

MATEC INDUSTRIES®

THE INDUSTRIAL EXCELLENCE IN ITALIAN MACHINERY BY NATURE



WASHING & CLASSIFICATION

THE WASHING REVOLUTION



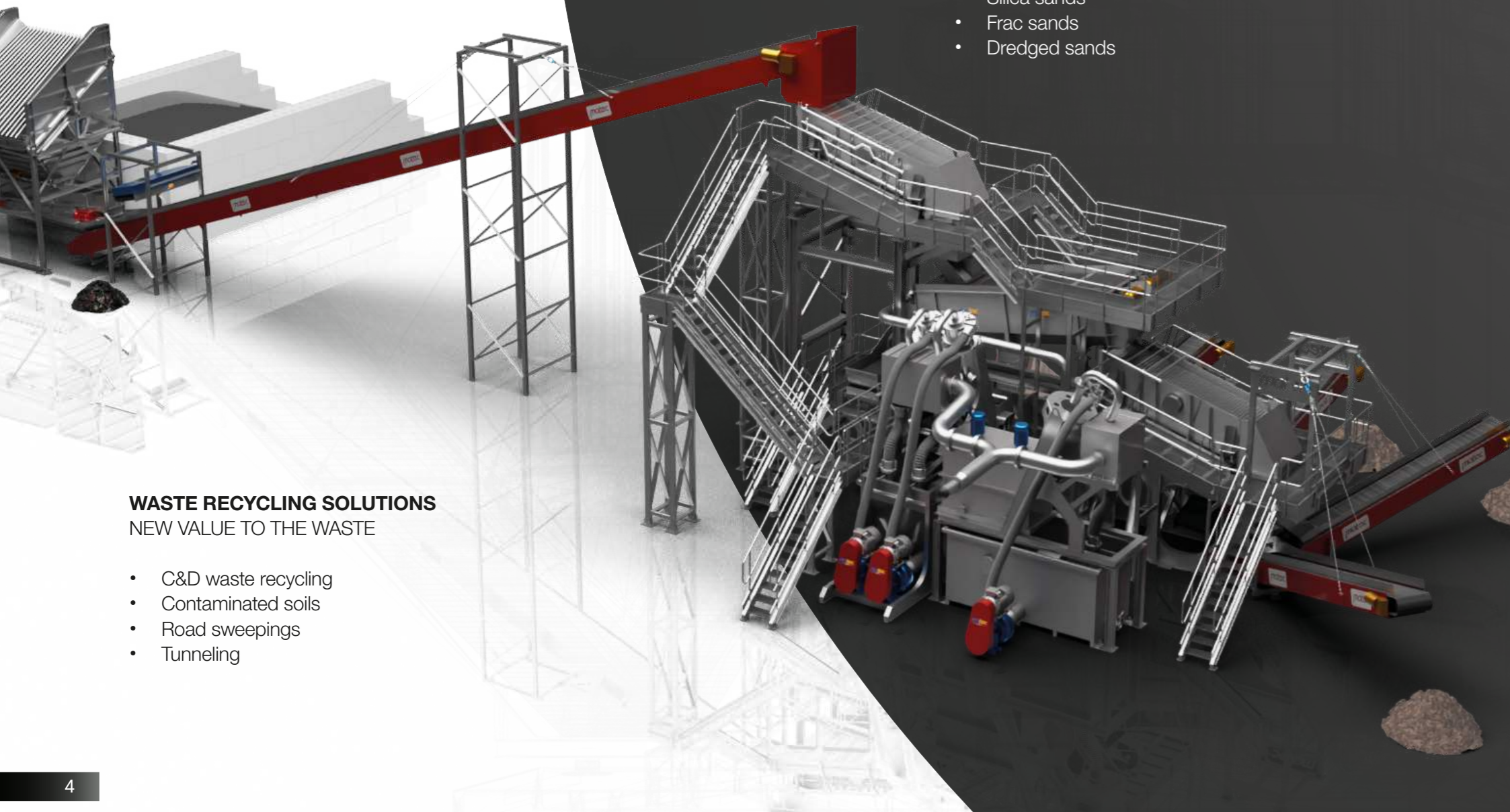
FROM WASHING TO FILTRATION WITH **MATEC**, STEP BY STEP TO **GREAT RESULTS**

Matec is a well-established leading company in the designing, manufacturing and installation of purification and filtration plants. After over **20 years of experience** and hundreds of 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** 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.

