹⁾ The extracted air can be led directly into the building's ventilation ducting.²⁾

HOBART HEAT PUMP

The HOBART heat pump uses the residual energy in the extracted air following heat recovery. A compressor and refrigerant are used to ensure efficient heat recovery. The amount of recovered energy is sufficient to heat the wash and rinse water. This innovative technology reduces energy consumption by up to 10 kWh and total connected load to 21,9 kW.³⁾ The temperature of the extracted air is reduced to approx. 20 - 24°C.⁴⁾ The extracted air can be blown directly into the room.²⁾

¹⁾ Calculation example for the PREMAX CP S-A-DS, C20 compared to models without heat recovery

²⁾ Conditional on compliance with VDI 2052

³⁾ Calculation example for the PREMAX CP S-A-DS, C20, CHP compared to the models without heat pump

⁴⁾ Values in continuous operation +/-10% depending on room air supply and fresh water temperature (values based on 10°C water supply and 23°C indoor air temperature)



The nozzle geometry of the wide angle nozzle FAN was calculated in numerous simulations.

2 | WASH RESULT

PATENT

WASH SYSTEM CONTACT-PLUS

The impact with wash water via the wash arms is, apart from the temperature, the main factor influencing the cleaning result. The precision of the FAN wide angle nozzles makes it possible to reduce the distances between the wash arms. The wash arms are located very close to one another and thus achieving full cleaning performance. In connection with the 65% wider wash jets the new configuration of the FAN wide angle nozzles washes the items three times per wash arm. The new wash system CONTACT-PLUS with its 6 wash arms above and 5 wash arms below guarantees an optimal wash result.

PATENT

HOT-TEMP WASHING

Washing is the result of the combined action of temperature, time, mechanical action and chemistry. Water temperature has the biggest influence on the wash result, much more than the wash pressure. In most dishwashers the wash temperature is set at approx. 60°C. HOT-TEMP washes with 67°C water, at which temperature the detergent reaches its maximum efficiency – wash ware is clean faster. The HOT-TEMP washing increases the capacity per hour by 50%. As a reverse effect, a smaller unit can therefore be used, reducing the used floor space as well.

PATENT

RINSE TRI

The HOBART triple rinse TRI consists of the RADIUS pre-rinse nozzle, a pumped rinse and a fresh water final rinse. The RADIUS pre-rinse nozzle rinses off most detergent from the wash ware before entering the rinse zone. The water is directed back into the wash tank, minimizing detergent addition into the recirculating rinse water.



HOBART



3 | SENSOTRONIC WASHING INTELLIGENCE

UNIQUE TO THE WORLD MARKET

PATENT
PENDING

COMPARTMENT DETECTION AUTO-SAVE

Discontinuous wash ware load during the dishwashing shift means that your appliance is not running at capacity. Gaps will arise in your wash ware load; on average, they will amount to around thirty to forty percent of your wash ware compartments throughout the washing period, depending on how you use the appliance. AUTO-SAVE automatically detects these gaps, and immediately reduces the fresh water supply down to the minimum necessary for a perfectly hygienic result while cutting water, power and detergent consumption.

PATENT
PENDING

WATER CONSUMPTION CONTROL AQUA-ADAPT

Modern warewash systems have a range of speeds that you can set according to the wash ware load, the level of soiling or the time you have available for dishwashing. AQUA-ADAPT automatically adjusts the hourly fresh water consumption to the selected transfer speed, keeping water volumes per meter of the dishwasher at all times at an optimized level. In warewashing systems fitted with a tray-return conveyor belt, the speed and fresh water consumption are adjusted automatically. In dual-tank systems, SENSOTRONIC keeps one wash tank on standby until the dishwasher reaches full capacity to prevent water wastage at low machine speeds.

