



**FORMECO**

# WATER EVAPORATION UNITS



Professional

Industrial

Ergonomic

**Formeco s.r.l.**  
Via Cellini, 33  
35027 Noventa Padovana  
Padova – Italy – [www.formeco.com](http://www.formeco.com)

# SERIES “HP” – HEAT PUMP

## HP-S series

with immersed heating coils



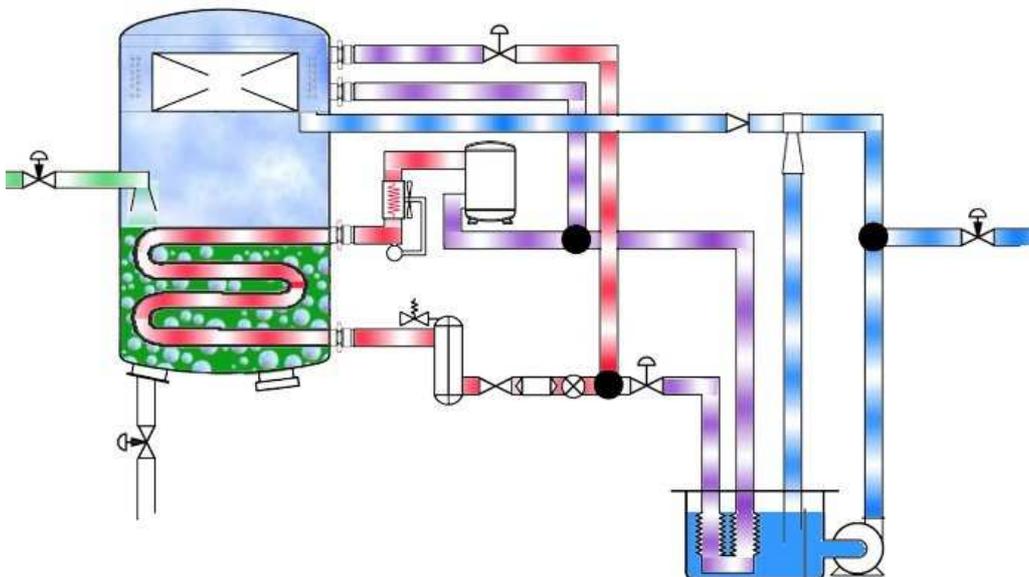
The HP-S series use a heat pump system and is designed to treat wastewater that does not contain products that could encrust on the boiler surface. They are ideal for treating oil-water emulsions with concentrations less than 20%, waste streams from die casting and industrial degreasing processes.

The units are fully automatic and are controlled by a programmable microprocessor allowing the user to easily change operating parameters to suit a particular waste stream.

Ideal for :

- **oil/water emulsions**
- **die casting**
- **degreasing processes**

From 10 up to 500 litres/hour



## SERIES “HP” – HEAT PUMP

### HP-R series

with internal boiler scraper



The HP-R series use a heat pump system and has external heating coils and features an internal boiler scraper to avoid the build-up of encrusting solids on the boiler surface.

