

WAREWASHING  
HOOD-TYPE DISHWASHER



# PREMAX AUP

EFFICIENT - RELIABLE - INNOVATIVE

**NEW**



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.

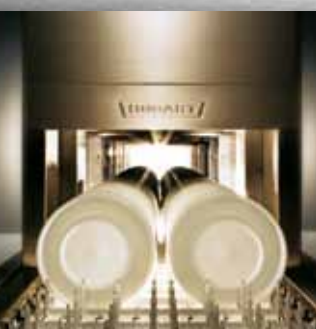
2004 HOBART relocates to Elgersweier

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





## 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.



## 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 CO<sub>2</sub>NSEQUENT 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 "For larger events we need a machine which fulfills our capacity requirements and provides a consistently good dishwashing result – the PREMAX AUP is exactly the right machine for our needs."

2 "The way that prices are increasing, we keep a very close eye on our consumption – it's good that ours has fallen significantly since we have been operating the new PREMAX machine."

3 "In the past we had to wash our pans by hand – but with the POWER-PLUS wash program we can now wash everything in the machine."

4 „In the past, to clean encrusted cutlery, staff needed to first soak the pieces and then wash them several times. Thanks to the integrated cutlery program, we can now clean everything in one single wash, so that our personnel can concentrate on other tasks."

Andreas Huber  
Golden Star Resort,  
Dubai

Anna Thaler  
Hotel Krone,  
Düsseldorf, Germany

Conor O'Donoghue  
O'Donoghue's Restaurant,  
Dublin, Ireland

Rajan Anand  
Restaurant manager,  
Berlin



# PREMAX AUP

EFFICIENT – RELIABLE – INNOVATIVE

## EFFICIENT – INNOVATIVE – PREMAX

Congratulations! By opting for a PREMAX dishwasher, you have chosen a top product offering you all the latest innovations currently available in the market.

Economical operation has become a key concern for purchasers, given the ever increasing running costs of dishwashers and the growing environmental awareness. These are also major issues for HOBART, who responded by becoming the first manufacturer to launch a steam rinsing program for hood-type dishwashers that uses only 1.6 liter of water.

As the steam expands to 1,600 times the volume of the equivalent amount of water, operating costs are greatly reduced without compromising the rinsing performance. In addition, the consumption of water, detergent and other chemicals is 30% lower than that in previous PREMAX models.

Most of the hot steam remains under the hood, thus preserving 3kWh of energy within the system. The residual hot vapour collecting at the height of the goods to be cleaned is extracted by the hood system VAPOSTOP and

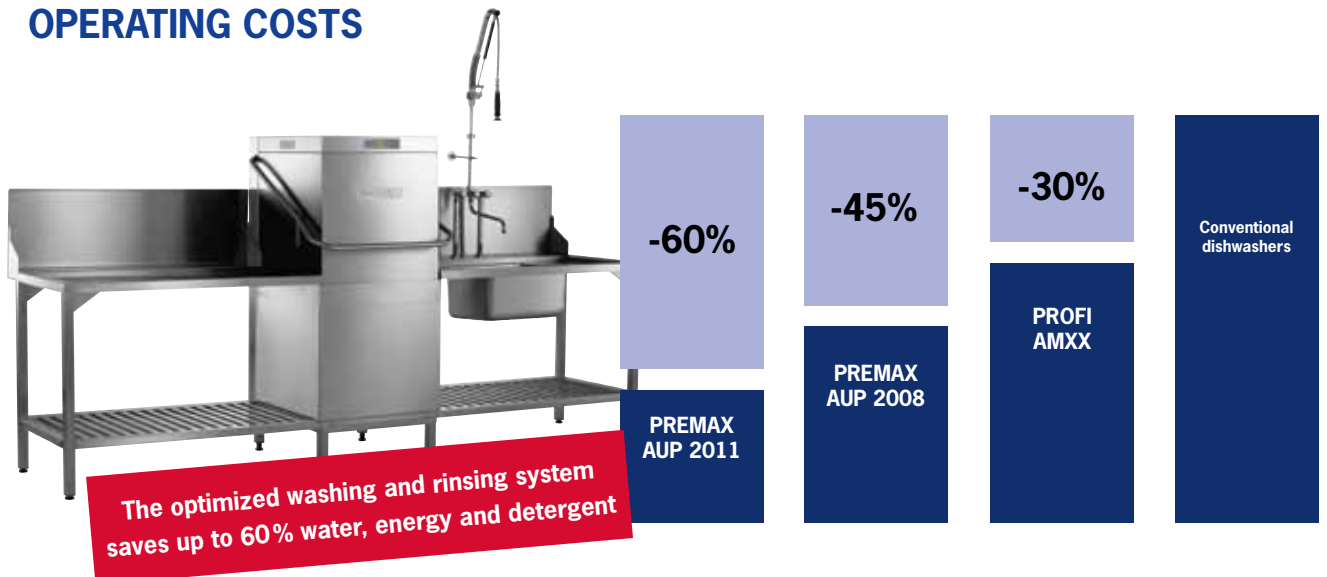
ejected in the form of cooled air at the side of the unit. PREMAX is again setting new standards, as 90% less residual moisture is released to the ambient per cycle than with machines that feature a hood with rear opening. Your staff will thank you for a greatly improved working climate.

