



WAREWASHING  
FLIGHT-TYPE DISHWASHER

# PROFI FTN

EFFICIENT - RELIABLE - INNOVATIVE

**PROFI**  
GENERATION 2012



## MADE IN GERMANY

„Made in Germany“ has been a synonym for quality and reliability in the segment of high quality for a long time and still is today. A company can only maintain its hold on the market by keeping its promises as to quality and by producing permanently high quality.

## WORLDWIDE

Whether you need a completely new kitchen or a replacement item you can buy HOBART equipment at the professional consultancies. It's nice to know we're 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

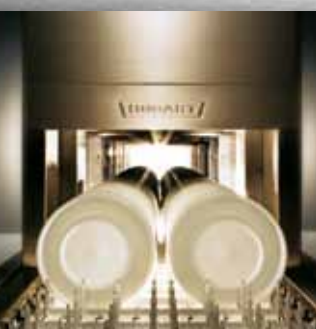
2006 Launch of HOBART's export activities

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

1 "In a hospital it would be a disaster if the dishwasher broke down. That's why I give priority to reliability. HOBART stands for quality and reliability and so it was my prime choice."

2 "Since we have decided on a HOBART we have more time to meet our guests' wishes."

3 "We have to wash lots of kitchenware in very short periods. The HOBART flight-type dishwasher works at highest performance – every day."

4 "I deliberately decided on a HOBART. I know from my experience that I can always rely on a perfect result. HOBART is and will always be the right choice."

3

4

Jeremy Ryan  
Hospital  
Cambridge, England

Markus Hesse  
Restaurant  
Koblenz, Germany

Paolo Cagliostro  
Catering  
Palermo, Italy

Jacques Bourdon  
Maison de retraite  
Toulouse, France



## 1 | ECONOMY

### PATENT

#### ENERGY-MANAGEMENT EFFICIENT

A conventional flight-type dishwasher loses 40% of the energy already available in the machine via the exhaust system. Here the distribution of water and the air stream have a considerable influence. The energy-management EFFICIENT reduces the loss by evaporation. 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 energy-management reduces the energy loss of the flight-type dishwasher by up to 25%.

### 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 120 liters of 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 65% compared to conventional systems.

### EFFICIENT – OPTIMAL



Up to 65% wider and more even spray pattern.

#### 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. Their 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 6.1 kW and total connected load to 36.1 kW.<sup>1)</sup> The extracted air can be led directly into the building's ventilation ducting.<sup>2)</sup>

#### 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 10.5 kWh and total connected load to 24.0 kW.<sup>4)</sup> The temperature of the extracted air is reduced to approx. 20 - 24°C.<sup>3)</sup> The extracted air can be blown directly into the room.<sup>2)</sup>

<sup>1)</sup> Calculation example for the PROFITN S-A-DS5, C25 compared to the models without heat recovery

<sup>2)</sup> Conditional on compliance with VDI 2052

<sup>3)</sup> Values in continuous operation +/-10% depending on room air supply and fresh water temperature (values based on 10° water supply and 23°C indoor air temperature)

<sup>4)</sup> Calculation example for the PROFITN S-A-DS5, FHP-18 compared to the models without heat pump

### EFFICIENT – INNOVATIVE



Optimised energy efficiency using the HOBART heat pump.

## 2 | WASH RESULT

### PATENT

#### WASH SYSTEM CONTACT-PLUS

The impact with detergent solution via the wash arms is, apart from the temperature, the main factor influencing the cleaning result.

The precision of the patented 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, 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 11 wash arms of the CONTACT-PLUS wash system guarantee an optimal wash result.

### PATENT

#### RINSE TRI

The patented triple rinse TRI consist of the RADIUS pre-rinse nozzle, a recirculated rinse and a fresh water final rinse. The new RADIUS pre-rinse is ranged in front of the pumped rinse. It 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.

