



THE EXCELLENCE IN **FILTRATION**, BY NATURE



WASHING  
PRODUCT RANGE



**matec**®  
machinery technology

**WATER TREATMENT & SILT MANAGEMENT**



## FROM WASHING TO FILTRATION WITH MATEC, STEP BY STEP TO GREAT RESULTS

Matec is a well-established leading company in the designing, manufacturing and installation of purification and filtration plants.

After over 10 years of experience and hundreds of washing plants we have started our dedicated line of washing systems, to offer our customer a solution which has been conceived to work with our purification and filtration plant. Thus, the best result is guaranteed.

The creation of systems which harmonize cutting-edge industry and the environment has always been our main objective.

As a matter of fact, our machines, from the washers to the filter press, comply with regulations in terms of water and materials.



Searching for innovation, to offer customers complete and efficient plants in the aggregates, recycling, sand production and mining sectors.

100% Made in Italy products to be assembled in our headquarters in Massa, in one of our branches worldwide (USA, Brazil and India) or on-site, thanks to the work of a great team of engineers and technicians.

In addition, Matec will offer you pre-sale assistance for your customized plant, perfect for your needs, and after-sale assistance thanks to global dealer network, because we believe in working with local people to best serve our customers, wherever they are.

Our machines can be stationary or modular ones, according to the requirements of the plant.



# WE GIVE YOU MORE



# NEW VALUE FROM WASTE



## AGGREGATES

Matec has developed a wide knowledge in the aggregates sector, as our machines for the water treatment were born to work with aggregates, materials which are not easy to handle. This is why we created a range of machines for the washing of aggregates, to manage the whole process and guarantee the best output both from the washing system and the water treatment plants.



## INDUSTRIAL SANDS

We look forward to the industrial sand production sector, as the demand of silica materials is constantly increasing. A treatment which can reduce contaminants and precision in the separation of material are the requirements we face from our customers and that our machines are able to fulfill.



## RECYCLING

Recycling, C&D recycling especially, is a fast-paced growing sector. The concern for re-using materials to respect the environment and comply with laws has led to a development of technologies, systems and plants for which Matec can exhibit great experience. In addition, the recovery of resources has always been one of the key objective of our business since we started as Matec back in 2003.



## WATER MANAGEMENT

Matec is already a leader in the water management system with over 1800 installations which help customer save and recover water all across the world. Through our filterpresses and our thickeners, you will be able to reuse up to 95% of the water. Cutting down costs is essential for a washing system and our equipment will deliver it, maximizing the return of your plant.

## SANDTEC

Sandtec is designed to recover fines and ultra-fines present in the slurry coming from aggregates washing plants. Compactness is one of the key feature of SandTec, which has been conceived for uses in which the feeding material oversize is minimum. It guarantees the recovery of about 90% of fines over 75 microns, the almost total elimination of clay and lime impurities, the recovery of materials with a residual moisture below 15% and the reduction of the solids present in the discharge water with reduction of materials to be treated in the water treatment plants.

### APPLICATION:



MODEL	WASTE WATER FLOW (m <sup>3</sup> /h)	MAX SAND OUTPUT (t/h)	POWER (kW)
SH-035-180	180	35	22+1.6x2
SH-045-180	180	45	30+2.2x2
SH-065-250	250	65	30+2.2x2
SH-045-300	300	45	37+2.2x2
SH-065-300	300	65	37+2.2x2
SH-080-300	300	80	37+3.6x2
SH-100-300	300	100	37+3.6x2
SH-120-350	350	120	45+3.6x2
SH-120-500	500	120	55+3.6x2
SH-150-500	500	150	55+6x2
SH-150-600	600	150	75+6x2
SH-200-600	600	200	75+7x2
SH-150-750	750	150	90+6x2
SH-200-750	750	200	90+7x2
SH-150-850	850	150	90+6x2
SH-200-850	850	200	90+7x2
SH-250-900	900	250	100+8x2
SH-300-950	950	300	110+8x2
SH-350-980	980	350	140+10x2