PATENT
PENDING

RESOURCE MANAGEMENT MINIMAL

The soiling level and the drying time both play a major role in selecting a suitable wash program. Resource

management MINIMAL gives you the ideal solution for low-soiled wash ware. Selecting the program is simple and quick. The fresh water consumption is automatically reduced so that operating costs are significantly lowered. The total savings for water, energy and chemicals can amount to up to 10%, depending on the machine type.

PATENT
PENDING

WASHWARE DETECTION ACTIVE

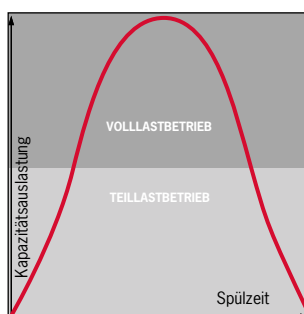
In most cases, glass and cutlery racks are also washed in a flight-type or rack-type dishwasher. ACTIVE is an optional wash ware detection system that adjusts the wash process to the high demands of glassware and cutlery washing. Coded glass racks are automatically detected in the machine, and the wash parameters are configured to match the new requirements. Wash ware detection ACTIVE ensures an optimized wash result – at all times.

PATENT
PENDING

SYSTEM CHECK BEST-START

Each time the machine is filled with new soiled goods, the relevant parameters for hygiene and proper washing, such as the heating system, pump and wash arm are automatically checked for correct positioning and operation. The result of the system check is displayed on the color touch screen of the control system. If there are deviations from the nominal status, the machine operator is informed by means of clear symbols and plain text explanations. The intelligent system also suggests measures to be taken to rectify the situation.

