

C A T A L O G

BATTERY EQUIPMENT - ANALYSIS SYSTEM - LIQUID TREATMENT



2020



we realize ideas

We realize ideas

orsaiec born on 2010 in Sarego (VI) thanks to idea of Elena and Orazio Sartori, after many years of consultant activities around the world, developing project for the realization of equipment and technologies for the lead acid battery, and continue with the production of equipments designed.

On 2014 orsaiec has opened a new business division, developing equipment for the analysis of water and for oil&gas, waste water treatment and chemical companies.

Advanced technical solutions, custom-made every company

Every business is unique: individual requirements, exclusive processes, professionals with consolidated methodologies.

We make sure that our solutions are unique too. All requests are met thanks to targets that aim for excellence on every single project.

Thanks to our assiduity and passion for innovation, we continue to grow in the world market of industrial installations.

Research & development

The rich experience that orsaiec has acquired over the years shows the care and innovation of products are essential to guarantee constant quality

Thanks to the continuous investments in machinery as well as developing of new strategies, orsaiec has created a space where research and innovation become concrete tools to satisfy customers' requirements.

Mission

Provide to our customer high quality products, thus obtaining their satisfaction, as well as the best outcome for our company and the growth of our employees.

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BATTERY EQUIPMENT

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- Slurry filling station

Volumetric acid filler

FAMILY CODE: VFS

DESCRIPTION: The volumetric acid filling station is designed to operate with the SLI Automotive batteries, for DIN, JS standard and for truck batteries. The acid filler has the purpose to fill the acid batteries to a predetermined level and to verify the presence of the acid inside the battery. It can be equipped with 1 head, 2 heads, 4 heads or 6 heads.

The heads are lowered into the filling holes of the battery covers by the electrical axes, every time at the settled battery's position. The heads can be adjusted according to the distance of the Battery cover holes, 6x1 or 3x2. Per each head there are 6 nozzles that they are controlled individually by diaphragm valve, flowmeter and level sensor; these instruments permit to controlling the levelling process, with high accuracy. To verify the position of the nozzle to check slowly the nozzle insertion into the battery's lid there is the control panel.

MATERIALS: Filling head in SS316L with nozzle in stainless steel 316
Structure in SS316L and PP.
Belt conveyor in SS316L and PE.
All parts in contact with the acid in PP High Impact

DIMENSION: Customized



Formation dpt

Acid refiller and leveller

FAMILY CODE: VFLS

DESCRIPTION: The LVFS-2H-AUTO is a double heads station designed to operate with the SLI Automotive batteries, for DIN, JS standard, also for truck batteries. The station is necessary for the second filling and the top-off (acid levelling) when is usually the double shot formation.

The process consists into to fill the acid with the flowmeter sensor one per each nozzle that read the exact flow come through it with the level control trough the fiber sensor that read the level into the single cells to not have any difference in terms of level into all 6 cells.

With the sucking system the station is able to guarantee the level into the cell with the accuracy of ± 1.0 mm. Per each nozzle there is a dedicate suction pump that permit to increase the speed of levelling.

The machine is typically used after the formation into the double shot formation.

The heads move up and down through 2 independent brushless motors, to guarantee the accuracy of head positions.

MATERIALS: Filling head in SS316L with nozzle in stainless steel 316
Structure in SS316L and PP.
Belt conveyor in SS316L and PP.
All parts in contact with the acid in PP High Impact

DIMENSION: Customized



Acid dumper

FAMILY CODE: RVB

DESCRIPTION: The dumper has the purpose to evacuate the acid inside the batteries. It is using into the double shot formation and for GEL batteries process.

The batteries are loaded into the rotation beam of the station by a belt conveyor then they are blocked by a pneumatic clamp on the rotation beam. When the batteries are in position the rotation beam turns from 0° to 180°. It is possible to define 30 different stops position from 0° to 180°, and from 180° to 0°. When the beam has complete the rotation and has reached the 180° on the opposite site the new batteries are loaded. All these steps are definable in terms of battery type, emptying process, timing of rotation and stop rotation position. The acid discharged from the batteries is sending to the recovery acid unit by the membrane pneumatic pump, to reused it.

MATERIALS: All parts in contact with the acid in PP High Impact
Structure in SS316L
Belt conveyor in PP

DIMENSION: Customized



Formation dpt

Acid recirculation system

FAMILY CODE: ARSa (for automotive batteries) – IBFL (for industrial batteries)

DESCRIPTION: The acid recirculation system has the purpose to form the batteries with a short cycle time, maintain the correct temperature of the acid inside the batteries and increasing the quality of formation process.

The ARSa is one the biggest system to forms the Car and track batteries with a short cycle time, 220Ah Truck in less of 10 hours. With the ARSa we supply also the process to realize the perfect formation cycle designed on the Customer's batteries product. The structure is designed for an easy loading/unloading of the battery. It is possible to have in differrent configuration:

ARSa080: 04 independent circuits, acid preparation and scrubber on board

ARSa120: 06 independent circuits, acid preparation and scrubber on board

ARSa160: 08 independent circuits, acid preparation and scrubber on board

ARSa180: 10 independent circuits, acid preparation and scrubber on board
Industrial batteries:

IBFL288: 04 independent circuits, 72 2Volt cells

IBFL288: 06 independent circuits, 48 2Volt cells

IBFL480: 10 independent circuits, 48 2Volt cells

MATERIALS: All parts in contact with the acid in PP High Impact
Structure in SS316L
Belt conveyor in PP

DIMENSION: Customized



Water bath formation

FAMILY CODE: WB

DESCRIPTION: The Water Table is designed for the formation of automotive batteries Car and Truck and Semitractor Batteries.
This water table has the capacity of 80 batteries per each formation cycle.
The loading batteries is manual. When the table is loaded the door with the Up-Down movement can be closed from two handle with eccentric movement.
With the SC option is an ideal water bath for the AGM Batteries Formation, thanks at the water recirculation system that permit to mix and chill the water on board of the Water Bath.
If during the formation the window is open the rectifiers stop to send the current (it changes from run to halt its state).
When the window is closed, the rectifiers restart to send the current.

MATERIALS: Structure in SS316L
Water table is equipped with PE roller, SS316L hood and window.

DIMENSION: Water Bath: L5.250 mm - W1.375 mm - H300 mm
Total High from the floor to the chimney connection: 3200 mm



Industrial formation

FAMILY CODE: CTF

DESCRIPTION: The industrial formation mod. CTF-* CONTAINERS are projected to formed the Industrial Cells (traction cells and stand-by cells).

According to the height of the elements to load, in the tank are positioned 24 cells maximum for each pallet, that will allow to immerse in the water by a crane. Each pallet is independent from the others, therefore is possible to load elements of different eight for each pallet.
The water-cooling system with automatic control and handling, is provided of a recycle system, with close-circuit pump, that permit to generate the correct turbulence for cool the cells. On the water circuit is installed one heat-exchanger that permit to cool the water at about 18°C. This system it is that improves the water uniformity inside each single sector, allowing the cooling process to be uniform on each element present in the pallet.