FIELDS OF APPLICATION



HIGH VALUE TO THE NATURAL RESOURCES

- Sand and gravel
- Crushed stones
- Silica sands
- Frac sands
- Dredged sands

WASTE RECYCLING SOLUTIONS NEW VALUE TO THE WASTE

- C&D waste recycling
- Contaminated soils
- Road sweepings
- Tunneling



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-pace 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 TREATMENT

Reusing 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.



THE ULTIMATE WASHING SOLUTION



AGGRETEC

SEMI-MOBILE SCREENING AND WASHING UNIT

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

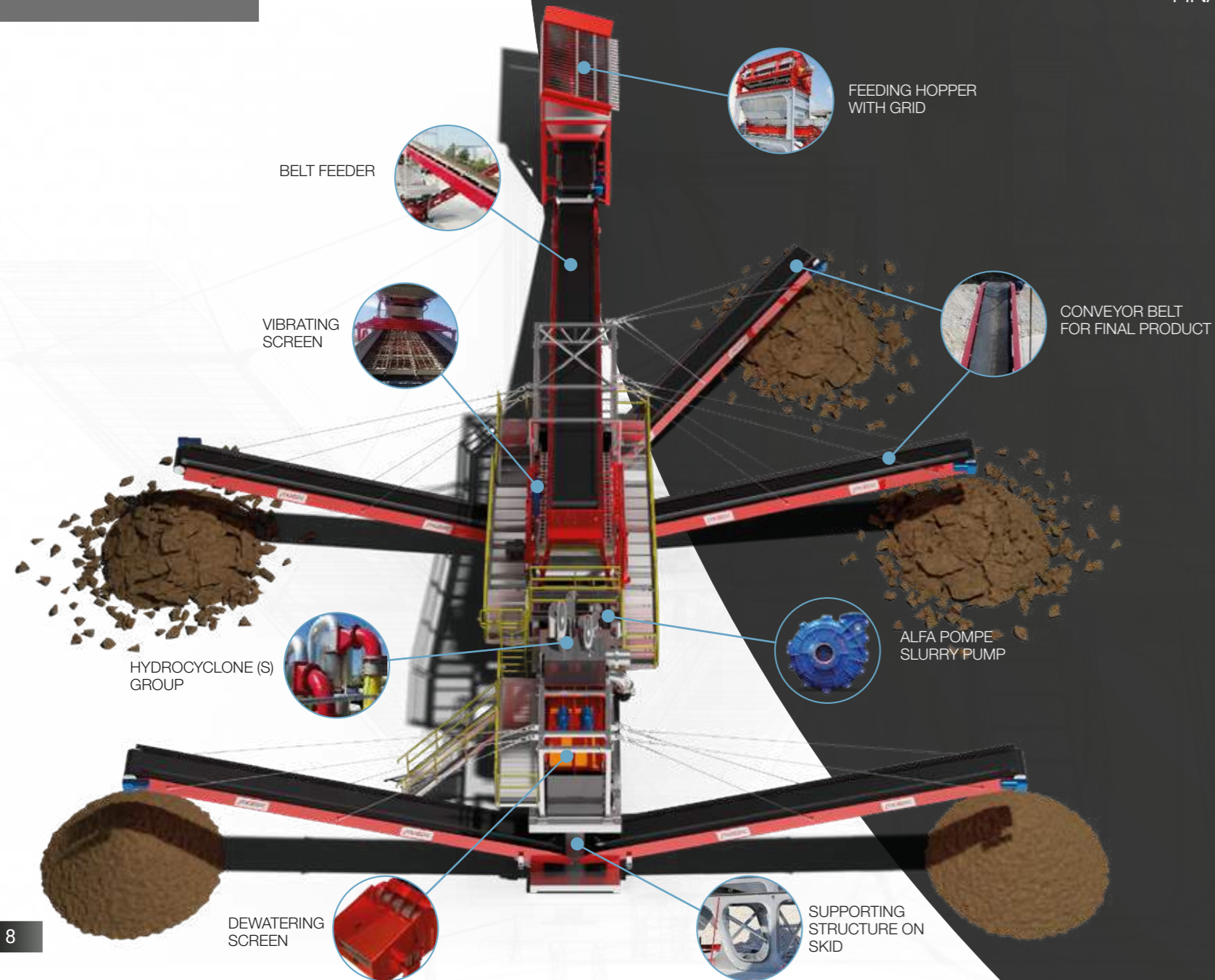
Since the system is semi-mobile, it becomes highly portable and also ideal for working in construction and demolition sites, Aggretec proves to be equally effective in applications with raw material.

