



DEDICATED EQUIPMENT

# Precious metals

Precious metals capture

Under-sink recovery

Plaster moulding treatment

Treatment of tribofinishing water - Floor washing

Effluent treatment

Oil mist purification



## Manufacturing sector

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**GOLDVAC**

# Recovery unit for precious metal

The GOLDVAC is a unit dedicated to the recovery of precious metals. Efficient both for emptying machine tools during inventories and for daily extraction of lubricated swarf during production, it is indispensable to the luxury goods industry, where machining dust and swarf represent a major economic challenge.



**Liquid / solid separation**

Provided by a 15 l stainless steel basket for 2000 µm pre-filtration, coupled with a removable 200 µm calcinable bag.



**Total recovery**

The delivery pump sucks directly from the low point of the tank, then the final total draining is done by gravity thanks to the selection valve.



**Zero loss of precious metals**

Double-stage filtration (first cartridge 5 µm to retain most of the solid particles, followed by an absolute filtration of 1 µm) enables all the precious metals to be retained at the oil discharge.

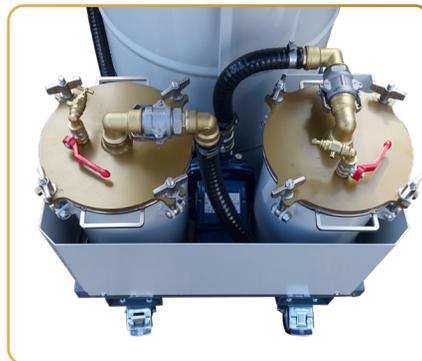


**Top-of-the-range filtration**

The GOLDVAC incorporates the very best of the SIEBEC group's filtration technology. The pleated cartridges with a very large filtration surface of 5 µm and then 1 µm absolute are colour-coded.

**Recommended accessories kit**

- 1 Semi-rigid PE-metal cane (90 cm)
- 2 PE straight cane (90 cm)
- 3 Wide rubber nozzle (120 mm)
- 4 Flat bevelled spout
- 5 Reinforced suction hose with knurled screw sleeves (3 m)
- 6 Conical rubber nozzle



**GOLDCLEAN**

# Unit for precious metal recovery

The GOLDCLEAN is a powerful and compact industrial unit, dedicated to the collection and recovery of fine dust, solid particles or lubricated chips of precious metals.

**"No loss" from the point of suction to the collecting filter bag**



The Ø40 mm spiral PU metal hose is abrasion-resistant and connects directly to the removable tank.



Material inlet "through the tank", with direct connection to the basket using a quick-fit watertight clamp.



Front retention tray, including 7 accessory holders and 2 holders for long canes.



### Cyclonic separation



The tangential inlet in the Hoover tank effectively separates valuable particles from the air stream. The filtered air is then purified at the outlet by a dual-stage filtration system consisting of a HEPA 13 cartridge.



### Semi-automatic unclogging

Maintain suction power with vibrating filter cleaning.

### Recommended accessories kit

- 1 PE straight cane (90 cm)
- 2 Flat spout (width 120 mm)
- 3 Fine bevelled rubber nozzle (60 mm)
- 4 PU-reinforced suction hose with rubber sleeves (3 m)
- 5 Conical, breakaway nozzle for adjusting the suction diameter, rubber, antistatic and resistant to lubricants
- 6 Thin angled nozzle, lubricant-resistant antistatic rubber
- 7 Wide floor nozzle with height-adjustable wheels, antistatic, with lubricant-resistant lips, with metal bent nozzle
- 8 Small-diameter angled brush, antistatic, resistant to lubricants
- 9 Large-diameter brush, antistatic, resistant to lubricants



## CENTRIFUGE

# Centrifugation of precious metals

Centrifuge system for efficient de-oiling of precious metal shavings of 50 µm and over down to a residual oil content of less than 3%.



Precious metals process control



Precious metal batch dryer

## Characteristics

Centrifuges are designed for years of **continuous operation**. The machine body is of **robust welded construction**. The special central motor with oversized bearings is fitted with a heavy-duty starter with a wear-free brake. The cover is opened and closed manually, with the help of a gas spring.

Control and operation are located on the machine and equipped with an **adjustable timer** for various spin times. Maximum operational safety is ensured by an **electromagnetic lid lock**, **stop monitoring** and an **unbalance switch**.

Paintwork is available in RAL 7035 (light grey) and RAL 1036 (pearl gold).