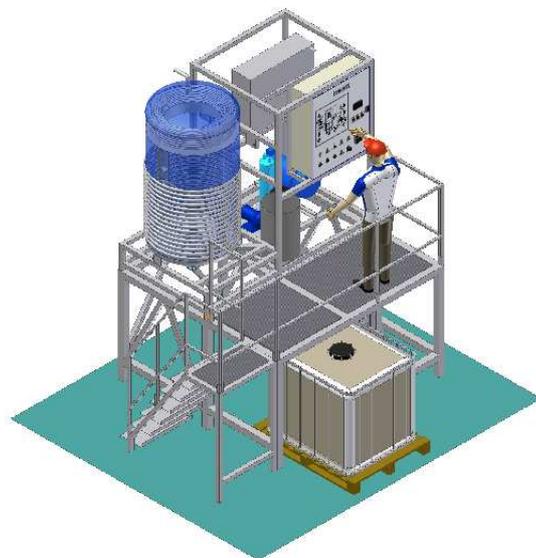
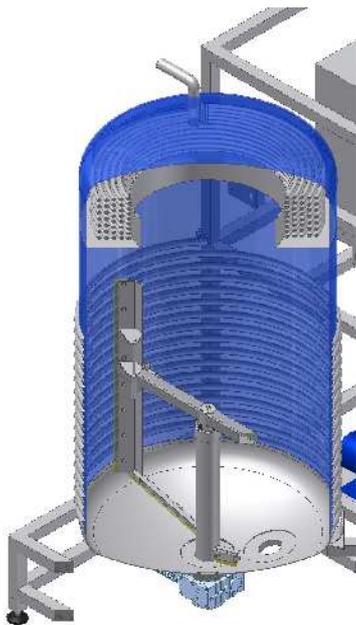
The HP-R series is extremely versatile and is suitable for a wide range of waste liquids particularly those that create encrustations such as paint, ink emulsions and ion exchange residues.

The units are fully automatic and are controlled by a programmable microprocessor allowing the user to easily change operating parameters to suit a particular waste stream.

Ideal for :

- encrusting liquids like paints, inks, salts, etc.
- high concentration of residue required

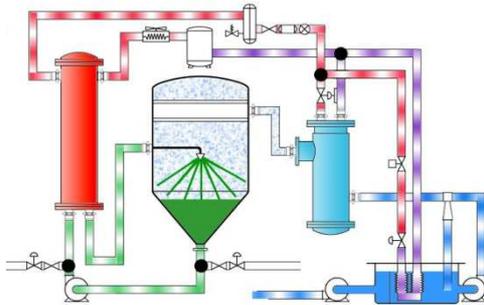
From 10 up to 200 litres/hour



# SERIES “HP” – HEAT PUMP

## HP-Cf series

with forced circulation pump



The HP-Cf series is designed for high throughputs and is ideal for waste streams with a density less than 1.25 kg/l and suspended solids content less than 20%. The units with heat pump system.

The treated product is in constant circulation in a high efficiency expansion chamber. These units have a reduced sensitivity to foam formation.

These units can be equipped with two or three boilers (effects) operating in series. A different vacuum rate in each individual boiler allows for different evaporation temperatures.

When higher concentrations have to be achieved, these units can be combined with the units from the HP-R series.

Ideal for :

- **high hourly throughputs**

From 50 up to 3000 litres/hour



Single effect plant



Double effect plant

## SERIES “HW” / “HS” – WARM WATER / STEAM

### HW-Cf series / HS-Cf series with forced circulation pump



Waste water evaporation units fed by an external source of energy: hot water or steam. These units can be equipped with two or three boilers (effects) operating in series. A different vacuum rate in each individual boiler allows for different evaporation temperatures. An advantage of this process is the automatic sterilisation of the product in the third effect, making these units highly recommended for use in the pharmaceutical and food industries. This technology allows the reduction of energy costs by up to two thirds combined with low investment costs.

For waste streams with a density less than 1.25 kg/l and suspended solids less than 20%.

The units utilise warm water or steam for heating and this can be taken from existing sources.

Also available the Cn version using natural circulation for treating highly aggressive products such as sulphuric, hydrochloric and hydrofluoric acids by utilising special resistant plastics and alloys.

When higher concentrations have to be achieved, these units can be combined with the units from the HW/S-R series.

Ideal for :

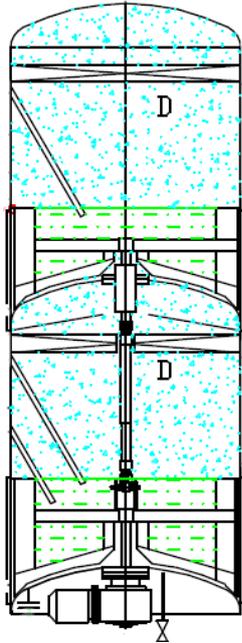
- **high hourly throughputs**
- **when a high quality distillate is required**

From 50 up to 7000 litres/hour



## SERIES “HW-R” / “HS-R” – WARM WATER / STEAM

### HW-R series / HS-R series with internal boiler scraper



Water Evaporator with internal boiler scraper, fed by an external source of energy: hot water or steam.