Imagine to have a **Sandtec**, a **Screentec**, a feeding hopper and 3, 4 or more conveyors in a **single machine**.

- UP TO 4 GRADES OF AGGREGATE AND 1 OR 2 GRADES OF SAND
- MODULAR DESIGN, PRE-TESTED
- COMPLETELY PRE-WIRED WITH PLC CONTROL PANEL
- RUBBER LINED PUMPS, CYCLONES AND CHUTES/PIPES FOR EXTENDED PLANT LIFE
- TRANSPORTABLE



AGGRETEC COMPOSITION



GRANULOMETRY OF FINAL AGGREGATE PRODUCTS



- Clay 0 - 4 µm
- Silt 4 - 75 µm
- Fine Sand 75 µm - 2 mm
- Coarse Sand 2 mm - 4 mm
- Fine Gravel 4mm - 8mm
- Medium Gravel 8 - 16 mm
- Coarse Gravel 16 - 32 mm

SPECIFICATION



OPTIONAL

- Overband magnet on feed conveyor
- Scalper screen on the hopper
- Tank and hydrocyclones in aisi Stainless steel
- Polyuretan panels
- Siemens tablet hmi

COMPONENT	AGGRETEC AGT 50		AGGRETEC AGT 100		AGGRETEC AGT 150		AGGRETEC AGT 200		AGGRETEC AGT 250	
		POWER (kW)		POWER (kW)		POWER (kW)		POWER (kW)		POWER (kW)
Hopper with fix grid and hydraulic unit	8 m³ capacity	4	8 m³ capacity	4	10 m³ capacity	4	10 m³ capacity	4	10 m³ capacity	4
Belt feeder Width Lenght (mm)	W 650 L 3900	4 + VFD	W 800 L 3900	5.5 + VFD	W 1000 L 3900	5.5 + VFD	W 1000 L 3900	7.5 + VFD	W 1000 L 3900	9 + VFD
Main conveyor belt Width Lenght (mm)	W 650 L 15000	4 x 2	W 800 L 15000	4 x 2	W 1000 L 18000	5.5 x 2	W 1000 L 18000	7.5 x 2	W 1000 L 21000	9 x 2
Three decks inclined vibrating screen Width Lenght (mm)	W 1200 L 4000	11	W 1500 L 4000	11	W 1500 L 5000	15	W 1800 L 5000	18.5	W 1800 L 6000	22
Two Sands dewatering screen Width Lenght (mm)	W 1200 L 3000	4 x 2	W 1500 L 3000	5.5 x 2	W 1800 L 3000	6 x 2	W 1500 L 4000	7 x 2	W 1800 L 4000	7.5 x 2
Slurry centrifugal pump for coarse sand	Alfa WP 4/3	22 + VFD	Alfa WP 6/4	30 + VFD	Alfa WP 6/4	37 + VFD	Alfa WP 8/6	45 + VFD	Alfa WP 8/6	55 + VFD
Slurry centrifugal pump for fine sand	Alfa WP 4/3	22 + VFD	Alfa WP 6/4	30 + VFD	Alfa WP 6/4	37 + VFD	Alfa WP 8/6	45 + VFD	Alfa WP 8/6	55 + VFD
Hydrocyclone for coarse sand	500 mm		600 mm		800 mm		800 mm		800 mm	
Hydrocyclone for fine sand	400 mm		500 mm		600 mm		600 mm		600 mm	
Storage conveyor belts (n°5) Width Lenght (mm)	W 500 L 10000	3 x 5	W 500 L 10000	4 x 5	W 650 L 10000	4 x 5	W 650 L 10000	4 x 5	W 650 L 10000	4 x 5
WASHING WATER (Lpm , m3/h)	2000 120		3000 180		4000 240		5000 300		6000 360	

* The data provided is indicative, the dimensions must be confirmed based on the granulometric curve of the material to be treated.