MATERIALS: Tank in PP
Trays in SS316L

DIMENSION: Customized



We accumulate

Automatic acid dilution

FAMILY CODE: AD

DESCRIPTION: Automatic acid dilution permits to prepare the acid from 1860/1840 gr/l to each specific gravity needed (for example for pasting, for formation, ecc) from the lorry to the end user points

The system is all in automatic, without any manual operation. It don't works by a batch preparation, but it works just by an end user consumption.
When the end user starts to call the "specific gravity", the acid preparation starts to reintegrate the volume that was called at the same gravity. The acid can be chilled at which temperature you need, by direct exchanger or by a fast cooling just before to use it.
Per each tank you have only one Specific gravity (for example: 1400 gr/l for the pasting, 1100 gr/l for the formation, 1330 gr/l after the dumping, 1290 gr/l for the top off).
The preparation is under control by the PLC program and the densimeter instrument. This instrument is manufactured under our specification and with our target range of tolerance that is ± 0.1 gr/l.

MATERIALS: Structure in SS316L
Body in PE,
Plate exchanger in graphite
Piping in PP, PVDF

DIMENSION: Customized



Acid dilution

Acid cooling system

FAMILY CODE: ACS

DESCRIPTION: The unit is required to cool the electrolyte at 5°C before the filling.

It is composed from:

- Insulated tank 2000 lit
- Plate exchanger
- Vertical centrifugal pump
- Temperature control
- Valve for mixing the cooling acid into a loop and to the initial filler.
- The unit is integrated into the Acid Mixing PLC.

MATERIALS: Structure in SS316L
Tank in PEHD

DIMENSION: Customized



Acid and electrolyte storage tank

FAMILY CODE: AES

DESCRIPTION: The storage tanks can be used for the storage of sulfuric acid, row acid, demi water and electrolytes. Each storage tank is complete of accessories: pump, pipeline distribution, ultrasonic level and emergency level switch.

The top quality tanks technology manufacture with Overlapping of melt strips and compressive fusion for highest safety and decisive benefits: outstanding chemical resistance, excellent corrosion and weathering resistance, homogeneous monolithic material, good insulation properties, space-saving design, easy to transport and install, lightweight, low thermal conductivity, long service life.

MATERIALS: Tank in PEHD

DIMENSION: Each tank can be from 5.000m³ to 20.000m³



Acid filtration and titration

FAMILY CODE: AFT

DESCRIPTION: Filtration: This unit is required to clean the acid that is tipping from the batteries into the dumper.

Titration: In is the tank where the acid that comes from the filtration unit is titrated at the specific gravity that is inserted into the PLC's touch screen.

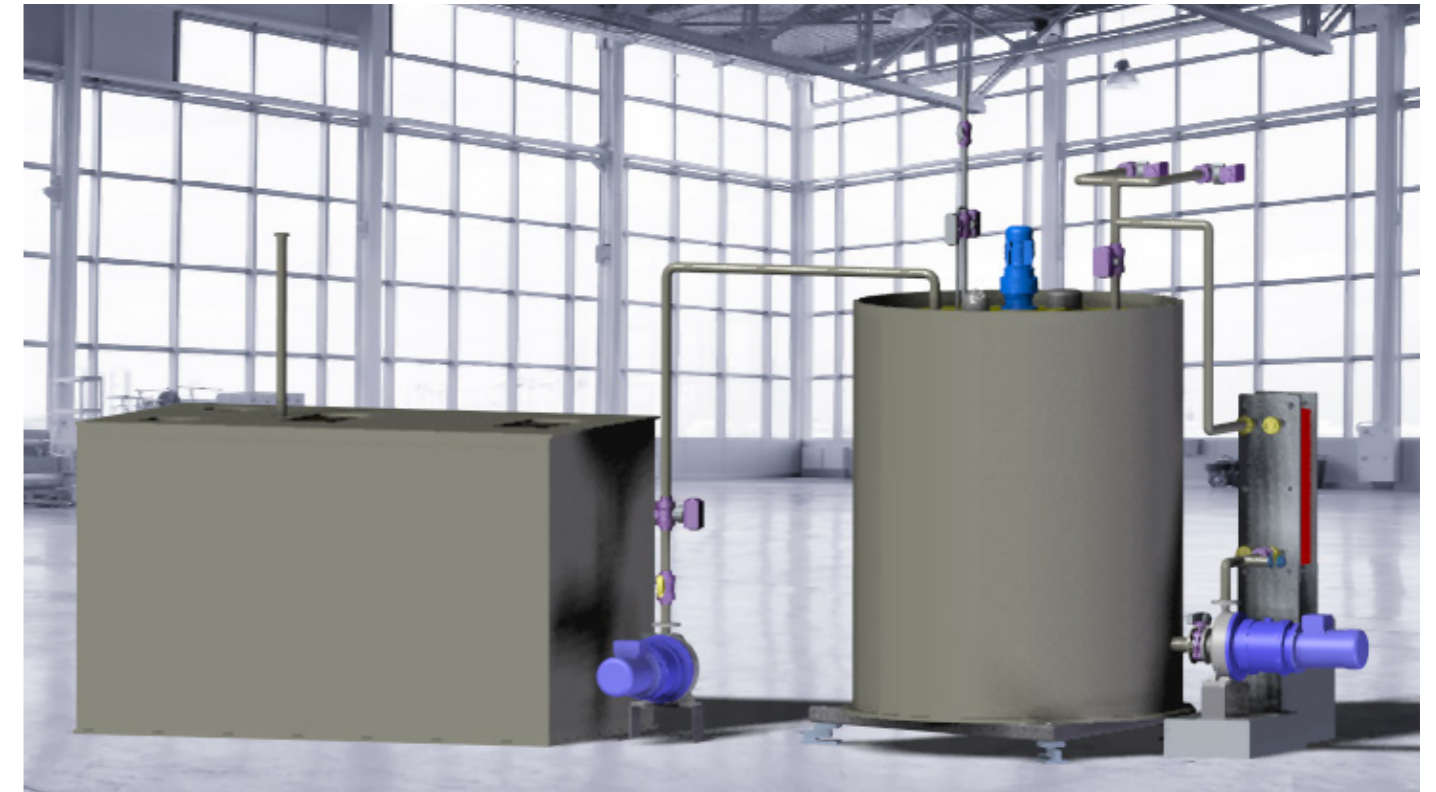
From the dumper, by a membrane pump 360l/min the acid is sending into the **filtration** tank. The filtration tank is composed from:

- First filtration, it is composed with 18 sleeve bag filters where the dirty acid is cleaned from the oxide dust, residual of paper and residual of expanders.
- Second filtration where by decantation the last part of impurity are removed.
- Into this tank the acid is stored and it is waiting to transfer by the magnetic centrifugal pump in Polypropylene to the Titration unit.

During the **titration** the gravity is corrected fasted from the weighing cells, and by the densimeter. During this time the acid is mixed fast by the agitator that mix the electrolyte and the pump that by the close loop and through the plate exchanger chill and mix the acid. When the specific gravity is reached the acid is transferred to the filler.