ECONOMICAL – AUTOMATIC



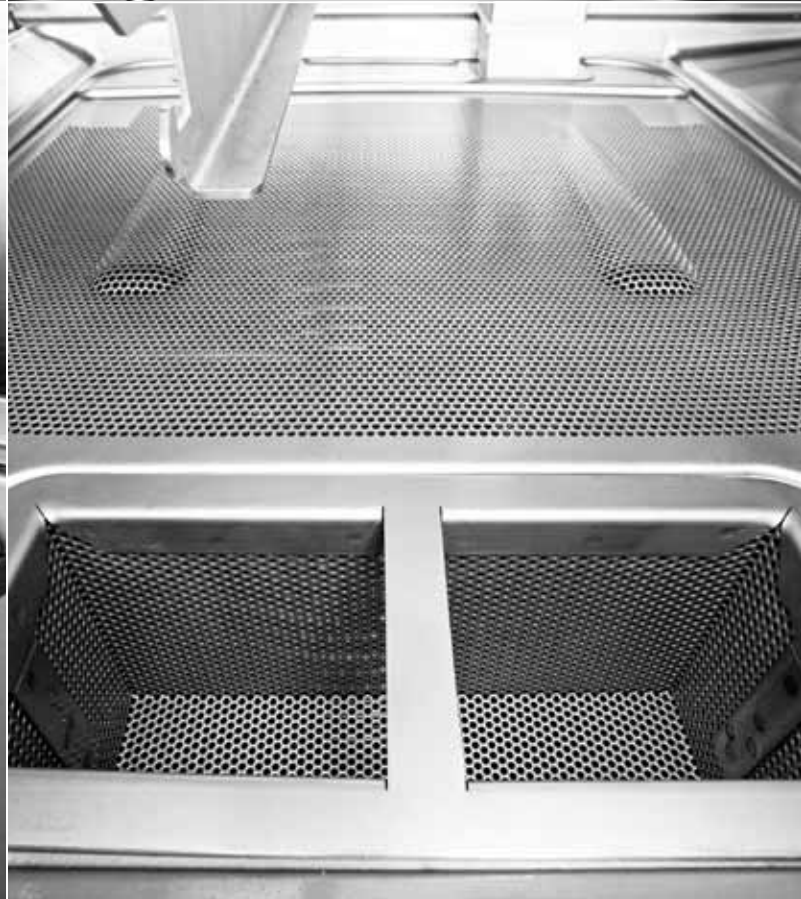
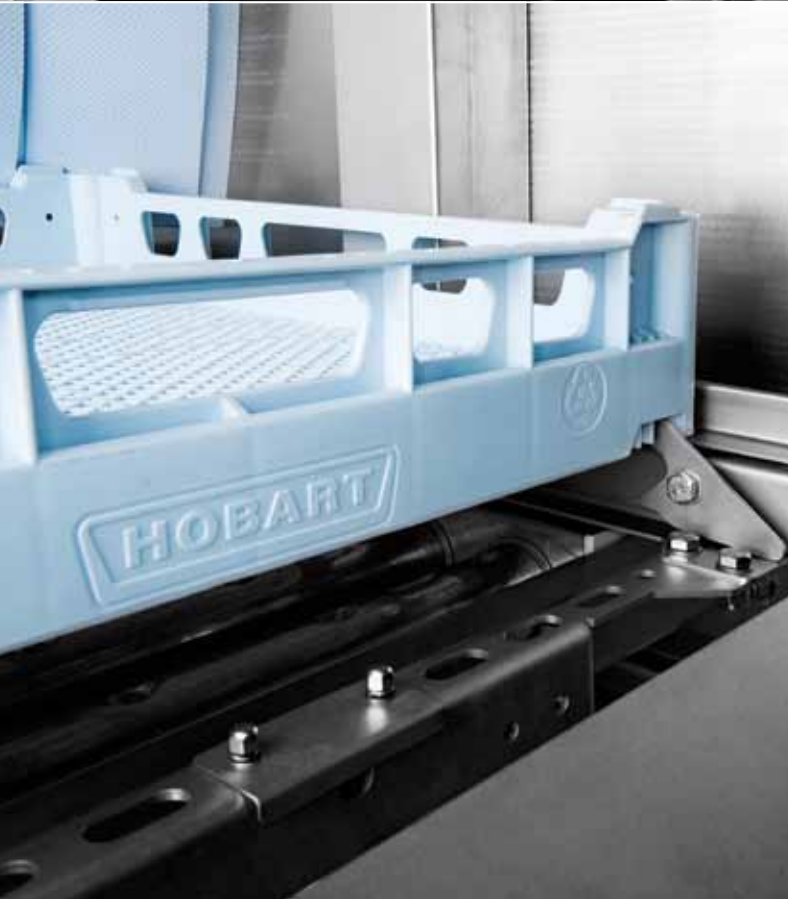
We make a distinction between part and full operation by the degree of capacity actually used.

INTELLIGENT – SAFE



Visualization of the system check BEST-START on the color touch screen of the PROTORNIC control.

HOBART



4 | PERMANENT CLEAN

PERMANENT CLEAN

Available for models with L- or S-Pre-wash Zones

- No soiling spreading around the appliance
- Active soiling removal from the zone
- Constant high-level wash water quality
- Reduction in water, energy, and chemicals consumption
- Reduces refilling during operation
- Convenient removal of soiling at the end of the dishwashing shift

In busy kitchens, large amounts of dirt collecting in the pre-wash section of the flight-type dishwasher can normally not be prevented.

This increases wash water soiling and more frequent tank water changes. Apart from that, this also has detrimental effect on waste water and degreasing.

The PERMANENT clean system automatically actively removes coarse soiling from the appliance in the pre-wash phase using a well-designed and effective filter system. The coarse soiling in this zone is permanently filtered out and pumped into a filter drawer in the appliance to keep pre-wash results clean at all times. Food residues can then be conveniently removed from the drawer at the end of the dishwashing shift. This eliminates the time-consuming chore of emptying the filter basket, interrupting operation.

PERMANENT clean removes soiling particles from the washing process before they adversely affect water quality, keeping wash water quality high while reducing detergent replenishment and eliminating the need to empty the tank during operation. This gives you further savings in operating costs while automatically reducing degreaser and waste water burden, and protecting the environment.