The washing HOT-TEMP option cleans your ware at 63 °C, which is 3 °C above the temperature in conventional machines. This means that the ware is already hygienically clean after the washing cycle, as more energy is applied in the process.

With the higher temperature, the program cycle times are reduced, so that the machine capacity is increased to 75 racks per hour. Thanks to the innovative steam washing function, even heavily encrusted utensils become perfectly clean, while the switchable cutlery program washes dirty knives and forks so that they sparkle as if polished by hand.

In addition to excellent economy and increased capacity, PREMAX thus sets new standards also as regards hygiene, exceeding the requirements of DIN 10512 – at significantly reduced operating costs.

## OPERATING COSTS





## 1 | ECONOMY

### VAPO RINSE ECO **NEW**

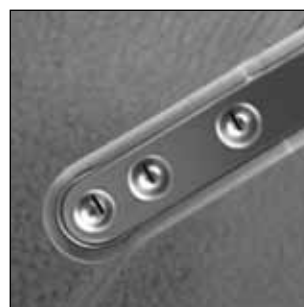
The primary task of rinsing is to remove detergent from the wash item. The switchable steam rinse cycle VAPO RINSE ECO works in two phases. In the first phase, the detergent is rinsed off with water. The following VAPO RINSE ECO fills the wash chamber completely with steam which forms a microscopically thin film on the wash items and removes residual alkalinity. The self-drying effect of the wash items is additionally enhanced by the increased temperature penetration into the wash items. The steam rinse cycle VAPO RINSE ECO reduces the consumption of fresh water to 1.6 liter per cycle. Compared to standard machines, this represents a saving of up to 55% in water and detergent as well as up to 70% in rinse aid.

### RINSE SYSTEM ACCURINSE

Ensuring constant temperature and volume of clean rinse water is vital to achieve not only clean, but hygienically clean table-ware. The HOBART system “pulls” rather than “pushes” the rinse water through the booster and is totally independent of flow pressure on site thus preventing any mixing with incoming cold water.

The rinse system ACCURINSE saves up to 30% water, energy and detergent.

## THRIFTY – ECOLOGICAL



Just 1.6 l of fresh water are efficiently distributed by means of the rinse arms.

**HOOD CONCEPT E-STORE**

When opening the hood of a conventional machine, the hot steam escapes from the hood's open rear side. This cools the interior space and the hood itself. During the subsequent wash program, the cooled interior space and the cooled hood take heat from the wash water.

To restore the necessary temperature in the machine, this energy loss must be compensated by extra heating power.

The hood concept E-STORE is based on a fully enclosed 4-sided hood. When the hood is opened, the hot steam remains in the hood. The heat energy is retained, and does not need to be replaced in the subsequent wash process. This saves up to 3 kWh or up to approx.

820 € per year\*.

The hood concept E-STORE saves energy and reduces operating costs.

\*based on 15 cents/kWh, 5h/day, 365 days/year

**HEAT AND SOUND INSULATED HOOD**

15 mm hood insulation helps to retain further valuable energy during operation. The wash water does not lose heat through the hood which increases heat conservation and thereby saves energy. The fully enclosed hood enhances the energy-saving effect of the insulation.

**HEAT RECOVERY E-SAVE**

In conventional professional dishwashers, the soil is pumped out of the tank with a fixed quantity of water after each wash cycle. The waste water has an average temperature of approx. 60 °C, and so the energy stored in the water as heat is lost.

