

# SUSTAINABLE EFFICIENCY

INTERACTIVE  
CATALOGUE



SUSTAINABLE SOLUTIONS & INNOVATION IN LAUNDRY SERVICES

A large, clear glass lightbulb is shown from a low angle, with its base resting on a patch of vibrant green grass. Inside the bulb, a small green plant with several leaves is growing upwards. The background is a clear blue sky with a few wispy clouds. A large, white, diagonal shape cuts across the left side of the image, creating a modern, geometric design.

# WELCOME TO DANUBE ECO WORLD

Danube knows how important efficiency is, which is why we make our commitment to the environment a key point.

We have developed a new range of state-of-the-art products offering low consumption and high energy savings throughout their lifetime.





## Water

The saving and good use of water is one of our main objectives so as not to waste it. Our washing machines offer an optimized design and programming as well as a unique accessory, the AQUABAC water recovery tanks to meet this goal.



## Energy

Optimizing energy is an essential point in managing a laundry. Our machines have been designed with the objective to achieve greater energy savings.



## Chemicals

Our washing machines have been designed with features that facilitate and ensure the most appropriate use of chemicals, providing greater savings and better care of garments.

**Sustainable efficiency  
towards an environmentally  
friendly balance**

In a laundry, the price of the machines is the visible tip of the iceberg . Danube pays attention to the invisible part, to optimize resources throughout the life cycle of machines (**life cycle cost**). What is important is not the purchase price of a machine but the total cost that the machine will have during its useful life (**Total Cost of Ownership**).

## Washing

Investment

8%

Water

13%

Energy

32%

Detergent

47%

100 %  
of resources



WATCH  
VIDEO

## Drying

Investment

7%

Energy

93%

## Ironing

Investment

19%

Energy

81%

\*Example of a standard laundry with 50% flat linen and 50% towelling,  
during the first 10 years of life.



# WASHERS



- 1 HIGH G FORCE:**  
THE MOST EFFICIENT  
SPINNING
- 2 LOW WATER  
CONSUMPTION** WITH ET2
- 3 WATER SAVINGS**
- 4 CHEMICALS SAVINGS**
- 5 WATER RECOVERY**
  - ✓ AQUABAC
  - ✓ AQUABAC XL
- 6 WEIGHING SYSTEM**