CLEAN – ACTIVE



Phase 1:
Coarse soiling is removed from the washware early, in the pre-wash zone.

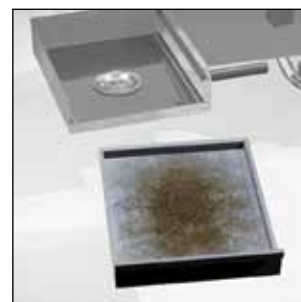


Phase 2:
The coarse soiling washed off is automatically and cyclically removed from the pre-wash zone.

LASTING – ECOLOGICAL



Phase 3:
The process water available washes the coarse soiling into the filter drawer in the appliance intake.



Phase 4:
Convenient removal of the accumulated soiling residues at the end of the dishwashing shift.

HOBART

5 | DRYING RESULT

PATENT

PUMPED RINSE 80DEGREES

The temperature is an important factor for the drying of the wash ware. In conventional dishwashers the highest temperature is in the fresh water rinse. For heating up the wash ware, there is only the volume of the fresh water consumption available. In the pumped rinse 80DEGREES the hot water is circulated several times and increases the temperature input on the wash ware. The better heating up of the wash items supports the selfdrying effect. It optimizes drying results and reduces the energy required for drying.

HOT – DRY



The hot pumped rinse enhances the self-drying of the wash items.



Easy to clean:
the pumped rinse unit.



6 | HANDLING

HANDLING ASSISTANT EASY

featuring

- PROTRONIC control
- Drop-In wash system
- Coded wash and rinse arms
- Coded curtains

PROTRONIC CONTROL

The innovative, multi-line text and symbol display is operated by touchscreen. This ensures easy operation and minimises errors.

DROP-IN WASH SYSTEM

Easy to take out and insert.

CODED WASH AND RINSE ARMS

The wash and rinse arms are clearly designed to prevent risk of confusion when inserting.

CODED CURTAINS

Easy to take out and insert. The clear marking on the wash curtains prevents confusion when inserting.

CONVENIENT – SIMPLE



The wash systems are easy to remove.

7 | SUPPORT

CLEANING ASSISTANT SUPPORT

comprising

- Wash system
- Bayonet catch
- Completely moulded washing tanks
- 1-part strainer
- 150 mm floor clearance
- Condenser
- Panorama door
- Cleaning assistance

WASH SYSTEM

The wash systems are easy to remove and to insert due to a drawer mechanism.

BAYONET WASH ARM CATCH

The wash arms can easily be opened and closed to simplify cleaning.

MOULDED DRAIN ELEMENT

Dirt is directed via beading to a central point and into the drain. This prevents dirt accumulation in the tank.

COMPLETELY MOULDED TANK

The tank sump and tank bottom are moulded from one single part. There are no corners and edges or weld seams where dirt could accumulate. This optimizes cleaning and hygiene.