In the heat recovery system E-SAVE the hot waste water passes against the incoming cold water in a heat exchanger. The heat exchange which thus occurs heats the cold water up to approx. 45 °C. As a result, the energy required to reach the final rinse temperature of approx. 75 °C is reduced by as much as 6.5 kWh and saves up to 1,812 € per year.\*

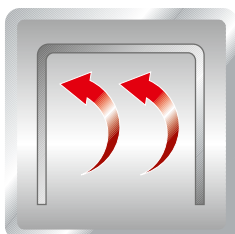
Heat recovery E-SAVE uses the energy already in the machine, and saves operating costs.

\*based on 15 cents/kWh, 5h/day, 365 days/year

Operating days per year	Operation time in hours per day			
	2	3	4	5
220	437 €	655 €	874 €	1.092 €
300	596 €	894 €	1.192 €	1.490 €
365	725 €	1.087 €	1.450 €	1.812 €

Calculation basis:  
Loading with 75 racks per hour on average (theoretical rack capacity)  
Energy costs 0.15 € per kWh

**ECONOMICAL – OPTIMIZED**



With the hood concept E-STORE, the hot steam remains in the hood, saving energy and protecting your wallet.

**ECONOMICAL – EFFICIENT**



Up to 1,812 € of savings thanks to heat recovery system E-SAVE.

# HOBART

## 2 | WASH RESULT

### **FINE FILTER SYSTEM GENIUS-X<sup>2</sup>**

Permanently clean wash water is the key requirement for an optimal wash result with less detergent and water consumption. In the next generation of the fine filter system GENIUS-X<sup>2</sup>, the wash water is continuously led through a system of filters.

During the wash cycle the majority of soil particles are removed during the first phase of draining. Any remaining soil particles are retained in the filter and are then removed during the second stage of draining, just before the final rinse. The tank water is then replenished with 2.3 liter of fresh hot rinse water. This optimal regeneration ensures a perfect wash result.

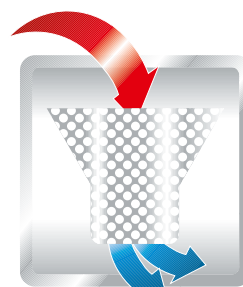
The GENIUS-X<sup>2</sup> cleans itself during the draining phase. GENIUS-X<sup>2</sup> helps to reduce water usage by up to 30%.

### **PATENT**

### **WIDE ANGLE NOZZLE FAN**

Wash efficiency depends largely on the distribution of the wash water and on avoiding any masked areas. Spraying angles and the precision of the wash jets are vital factors in achieving a powerful, searching wash action and the HOBART designed wide angle nozzles FAN provide a substantially broader and more precise spray pattern. Compared with conventional wash arm systems the wash water is distributed more efficiently, masking is avoided and the wash result, especially in the corners, is considerably improved.

### **STRONG – HYGIENIC – CLEAN**



The fine filter system GENIUS-X<sup>2</sup>, with integrated pre-washing process, filters the wash water continuously and then pumps out the soil particles.





## WASH SYSTEM ROTOR-X

A perfect wash result is only achieved if the detergent makes contact with the entire surface of the wash ware items, dissolving and binding the soil. Therefore the wash water must reach every point of the items, and the more thoroughly and intensively this occurs, the better the result. The rotating wash system ROTOR-X consists of two 4 spoke wash arms, one above and one below. The rotation of the wash arms creates the necessary mechanical wash action, and at the same time the precise wash pattern of the wide angle nozzles FAN ensures that the wash water reaches every part of the wash ware. The wash system ROTOR-X guarantees an outstanding cleaning result over the entire surface.

## STEAM WASHING **NEW**

Heavily encrusted food residues, particularly starches and proteins, pose a challenge for any hood-type dishwasher. In the PREMAX AUP, as a supplement to the wash program POWER-PLUS, steam helps to remove heavily encrusted food during the wash cycles without any additional mechanical devices. Starch and protein residues are softened and removed. The steam also increases the wash temperature, thus improving the efficiency of the detergent.

## COMPLETE – CONSTANT



With the wash system ROTOR-X, the detergent works over the entire surface of the items being washed.

## PERMANENT WASH PROGRAM

The permanent wash program is built-in as standard and can be adapted anytime to heavily soiled wash ware. No need to run a second cycle, only the wash phase is extended. No additional detergent dosing or rinsing is necessary. Time is saved and operation costs are reduced.