# 1 HIGH G FACTOR THE MOST EFFICIENT SPINNING.

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VIDEO

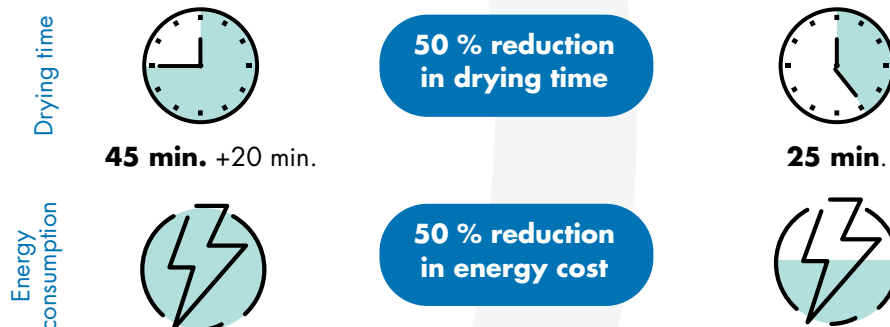
- + Precision
- Consumption

**WEN** Washing machine  
G Factor **200**

**WED** Washing machine  
G Factor **500**



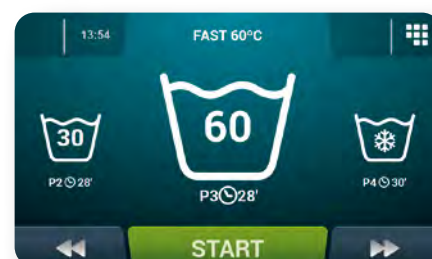
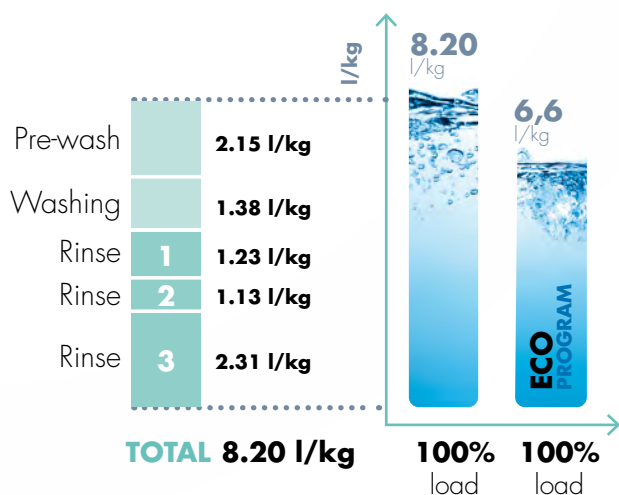
**LOW RESIDUAL MOISTURE RESULTS IN MORE EFFICIENT DRYING.**



## 2 LOW WATER CONSUMPTION

WATCH  
VIDEO

- + Precision
- Consumption of water of energy



Data with a 28 kg washer, 100% cotton towels full load

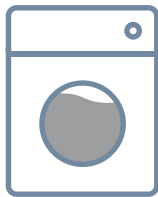
### 3 WATER SAVINGS

Significant water savings are achieved thanks to the weighing system and the Eco program.

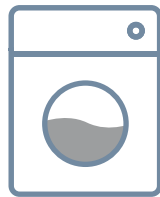


- ☐ Precision
- ☐ Consumption of water of energy

**YOU CHOOSE THE SAVINGS LEVEL**

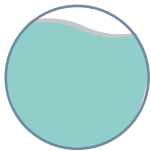


Full load



50% load

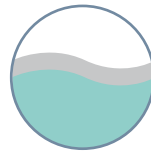
Examples with partial loads: increased savings



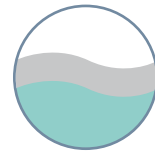
The program runs as registered without any type of saving.



With a 50 % load, we save **18,75 %** of water



With a 50 % load, we save **25 %** of water



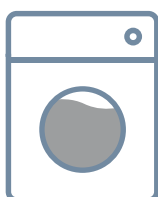
With a 50 % load, we save **50 %** of water

### 4 CHEMICALS SAVINGS

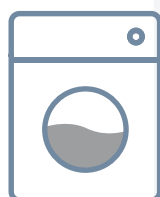
The ET2 allows you to configure the machine with different levels of chemical savings in addition to water and energy, regardless of the load. Less load, more savings.

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- ☐ Precision
- ☐ Consumption



Full load

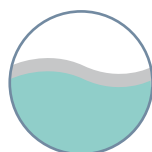


50% load

Examples with partial loads: increased savings



The program runs as registered without specific adjustments



With a 50 % load, we save **18,75 %** of detergents



With a 50 % load, we save **25 %** of detergents



With a 50 % load, we save **50 %** of detergents



# 5

## WATER RECOVERY TANKS

### AQUABAC

To save up to 70% of water.

Standard program example	l/kg	Washing machine 28 kg High speed
Pre-wash	2.15 l/kg	60,20 l
Washing	1.38 l/kg	38,64 l
Rinse 1	1.23 l/kg	34,44 l
Rinse 2	1.13 l/kg	31,64 l
Rinse 3	2.31 l/kg	64,38 l
<b>TOTAL 8.20 l/kg</b>		<b>TOTAL 229,60 l</b>

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### Example

The rinse water 3 passes to the rinse 1 and 2

The rinse water 1 and 2 passes to the prewash

The rinse water 1 passes to the wash

### AQUABAC XL

New centralized tank for one or more machines, from 1 to 3 tanks of 1.000 liters. Suitable for machines from 45 to 120 kg.

