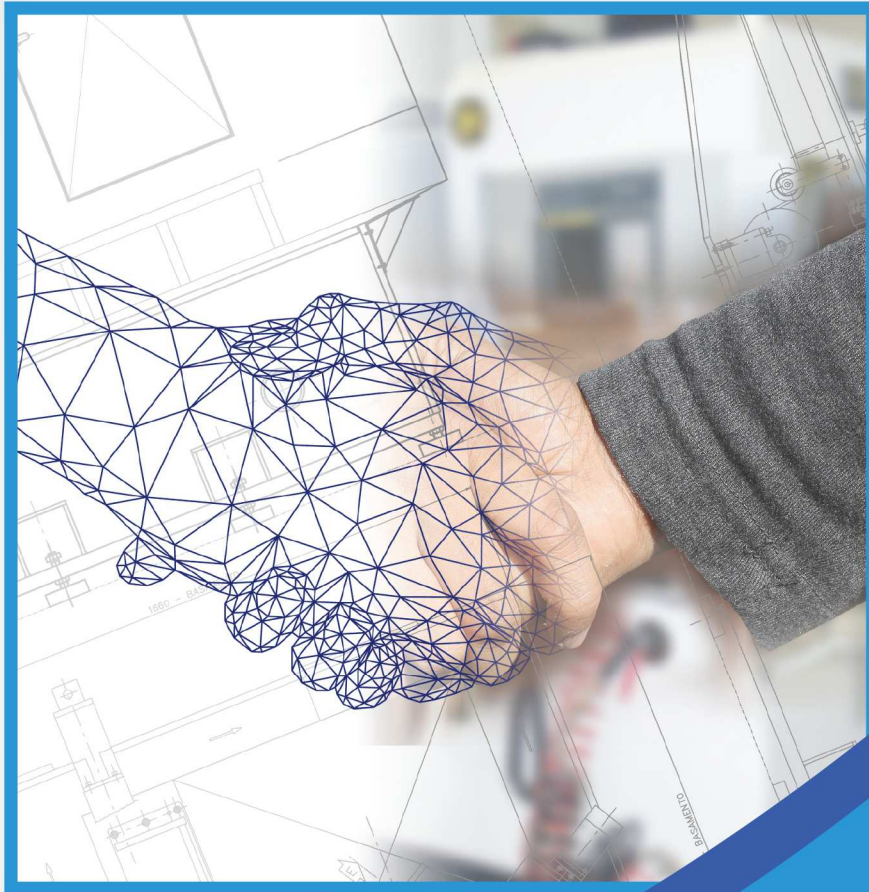


## PRESENTATION OF MACHINES AND SYSTEMS



A new division has been created at Boccetti for the design and production of a wide range of machines and systems to support the following industrial processes:

- ✓ Cleaning
- ✓ Non Destructive Testing
- ✓ Testing

# PRESENTATION OF MACHINES AND SYSTEMS

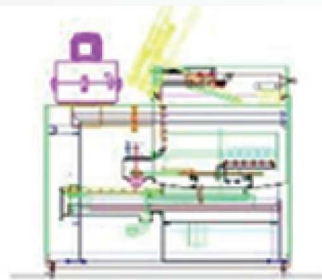
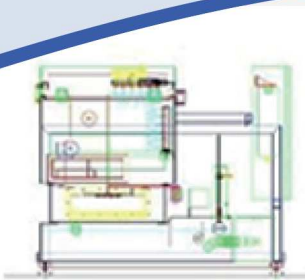


Cleaning machines and systems are designed to meet the various industrial cleaning requirements of mechanical parts with chemical and/or particle contamination.