MATERIALS: Filtration tank in PP High Impact
Titration tank in PP High Impact
Heat Plate Exchanger in Hastelloy
Piping, valves in PP or PVDF

DIMENSION: Customized



We accumulate

Acid dilution

Gel system

FAMILY CODE: GS

DESCRIPTION: This system is needed to produce the gel (solution of silica). We have design the full GEL system able to produce 400 kg/h of solution of acid silica.

The gel system is composed by:

- Gel mixing and preparation unit with:

- Main dissolver tank
 - Storage tank
 - Cooling system (with chiller and graphite plate exchanger to chill the acid)
- Acid dumper
- Volumetric Gel Filler

This type of unit is developed for give at the end User the possibility to configure it as per his requirement, with the advantage that is possible to change the configuration after its installation.

MATERIALS: All system has the structure in SS316L
All parts in contact with the acid in PP High Impact

DIMENSION: Customized



Gel technology

Gel filler

FAMILY CODE: GF

DESCRIPTION: The GEL Acid Filler is designed for the initial filling of the GEL 6 and 12 Voltage Batteries. It is possible to use the filler as an Acid Leveling unit, for refill the batteries after the formation.

The station is equipped with vases where the solution of silica is prepared and mixed. After the preparation the silica electrolyte mixture is filled into the battery, thank to the vacuum system, that permit a fast filling and to extract the air from the batteries. With a huge range of possible configuration, we have the conviction that this is the BEST Solution present on the market in this moment.

Volumetric Gel Filler:

- 1 head --> 2 batt/min

- 2 head --> 4 batt/min

MATERIALS: Structure in SS316L
Vases PVC trasparente
Belt conveyor in PP
All parts in contact with the acid in PP High Impact

DIMENSION: Customized



Slurry system

FAMILY CODE: SLYS

DESCRIPTION: The slurry preparation is a system that permit to prepare the active material for the tubular positive plate. The system is designed for mixing the PbO and the Pb3O4 with deionized water and low quantity of SO4.

Slurry system is a close loop system, LESS 1% OF WASTE.

The advantage of the Slurry System is that:

- the active material remains stable for a long time because there isn't any sulfating of the oxide mixed.
- the waste material generated by the drying just after the filling of the plate is all RECYCLING into the next slurry preparation.

We can supply all process for the Slurry Filling of the tubular plate for the DIN and BS Standard in terms of:

- Tubular Casting Machine
- Continuously Slurry Preparation
- Slurry preparation
- Slurry Filling Desk Automatic or Semiautomatic
- Dry Oven / Tunnel Oven.

MATERIALS: Structure in Fe
Mixer in Fe
Filler in SS316L
Piping in PVC, PP, Rilsan

DIMENSION: Customized



Tubular plate technology

Slurry filling station

FAMILY CODE: SLF

DESCRIPTION: The slurry filling station is the unit that is required for the filling of the tubular plate with the slurry active mass. The standard plate production is 2000 per shift (Std. Plate 125Amp) Easily changeover from DIN to BS and vice versa and size by size. The average time is not over 5 minutes

The station reach the active material from the mixers of slurry preparation through the membrane pumps and relative rilsan pipes.

The station is composed by:

- Filling desk with two heads
- Coveyor

The operator insert in the first head the tubular plate, close the doors and insert the tubular plate on second head. While the operator insert the second tubular plate, the first fills up.

After that the tubular plate is filled the operator put it on the conveyer.

The station can be equipped also with the washing desk. It washes the tubular plate after the filling.

MATERIALS: All the slurry filling station is in SS316L.

DIMENSION: Customized





We analyze

ANALYSIS SYSTEM

1. SAMPLING SYSTEM

- Cabinet
- Pressurized cabinet
- Analysis rack
- Wall sampling

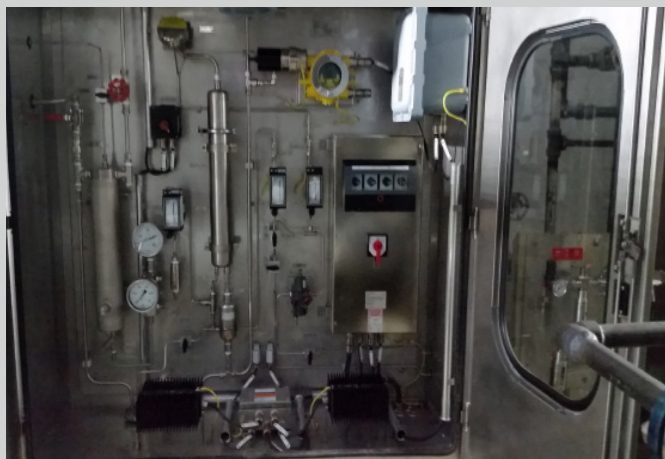


2. PROBE EXTRACTION SYSTEM

- SEMAN
- SEMAC

3. SYSTEM FOR PROBE MOUNTING

- Immersion support straight with/without flange
- Immersion support inclined
- Online insertion TEE probe holder
- Flange
- Flow cell
- Accessories



- Floor telescopic support
- Wall mounted telescopic support
- Handrail support
- Cleaning system
- Sunshade



Cabinet

FAMILY CODE: ASQ

DESCRIPTION: Cabinet mounting is the ideal solution when the system must be protected from the environment nearby and when it's necessary to place it outdoor (with proper material and IP protection). This solution also allows to keep the temperature controlled by heating or cooling the inner of the cubicle due to stay within the operative limits of the instrumentation (normally -10...+50°C).

All the cabinet produced by orsaiec are made based on the customer request, so each cabinet is customized.

All the components that make up these cabinets are of the highest quality and comply with the final customer's requests.

The design is aimed to make maintenance operations extremely simple, with the analysers and all the sampling components easy to reach.

orsaiec can realize state-of-art products, each cabinet is tested to ensure maximum reliability in operation.

Availbale with clear fron door or with blind door

For wall of floor mounting

Executions: for safe and hazardous area (ATEX)

MATERIALS: The cabinets can be in Fe painted and SS316L
Piping inside ca be in PP, PVC, PVDF, SS316.

DIMENSION: Customized



Sampling system

Pressurized cabinet

FAMILY CODE: ASQP

DESCRIPTION: Pressurized cabinet is the ideal solution for the danger explosion (Ex areas) and when the system must be protected from the environment nearby and when it's necessary to place it outdoor (with proper material and IP protection). This solution also allows to keep the temperature controlled by heating or cooling the inner of the cubicle due to stay within the operative limits of the instrumentation (normally -10...+50°C).

All the cabinet produced by orsaiec are made based on the customer request, so each cabinet is customized.

On the cabinet, containing the analysis system, is generated a overpressure. This permit that the explosive gases not enter on the cabinet. The results: a safe areas is created inside the cabinet.

The components inside the cabinet can be: not Ex (EX px), minimun for zone 2 (Ex py) or EX (Ex pz).

The pressurized cabinet are designed for zone 1 o 2

Executions:

EEx p, EEx i, EEx e

- EEx d

MATERIALS: The pressurized cabinets are produced in SS316L.
All piping and components are in SS316L.