A WED-80C ET2 washer can achieve up to **56% water savings** using the AQUABAC XL with 60% of the load capacity filled with towels.

#### Water savings

-56% value

Washing machine  
656 litres



Washing machine +  
AQUABAC XL

288 litres



#### Energy savings

-12% value

Washing machine

21,37 kW/h

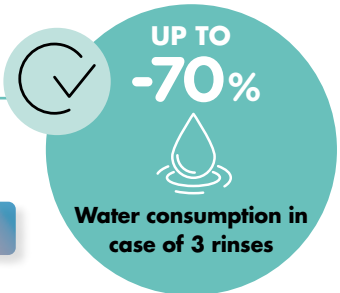


Washing machine +  
AQUABAC XL

18,80 kW/h



Test data with an 80 kg washer and a 60% towels load.



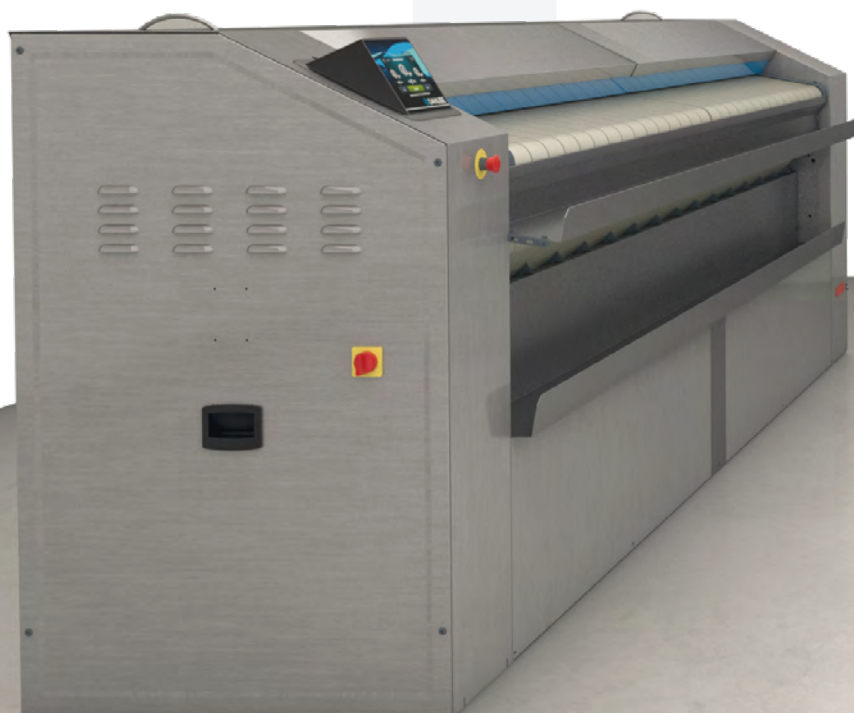
## 6 WEIGHING SYSTEM

Optional on WED-11 to WED-120C models. This system provides great water, chemicals and energy savings, especially with partial loads, since the water and detergents are adjusted to the actual load.



### ADVANTAGES

- ✓ An 80 kg WED-80C ET2 washer, with a 50% load, can achieve up to 70% water savings and 45% energy savings.







UP TO  
**-70%**

WATCH  
VIDEO

Thanks to the AQUABAC XL and the incorporated weighing system, a WED-80C ET2 washer can save up to **68% of water** with a load at 60% of the capacity filled with towels.

### Water savings

	-30 % value	-70 % value
Washing machine	Washing with weighing system	Washing with weighing system and AQUABAC XL
<b>656 litres</b>	<b>459,2 litres</b>	<b>196,8 litres</b>

Thanks to the AQUABAC XL and the incorporated weighing system, a WED-80C ET2 washer can save up to **45% of energy** with the same load.