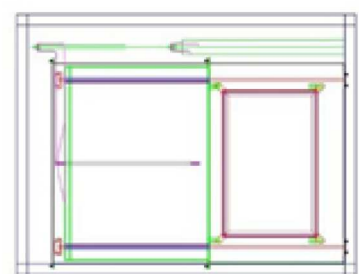
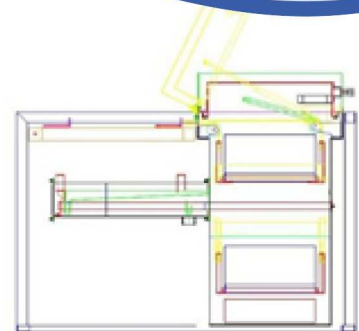
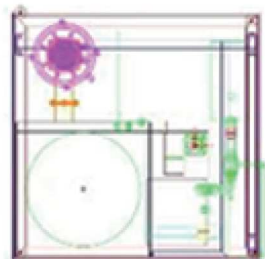
Depending on the size of the mechanical parts to be cleaned, their surface contamination, the type of cleaning to be carried out (inter-operational or finishing) and the productivity required, we assist the customer in identifying the most suitable cleaning process and in choosing the type of machine to be used.

The range of industrial washing machines includes the following basic classification:

Single station washing machines	<b>Top loading tanks</b>
	<b>Front loading cabins</b>
	<b>Manual cabins for oversized parts</b>
Multi-station washing machines	<b>Multi-tank lines</b>

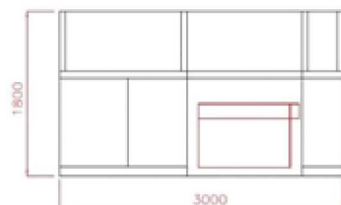


**RB60 – RB90**



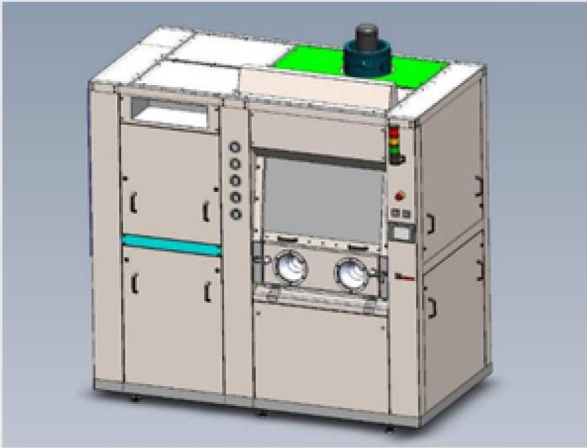
**SD60 – SD80**

Top loading tanks	
A	Spray washing machine with rotating drum - (φ600 - φ900) <b>RB 60 – RB 90</b>
B	Immersion washer with up/down basket (350x550xh150mm) <b>IB355</b>
C	Spraying and immersion washing machine <b>SD 80</b>

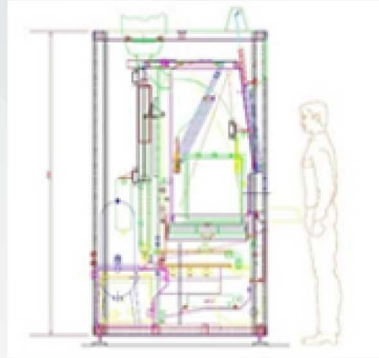


Front loading cabins		
D	Immersion washing cabin	<b>FLC 75</b>
E	Spray washing cabin	<b>SWM1000</b>

# PRESENTATION OF MACHINES AND SYSTEMS



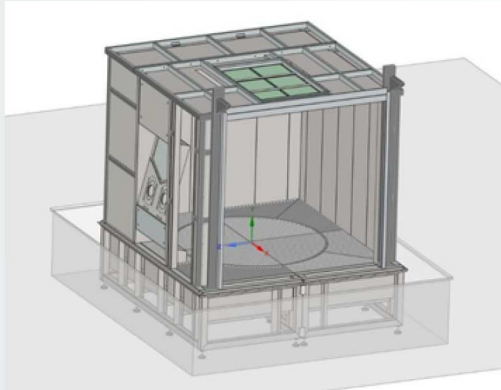
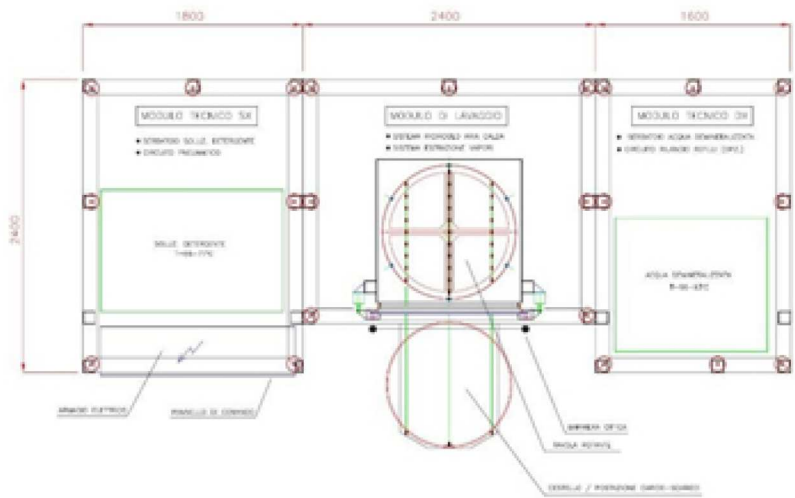
**FLC75**