DIMENSION: Customized



Analysis rack

FAMILY CODE: ASR

DESCRIPTION: The analysis rack is suitable when the system needs to be protected from environmental conditions, without the overall dimensions of a cabinet. The rack can be installed in areas where the environmental conditions do not have a decisive influence on the analysis, and in any case where the temperature doesn't exceed the operative limits of the analysers (normally, -10...+50°C).

Our analysis rack is customized and it ensures the protection, area classification and the characteristics requested by the customer.

Executions: for safe and hazardous area (ATEX)

MATERIALS: Analysis rack (structure, panel and sunshade) in SS316L
Piping and components in SS316L

DIMENSION: Customized



Wall sampling

FAMILY CODE: ASW

DESCRIPTION: This is a suitable solution when the system is installed where the environmental conditions do not have a decisive influence on the analysis, and the system is installed in a protected zone and where the temperature doesn't exceed the operative limits of the analysers (normally, -10...+50°C).

On this solution the sampling system is mounted on a panel. The wall sampling is made based on the customer request. All the components that make up these sampling systems are of the highest quality and comply with the final customer's requests.

Accessories:
- Removable sunroof

Executions: for safe and hazardous area (ATEX)

MATERIALS: The wall sampling in plastic material (PP/PVC) or in SS316L
Piping and components in PP/PVC/PVDF or in SS316L

DIMENSION: Customized



Probe extraction SEMAN

FAMILY CODE: SEMAN

DESCRIPTION: There are 2 types of SEMAN:
- SEMAN316L-V composed by:
- manual ball valve in SS316L
- ferrule nut that blocked the probe
- SEMAN316L-VF composed by:
- flanged manual ball valve in SS316L
- ferrule nut that blocked the probe

Each probe extraction can be customized as per final customer request with the following optional accessories:

- High temperature protection
- flange DIN or ANSI (only for SEMAN316L-V)
- Male threaded connection

The probe extraction system is in SS316L
It can be also varnished.
Standard type for probe: Ø25-27, Ø35-37, Ø45-48

MATERIALS: The probe extraction system is in SS316L
It can be also varnished.

DIMENSION: Customized (based on probe dimension)



Probe extraction system

Probe extraction SEMAC

FAMILY CODE: SEMAC

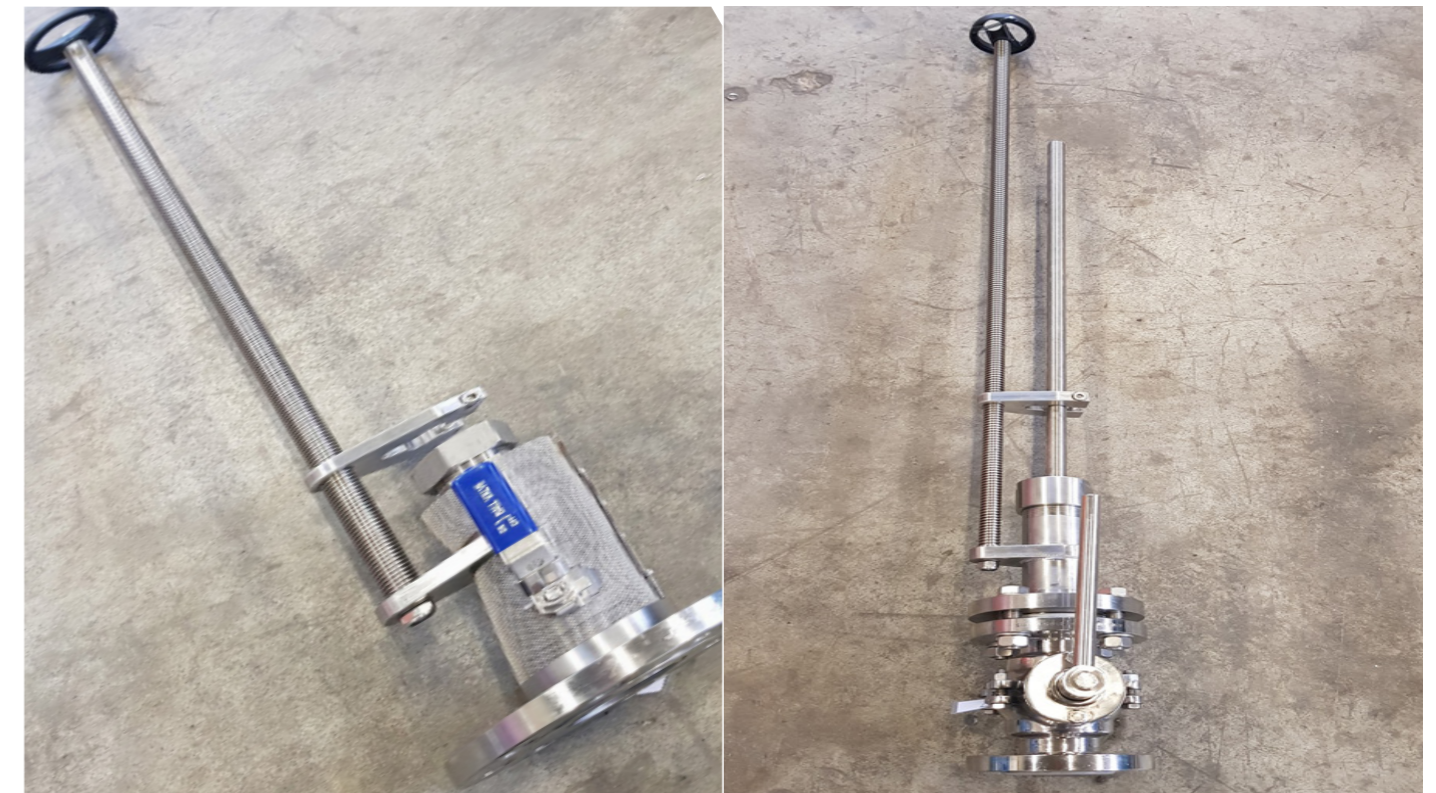
DESCRIPTION: There are 2 types of SEMAC:
- SEMAC316L-V composed by:
- manual ball valve in SS316L
- ferrule nut that blocked the probe
- Screw with extraction wheel
- Top clamp for guide the probe
- SEMAC316L-VF composed by:
- flanged manual ball valve in SS316L
- ferrule nut that blocked the probe
- Screw with extraction wheel
- Top clamp for guide the probe

Each probe extraction can be customized as per final customer request with the following optional accessories:

- High temperature protection
 - Flange DIN or ANSI (only for SEMAC316L-V)
 - Male threaded connection
- Standard type for probe: Ø25-27, Ø35-37, Ø45-48

MATERIALS: The probe extraction system is in SS316L
It can be also varnished.

DIMENSION: Customized (based on probe dimension)



Immersion support straight

FAMILY CODE: S (with Flange) – ST (without flange)

DESCRIPTION: The immersion support straight can be for each type of probe (for example: turbidity, suspended solid sludges, ecc). The immersion support are made as per different liquid that use for.

Each immersion support can be customized.

Accessories only for mod. **S:**

- Floor mounted telescopic support
- Wall mounted telescopic support
- Cleaning system for probe

MATERIALS: **Pipe:** PP, PVDF, PVC-U, PVC-C, PVC trasparente
Connection, plug: PP, PVDF, PVC-U, PVC-C.