### WE GIVE YOU MORE:

- ✓ Up to 2 qualities of sand
- ✓ VFD (to vary the pump speed)
- ✓ Stainless Steel or Galvanized Steel option
- ✓ Mini Hydrocyclones (Desilters)



- ✓ Max recovery of material through silt removal
- ✓ Easy to assemble and compact
- ✓ Easy maintenance
- ✓ Very low residual water content
- ✓ It fits other washing equipment perfectly



THE BEST QUALITY SAND

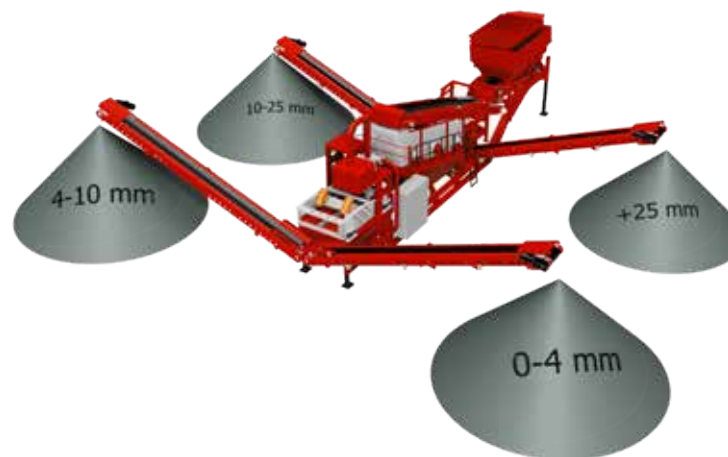
## AGGRETEC

AggreTec is the quick to install solution for sectors such as aggregates, recycling, remediation and mining.

The system is highly portable. Ideal for working in construction and demolition sites, AggreTec proves to be equally effective in applications with raw material

MODEL	CAPACITY (TPH)
AGT-50	50
AGT-100	100
AGT-150	150
AGT-200	200

### APPLICATION:



### WE GIVE YOU MORE:

- ✓ 100% Mobile
- ✓ Selection of 5 materials
- ✓ Stainless Steel option





- ✓ Up to 4 grades of aggregate and 1 or 2 grades of sand
- ✓ Modular Design, pre-plumbed with Single connection point for easy and fast set-up
- ✓ Completely pre-wired with simple PLC control panel
- ✓ Overband magnet on feed conveyor for removal of ferrous metals
- ✓ Rubber lined pumps, cyclones and transfer points for extended plant life
- ✓ Transportable as single piece or in different containers



**YOUR MOBILE SOLUTION TO RECOVER AND SELECT**



## SCREENTEC

Gravel, coal, crushed stone, slag, recycled materials, concrete, iron ore and silica glass, the ScreenTec can cover all these applications with high efficiency. The screen parts are easy to mount and assemble and make the ScreenTec a suitable match for the other washing machines. Custom projects are the key to Matec success, thus we can offer solutions which perfectly fit your needs, both in terms of production and space.

You can install 2 or decks and choose among several media options.

### APPLICATION:



MODEL	CAPACITY (TPH)	POWER (KW) 2 decks	POWER (KW) 3 decks	POWER (KW) 4 decks
VS-150-400	30-100	7.5	11	11
VS-150-500	50-200	15	15	18.5
VS-180-500	50-250	18.5	18.5	22
VS-180-600	50-280	18.5	18.5	22
VS-210-600	90-300	18.5	22	30
VS-210-700	100-300	22	30	37
VS-240-700	110-350	37	45	-
VS-240-800	130-400	45	55	-

### WE GIVE YOU MORE:

- ✓ Galvanized steel option
- ✓ Stainless Steel option



- ✓ Up to 4 types of washed aggregates and 1 or 2 grades of sand
- ✓ Low maintenance for high efficiency
- ✓ Easy replacement
- ✓ Custom choice for meshes and decks
- ✓ Easy assembling and mounting



EFFICIENT LONG-LIFE SOLUTION

## BUCTEC

The bucket wheels, sand recovery units, are used for the recovery of sands coming from aggregate washing plants.