### Optional accessories kit

- Drum with fine sieve
- Filter bags from 50 µm
- Funnel for loading the material to be centrifuged
- Lifting device
- Handle for lifting and tilting the drum
- Speed control
- Electropolished trolley

**GOLDPURE**

# Filtration system for precious metals

GOLDPURE has been specially designed to maximise the capture of fine particles in a liquid.

The filter housings are specially designed to facilitate internal cleaning (no retention).



**3 stages of High Performance filtration**

The system is capable of treating both oil and water to recover particles of gold or other precious metals.

**Treatment stages**

- 1 Filter bag 50µm
- 2 Filtech cartridge 20µm
- 3 Filtech cartridge 1µm

**INTEGRATED MACHINE FILTRATION**

# Filtration and recovery of swarf in machining tank

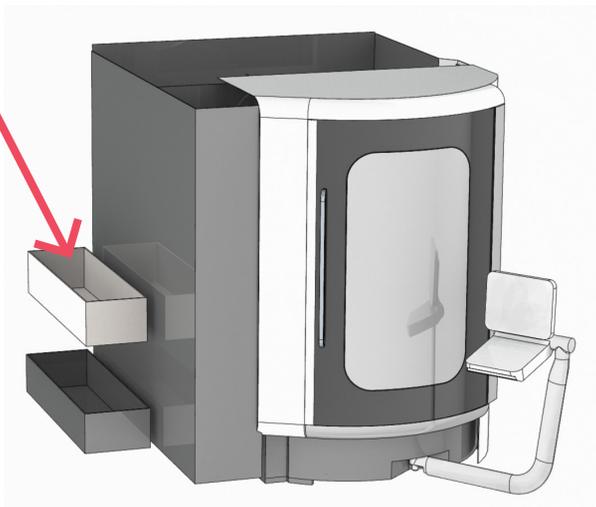


**Possibility of integrating laces or zip fasteners to facilitate handling during recovery**



**A range designed to meet your needs**

Wide range of monofilament filter cloths from 1µ to 1000µm.



**Made to measure**

Siebec designs and manufactures filter bags on request to fit perfectly into your machining bins.



CONTRACT REVIEWS

# Custom design & projects

## INDIVIDUAL HAND WASHING - Recovery and under-sink filtration of valuable particles.



### Characteristics

#### Principle

We design or adapt under-bench filtration systems for hand washing.

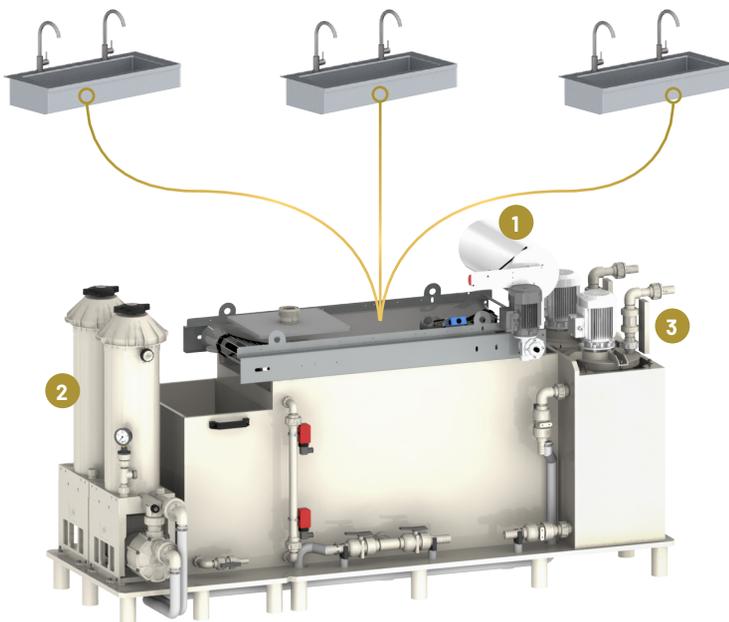
#### Application

To filter the fine gold particles collected when the hands of jewellers are washed.

#### Technical solutions

- 1 Pre-filtration 200µm bag
- 2 Fine filtration on 5µm and 1µm cartridges
- 3 Self-contained system with lift pump
- 4 Pressure sensor for clogging detection

## CENTRALISED HAND WASHING - Centralised recovery and filtration of valuable particles.



### Characteristics

#### Application

The centralised system recovers hand-washing effluent from several washbasins in your workshop.