DIMENSION: **Diameter:** D32-PN16, D40-PN16, D50-PN16, D63-PN16, D75-PN16
Length of this immersion support can be max. 5000mm



Immersion support inclined

FAMILY CODE: SO

DESCRIPTION: The immersion support straight can be for each type of probe (for example: turbidity, suspended solid sludges, ecc). The immersion support are made as per different liquid that use for.

It can be with or without flange for the installation on the customer system.

The flange can be DIN or ANSI.

Each immersion support can be customized.

Accessories:

- Floor mounted telescopic support
- Wall mounted telescopic support
- Cleaning system for probe

MATERIALS: **Pipe:** PP, PVDF, PVC-U, PVC-C, PVC trasparente
Connection, plug: PP, PVDF, PVC-U, PVC-C.

DIMENSION: **Diameter:** D32-PN16, D40-PN16, D50-PN16, D63-PN16, D75-PN16
Length of this immersion support can be max. 5000mm



System for probe mounting

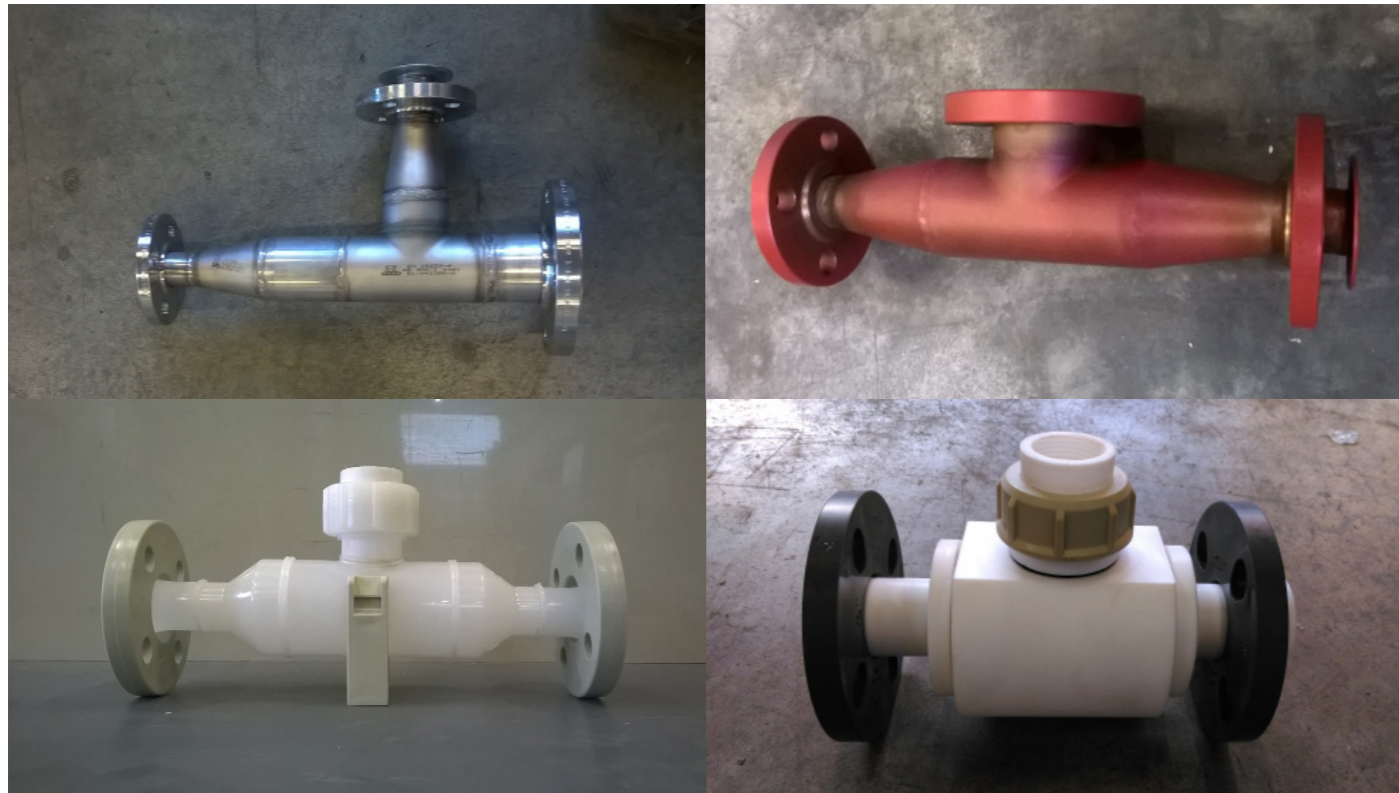
Online insertion TEE probe holder

FAMILY CODE: T

DESCRIPTION: The TEE is an online insertion support and it can be installed as per customer sampling system in vertical or horizontal position.
The process connection can be flanged or threaded m/f.
The probe connection can be in 90° or 45° position and flanged or threaded.

MATERIALS: PP, PVDF, PVC-U, PVC-C, SS316L, PTFE
The TEE in SS316L can be teflon coated.

DIMENSION: The sampler connection line can be:
DN20, DN25, DN32, DN40, DN50, DN60, DN80
The length is customized.



Flange for probe mounting

FAMILY CODE: FSP

DESCRIPTION: The flange can be DIN or ANSI.

MATERIALS: PP, PVDF, PVC-C, SS316L
The flange in SS316L can be teflon coated.

DIMENSION: Flange standard or customized.
The probe connection: 1/2", 3/4", 1", 1 1/2", 2" GAS or NPT



We analyze

System for probe mounting

Flow cell

FAMILY CODE: FL

DESCRIPTION: This accessory simplifies the installation of probe in in-line and slipstream/bypass applications.

The flow cell is suitable for a vertical online insertion on the sampling system.

The typical applications of these cells are in chemical processes, in concentration measurements, in high conductivity solutions, in the pharmaceutical industries, in the food and beverage industry, in thermal power plants.

MATERIALS: SS316L, SS316Ti, POLICARBONATE, PTFE

DIMENSION: The probe connection can be:
1/2", 3/4", 1" GAS or NPT



System for probe mounting

Floor telescopic support

FAMILY CODE: FTF

DESCRIPTION: It is suitable for our immersion support type SO and ST, with dimension of:

D32-PN16

D40-PN16

D50-PN16

D63-PN16

D75-PN16

It has to be fixed to the floor by the 4 holes on the plate.

Accessories:

Protection sunroof for the measuring unit.

MATERIALS: Plate: SS316L
Body: SS316L
Rod and support: SS316L
Rod fixing screw: SS316L

DIMENSION: Total pole height: 2000mm,
Pole for immersion probe holder: Adjustable height and length: (L=min.600 max.1000mm)



Wall mounted telescopic support

FAMILY CODE: WTF

DESCRIPTION: It is suitable for our immersion support type SO and ST, with dimension of:
D32-PN16
D40-PN16
D50-PN16
D63-PN16
D75-PN16

It have to be fixed to the wall by the 4 holes on the plate.