UP TO  
**-45%**

### Energy savings

	-23 % value	-45 % value
Washing machine	Washing with weighing system	Washing with weighing system and AQUABAC XL
<b>21,37 kW/h</b>	<b>16,45 kW/h</b>	<b>11,75 kW/h</b>



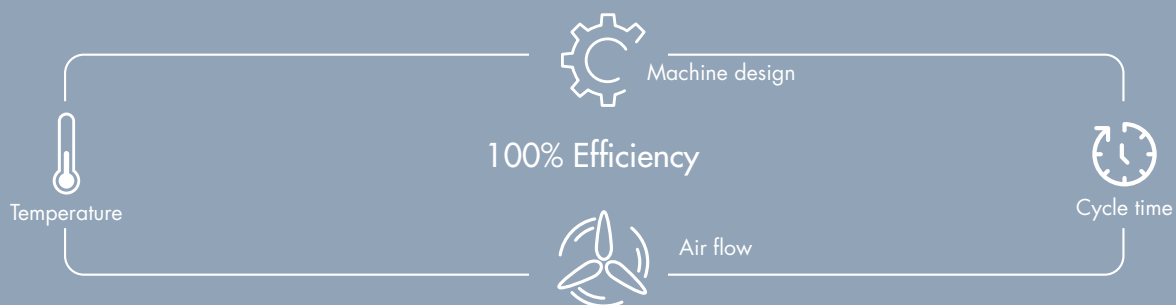
# TUMBLE DRYERS



- 1 DANUBE RANGE:**  
COMPARISON ACCORDING  
TO EFFICIENCY
- 2 GOLD RANGE**
  - AIR RECOVERY SYSTEM  
(AIR RE-CYCLE)
  - PANELS INSULATION  
(THERMAL INSULATION)
- 3 CARE DRY:**  
INTELLIGENT HUMIDITY  
CONTROL
- 4 FILTER AND TURBINE:**  
OPTIMIZED DESIGN
- 5 HEAT PUMP**



# 1 DANUBE TUMBLE DRYER RANGE: COMPARISON ACCORDING TO EFFICIENCY.



RANGES FEATURES	SILVER	SILVER + CARE DRY	GOLD
<b>CARE DRY</b> Intelligent humidity control	No	Yes (option included)	Standard
<b>AIR RE-CYCLE:</b> Air recovery.	No	No	Standard
Double door glass	Option	Option	Standard
<b>THERMAL INSULATION</b>	No	No	Standard

	Cycle time	32 min	29 min	25 min
	Time reduction		- 3 min	- 7 min
	Energy (kWh) <b>Savings</b>	<b>48 kWh/cycle</b>	<b>43,5 kWh/cycle</b>	<b>37,5 kWh/cycle</b>

## 2 GOLD RANGE

The most efficient range, fitted as standard, with the most cost-saving features.

- ✓ **AIR RE-CYCLE**  
Air recovery system for increased energy efficiency.
- ✓ **CARE DRY**  
Intelligent humidity control
- ✓ **THERMAL INSULATION**  
Full isolated air flow circuit.
- ✓ **OPTIMAL FLOW**  
Optimized axial-radial full air flow.
- ✓ **REVERSING DRUM**  
Standard in all models.
- ✓ **BIG FLUFF FILTER**  
New filter with larger surface and improved air flow.
- ✓ **DOUBLE DOOR GLASS**  
No heat loss