**SWM-1000**

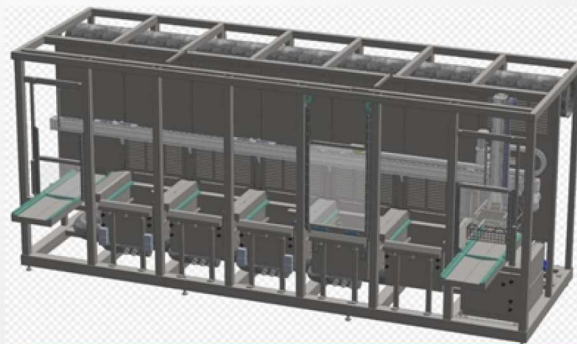
## Manual cabins for oversized parts

F Washing cabins with floor rotary table and external workstation



## Multi-tank lines

G Automatic cleaning line

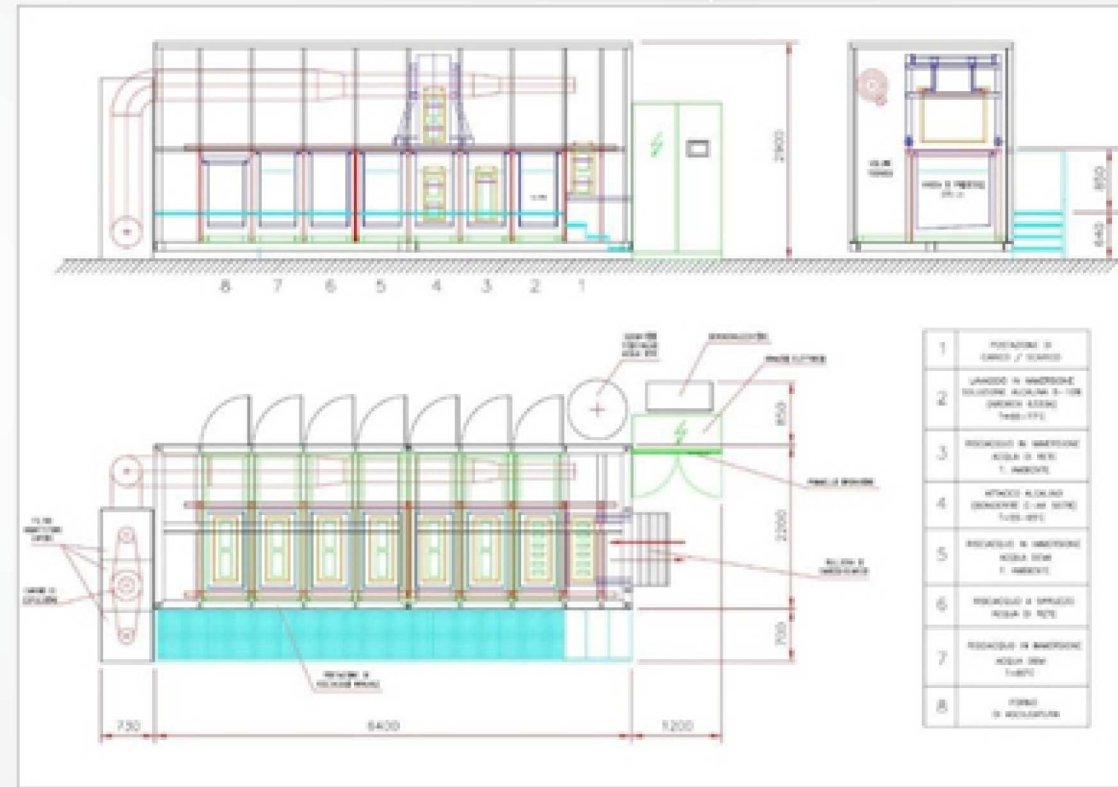
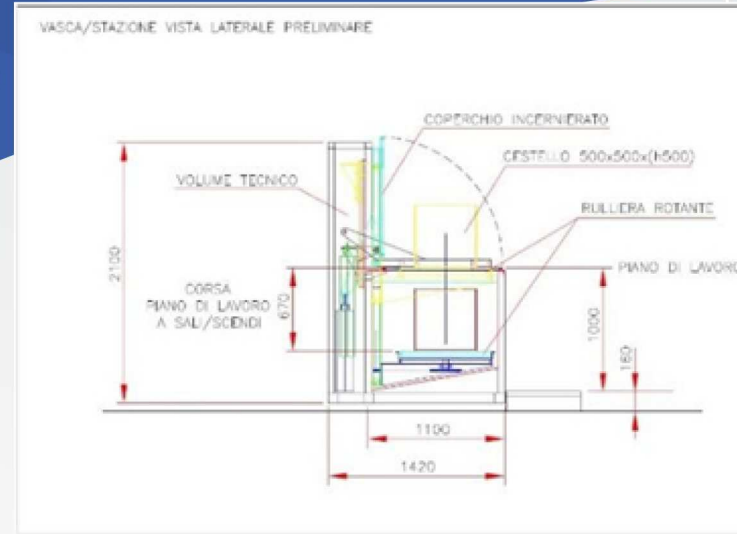