MATERIALS: Wall fixing plate: SS316L
Rod and support: SS316L
Rod fixing screw: SS316L

DIMENSION: Adjustable leght, starting from lenght: 600mm



Handrail support

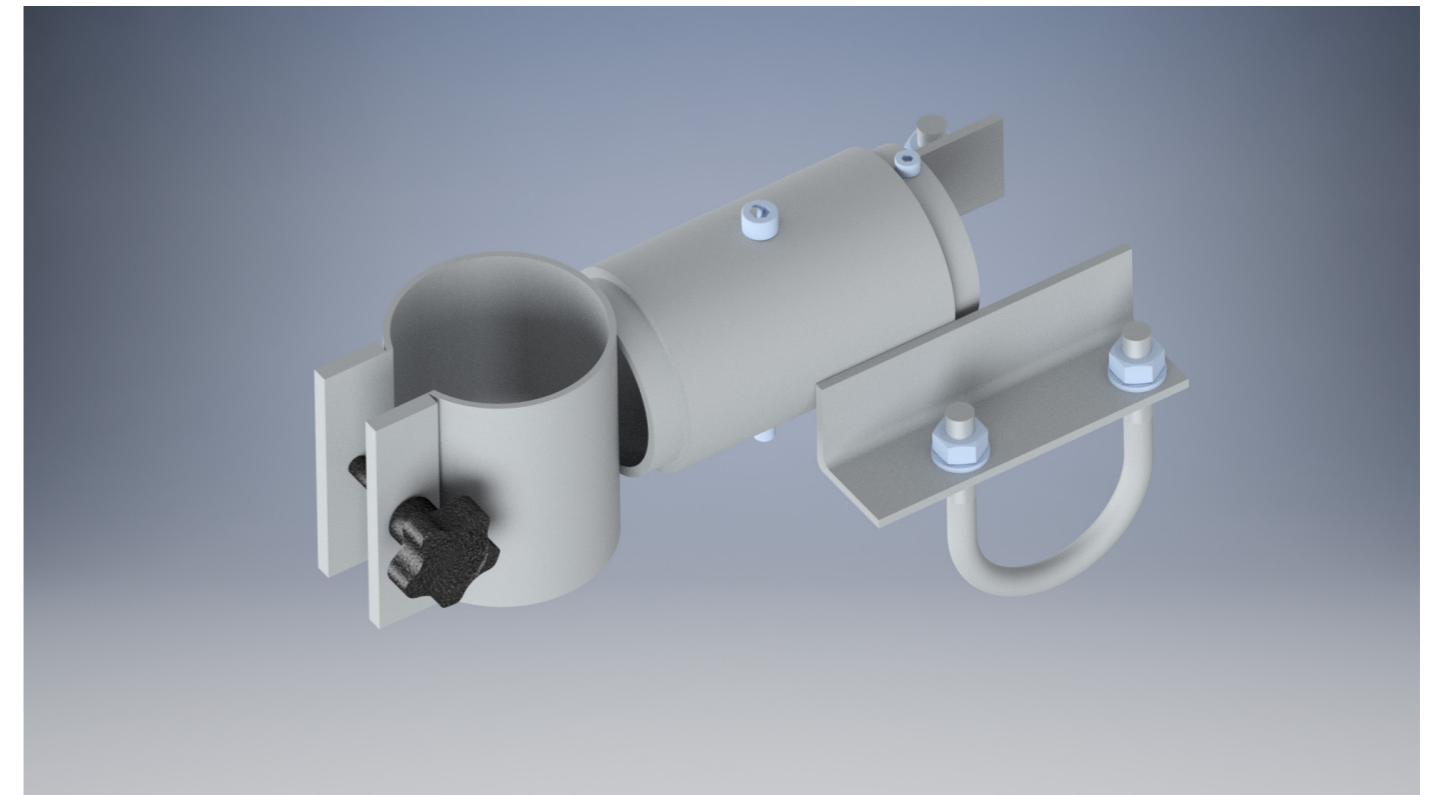
FAMILY CODE: FC

DESCRIPTION: It is suitable for our immersion support type SO and ST, with dimension of:
D32-PN16
D40-PN16
D50-PN16
D63-PN16
D75-PN16

The articulated support is able to rotate and tilt around the X and Y axis, allowing a remarkable possibility of configurations.

MATERIALS: All in SS316L

DIMENSION: Customized



We analyze

Cleaning system

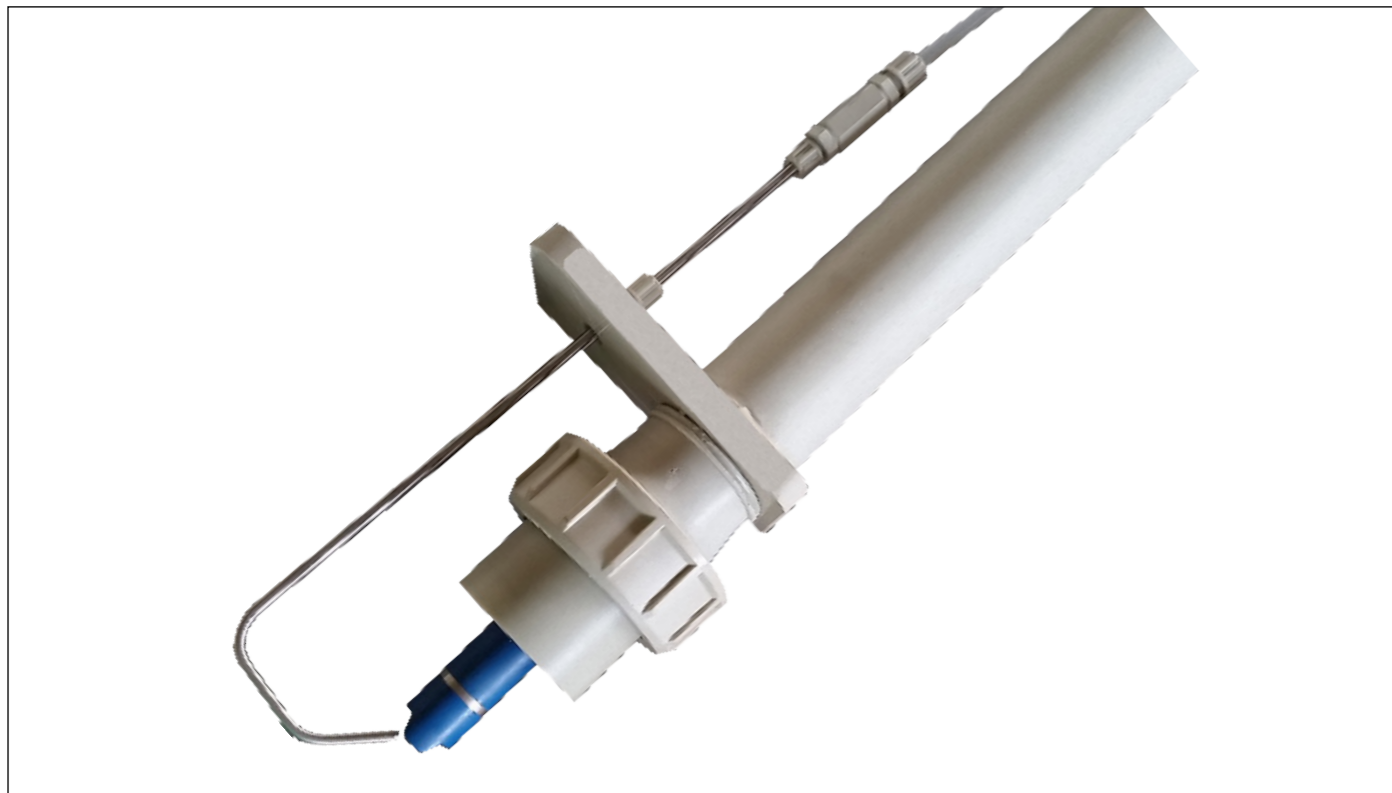
FAMILY CODE: CL

DESCRIPTION: The cleaning system it can be adapted to all immersion probe holders. The basic type is composed by: Sprinkler mounted on the adjustable plate and manual valve.