SCREENTEC

INCLINED VIBRATING SCREEN

Screentec is the machine that **washes** and **selects** materials as **gravel, coal, crushed stone, slag, recycled materials, concrete, iron ore** and **silica glass**, with high efficiency.

The screen parts are easy to mount and assemble and make the Screentec a suitable match for the other washing machines.

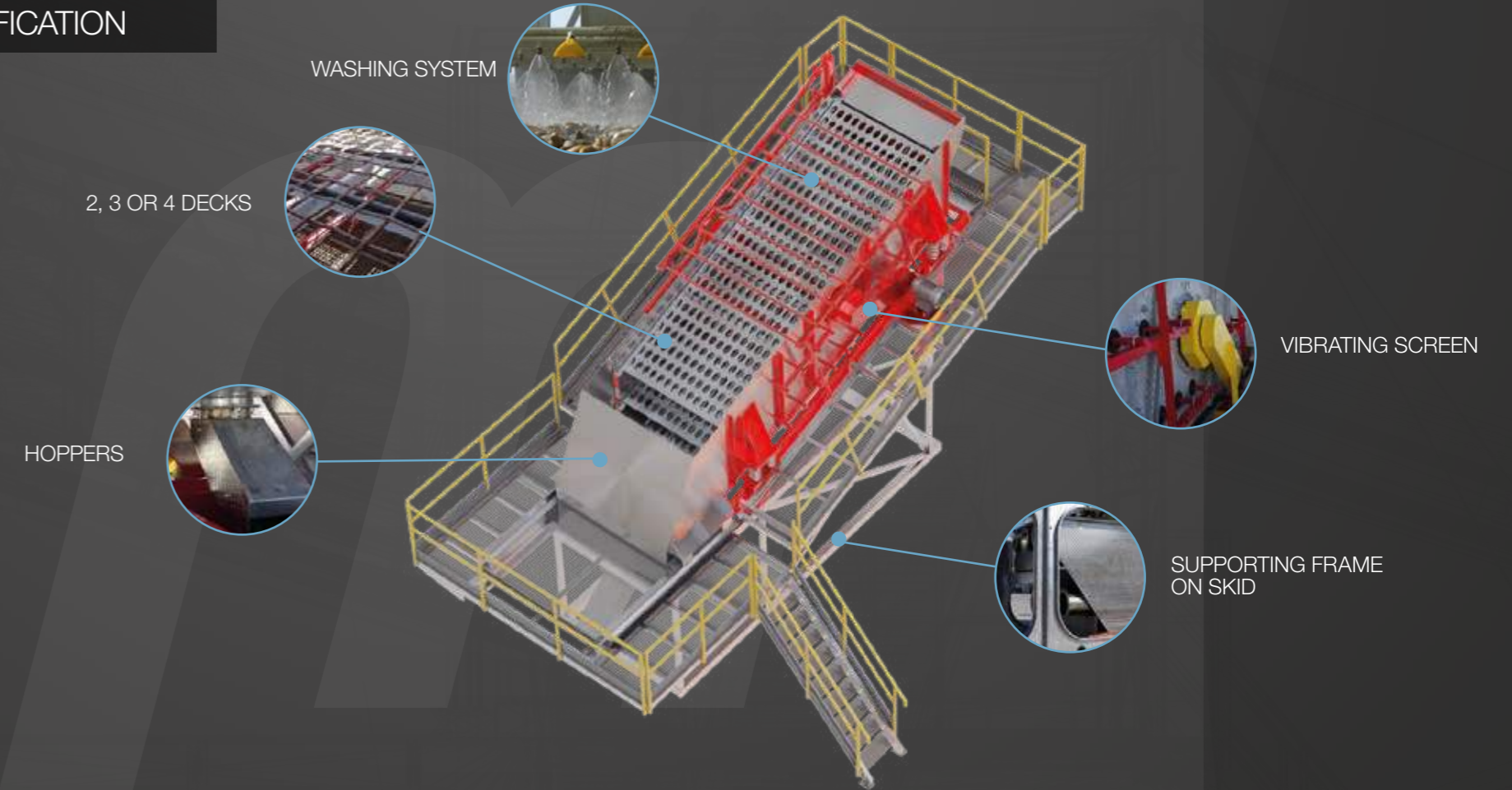
You can install 2, 3 or 4 decks and choose among several media options.