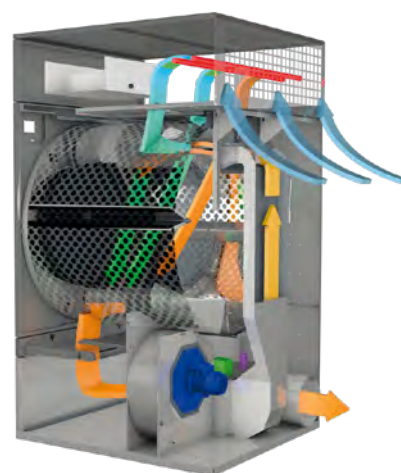
WATCH  
VIDEO



### AIR RE-CYCLE





#### Air recovery system

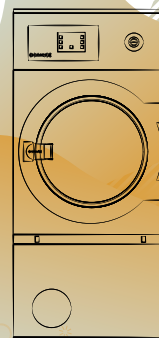
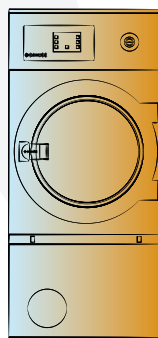
Drying times are shortened thanks to the recovery of hot, almost dry air and energy consumption is therefore reduced.



### THERMAL INSULATION

Thermal insulation allows to keep warm air inside the dryer.

-  ALL AIR FLOW CIRCUIT ISOLATED
-  DOUBLE GLAZED DOOR
-  AIR CHANNELS
-  DOUBLE PANEL



THERMAL INSULATION

NO THERMAL INSULATION



### 3 CARE DRY INTELLIGENT HUMIDITY CONTROL

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VIDEO

⊕ Precision  
⊖ Time

#### Optimized rotation speed

The intelligent humidity control system adapts the rotation speed of the drum to the level of humidity detected during each drying phase.

Rotation  
speed "RPM"

% RM  
moisture sensor



Time  
cycle (min.)

CARE DRY  
OFF



32 min

CARE DRY  
ON



29 min



Reduction  
time

**-3 min**

Cycle time is shortened to save energy (especially with partial loads) but clothes are treated with care as they are not too dry. The cycle stops when the set humidity level is reached.



The moisture sensor automatically adjusts the cycle time to the set point moisture of the clothes.

## 4 FILTER AND TURBINE OPTIMIZED DESIGNS

30%

MORE EFFECTIVE SURFACE



### Filter in drawer format

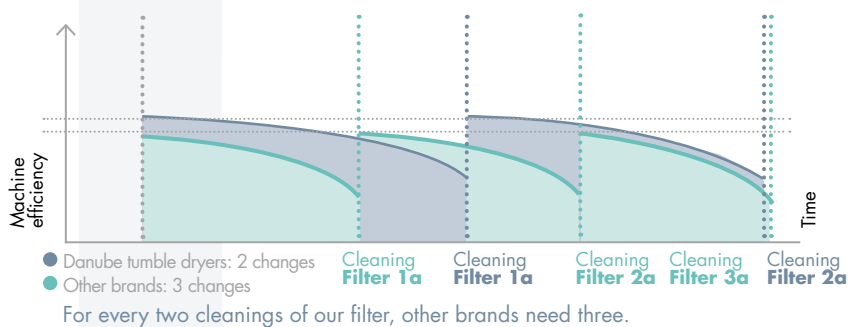
- ✓ Easy to open
- ✓ Easy to clean
- ✓ More ergonomic
- ✓ More surface (+30%)



### Stainless steel filter mesh

#### As an option

Choose the size of the stainless-steel mesh you want between standard 0.3 mm, 0.6 and 1.2 mm.



- ⊕ Efficiency
- ⊖ Dedication

### Improves the time for more machine efficiency

- 1 Reduced frequency of filter cleaning with the dedication time for it
- 2 More efficient cycle time between each filter cleaning, improving the overall machine performance.
- 3 More machine available time



+20%

OF INCREASED PERFORMANCE  
THANKS  
TO THE DESIGN.



Turbine: air flow, with models of different sizes.

### Turbine and box assembly optimized outlet

The design, curves, elbows, and diameter have been optimized to get the most out of the airbox assembly with the turbine.



## 5 HEAT PUMP

WATCH  
VIDEO

New range of heat pump dryers.  
The most efficient range with industrial models  
from 11 to 22 kg and professional 8 and 10  
kg models.