They are mainly composed of a slurry storage tank in steel inside which a wheel with buckets in perforated steel plates is fitted. Thanks to its rotating motion, it can recover the sand, partially separating it from the water, and carry it through to the discharge outlet.

The bucket wheel can have one or two Archimedean screws that carry the sands through to the centre of the storage tank. The transmission is by means of a reduction gear unit driven by an electric motor.

### APPLICATION:



MODEL	WHEEL DIAMETER (mm)	MAX CAPACITY (tph)	POWER (KW)
BT-200-030	2000	30	2
BT-200-050	2000	50	3
BT-240-080	2400	80	4
BT-240-110	2400	110	5.5
BT-300-160	3000	160	11
BT-400-220	4000	220	7.5x2
BT-500-400	5000	400	11x2

### WE GIVE YOU MORE:

- ✓ 1 or 2 Wheels
- ✓ Galvanized Steel option
- ✓ Stainless Steel option





- ✓ Up to 2 grades of sand
- ✓ Simplicity
- ✓ Maximum versatility
- ✓ Complementarity
- ✓ Low running costs
- ✓ Low maintenance



RELIABILITY THROUGH SIMPLICITY

## SCRUBTEC

C&D recycling is the application in which the Scrubtec finds its best application. Low running and maintenance costs and the highly customizable features of this equipment can be listed among the most appreciated features of the Scrubtec. Its suitability for the C&D sector can be translated into high performances when it comes to scrubbing aggregates, lights and other floating materials.

### APPLICATION:



MODEL	MAX CAPACITY (tph)	POWER (kW)
LW-080-500	75	2x18.5
LW-095-700	150	2x37
LW-120-700	220	2x45

### WE GIVE YOU MORE:

- ✓ Anti-wear blades
- ✓ Galvanized Steel option
- ✓ Stainless Steel option



- ✓ Up to 4 grades of washed aggregates
- ✓ Modular design for easy installation
- ✓ 100% Automatic
- ✓ Easy to transport
- ✓ Low running costs



THE EXPERIENCE TO DELIVER RESULTS

## ATTRITEC

The AttriTec is used to remove effectively the pollutants on the surface of the sand contained in the contaminated slurry by the action of scrubbing (friction). The friction is generated by agitators inside the machine. The machine has two or more cells according for the contact times needed to achieve the optimal separation. Usually they are used before the hydrocyclone process.

### APPLICATION:



MODEL	VOL m <sup>3</sup>	POWER (KW)
2 CELLS	100	5.5x2
	220	7.5x2
	270	9.2x2
	650	15x2
	1300	22x2
3 CELLS	100	5.5x3
	220	7.5x3
	270	9.2x3
	650	15x3
	1300	22x3

### WE GIVE YOU MORE:

- ✓ 2 or 3 cells
- ✓ Galvanized steel option
- ✓ Stainless steel option



- ✓ Intensive treatment for slurry
- ✓ Pollutants removal
- ✓ Robust design
- ✓ Wear-resistant



AIMING AT SUSTAINABILITY

## FILTER PRESS

Matec offers four ranges of filter presses: ACQUAE, IGNIS, TERRAE, MAGNUM. Our machines can handle all kinds of capacities and flow rates, and are designed for heavy duty projects.

Automation, top brands, 24-month warranty, HPT and TT2 Fast are what Matec can offer compared to our competitors.

Matec develops filter presses for the filtration of waste water and slurry in every sector, such as mining, aggregates, marble and granite, concrete, chemical industry, ceramics, glass and others.

### THE SECRET OF MATEC FILTER PRESS

What most of competitors are unable to offer their customers and the main ingredient of the success of Matec filter press is the high pressure technology. Having developed great experience by working in the aggregates and clay sectors, which present some of the most difficult slurries to treat and require high pressure to obtain great results, Matec can state our filter press will handle any slurry in any sector.