They mainly consist of a deck-holding body suspended on helical springs, a central protection guard for the shaft, a mesh tensioning system with a metal rod, a steel alloy shaft, grease lubricated bearings protected by a set of labyrinth flanges, adjustable eccentric weights for output variation, a rear feeding chute and hoppers bolted onto the front part of the machine for material discharge.

- 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



SPECIFICATION



MODEL	Deck width		Deck Length		Screening area		Deck Number	Capacity tph	Weight			Power					
	mm	feet	mm	ft	m2	ft2			Kg		Lbs		kW				
VS-150-400	1500	5	4000	13	6.0	65	2 3 4	30-100	2500	3000	3500	5500	6600	7700	7.5	11	11
VS-150-500	1500	5	5000	16	7.5	80	2 3 4	50-200	5000	6000	6500	11000	13200	14300	15	15	18,5
VS-180-500	1800	6	5000	16	9.0	96	2 3 4	50-250	6000	7000	7500	13200	15400	16500	18,5	18,5	22
VS-180-600	1800	6	6000	20	10.8	120	2 3 4	50-280	6500	7500	8000	14300	16500	17600	18,5	18,5	22
VS-210-600	2100	7	6000	20	12.6	140	2 3 4	90-300	7000	8000	9000	15400	17600	19800	18,5	22	30
VS-210-700	2100	7	7000	23	14.7	161	2 3 4	90-300	7500	8500	10000	16500	18700	22000	22	30	37
VS-240-700	2400	8	7000	23	16.8	184	2 3	110-350	9000		9500	19800		20900	37		45
VS-240-800	2400	8	8000	26	19.2	208	2 3	130-400	15000		18000	33000		39600	45		55

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SANDTEC

COMBINATION OF CYCLONE AND DEWATERING SCREEN FOR SAND PRODUCTION OR FINES RECOVERY

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 **95% 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.