### REASONS FOR AND ADVANTAGES OF INSTALLING A HEAT PUMP DRYER

✓ When the customer prioritizes  
energy efficiency over drying time

✓ When a smoke vent  
cannot be installed

**-60%**

of less consumption with  
respect to the electric model

✓ When we have power  
limitation installed

✓ Due to the difficulty of getting  
gas installations or certifications

## 5 HEAT PUMP



### EFFICIENCY

ELECTRIC  
DRYER

**18 kW**

HEAT PUMP  
DRYER

**3,95 kW**

**DIRECT  
SAVING**



#### Less power installed

A heat pump dryer uses 1/5 of the power in kW consumed by an electric model of the same capacity.

#### Efficient

A heat pump dryer uses 0,5 kW/liters of evaporated water.

#### Optimized cycle time

Full load of 100% cotton towels

Industrial dryer —————> **63 minutes**

Professional dryer —————> **70 minutes**

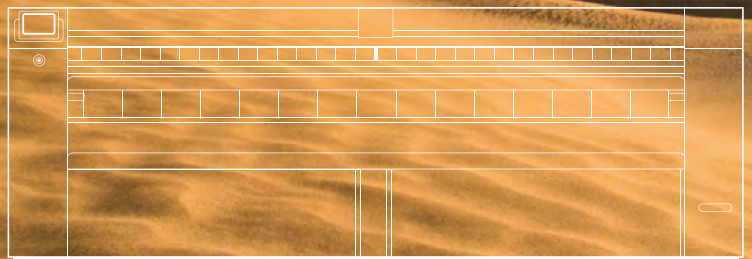
60% load, 50% polyester 50% cotton towels

Industrial dryer —————> **32 minutes**

Professional dryer —————> **35 minutes**

# FLATWORK IRONERS

- 1 RADIANT BURNERS:**  
THE MOST EFFICIENT
- 2 CARE IRON**
- 3 HPS:**  
HIGH PRODUCTION  
SYSTEM
- 4 LENGTHWISE FOLDER**





# 1 RADIANT BURNER: THE MOST EFFICIENT.

WATCH  
VIDEO

## ADVANTAGES



- ✓ With a similar gas consumption, the hourly **productivity** of the flatwork ironer **increases by 25 %** compared to the same machine with atmospheric gas burners.
- ✓ They can be used in places at high altitudes and without the oxygen level problem affecting combustion.

Atmospheric  
burner



Radiant  
burner

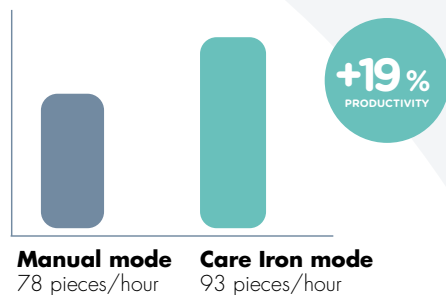


## 2 CARE IRON

- ⊕ Production
- ⊖ Energy

Automatic regulation of ironing speed according to residual moisture in garments. Standard in 650 mm, optional in 500 mm.