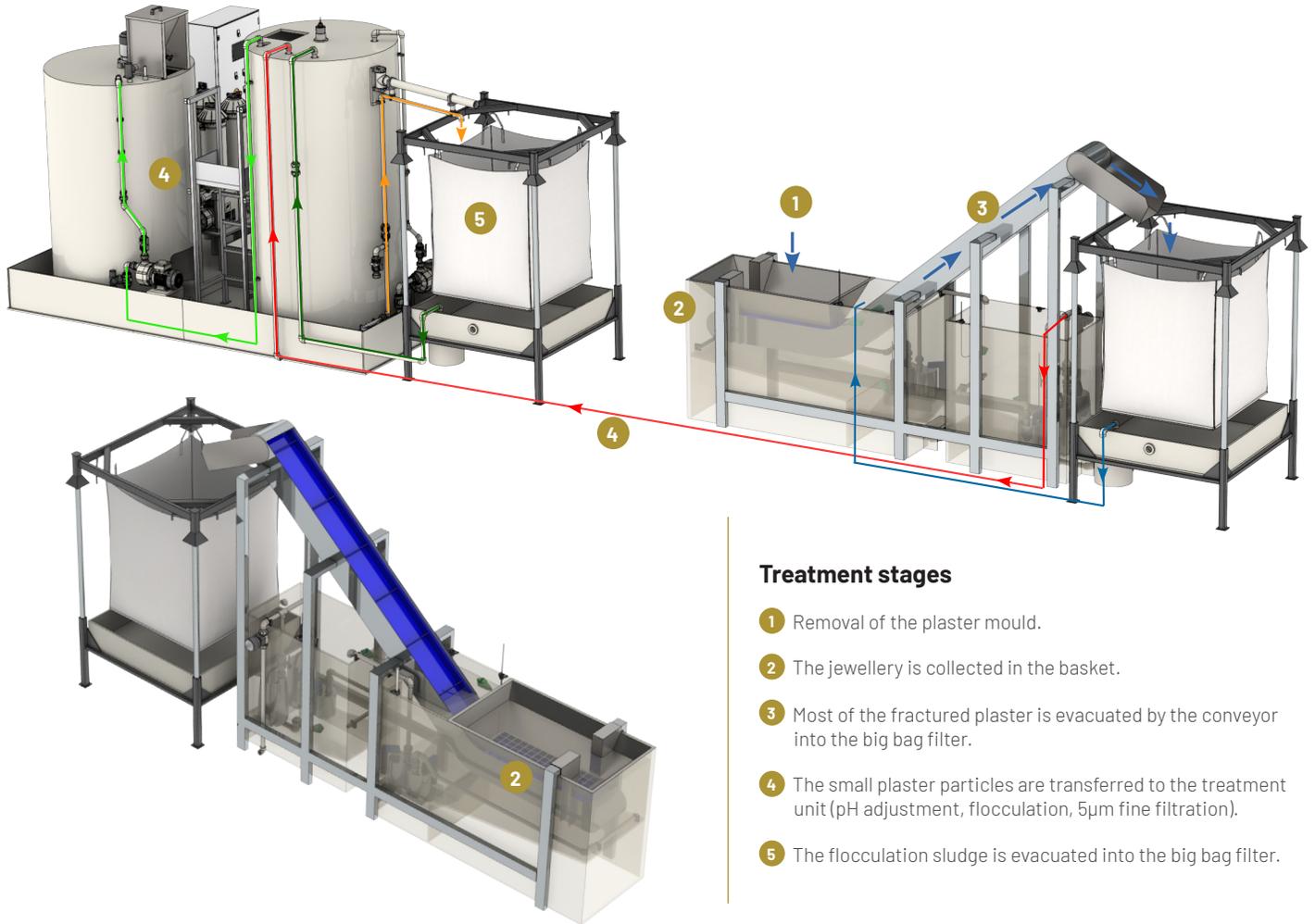
#### Technical solutions

- 1 Automatic unfolding filter 50µm
- 2 Fine filtration on 5µm and 1µm cartridges
- 3 Self-contained system with lift pump