CONDENSER

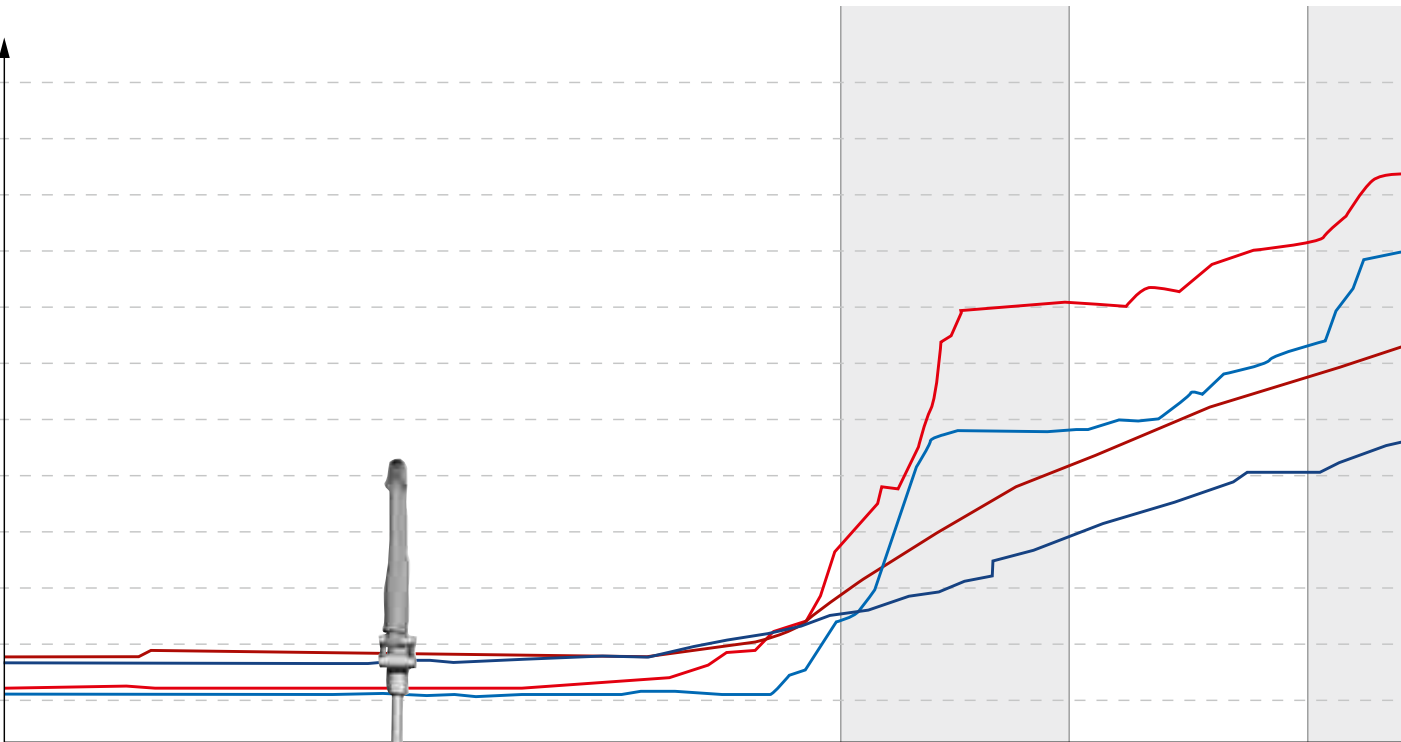
Optimal accessibility for water spraying - by simply removing the front covering.

CLEANING ASSISTANCE

Additional cleaning nozzles in the washing system continuously clean the back of the door and washing system as well as the machine cover during operation. This minimises soiling residues on the inside of the appliance, reducing the effort needed to clean the appliance manually at the end of the dishwashing shift.