It can be modified to customer requirements with: electrical box with fuses or Electrical explosion proof box switch timer and electrical valve. PLC to frozen the I/O during the washing cycle.

MATERIALS: Fixing plate in PP
Washing sprinkle: SS316L

DIMENSION: Standard



Sunshade

FAMILY CODE: SR

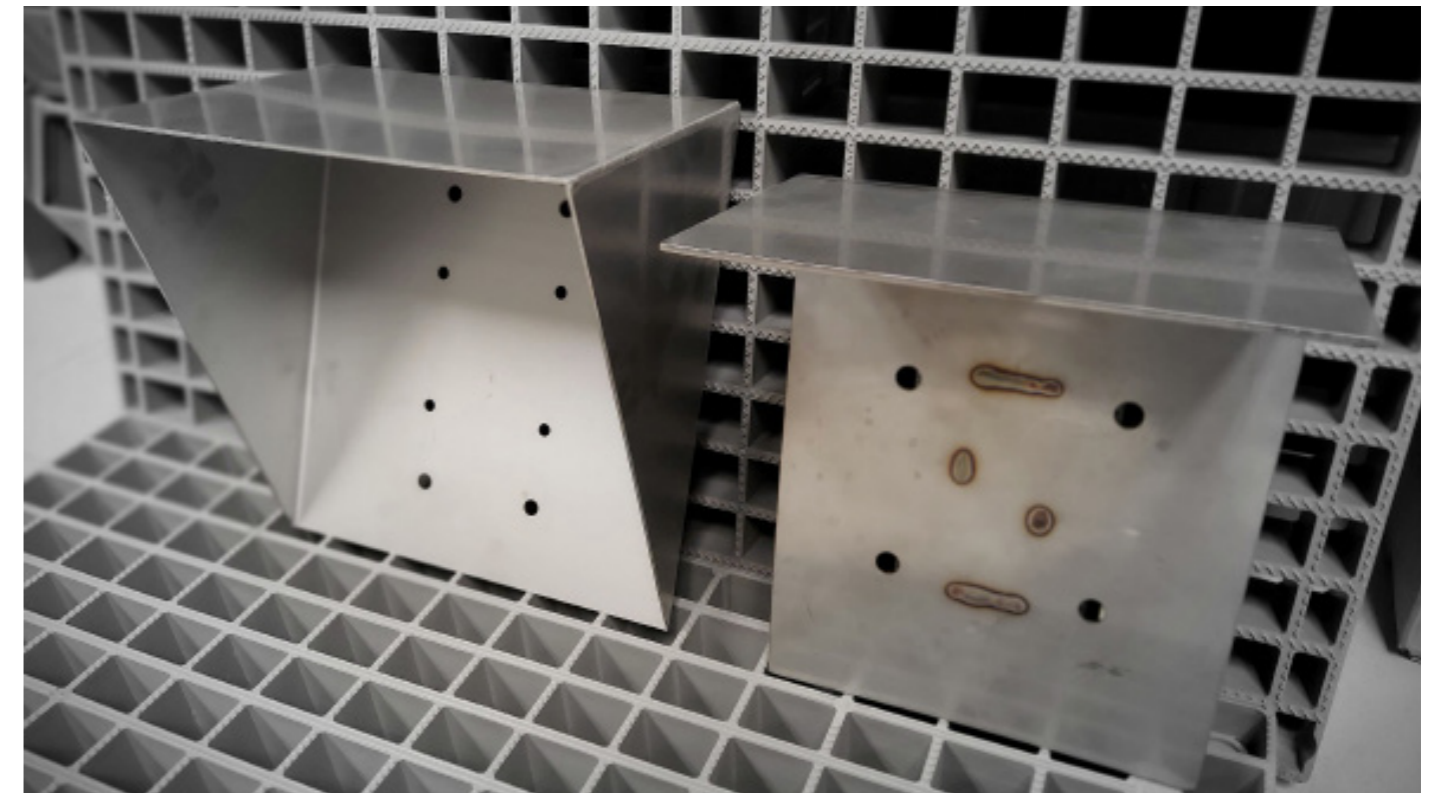
DESCRIPTION: The sunshade maintains a weather protection (sun, rain, ecc) It can be for analyser and cleaning valve

It can be removable and fixed with screw or welding to support.

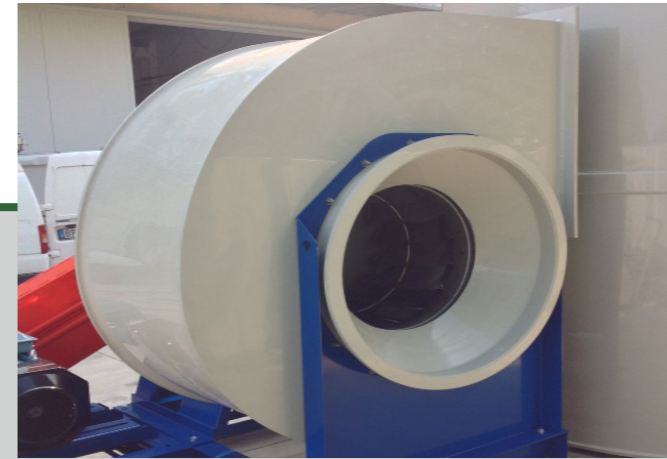
This sunroof can be also explosion proof.