- 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



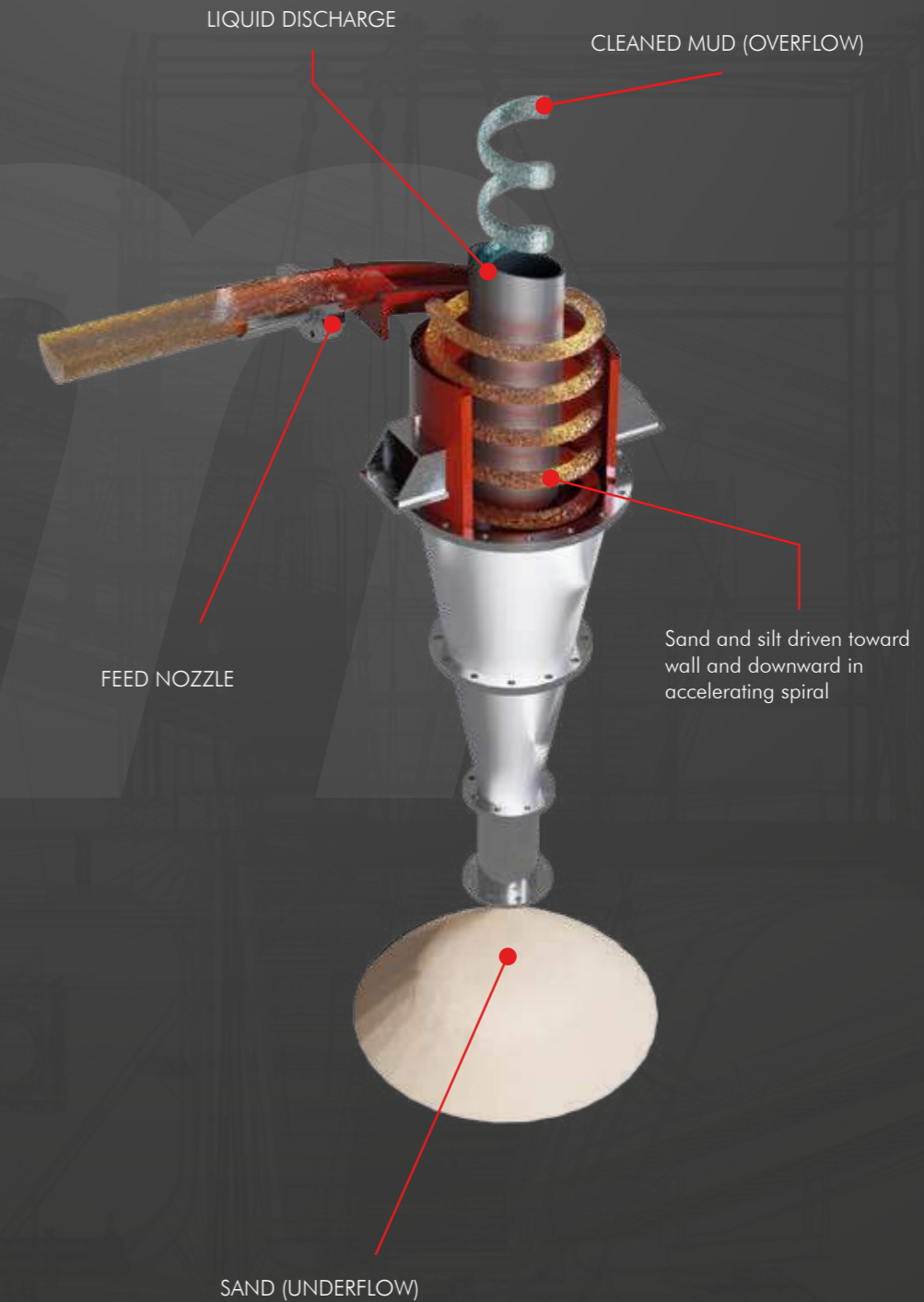
MATEC HYDROCYCLONE

Liquids and solids enter the unit and begin traveling in a circular flow.

This centrifugal action forces heavier particles downward in a spiral motion to the separation chamber.

The particles collect in this separation chamber and are purged from the system.

The filtered water is drawn to the separator's vortex and up through the outlet.



DEWATERING SCREEN

The dewatering screen working principle is that these screens are parts of larger systems meant to **reduce the water content of slurries**. First, the slurry is sent down a steep, declined screen surface.

As it passes over the screen, water falls from the mixture and forms a pool. Then, as the slurry progresses through the system, it goes back up an incline. The screens vibrate throughout the process to encourage more water to fall out of the solution.

A discharge weir is combined with these systems to absorb water while allowing the desired material – the fines – to continue passing through. Rinsing systems may be stationed along the pathway if a cleaner end product is needed. The dewatering system removes the water used during the rinsing just like it takes care of the water already inherent in the slurry.



SPECIFICATION



OPTIONAL

- Electric Panel on board
- Hydrocyclone pressure gauge
- Pit Hydrocyclone
- Tower Hydrocyclon
- Additional tamper-proof grids

MODEL	Waste water flow	Max sand output	Cyclones		Dewatering screen		Pump	Pump Power	DS Power	Weight	
	Lpm		tph	n°	Ø mm	width mm	length mm	Alfa Model	KW	KW	Kg
SH-012-075	75	12	1	300	600	1500	WP 3/2	11	1.1+1.1	1800	3960
SH-012-120	120	12	1	400	600	1500	WP 4/3	15	1.1+1.1	2200	4840
SH-020-120	120	20	1	400	900	1750	WP 4/3	15	1.6+1.6	4300	9460
SH-035-180	3000	35	1	500	900	1750	WP 6/4	22	1.6+1.6	5000	11000
SH-045-180	3000	45	1	500	1200	1750	WP 6/4	30	2.2+2.2	5700	12540
SH-065-250	4000	65	1	650	1200	2750	WP6/4	30	2.2+2.2	7300	16060
SH-045-300	5000	45	1	650	1200	1750	WP 6/4	37	2.2+2.2	6000	13200
SH-065-300	5000	65	1	650	1200	2750	WP 6/4	37	2.2+2.2	7500	16500
SH-080-300	5000	80	1	650	1500	2750	WP 6/4	37	3.6+3.6	8000	17600
SH-100-300	5000	100	1	650	1500	2750	WP 8/6	37	3.6+3.6	8800	19360
SH-120-350	6000	120	2	500	1500	2750	WP 8/6	45	3.6+3.6	9800	21560
SH-120-500	8000	120	2	500	1500	2750	WP 8/6	55	3.6+3.6	9900	21780
SH-150-500	8000	150	2	650	1800	3000	WP 8/6	55	6+6	12600	27720
SH-150-600	10000	150	2	650	1800	3000	WP 8/6	75	6+6	12800	28160
SH-200-600	10000	200	2	650	1800	4000	WP 10/8	75	7+7	13700	30140
SH-160-750	12500	160	2	800	1800	3000	WP 10/8	90	6+6	14300	31460
SH-160-850	14000	160	2	800	1800	3000	WP 10/8	110	6+6	14500	31900
SH-200-750	12500	200	2	800	1800	4000	WP 10/8	90	7+7	16000	35200
SH-200-850	14000	200	2	800	1800	4000	WP 10/8	110	7+7	16300	35860