8 TEMPERATURE PROFILE

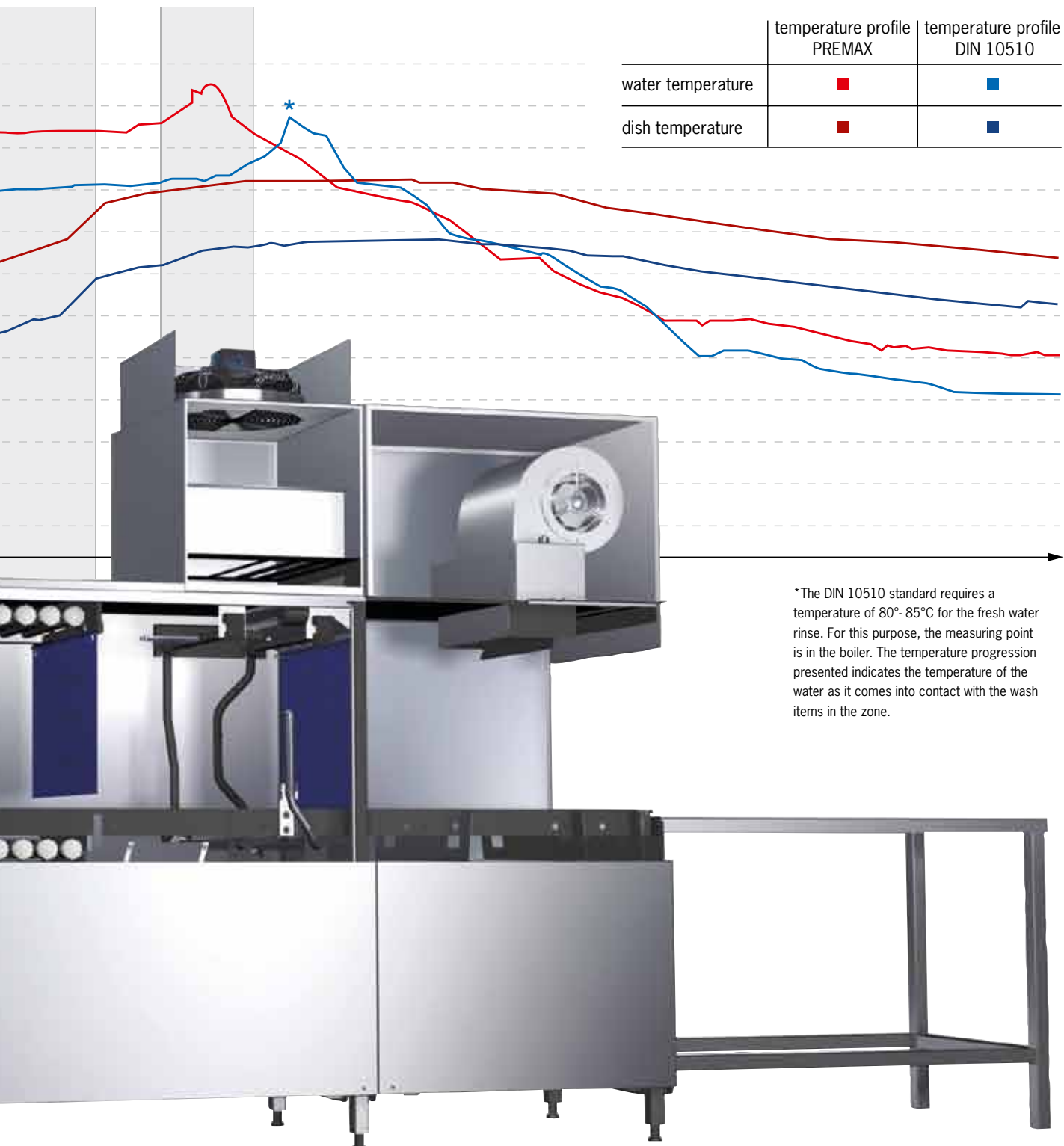
°C
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PREMAX – AWARD-WINNING INNOVATION



Dekra-Award
2011



Environmental
Technology Prize



TOP 100 – 2007



TOP 100 – 2008



TOP 100 – 2009



GV-Manager's
Best



Gastro
Innovation Award



Dr.-Georg-Triebe
Innovation Award



FCSI
European Award



Seatrade Insider
Cruise Award

9 | TECHNICAL DATA

Racks (number/h) all speeds: hygienic wash result based on DIN 10510			Conveyor speed (m/min)	Water consumption*		Energy consumption** (connected load) [kWh; (kW)]		Recommended model selection	Total length (in mm without drying zone)
speed 1	speed 2	speed 3		(l/h)	(l/rack)***	with heat recovery	with heat pump		
120	180	240	1.50	140	0.6	30.5 (32.3)	22.0 (25.5)	CP-L-A	2,000
120	190	300	1.58	140	0.5	31.4 (33.0)	21.9 (26.2)	CP-S-A	2,250
120	200	320	1.67	140	0.4	32.3 (33.0)	22.7 (26.2)	CPE-S-A	2,750