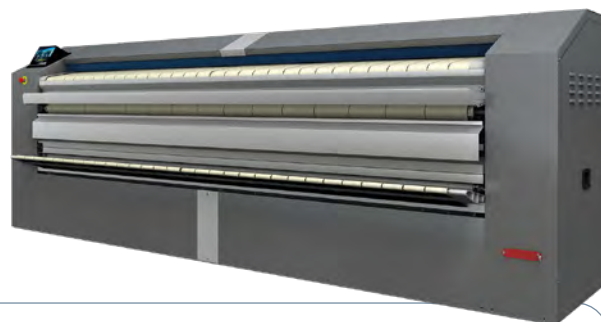
Example in  
**Flatwork ironer ø 650**



### ADVANTAGES

- ✓ Energy savings
- ✓ Increased production
- ✓ Delicate treatment of garments

### OPTIMIZED IRONING TIME

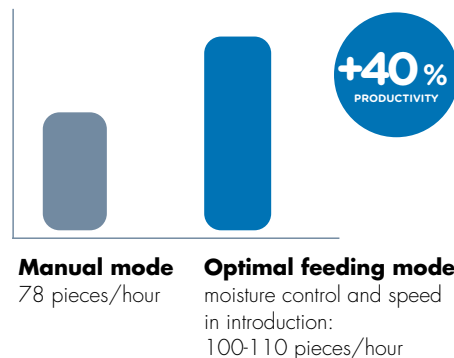


## 3 HPS

The linen introduction sensor and LED lights help to adapt feeding speed to optimize productivity.

Example in  
**Flatwork ironer ø 650**

[WATCH VIDEO](#)



**Manual mode**  
78 pieces/hour

**Optimal feeding mode**  
moisture control and speed in introduction:  
100-110 pieces/hour



## 4 BUILT-IN LENGTHWISE FOLDER

- ✓ Efficiency in the process, which goes from manual to automatic.
- ✓ High speed folding for greater productivity.
- ✓ LED indication of availability to save time.
- ✓ Automatic mode to detect sheet dimensions: efficiency and time saving.

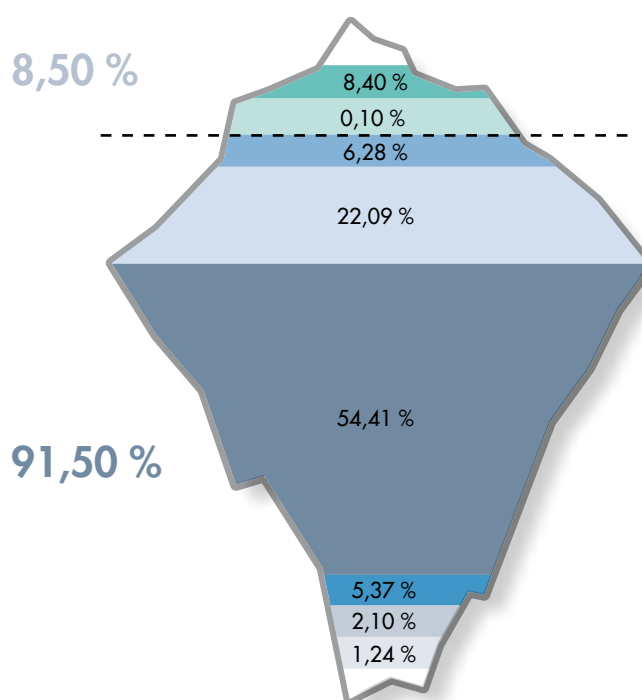


# LAUNDRY ICEBERG

Here is an example of the Iceberg study of a laundry with calculations and consumption throughout the life cycle of the machinery thanks to the efficiency and technology of Danube machines.

1 washing machine WED-18 HW ET2  
1 washing machine WED-45C HW ET2  
1 tank AQUABAC XL  
1 dryer DD-18 G ET2 GOLD  
1 dryer DD-45 G ET2 GOLD  
1 flatwork ironer M-33 GR ET2

Description	%	
Machine purchase cost	8,40 %	8,50 %
Scrapping	0,10 %	
Water	6,28 %	91,50 %
Detergents Chemicals	22,09 %	
Heating Energy	54,41 %	
Operating Electricity	5,37 %	
Maintenance	2,10 %	
Consumables	1,24 %	



## LAUNDRY WORK SUMMARY IN 10-YEARS

Cycles/Hours Work day	10	Machine cycles
Working days per year	320	Days
Cycles work year	3.200	Cycles
Kg. processed in washers	2.016	Tons
Kg. processed in dryers	2.016	Tons
Kg. processed in ironers	3.840	Tons