* The data provided is indicative, the dimensions must be confirmed based on the granulometric curve of the material to be treated.

SCRUBTEC

HEAVY SCRUBBING UNIT

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.

Logwashers are used to wash very dirty materials. The material is washed through **inclined blades** arranged in series inside the machine. These blades slow down the advance of the material when it is very dirty, but facilitate progress when it is cleaner.

The whole washer is lined with interchangeable anti-wear steel armours. The machine is driven by a motor reduction unit.

- MODULAR DESIGN FOR EASY INSTALLATION
- 100% AUTOMATIC
- EASY TO TRANSPORT
- BEST EFFICIENCY SCRUBBING



SPECIFICATION

WASHING SYSTEM



ANTI-WEAR STEEL REMOVABLE PADDLE SHATS

STEEL TANK FOR WATER-SILT-SAND-GRAVEL COLLECTION



COMPOSITION

- Pre-screen
- Logwasher
- Trash screen
- Finishing / Dewatering screen
- Support structure on skid
- Water and Sand Pump group

LW MODEL	Blades diameter	Shaft length	Max feeding size	Capacity	Weight		Power
					Kg	Lb	
LW-080-500	800	5000	70	75	10500	23148	2x18.5
LW-095-600	950	6000	100	150	13500	29762	2x30
LW-095-700	950	7000	100	150	14500	31967	2x37
LW-120-600	1200	6000	100	220	16000	35273	2x45
LW-120-700	1200	7000	100	220	17500	38580	2x45

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ATTRITEC

ATTRITION CELLS

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.

The attrition cells usually find their ideal location before the hydrocyclonic process of the slurry and their applications are as follows:

- For contaminated sites (soil-washing)
- For the pre-flotation treatment of the slurry
- For the mechanical preparation of minerals
- For the separation of grains of sand from minerals and cement purposes
- For the removal of clay and iron stains from silica sand intended for the glass industry
- For the break-up of balls of clay and bituminous material
- For the recovery of valuable minerals which may be present on the sand grains
- For the salt industry (refining)
- For lime slaking



SPECIFICATION



COMPOSITION

- Steel plate box
- Drive shafts made of high resistance stainless steel
- Double easy removable impellers made of wear resistant steel
- Separation diaphragm between the chambers
- Replaceable, wear-resistant coating made of rubber sheet

	MODEL	VOL m ³	Power (kW)
2 CELLS	AT-0652	1,30	15X2
	AT-1302	2,60	22X2
4 CELLS	AT-0654	2,60	15X4
	AT-1304	5,2	22X4

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BUCTEC

SAND RECOVERY UNIT

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.

- UP TO 2 GRADES OF SAND
- SIMPLICITY
- MAXIMUM VERSATILITY
- COMPLEMENTARITY
- LOW RUNNING COSTS
- LOW MAINTENANCE



SPECIFICATION

GEAR BOX AND ELECTRICAL MOTOR

1, 2 OR 3 BUCKET WHEELS

ARCHIMEDEAN SCREW

TANK FOR WATER-SAND-SILT COLLECTION

MODEL	Wheel diameter	Bucket width	Max capacity		Weight		Power
	mm	mm	m ³ h	tph	Kg	Lbs	KW
BT-200-030	2000	500	20	30	1700	3740	2
BT-200-050	2000	750	30	50	2000	4400	3
BT-240-080	2400	1000	50	80	2700	5940	4
BT-240-110	2400	1300	70	110	3000	6600	5,5

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AUSTRIA

Aggregate Sand and Gravel — FILTER PRESS 1300x1300/70P - AGGRETEC 150



BELGIUM

Aggregate Sand and Gravel — FILTER PRESS 1300x1300/80P - AGGRETEC 150











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