MATERIALS: Standard SS316L
Also available in PP

DIMENSION: Standard type for analyzer:
Height: 250mm, 500mm, 750mm - Depth: 150mm
Also available customized



We analyze



We protect

EQUIPMENT FO WATER, ACID AND GAS TREATMENT

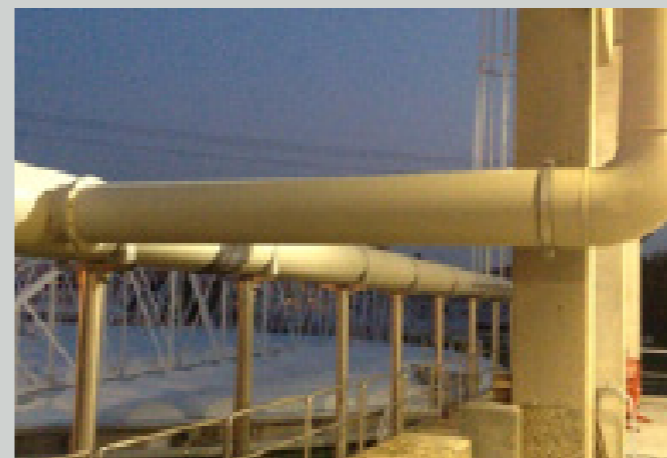
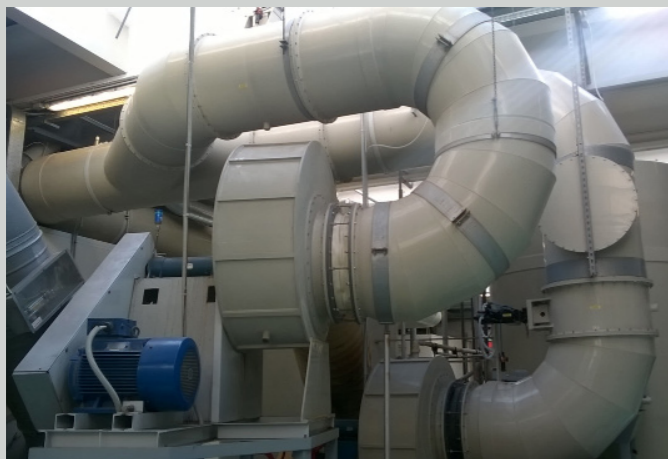
1. FUME TREATMENT

- Scrubber
- Ventilation and suction piping



2. WATER, ACID AND GAS TREATMENT

- Mixer and tank
- Dosing system
- Waste water treatment and recovery
- Piping
- Security and containment tank
- Welding TIG, MAG and plastic material



Scrubber

FAMILY CODE: SCR

DESCRIPTION: The SCR** is for the fumes extraction and treatment for deployment for the formation room of battery producer.

**The number after the denomination are the cubic meter per hour

This scrubber is normally installed in or close to the plant where there is the fume to be extract. It is complete with an independent ventilator fan, water pump, level controls and electrical control panel. The SCR** is composed of three principal parts.

- The upper part contains the drop separators and is used to separate the suspended drops in airflow before the clean air is expelled into the ambient.
- The second part, located below the drop separator compartment, is where water is sprayed onto the air being sucked up towards the fan.
- The third area is located at the bottom and is where the water is stored and pumped back up to filter the air.

MATERIALS: Manufactured entirely in PP and reinforcements where necessary

DIMENSION: Customized (based on fume q.ty)



Fume treatment

Ventilation and suction piping

FAMILY CODE: VSP

DESCRIPTION: orsaiec design and produce each type of piping useful for air circulation and treatment, that can be connect to the air system treatment.

Layout and setup as per customer requirements

MATERIALS: PP, PPS, PVC

DIMENSION: The diameters available for the ventilation piping are from 50 mm to 1200 mm. Other measures or non-standard requirements can be satisfied by making the components directly from semi-finished products.



Mixer and tank

FAMILY CODE: M (mixer) - T (tank)

DESCRIPTION: The mixers and tanks that orsaiec realized are made with project materials compatible with the chemical products in use.

Mixers come in various sizes and can be used in a wide range of industries. Our mixing tanks start as small as 50L but can go up to 10.000L or even bigger.

The mixers are complete with agitator and switch level.
The tanks are complete with vent for filling phase, sleeve for min/max level, inspection.

The tanks and mixers can be integrated with
Control panel
Loadcells
Several finishing levels
Piping line for load and unload chemicals/acids/liquids

MATERIALS: The mixers in INOX 316L, INOX 304 and FE can be painted.
Tanks: PP, PE, PVC

DIMENSION: Customized



Water, acid and gas treatment

Dosing system

FAMILY CODE: DSV

DESCRIPTION: orsaiec realize each type of dosing system, suitable with the application required (chosen based on liquid or acid that can be in contact)

From a concentrate acid or liquid, orsaiec thanks to his dosing system are able to create diluted liquid/acid. The system is all in automatic, without any manual operation. It don't works by a batch preparation, but it works just by an end user consumption.

Offering great performance and extreme versatility, they are fully configurable and adaptable to any filling, dosing and automation application in any industrial sector, from bottling plants to dosing large quantities of material.

the dosing system is composed by two pumps, a collector and if it is necessary a plate exchanger to refresh the final liquid/acid.

MATERIALS: PVDF, PP, PVC, INOX

DIMENSION: Customized



Waste water treatment and recovery

FAMILY CODE: WTR

DESCRIPTION: Piping and Tube Collectors for:
Waste Water Treatment
Civil Water Distribution
Chemical transportation and dosing

MATERIALS: PP, PPS, PVC-U, PVC-C, PVDF

DIMENSION: As per requirement



Water, acid and gas treatment

Piping

FAMILY CODE: PIPING

DESCRIPTION: orsaiec starting from the customer request can project and realize each type of piping in plastic material and SS316L.

orsaiec thanks to the knowledge of the different materials, it is able to offer complete solutions.

The plastic piping, can be integrated with any type of components/accessories (valves, nipples, sleeve, elbow, etc) by weldin or butt fusion or socket fusion.

The stainless steel piping ca be integrated with any type of components/accessories (valves, nipples, sleeve, elbow, etc) by threaded or welding.

orsaiec realizes only customized piping.

MATERIALS: PP, PVC-U, PVC-C, PVDF, PTFE
SS304, SS316, SS316L

DIMENSION: Customized



Security and containment tank

FAMILY CODE: STK (Security tank) - CTK (Containment tank)

DESCRIPTION: **Security tank:** Perimetrical structure and the bottom realize with plastic sheets, suitable with the application required (chosen based on liquid or acid that can be in contact). On the bottom are welding some pipes with a frame, that are the bearing structure, where is installed the walkable grid.
Accessories: liquid level sensor, pumps for liquids extraction.

Containment tank: Perimetrical structure and the bottom realize with plastic sheets, suitable with the application required (chosen based on liquid or acid that can be in contact).
Accessories: liquid level sensor, pumps for liquids extraction.

All our tank solution are realized as per customer request, in dimension and material type.

MATERIALS: PP, PVC, PE, PVDF

DIMENSION: Customized



Welding TIG, MAG and plastic material

FAMILY CODE: WELDING

DESCRIPTION: Orsaiec technicians are able to work all type of plastic material, pipe, heets and fittings, to realize a complete system.

Plastic welding type:

- Butt Fusion
- Socket Fusion
- Extrusion welders
- Hot-air welders

The weldings of plastic pipes are certified as per international Norm:
UNI EN13067, BS, DVS2207

INOX welding type:

- TIG
- MAG

The weldings of INOX 316 pipes are made by certified welders as per standard 141/TIG (ISO 14343-A W 19 12 3 LSi) - 135/MAG (ISO 14343-A G 19 12 3 LSi)

MATERIALS: Plastic material: **PP, PVC-U, PE, PVDF**
Stainless steel: **304, 316, 316L**

DIMENSION: Customized



We protect

Water, acid and gas treatment

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