**Non-Destructive Testing**

The non-destructive testing lines, carried out by means of fluorescent penetrant liquids (FPI lines), are made "manual feed" and characterised by intermediate inspection stations (partially obscured) with a final control cabin.

The "complete standard" FPI line, regardless of the useful dimensions of each process station, has the following sequence:

- ✓ 1) Application of penetrating fluid by electrostatic spraying;
- ✓ 2) Application of penetrating fluid by immersion (by-passable by means of overhead roller conveyor);
- ✓ 3) Pre-cleaning by spraying with softened water;
- ✓ 4) Emulsification by immersion;
- ✓ 5) Final washing by spraying with demineralised water;
- ✓ 6) Inspection and possible touch-ups;
- ✓ 7) Dewatering in drying oven;
- ✓ 8) Application of developer powder by electrostatic spraying;
- ✓ 9) Blowing off excess powder with filtered and dried air;
- ✓ 10) Checking with Wood's lamps.

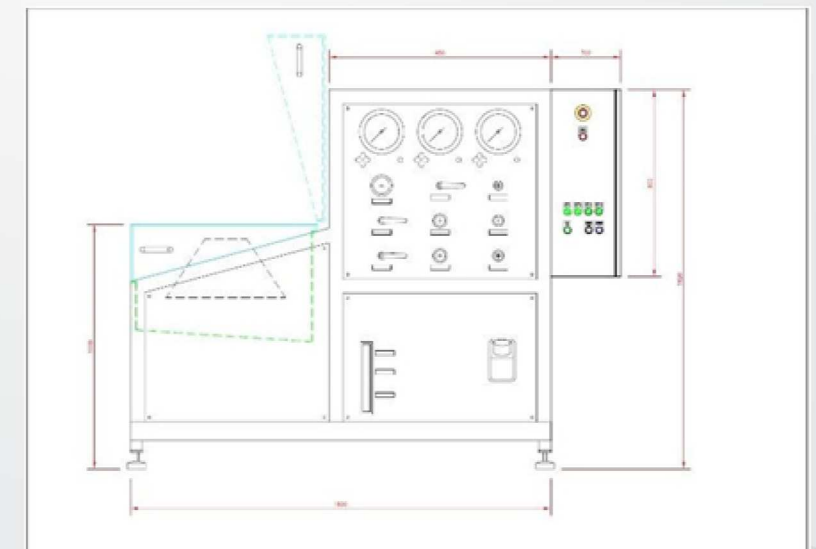
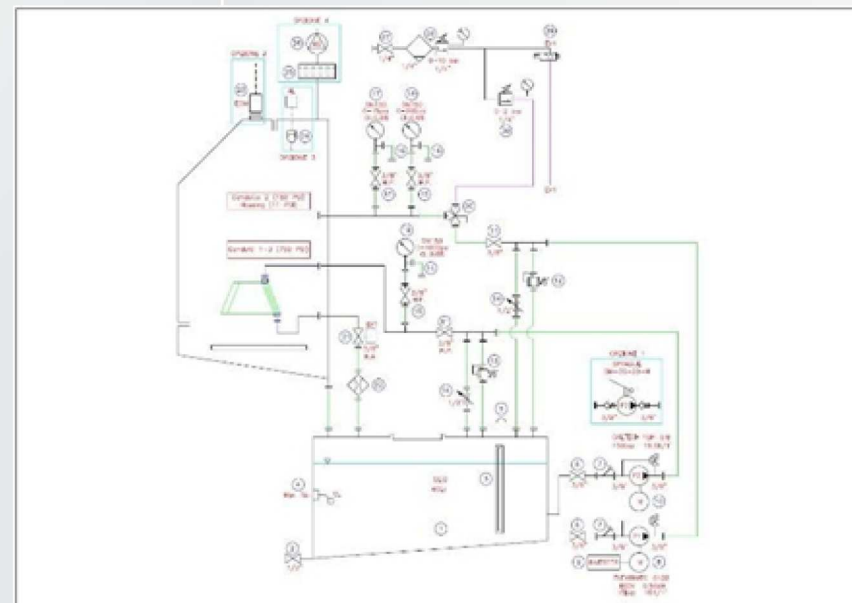
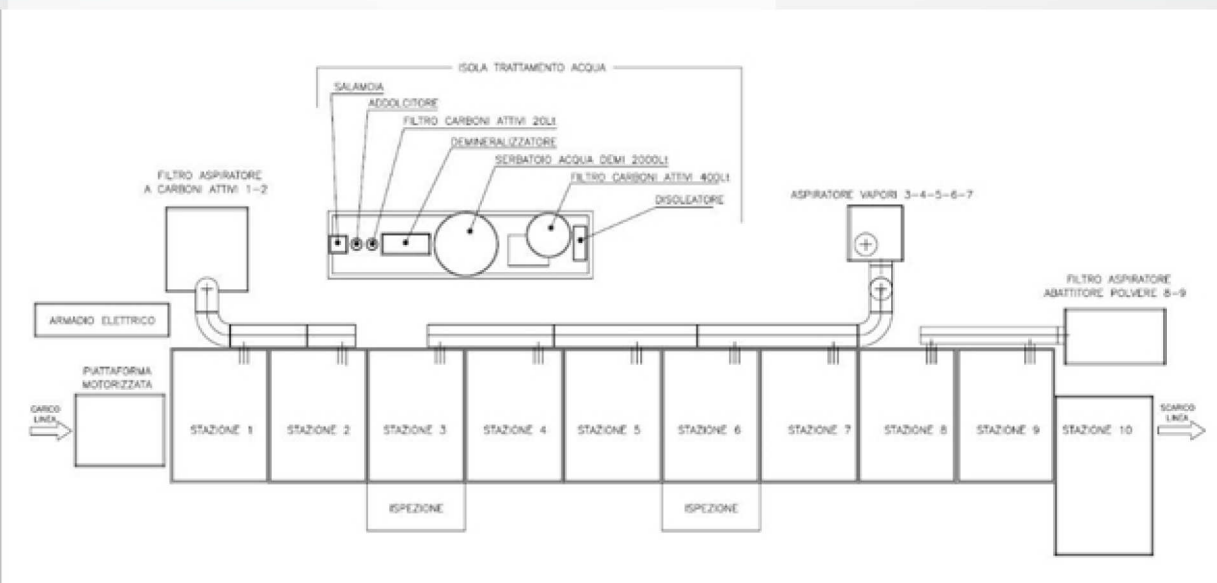


FPI lines can be made with any sequence of process stations required by the customer:

**Testing**

The machines and equipment belonging to the "Testing" section have been developed to offer solutions to the various control actions to be carried out on specific mechanical parts.