This series is extremely versatile and is suitable for a wide range of waste liquids particularly those that create encrustations such as paint, ink emulsions and ion exchange residues.

The units are fully automatic and are controlled by a programmable microprocessor allowing the user to easily change operating parameters to suit a particular waste stream. Available at single or double effect.

They are often used as concentration units of multi effects evaporation system.

Ideal for :

- encrusting liquids like paints, inks, salts, etc.
- high concentration of residue required

From 50 up to 500 litres/hour



## WHAT IS IT FOR?

Vacuum evaporation can be used to efficiently treat a wide range of wastewaters from many industrial processes. Our wide range of standard and custom built equipment ensures a solution to every application. Distillation effectively resolves the problem of the disposal of industrial polluted water, concentrating as much as possible the contaminating products such as inks and heavy metals and recovering the water that, distilled, can be reused in the production cycle. With widespread pollution control regulations and an environmental conscience, it is interesting to find a new way to deal with the use of natural re-sources and their disposal.

## LARGE RANGE

- Compact
- Low Energy
- Fully automatic
- Easy to install
- For small or large volumes (from 10 up to 7000 litres/hour)

## APPLICATIONS

The different fields of application are almost end-less with systems installed in virtually every sector of industry.

With the different types of equipment available, each with their own features you can be sure to find a solution to your wastewater problem.

When a standard unit does not meet your requirements we can provide a purpose built machine and include additional equipment like ion exchange.

With our extensive knowledge and experience we can always give a positive answer to your most demanding applications.

We invite you to contact us so we can verify if vacuum evaporation technology is suitable for your application.

### **Food industry**

Recovery and concentration of sugars

### **Graphic arts and photographic labs**

Concentration of developing and fixing baths

Recovery of inks from wash water

Concentration of ink washings

### **Pharmaceutical and cosmetic industry**

Concentration of washing liquids

### **Electroplating industry**

Recovery of metals from washing process

Concentration of wash waters

### **Dairy industry**

Recovery of protein from milk whey

### **Mechanical Engineering**

Concentration of oily emulsions

Concentration of liquids from finishing processes

Concentration of washing baths

### **Die casting**

Concentration of working liquids  
(detaching product, glycol, lubricants)

## WHO WE ARE

Formeco designs and produces Waste Water Evaporators and Solvent Recovery Systems. Born in 1977, manufacturing in a its facility, located in Northern Italy (4000 sq. m indoor - 10000 sq.m outdoor), Formeco has installed more than 36.000 machines, keeping the world-wide leadership position on this field.

Common in all Formeco units is quality, workmanship and dedication to total customer satisfaction. Each Formeco machine is tested and tuned at the factory to give customers the ultimate performance and trouble-free operation.

Formeco examines customer's problems and simulates the recycling process with his waste by means of pilot test units. If the right plant is not included in the existing production line, Formeco builds a specific apparatus for the customer.

Formeco facilities : a chemical laboratory for analysis, a R. & D. design and project technical department, a complete range of pilot units for industrial tests.

Formeco provides : each unit with Conformity Certificates issued by the most important European Countries delivered with a detailed instruction booklet in customer's language and the sureness of a full warranty.

Formeco offers : the assurance of a technical service network throughout World ; a telephone line is at customer's disposal with skilled technicians who speak your language.

Producing systems for the treatment of solvents, water and acid, Formeco offers a complete solution to the industry pollution problems, contributing to the environmental protection.

## OUR SERVICES – OUR PRODUCTION

Project and design of polluted liquids treatment systems

Management of "turnkey" supplies

Assistance and maintenance on existing units



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