### PATENT

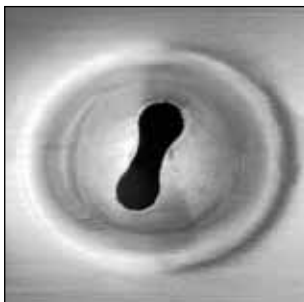
#### CONVEYOR BELT FREEFLOW

The position of items on the conveyor is important, especially for mixed loads, where large items like trays may shield smaller ones. The FREEFLOW conveyor is designed to avoid spray shadows, so that every item is exposed to the full wash power of the jets. The FREEFLOW ensures perfect results, without sorting the loads.

## PERFORMANCE – POWERFUL



Highest performance due to 6 wash arms above and 5 wash arms below.



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

## DIRECT – DYNAMIC



Excellent wash results using a patented three-stage rinse system.



Special fingers on the conveyor belt DIRECT enlarge the adjustment angle for the trays.

## 3 | PERMANENT CLEAN

### PERMANENT CLEAN

- 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.

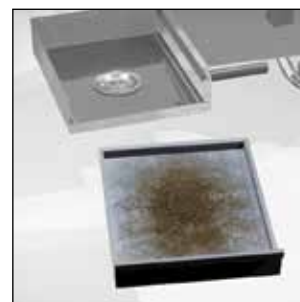


Phase 2:  
The coarse soiling washed off is automatically and cyclically removed from the pre-wash zone.

### 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.



## 4 | DRYING RESULT

### **PATENT** **DRYER GUIDEAIR**

A conventional drying blows the warm air on the wash ware from above. The air reflects uncontrolled from below to above. The patented GUIDEAIR dryer system directs air onto the washware from the top and side through channels and nozzles, while specialised air blades in the drying drawer direct a powerful airflow onto your washware from underneath.

The dryer GUIDEAIR guarantees perfect drying results for hollow items such as cups, bowls and glasses.



### **INSIDE – OUTSIDE**



Optimal drying results due to wellaimed airflow .

## 5 | RELIABILITY

### HANDLING ASSISTANT EASY

featuring

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

### SMARTRONIC CONTROL

Switch on/off – all other functions are automatically assumed by the control.

### PROTRONIC control

The innovative multi-line display with text and symbols also serves appliance operation by touchscreen, ensuring ease of use while minimising operator error.

### DROP-IN WASH SYSTEM

Easy to take out and insert.

### CODED WASH AND RINSE ARMS

The wash and rinse arms are clearly identified 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.

## OBVIOUS – SIMPLE



The curtains are marked distinctly.

## 6 | SUPPORT

### CLEANING ASSISTANT SUPPORT

including

- Cleaning assistance
- Bayonet catch
- Alligator flap
- Completely moulded tanks
- 1-part strainer
- 150mm floor clearance
- Condenser
- Panorama door

### 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.

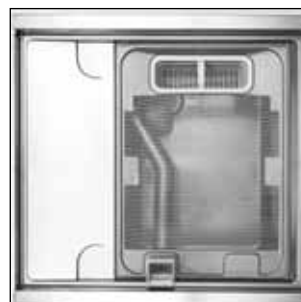
### BAYONET WASH ARM CATCH

The wash arms are easy to unlock and lock.

### FOLDABLE INTAKE

Most of the food waste occurs in the feeding section of the machine. The upward folding entry cover ensures convenient accessibility and easy cleaning. Operators do not have to fumble with removing coverings.

## EASY – CLEAN



The deep drawn tank is made out of one piece without edges and corners.



## 6 | SUPPORT

### **MOULDED DRAIN ELEMENT**

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

### **WASH ARMS**

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

### **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.

### **DISTANCE BETWEEN BELT AND BODY**

Easy accessibility, even in confined areas.

### **STRAINER DRAWER IN THE ENTRY SECTION**

In case of very high dirt accumulation fast cleaning is possible by simply removing the drawer from the outside – without interrupting operation. Overflow is prevented by a deep drawer which holds a large capacity.

### **CONDENSER**

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

## **CONVENIENT – ACCESSIBLE**



Bajonet catch: easy cleaning of wash arms.