CONTRACT REVIEWS

# Custom design & projects

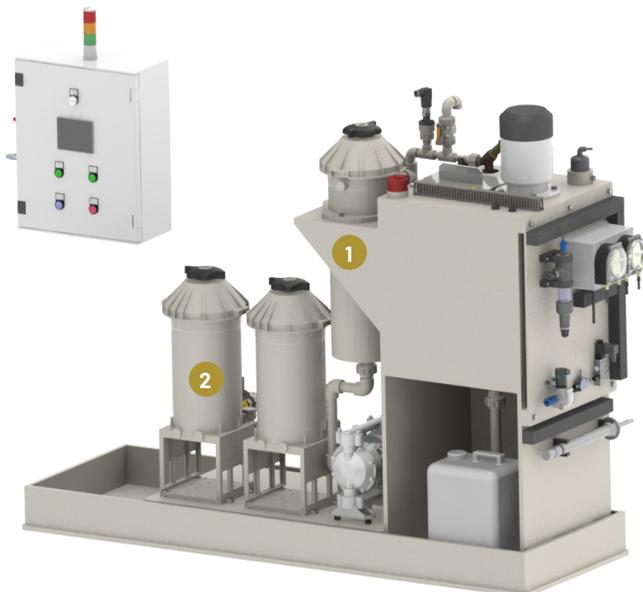
## TREATMENT OF PLASTER IN JEWELLERY - Plaster mould casting waste treatment



### Treatment stages

- 1 Removal of the plaster mould.
- 2 The jewellery is collected in the basket.
- 3 Most of the fractured plaster is evacuated by the conveyor into the big bag filter.
- 4 The small plaster particles are transferred to the treatment unit (pH adjustment, flocculation, 5µm fine filtration).
- 5 The flocculation sludge is evacuated into the big bag filter.

## REFINING WATER TREATMENT - FLOOR WASHING - EASYPURE small dedicated model



### Characteristics

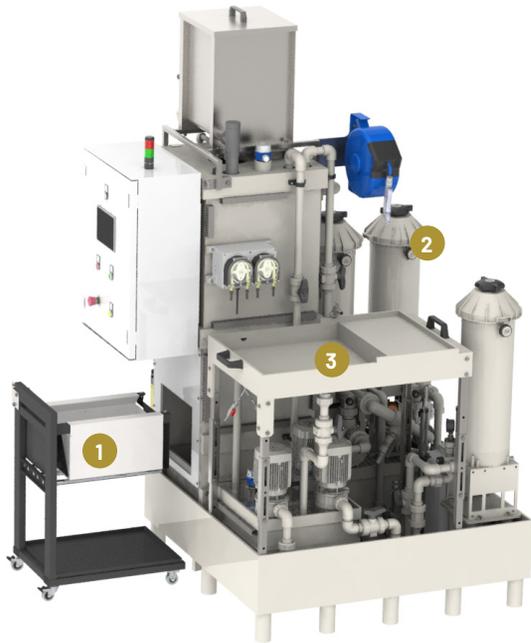
#### Application

Treatment of effluent before discharge

#### Technical solutions

- 50-litre treatment batch
- Physico-chemical treatment
- 1 Sludge recovery on filter bags
- 2 Final filtration on 10µm and 1µm cartridges
- Supervisory PLC

**TREATMENT OF TRIBO-FINISHING EFFLUENTS IN THE WATCHMAKING INDUSTRY - EASYPURE made to measure**



**Characteristics**

*Application*

Effluent treatment with parts cleaning tank

*Technical solutions*

- 100-litre treatment batch
- Physico-chemical treatment
- 1 Sludge recovery on filter bags
- 2 Final filtration on 10µm and 1µm cartridges
- 3 Integrated cleaning bench for collecting drippings
- Supervisory PLC

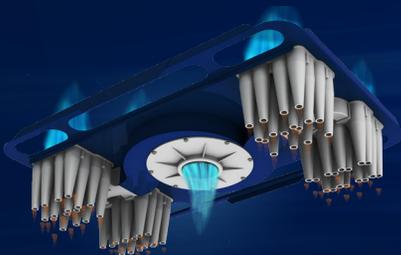
**ATMOS**

**Oil mist purification**

Provides a healthier working environment and recovers large amounts of cutting oil otherwise lost through pulverization.

**Characteristics**

- Modular design: the ATMOS can be adapted to air flows from 500 to 1500 m<sup>3</sup>/h.
- Exceptional efficiency: 290 W per 500 m<sup>3</sup>/h module.
- Minimal maintenance: the cyclonic separation efficiency significantly reduces the frequency of HEPA filter replacement.
- Ultra-quiet system.