## HEAT ELEMENT ECOTHERM

A consistently high wash temperature extracts maximum cleaning performance from the wash water. HOBART research has established that higher washing temperatures optimize detergent performance. ECOTHERM ensures a constant 63°C even during continuous use. The extra heat absorbed by the washed ware also improves the drying result.

## CUTLERY CYCLE **NEW**

Shining dinnerware is a restaurant's signature. Food residues are extremely difficult to remove after long periods left to dry – especially from the cutlery. Mostly, you will need to soak the items manually or wash them again to achieve a spotless result. HOBART's cutlery cycle removes even persistent residues by the use of steam. The soil particles are soaked and loosened. The wash cycle then washes the residues away. There is no need to pre-soak the items manually.

## EFFICIENT – CONSTANT



The heat element ECOTHERM maintains the wash water at a constant temperature even in continuous operation.

**HOBART**



## 2 | WASH RESULT

### WASH PROGRAM POWER-PLUS

The longer the dishes are left before being washed, the harder food residues stick to the crockery. After an extended period of drying on, it may be necessary either to prewash the ware, or to run it several times through the dishwasher in order to achieve a hygienic wash result. The wash program POWER-PLUS delivers increased washing pressure, through pumps connected in series. Contrary to conventional programs, even difficult to remove food residues are washed off without the need for pre-cleaning. The wash program POWER-PLUS guarantees a perfect wash result even with difficult to remove food residues.

### CLEANING CYCLE STARCH-REMOVAL

Depending on the type of food, and plate warming during meal distribution starch deposits will appear on the ware over time. The cleaning cycle STARCH-REMOVAL removes the starch from the crockery. Inconvenient and time consuming manual handling using aggressive detergents is eliminated. The cleaning cycle STARCH-REMOVAL assists the staff and guarantees shining crockery.

### STRAINER CONTROL SYSTEM PROOF

Clean wash water and accurate detergent dosage are key factors in achieving a clean and hygienic wash result. An efficient filter system is useless if it is not in the right position. The strainer control system PROOF has an interlock which is continuously monitored by the SMARTRONIC control. The wash cycle can only be activated if the filter is correctly positioned.

### WASHING HOT-TEMP

The washing is the result of a combination of temperature, mechanical action and chemistry. The water temperature has the biggest influence on the wash result – significantly more than wash pressure. In conventional dishwashers the wash temperature is at approx. 60 °C, but with the HOT-TEMP washing, the wash ware is washed at approx. 63 °C. This improves the efficiency of the detergent – the wash ware is cleaned faster whilst the capacity of the machine is raised by up to 75 racks/h.

## FLEXIBLE – RELIABLE



The cleaning cycle STARCH-REMOVAL eliminates the need for manual pre-washing.

## THOROUGH – SAFE



If the filter is missing or not inserted correctly, the SMARTRONIC displays a warning.

# HOBART

## 3 | HANDLING

### MINIMUM HUMIDITY RELEASE INTO THE ROOM **NEW**

The comprehensive concept consisting of a fully closed and insulated hood with the series standard hood system VAPOSTOP minimizes the release of steam into the room. Only four grams of water vapour are released to the ambient air per cycle. Most of the steam at a temperature of 60 °C remains inside the hood. The rest of the vapour is extracted by the VAPOSTOP and mixed with ambient air in the exhaust air channels where it condenses for recycling inside the machine. This significantly improves the room climate and leads to a reduced load on the kitchen ventilation system.

### HOOD SYSTEM VAPOSTOP **NEW**

When opening a conventional dishwasher hot steam escapes from the machine. The hood concept E-STORE remains the most part of the steam in the fully enclosed 4sided hood. The additional hood system VAPOSTOP extracts the moisture saturated air by means of a multistage ventilation. Due to the exhaust the escape of the steam is effectively avoided. So removing the wash ware is much easier for the operator. The input of humidity into the room decreases by 63% compared to ordinary machines.

### FREE OF STEAM – CONVENIENT



The hood opening system VAPOSTOP avoids effectively the escape of steam when loading and unloading the machine.



# PREMAX AUP

EFFICIENT – RELIABLE – INNOVATIVE

## SINGLE BUTTON SMARTRONIC

In any busy establishment the dishwasher must be easy to operate and customers tell us that having simple, understandable controls is of big importance.

The control SMARTRONIC with single button operation indicates the machine status in clear, self explanatory colors. Only the essential functions such as filling and heating, washing and rinsing, ready for use, and draining are indicated. Incorrect operation and misuse are eliminated. Additional functions can be accessed as required.