## 7 | TECHNICAL DATA

Plate capacity		Belt speed (m/min)	average water consumption (l/h)*	Energy consumption (connected load)**		Recommended model selection	Total length (in mm)	Entry section (in mm)	Exit section (in mm)
based on DIN 10510	maximum			with C25	with FHP				
2,230	2,530	1.02	180	36.2 (40.9)	n.a.	FTN 1-E-A-DL3	4,600	440	800
2,350	2,770	1.08	180	35.4 (42.4)	23.3 (29.7)	FTN 0-L-A-DL3	4,700	440	800
						FTN 0-L-A-DL4	5,000	440	1,100
						FTN 1-L-A-DL3	5,000	740	800
						FTN 1-L-A-DL4	5,300	740	1,100
2,680	3,230	1.23	180	36.1 (40.1)	24.0 (30.4)	FTN 1-S-A-DL3	5,000	440	800
						FTN 1-S-A-DL4	5,300	440	1,100
						FTN 2-S-A-DL4	5,600	740	1,100
						FTN 2-S-A-DL5	5,900	740	1,400
2,680	3,230	1.23	180	36.1 (40.1)	24.0 (30.4)	FTN 1-S-A-DS4	5,300	440	800
						FTN 1-S-A-DS5	5,600	440	1,100
						FTN 2-S-A-DS5	5,900	740	1,100
						FTN 2-S-A-DS6	6,200	740	1,400
3,210	3,820	1.47	180	36.1 (40.1)	24.0 (30.4)	FTN 1-E-S-ADS5	6,100	440	1,100
						FTN 2-E-S-ADS5	6,400	740	1,100
						FTN 2-E-S-ADS6	6,700	740	1,400
						FTN 2-E-S-ADS7	7,000	740	1,700
3,640	5,190	1.67	210	43.7 (45.3)	28.2 (33.3)	FTN 2-S-AA-DS5	6,800	740	1,100
						FTN 2-S-AA-DS6	7,100	740	1,400
						FTN 2-S-AA-DS7	7,400	740	1,700
4,210	5,590	1.93	210	43.7 (45.3)	28.2 (33.3)	FTN 2-E-S-AA-DS5	7,300	740	1,100
						FTN 2-E-S-AA-DS6	7,600	740	1,400
						FTN 2-E-S-AA-DS7	7,900	740	1,700
4,650	6,550	2.13	240	50.9 (56.5)	33.5 (43.0)	FTN 2-S-AAA-DS5	7,700	740	1,100
						FTN 2-S-AAA-DS6	8,000	740	1,400
						FTN 2-S-AAA-DS7	8,300	740	1,700
5,190	7,200	2.38	240	50.9 (56.5)	33.5 (43.0)	FTN 2-E-S-AAA-DS5	8,200	740	1,100
						FTN 2-E-S-AAA-DS6	8,500	740	1,400
						FTN 2-E-S-AAA-DS7	8,800	740	1,700

All data machines with a loading width of 612 mm.

\* Official fresh water consumption figure under optimised conditions (results may vary by customer)

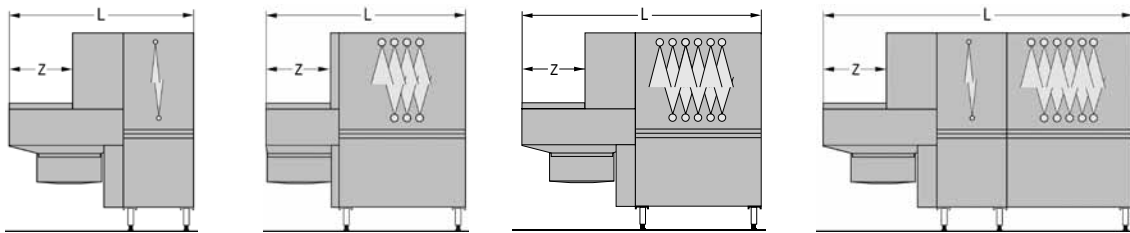
\*\*Energy consumption figures in a fully loaded machine

