



# EQUIPMENTS FOR THE SURFACE TREATMENTS

## Offices and technical services :

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## ROBOT

The equipments Ceever "**Robot**" serie are machines composed by different basins, one or more automatic trolley for the automatic movement of the baskets from one basin to another and one gallery that closes everything.

The big success of this kind of equipment is mainly obtained by its own versatility, big productions rate, very good reliability and the very low environmental impact.



The versatility is, at first, a **constructive versatility** : it's possible to adapt it to several kind of treatments cycles and to adapt very different kind of automatic loading and unloading system.

Another very important feature is the "**random system**" that allows to choose for every basket its own treatment program: it's possible to give a program to every basket that's going to be treated in order not to work by lot. This system gives a very big versatility in the use of the equipment.

Assembled on the basins there is a **covering gallery** : this gallery has the main function to avoid the waste of fumes in the working factory, reduce the noises and avoid the direct contact between the workers and the liquids inside the basins. This gallery reduce all these risks congenital in this kind of equipments.

In the basins can be putted fixed **structures** for baskets or rotating drum or custom built baskets. Here below there are some examples:



**Rotating drum:** multi partitions, stainless steel and electrical rotation 42v



**Fixed structure** in order to hold basket or parts. Stainless steel.

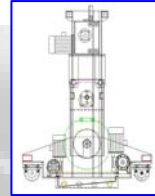


**Rotating structure for baskets:** carbon steel and electrical rotation 42v

In order to help the loading / unloading operations on the loading/unloading stage can be assembled **automatic loading-unloading system**. There are different systems and usually these are studied with the customer in order to include successfully the equipment in the production line of the customer.



On this kind of machines it's possible to install **optionals** like:



**Plate under the trolley:** the plate is a container that goes under the basket after the trolley have loaded it. This plate avoid the draining liquid from the basket fall down in the basins during the movement of the trolley. The insertion of the plate is programmable for every movement.

**Vertical movement in the basins:** this system, mainly suggested on the phosphating basins, produce a very small vertical movement of the basket/drum inside the basin in order to renew the liquid close to the parts in treatment. The basket leans on the yellow structure in the photo. This structure, by a gearbox, have a slow vertical movement.

**Indirect heatings** : usually the indirect heating is realized by double chamber heated by electrical resistances in diathermic oil. This system is important when we need a uniformity on the heating exchange surface.

**Raised base:** all the basins are assembled on a strong metallic base. In order to help the loading / unloading operation sometimes it's possible to rise up this strong base and so all the equipment.

**Agitators:** in order to have a homogeneous solution from a chemical and thermal point of view it's possible to install agitating systems.

**Multi partitions drum/baskets:** in order to be able to treat different parts at the same time, it's possible to have different partitions in the basket / drums.

**De oiler** : it's important to divide the oil from the water based solutions in order to give a longer life to the solution.

**Ultrasounds**

**Special filtrations**

**Automatic loading – unloading system**

**Automatic liquid level control:** this is an automatic control of the water in order to have a constant level in the basin.

**Control of the rinsing water:** in order to save the rinsing water as much as possible it's possible to install automatic valves in order to open the rinsing water by an independent plc program ( for example when there is the basket in the basin – this program is usually custom built on the customer's requirements/experience).

**Teleservice:** this is a remote program and control system obtained by a modem installed on the machine. It's allow us to change the program or to show possible damages on the equipment. It works by a normal direct phone line.



**Remote controls:** mainly suggested for very big equipments, it's possible to remote all the controls of the machine to an external console with display.



**External footbridge:** it's very comfortable for the control and maintenance of the liquids inside the equipment



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