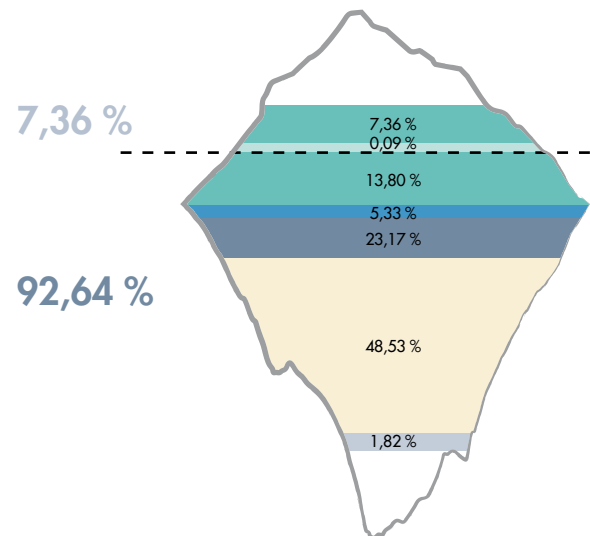


# LIFE CYCLE COST: 10 YEARS

## WASHING

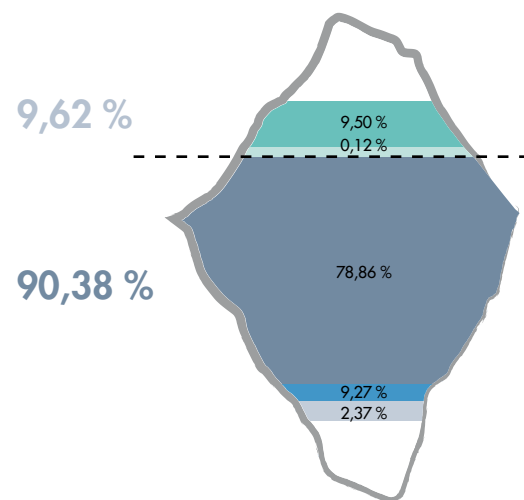
Description	%	
Machine purchase cost	7,27 %	7,36%
Scrapping	0,09 %	
Water	13,80 %	92,64 %
Operating electricity	5,33 %	
Heating energy	23,17 %	
Detergents	48,53 %	
Maintenance	1,82 %	

A water saving of up to 70% can be achieved with the AQUABAC XL, which is not counted in the iceberg.



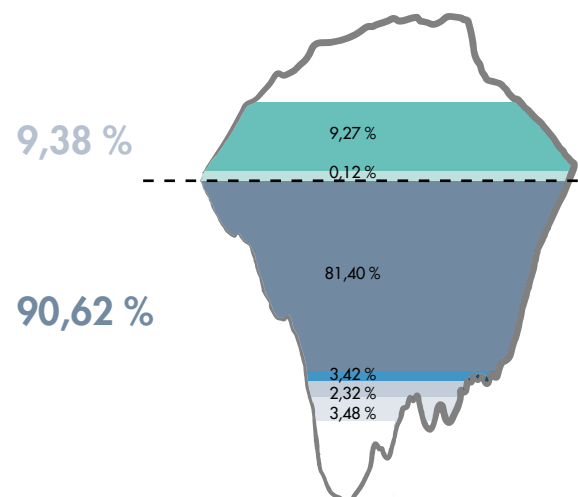
## DRYING

Description	%	
Machine purchase cost	9,50 %	9,62%
Scrapping	0,12 %	
Heating energy	78,86 %	90,38 %
Operating electricity	9,15 %	
Maintenance	2,37 %	



## IRONING

Description	%	
Machine purchase cost	9,27 %	9,38%
Scrapping	0,12 %	
Heating energy	81,40 %	90,62 %
Operating electricity	3,42 %	
Maintenance	2,32 %	
Consumables	3,48 %	



SUSTAINABLE  
EFFICIENCY

[www.danube-international.com](http://www.danube-international.com)

SUSTAINABLE SOLUTIONS & INNOVATION IN LAUNDRY SERVICES



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