# PROFI FTN

EFFICIENT – RELIABLE – INNOVATIVE

## 8 | FTN MODUL SELECTION

### Pre-wash zone



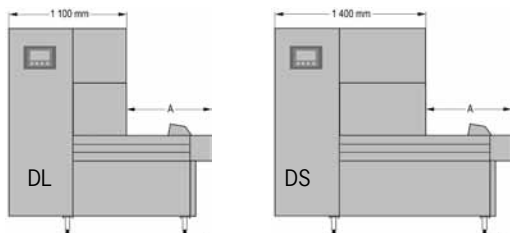
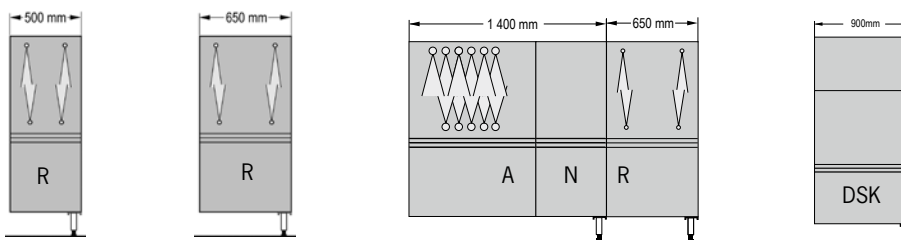
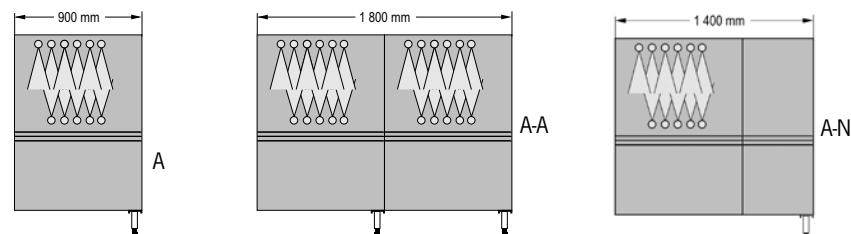
Prewash E		
	L	Z
1 E	1,300	440
2 E	1,600	740
3 E	1,900	1,040

Prewash L		
	L	Z
0 L	1,400	440
1 L	1,700	740
2 L	2,000	1,040

Prewash S		
	L	Z
1 S	1,700	440
2 S	2,000	740
3 S	2,300	1,040

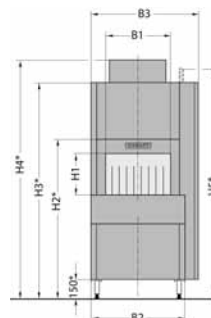
Prewash E-S		
	L	Z
1 E-S	2,200	440
2 E-S	2,500	740
3 E-S	2,800	1,040

### Main wash zone



	L	A
DL 3	1.900	800
DL 4	2.200	1.100
DL 5	2.500	1.400
DL 6	2.800	1.700

	L	A
DS 4	2.200	800
DS 5	2.500	1.100
DS 6	2.800	1.400
DS 7	3.100	1.700



### FTN-Measures

Loading width: 612 mm and 760 mm

Loading height: 400 mm

Loading height	B1	B2	B3	H1	H2	H3	H4	H5
400	612	865	980	400	1,410	1,920	2,120	2,064
400	760	1,013	1,128	400	1,410	1,920	2,120	2,064

WAREWASHING  
FLIGHT-TYPE DISHWASHER

**PROFI FTN**

**EFFICIENT – RELIABLE – INNOVATIVE**

## THE BEST CHOICE

Efficiency, hygienic wash results and reliability are the main factors of a flight-type dishwasher. These factors are essential when a lot of kitchen ware has to be washed in a very short time.

Features such as rinse TRI, wash system CONTACT-PLUS, detergent saving system LOW-CHEM and a reliable robust design guarantee best performance and customer's highest satisfaction.



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)

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