The control actions can range from simple investigations on the "degree of cleanliness" of mechanical parts subjected to cleaning operations (Cleaning Control Booths) to an accurate verification of their compliance with the characteristic physical quantities for which they have been designed, such as pressures and flow rates (Test Benches proper).



The principle of "maximum customisation" applies to all machines and systems, allowing the product to be fully configured according to the customer's specific requirements. This peculiarity is the result of decades of experience in design and production "on order", which has enabled the standardisation of specific technical solutions that can be easily parameterised and adopted from time to time, in the various customisations, with the "measurements" actually required.

The versatility of our systems covers:

### **- Effective dimensions of the process volumes (tanks or cabins)**

Each machine can be produced with the effective dimensions of the process volume (tank or cabin) compatible with the dimensions of the parts to be treated (or their containment basket) and with the quantity and type of auxiliary equipment introduced (ultrasonic transducers, up/down lifts, fixed or mobile spraying ramps, rotating table in a horizontal plane, tilting or full tilting basket).

### **- Machine layout (integrated or with remote technical volumes)**

To facilitate installation in production departments where space is limited, we can "remote" most of the process fluidic components in appropriate "technical modules" at a distance from the "process modules" or, on the contrary, compact all the components and service systems, including the electrical cabinet for supplying and controlling the system, into a single supporting structure.

### **- Degree of automation (handling and process)**

The degree of automation of the machines and plants can be more or less advanced and oriented towards both handling activities (loading/unloading of baskets, movement of baskets inside the multi-bucket line) and the various process phases (automatic movements of the mobile spraying ramp, rotation of the rotary table, up/down movement of the parts support grid, tilting of the parts containment basket).

### **- Configuration of the cleaning phases**

The sequence of phases making up the "automatic cycle", washing or testing, can be managed in "manual mode" or in "automatic mode". For the latter, the installation of a touch screen operator panel and appropriate management software allows the total configuration of the process cycles, being able to store the most suitable sequence and times for the various phases.

### **- Process Fluids Diversification**

The growing research in the field of industrial detergents has allowed us to identify a wide range of Alkaline, Neutral and Acid detergents that with their chemical characteristics allow the correct approach to any cleaning need for any type of metallic material.

The "optional" inclusion of "ionic exchange softeners" and "reverse osmosis demineralisers" allows us to obtain particularly pure process water (for the creation of "washing baths" and for the storage of rinse water), suitable for finishing washes and offering the advantage of safeguarding the cleanliness of the systems from excessive accumulations of limescale.

#### **Optionals**

It is possible to improve the performance of all machines by equipping them with additional circuits and optional systems if required:

- Safety systems (photocells, light barriers);
- Automatic level restoration system;
- Automatic detergent dispensing system
- Automatic effluent delivery system;
- Recycling and filtration circuits;
- De-oiling systems and/or circuits;
- Vapour extraction and suppression systems;
- Ejection chimneys.

#### **Accessories**

The accompanying accessories consist of a set of equipment that can help optimise the various activities involved in cleaning and testing the mechanical parts to be processed:

- Loading/unloading and buffer roller conveyors;
- Workpiece baskets and interface elements in shockproof plastic material;
- Equipment for handling and clamping the parts to be processed;
- Hoists and Pick & Place (motorised and manual);
- Hand washing guns and lances;
- Glove Boxes and transparent screens for operator protection;



**BOCETTI S.r.l. with YOU since 1970**

Administration and plant  
Via della Libertà, 47/49  
10095 GRUGLIASCO (Torino - Italia)  
Tel. 0039 011.789598 / 7801386 Fax 0039 011.7803829



info@bocetti.com  
www.bocetti.com