

# Trivalent Chromium Baths

## History

♣ For decades hexavalent chromium baths have been the most used solution in the field of decorative chrome plating;

♣ After **1975**, baths of salts (such as sulfate and chloride of chromium), in which the chromium is in the form of **Cr 3 +**, were introduced;

♣ Because of the restrictions on the use of hexavalent chromium, due to its carcinogenic properties, the **Cr 3 +** baths is gradually replacing it; probably in the next years some new Directives and/or Regulations will be introduced (ref. *REACH*).



## The Main Features

Some important aspects that characterize the **Cr 3 +** baths are:

- ✓ **Less toxicity** than the hexavalent chromium;
- ✓ The **control of contamination** of the bath by foreign metals.

## Solutions

It is necessary to pay attention to the contamination caused by foreign metals. The **Cr 3+** baths are very "sensitive" to these pollutants, which undermine the penetrating and covering power and the color tone of the coating.

The most commonly used method to remove pollution by heavy metals is the treatment of the bath with **suitable ion-exchange resins**.

## C24 RESIN FILTER

### Our Proposal: OMG and the Respect of Environment

In order to recover heavy metals, OMG di Gibogini, after having carefully analyzed the requirements of some loyal clients, designed and produced in 2006 a

**special filter: C24.**

***C24 is a resin filter for trivalent chromium plating baths used to recover selectively polluting metals*** such as Nickel (Ni) and Copper (Cu).

The recovering takes place through the resin (easy and fast to replace), contained in the filter unit.



### C24 filter dimensions

<b>Height</b>	mm 1200
<b>Width</b>	mm 800
<b>Depth</b>	mm 600

## CHARACTERISTICS

Our Company provides a filter **easy to use** and, at the same time, able to **guarantee** high efficiency in recovering heavy metals and high quality standards.

The new filter works only connected in series with the filter pump, through **special valves**.

The passage of the liquid is controlled by a sequence of valves and a flow meter, which allows to keep the speed constant at **700 l/h**.

The C24 filter is composed of:

- **No. 1 Plexiglass filter cylinder**

(dimensions: *Diameter* = 300 mm *Height* = 390 mm *Capacity* = 24 kg of resin);

- **No. 1 Steel and polypropylene cover;**

- **steel trolley with revolving wheels.**

The resins are easily loaded from the top of the filter and discharged from the bottom (with the help of a special valve) **without removing** the filter cylinder.

*All the components are produced by turning and milling pressed Polypropylene, AISI316L stainless steel plates and rods. Fittings are produced in AISI316L and valves in PP.*

***Please, feel free to contact us for any need you may have;  
we will be delighted to satisfy your requests.***