## REMAINING TIME INDICATOR

The remaining time indicator visibly shows the progress of the running wash program.

The four segments of the STARTER color up clockwise in sequence. Even in peak times personnel can set their priorities at a glance and work more efficiently.

## REFILL SIGNAL

For machines with external containers the integral low level signal indicates when detergent and rinse aid need refilling. This guarantees a perfect wash result every time.

## WATER SOFTENING SYSTEM NONSTOP

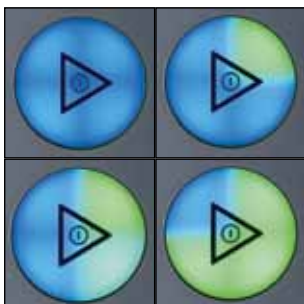
Lime scale is a major cause of poor wash results and machine problems. Deposits build up on machine parts, in the boiler and on heating elements reducing efficiency, increasing running costs and causing failures. Detergent performance is also significantly reduced.

The optional integral water softening system NONSTOP provides continuously and automatically soft water and eliminates the downtime or extended program times typically associated with other integral softener systems. The dishwasher, and in particular, the heating elements are maintained in optimum working order for efficient performance.

## EASY – INTELLIGENT



The simple control SMARTRONIC combines the most important functions into just one button STARTER.



The button STARTER shows the remaining cycle-time and the operation status in self-explanatory colors.

## CONTROL – PERMANENT



An easily accessible filler cap and a large refill opening allow quick and simple salt replenishment for the water softener NONSTOP.

**HOBART**



## 3 | HANDLING

### **FILTER OBSTRUCTION SENSOR**

If there is a lot of soil in the machine, the filter may become clogged. The filter obstruction sensor registers this, and displays a warning on the control panel. This function assists the operating personnel and ensures proper ongoing dishwashing operation.

**PATENT  
PENDING**

### **HYGIENE CYCLE ACTIVE**

A dirty dishwasher cannot deliver clean results and over a period of time dirt particles, starch and sometimes lime can build up inside the machine leading to bacteria and poor machine hygiene.

Together with the specially formulated tablets INTENSIVE HOBART's ACTIVE hygiene cycle effectively removes these deposits from the wash tank and chamber leaving a clean machine with a fresh smell.

### **HOOD DESIGN EASY-LIFT**

The physical effort required to open and close the hood when loading and unloading the machine is reduced considerably.

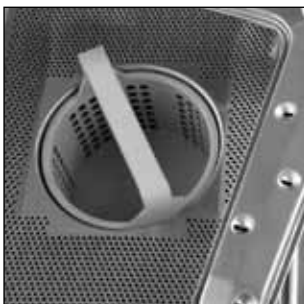
This is significant from an ergonomic point of view. The EASY-LIFT hood is the easiest hood on the market to operate, thanks to its innovative design. The effort needed for opening is 50% less than with normal machines. This reduces the strain on operators and makes their work easier.

### **AUTOMATIC HOOD LIFT**

The optional automatic hood lift opens the hood automatically at the end of the program, and closes it at the push of a button.

The automatic hood lift delivers maximum convenience for the operators.

## EFFICIENT – COMPLETE

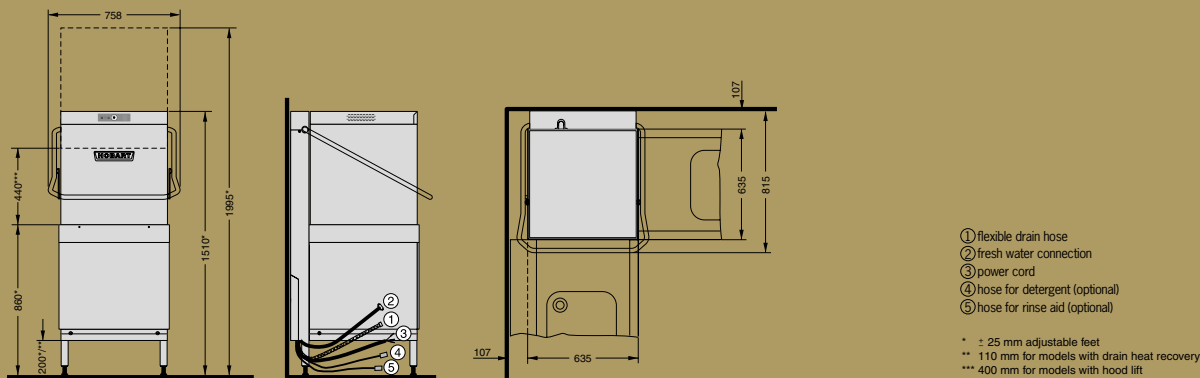


The filter obstruction sensor registers this, and displays a warning on the control panel.