**HEPA filtration**  
Filters out 99.95% of particles.

**Indicator light**  
Shows when the HEPA filter is clogged



**Oil recovery**  
The oil is returned to the machine tank for reuse.

**Patented cyclonic separation**  
90% of the oil is extracted from the intake air.

MC SERIES

## Low-flow filters

Flow rate (m<sup>3</sup>/h)  
0,35 - 4

Power (w)  
10 - 180

Materials : PP or PVDF  
Media height : 4" / 10" / 20"  
Max. temperature : 70 - 110 °C  
1 or 2 filtration tank(s)  
Series or parallel filters



L SERIES

## Medium flow filters

Flow rate (m<sup>3</sup>/h)  
1,5 - 21

Power (w)  
250 - 1500

Materials : PP or PVDF  
Media height : 10" / 20" / 30"  
Max. temperature : 80 - 110 °C  
1 or 2 filtration tank(s)  
Dissolving tank : 16 litres  
Parallel filters



R3 / R12

## Recovery of dissolved precious metals on ion exchange resin

Recovery of dissolved precious metals on ion exchange resin

Flow rate (m<sup>3</sup>/h)  
0,7 - 3

Max. temperature (°C)  
80



### Benefits

- 1 µm pre-filtration on a heat-welded cartridge (QUALITHERM type).
- Only one pass over ion exchange resin required.
- 2 models available: R3 for volumes of less than 300 litres, and R12 for larger volumes.

ELECTRUM

## Recovery of precious metals dissolved by electrolysis

Equipment for the electrolytic recovery of metals contained in dilute or concentrated solutions.

Flow rate (m<sup>3</sup>/h)  
1,8 - 3

Materials  
PP

Max. temperature (°C)  
60

Filtration  
Cartridge

### Benefits

- Capable of recovering very low concentrations (<5 ppm) depending on the application.
- No metal loss.
- Effective on all metals: gold, palladium, rhodium, ruthenium, silver, copper, nickel, etc.
- Easy to melt and refine: quick cartridge change and easy recovery.
- Continuous destruction of cyanides during the recovery process by adding ECN.



MEDIAS

# Filtration consumables

A wide selection to meet the needs of precious metals processing

CARTRIDGES

**QUALITHERM**  
PP, PE, PA OR COTTON



**THERMOWELDED CARTRIDGE**  
0,5 - 150 µm (0,5 to 150 µm (nominal)).  
Powerful depth filtration thanks to the density gradient

**QUALIMAX**  
ACTIVE CARBON



**ACTIVATED CARBON EXTRUDED CARTRIDGE**  
Ø ext : 63 mm  
Reduction of chlorine and smells

**L-TECH**  
PP, PE OR FV



**LARGE FILTRATION AREA PLEATED CARTRIDGE**  
0,2 - 100 µm 0,2 to 100 µm (nominal & absolute).  
Washable & reusable

**QUALI-HIGH-FLOW**  
PP OR FV



**PLEATED CARTRIDGE WITH LARGE FILTERING SURFACE**  
1 - 100 µm 0,2 to 100 µm (nominal & absolute).

BAGS & CLOTH

**QUALIPOCHE F**  
PP, PE OR PTFE



**FELT BAG**  
1 - 200 µm.  
tool-less setup

**QUALIPOCHE M**  
PP, PE OR NYLON



**MONOFILAMENT BAG**  
0,5 - 1500 µm.  
tool-less setup

**PRESSTECH**  
PP, PE OR FV



**FILTER PRESS CLOTH**  
Weight : 140 - 1000 g/m<sup>2</sup>.  
Permeability : 2 - 1000 l/dm<sup>2</sup>/min.

**BANDTECH**  
PP, PE OR VISCOSE

**FILTER MEDIA ROLL**  
Wide range of materials and porosity



 **GRAVITY FLAT**

 **HYDROSTATIC**

 **COMPACT DRUM**

 **PRESSURE BAND**

 **BAND UNIT**

FLUID TREATMENT

**ACTIVE CARBON**  
CARBON



**GRANULES**  
Made from coconut, whose pore structure offers optimal adsorption.  
Special Nickel formulation available.

**RESIN**



**ION EXCHANGE RESIN**  
Strong cationic, strong anionic, weak anionic.  
Special precious metal resin.  
Resin for specific applications.

**PP MICROFIBRES**  
POLYPROPYLENE



**DE-OILING MICROFIBRES**  
500g holds 6 litres of oil.  
Unlimited storage life in dry conditions.  
Safe to incinerate.



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