Our pressures (16 to 21 bar) can't be matched by anybody, because they need better quality, better design and better components.

### THE FILTRATION PROCESS

How does the filter press carry out the filtration process? The feeding pump injects the slurry into the filter press from the feeding head. The chambers created by the plates are filled up with the slurry, the cloth (specifically developed for each material) and the high pressure dry the cakes, faster and better. The clean water is discharged into drainage gutters, ready to be reused, and the cakes can now be disposed of easily.

### WHY A FILTER PRESS

A filter press is the best way to solve your waste water problems, and by installing a MATEC one you will be able to SAVE MONEY and MAXIMIZE THE RETURNS – because our machines use NO PEOPLE and NO FLOCCULANT

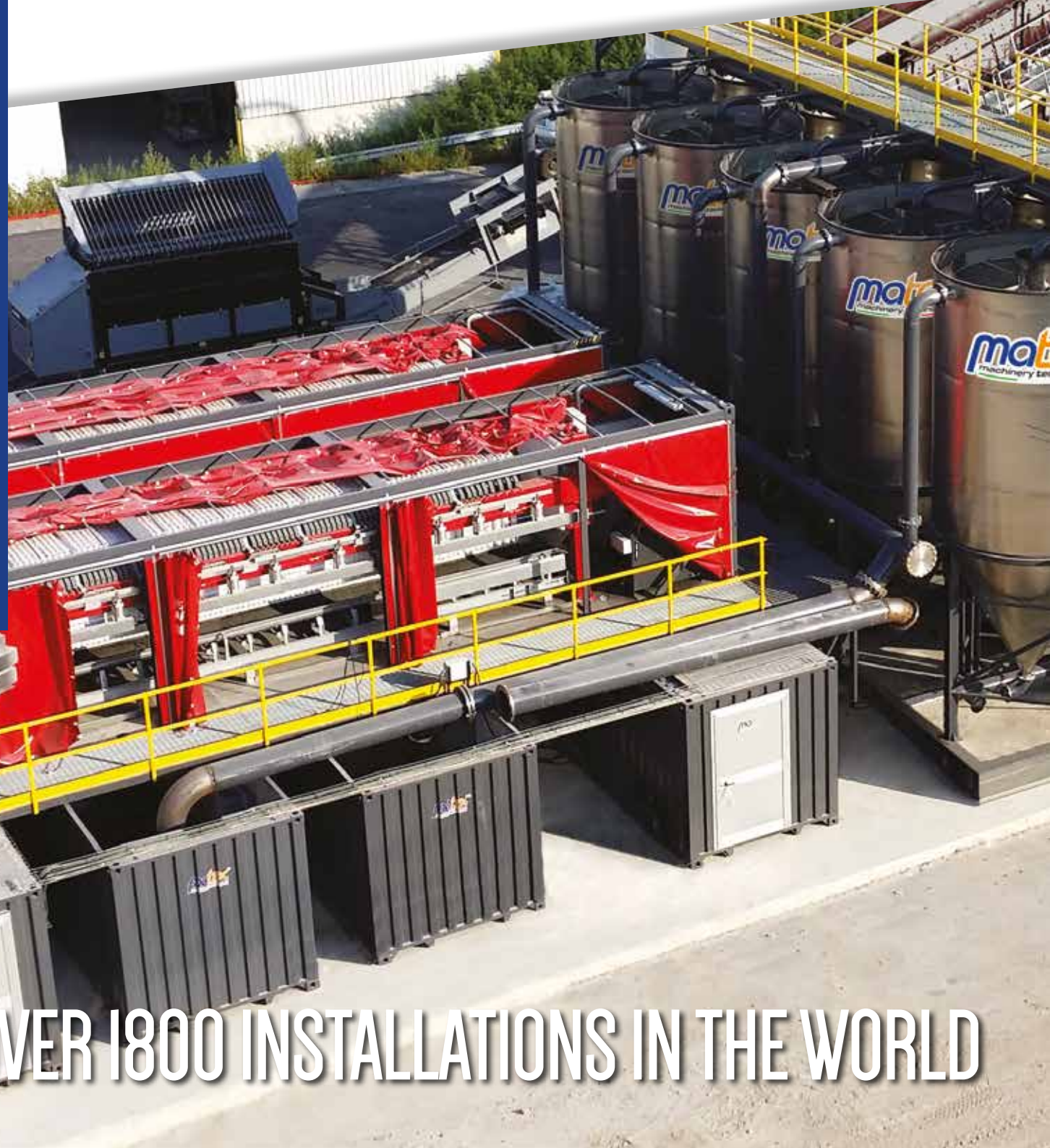
### APPLICATION:





- ✓ 100% Made in Italy;
- ✓ Assembled also in North America;
- ✓ HPT (High Pressure Technology);
- ✓ Gasser Shakers;
- ✓ Real automatic washing;
- ✓ Filter cloths easy to replace;
- ✓ Open design to identify cloth damages;
- ✓ PLC with remote control and assistance;
- ✓ Variable number of plates;
- ✓ Different models for the best technical/economical solution.

Customize your filter press system  
to your needs.



OVER 1800 INSTALLATIONS IN THE WORLD



## THICKENER

The clarification process is essential to a wastewater treatment plant. Unlike the filtration carried out by the filter press, the clarification is a continuous process that separates water from the solid particles suspended into it.

Matec can provide customers with any type of decanters, by designing and manufacturing vertical and horizontal ones made of stainless steel or concrete.

### SILOS DEEP CONE – VERTICAL THICKENER

The vertical decanters are based on the principle of static decantation and the natural precipitation of suspended solid particles. During decantation occurring inside Matec decanters, the solid particles (the mud) sink down to the bottom of the structure, while the clean water overflows into the drainage system at the top and it is discharged in a dedicated tank or pit (clean water tank).

The sedimentation of the sludge at the bottom of the silo is speeded up by using a polyelectrolyte (flocculant), while the custom design and dimensions create a water column which presses over the sludge, and guarantee the required thickness of the mud. The shape of the Matec vertical decanter, the right proportion between the cone and the upper cylinder, has been developed thanks to our experience in the filtration of waste water. The cone's inclination degree perfects the thickening of the mud and the upper cylinder can be used also an extra stocking space.

### MUD SENSOR

A pressure sensor can be placed on a membrane at the bottom of the cone of the silo. The discharging valve opens only when the required density is reached

### HORIZONTAL RAKE THICKENER

The horizontal decanters are ideal for the largest water flows.

They have a limited height and are provided with an upper sludge thickening system.

Horizontal decanters are made of stainless steel in their middle and large versions, while the largest ones are made of concrete.

The decantation principle is more or less the same occurring in vertical decanters. The rake mechanism stirs the sludge through its rotation movement pushing it to the bottom.

The discharging is automatic and adjusted to the rake effort, in order to reach the desired thickness. Sensors will give the opening input to the thickener discharging valve and the sludge will go through, to the Bifang.

### WHEN A HORIZONTAL THICKENER

24 meter width for the top of the range horizontal rake thickener by Matec. We usually suggest this typology of clarifier when the needed vertical decanters would exceed a 9 meter height.

### APPLICATION:





✓ Matec uses stainless steel to guarantee its clarifiers a long-lasting working life.



**THE BEST CLARIFICATION EVER**



## THE EXCELLENCE IN FILTRATION, BY NATURE

MATEC specializes in the design and development of waste water purification and filtration plants. We work for many different industries, the most important are: mining, aggregates, gravel, sand, stone, ceramics and glass. Our mission is the customer's satisfaction. That is why we offer timely after-sale service, as well as before-sale advice to understand the real requirements of our potential customers.



[www.matecwashingsystem.com](http://www.matecwashingsystem.com)

[www.matecitalia.com](http://www.matecitalia.com)

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