## SAFE – CONVENIENT



The hood design EASY-LIFT reduces the physical strain on operators.



## 4 TECHNICAL DATA

MODEL	AUPS	AUPRS
<b>Cycle times</b> in sec. [ 1 ]	47 / 70 / 170 / > 170	47 / 70 / 170 / > 170
<b>Capacity</b> [ 2 ]		
Racks / h	75	75
Dishes / h	1,350	1,350
Glasses / h	2,700	2,700
<b>Temperature</b> in °C		
Wash temperature approx.	63	63
Rinse temperature approx.	75	75
<b>Tank volume</b> liter	40	40
<b>Fresh water consumption per cycle</b> liter	1.6	1.6
<b>Pump capacity</b> in kW/l/min	2 x 1.1 / 600	2 x 1.1 / 600
<b>Heat output</b> in kW		
Tank	2.5	2.5
Booster kW*	12.3 / 6.15	6.15
<b>Total loading</b> in kW	17.1 / 10.9	10.9
Fuse in A	3 x 35 / 3 x 25	3 x 25
Nominal voltage in V/Hz/N-PE	400 / 50 / 3	400 / 50 / 3
<b>Dimensions</b> in mm		
Width / Depth / Height	635 / 635 / 1,510	635 / 635 / 1,510
Open hood height	1,995	1,995
Loading height	440	440
Rack size	500 x 500 / 500 x 530	500 x 500 / 500 x 530
<b>Features</b>		
Heat Recovery E-SAVE	-	●
Drain pump	●	●
Rinse System ACCURINSE	●	●
Rinse aid dispenser	●	●
Detergent dispenser	●	●
Built-in-softener	●	●
Corner version	●	●
Rack equipment	2 x plate rack 1 x universal rack 1 x cutlery rack	2 x plate rack 1 x universal rack 1 x cutlery rack

● Inclusive      - Not available

## WATER TREATMENT

### WATER SOFTENING SYSTEM

to protect against calcium deposits

Mod. SE output 1,600 liter at 10 °d (total hardness)

### PARTIAL DESALINATION CARTRIDGES

for sparkling wash results when the raw water contains minerals

Series TE output of 7,000 to 16,000 liter at 10 °d (carbonate hardness)

### FULL DESALINATION CARTRIDGES

for sparkling wash results when the raw water has a high mineral content.

Series VE output of 3,100- 5,000 liter at 10 °d (total salt content)



[ 1 ] The machine is equipped with an automatic cycle-time control which ensures hygienic rinse temperatures even on a cold-water supply or with reduced heating performance.  
 [ 2 ] Theoretical performance  
 \*Multi-Setting: The heater output can be reduced at site from 12.3 kW to 6.15 kW if required.



WAREWASHING  
HOOD-TYPE DISHWASHER

# PREMAX AUP

EFFICIENT – RELIABLE – INNOVATIVE

## TOP PERFORMANCE

PREMAX AUP is the ideal machine to meet the highest standards in wash result and washware quantity.

PREMAX AUP with HOT-TEMP washing increases your rack capacity to give you a hygienically perfect wash result in extremely short time. This saves you time, giving you the freedom to focus on more important activities.

Apart from increased capacity, PREMAX AUP has set new standards in economic terms, taking a leading market position at only 1.6 litres of water consumption and around four grams of vapour emissions per cycle.

PREMAX AUP fulfils the requirements of a hygienic result together with substantial decreases in operating costs.



WAREWASHING

COOKING

FOOD PREPARATION

WASTE TREATMENT

SERVICE

**HOBART GMBH**

Robert-Bosch-Straße 17

77656 Offenburg/GERMANY

Phone +49(0)781.600-28 20

Fax +49(0)781.600-28 19

email: [info-export@hobart.de](mailto:info-export@hobart.de)

[www.hobart-export.com](http://www.hobart-export.com)

**EFFICIENT – RELIABLE – INNOVATIVE**

Member of the *ITW* Food Equipment Group Europe