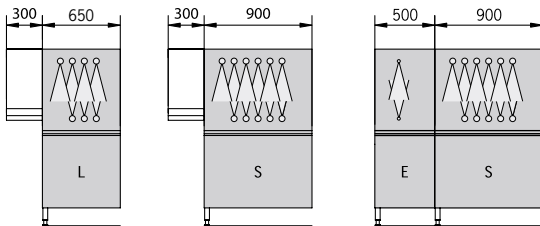
* Official fresh water consumption figure while using SENSOTRONIC under optimised conditions results may vary by customer

** Energy consumption figures in a fully loaded machine

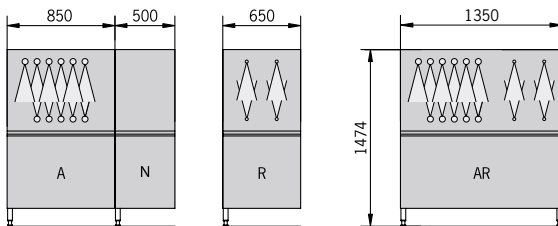
*** Ideal values

10 MODULE SELECTION

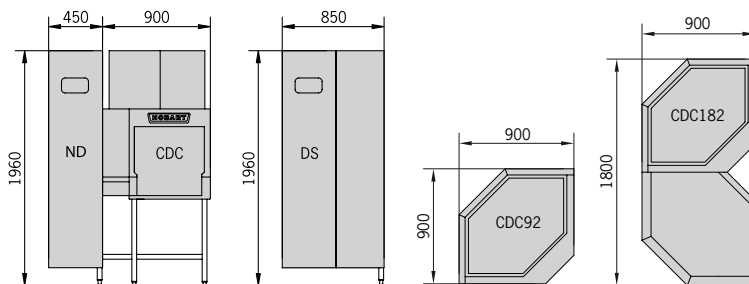
PRE-WASH ZONE



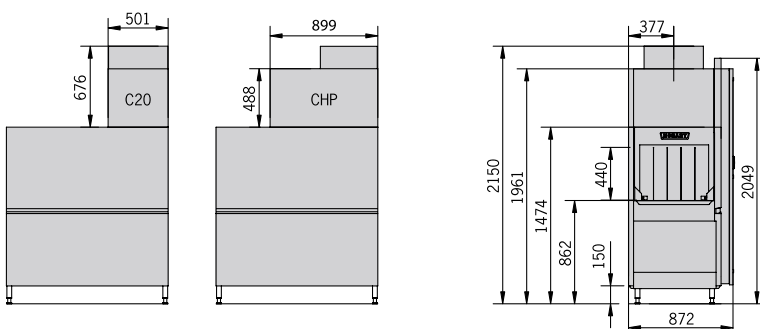
MAIN WASH ZONE



DRYING ZONE



HEAT RECOVERY/HEAT PUMP



Loading width: 510 mm
Loading height: 440 mm

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ECONOMICAL – ECOLOGICAL – PREMAX

The PREMAX line represents the technological peak of modern warewashing technology. These high-performance machines feature numerous world innovations – exclusively from HOBART.

With its focus on economy and conservation of water, energy and chemicals, PREMAX is clearly the right choice. The fact that more than 100 patents have been applied for underlines the innovative power of this technology.

The 50PERCENT fresh water rinse function results in a reduction in water consumption by up to 50% compared with machines that use standard technology. In combination with the LOW-CHEM detergent saving system, detergent savings of up to 80% can be realised. The energy management system EFFICIENT reduces energy losses by up to 15%.

Unique to the world market, the SENSOTRONIC washing intelligence ensures perfect wash results and operating safety while minimising consumption - taking care of the environment while saving you money. Whenever the water-free dishwasher finally arrives, it'll be a PREMAX.

Invest in the future, with PREMAX!



WAREWASHING

COOKING

FOOD PREPARATION

WASTE TREATMENT

SERVICE

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Member of the *ITW* Food Equipment Group Europe

