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THE INDUSTRIAL EXCELLENCE IN **MINING & QUARRY** WORLDWIDE, BY NATURE



The coexistence between industry and nature

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Our History

MATEC WAS BORN IN ITALY AND IT HAS GROWN IN THE INTERNATIONAL BRAND THAT WE NOW KNOW, WITH OFFICES ALL OVER THE WORLD.

Matec designs and manufactures **complete turnkey plants** for waste water **purification and filtration** in many sectors, the most important of which are: coal, iron-ore, aggregates, gravel, sand, stone, concrete, ceramic, glass. Matec's objective is the complete customer satisfaction, guaranteeing a fast after-sale service, but also presale

consultancy service, to accurately identify the real needs of potential customers. We have installed over **3000** wastewater purification plants all across the world, **400** in the last two years: this is the real guarantee of our production and quality service.





Founders

MASSIMO BERTOLUCCI

After working in the engineering department of Piaggio in Pontedera where he experienced working in an industrial excellence, he began his hands-on training in the sector of technical systems. At first, he started as a Mechanic, then he was promoted Head of Technical Assistance, and finally Technical and Design Director.

He has created and established companies over the years. Especially he takes care of each and every aspect of production and spare parts department, but he also focuses his work on the creation of just in time technical assistance services.

He has selected and trained many skilled technicians who have always been chosen for expertise. He attended training and management courses dedicated to technical areas.

Since 2003, MATEC foundation year, he has also developed skills and competences in design and engineering of turnkey systems, coordinating MATEC design center which consists of 15 engineers.

He has successfully carried out projects up to 5 million euros.

MATTEO GOICH

Has always worked as Manager and Commercial Director in various companies. He has been immediately able to identify customer's needs and compete in sales starting from basics since his first experience as a Salesman.

He has been successful in creating and developing commercial networks, entrusting products to a selected and qualified staff.
He also attended Masters and training courses in sales.
Increasing his professional curriculum and updating his sales techniques which represent the core of his work to meet market's latest need is his must.

He has organized and participated in international events in fields such as marble, granite, ceramics, mining, aggregates and environmental since 1997. By traveling across the world he has gained knowledge of various sectors' international markets, developing important partnerships with both collaborators and global companies.

Corporate Philosophy

MISSION

The company mission can be summed up in a few words: "Creating value through the supply of cutting edge products and services for Customer's greatest satisfaction and respecting mankind and environment."

The need of constantly keeping high both service level and operational skills offered by MATEC can be translated into a strong integration between Customer's needs and the daily comparison to the evolution of reference markets.

Clarity about a project feasibility always goes together with studying in depth customer's real needs. That is to say creating plants which satisfy Customers' needs, comply with regulations and guarantee long term reliability and safety at the same time.



VISION

The faster and more dynamic the realities which characterize the sectors we work for, the more MATEC commits in guaranteeing the correct development of company production processes and resulting commercial strategies. These have become our duties towards those who rely on a company for which transparency and technological rigor are indispensable and totally effective qualities.

Our organization gives a noble and profound meaning to its activities. A meaning that is capable of arousing enthusiasm, commitment, passion, respect and trust among all our collaborators. These conditions are necessary to ensure and create a strong and distinctive culture: "The culture of excellence", environmental friendly.

The Vision which has always moved our strategies is addressed to the Customer, with the sole aim of "creating the experience of comfort, gaining their confidence day by day".

VALUES

Obtaining these results means believing in principles such as determination, competitiveness, winning attitude, respect for people and environment, cooperation with suppliers, capacity of renewal, continuous relationships of collaboration and assistance to the Customer.

These are values we will not give up, because we are aware that only by following these complex and complicated paths any result can be achieved.

"You've got to find what you love. And that is as true for your work as it is for your lovers. Your work is going to fill a large part of your life, and the only way to be truly satisfied is to do what you believe is great work. And the only way to do great work is to love what you do. If you haven't found it yet, keep looking. Don't settle.

As with all matters of the heart, you'll know when you find it. And, like any great relationship, it just gets better and better as the years roll on.

So keep looking until you find it. Don't settle." [cit. Steve Jobs]



Matec in the World





Sectors



MINING



AGGREGATES

SAND AND GRAVEL



STONE CUTTING

MARBLE AND GRANITE



In the mining sector, the filter press is used for the tailing and the concentrate recovering. Coal mines have to deal with the problem of disposing of the uneconomic material, by-product of the coal production.

TAILINGS & CONCENTRATE

Especially, Matec machines can dewater the waste fines suspended in the water, recover them, clean water and eliminate tailing ponds.

Matec filter press is also used in the concentrate recovering.

For this application, the cake output must have a very low residual moisture, 6 or 7%, and Matec filters can reach it through the installation of membrane plates which squeeze further and the core blow accessory to dry the cakes more. Processed rocks, coal and clay may contain a wide range of heavy materials, such as arsenic, lead, cadmium, chromium, iron, manganese, dry areas. aluminum and nickel.

Aggregates like gravel and in particular sand, because of their applications, need to be washed to recover fine particles and eliminate the silt which adheres to their surfaces. Usually, the water used for sand washing can be recycled by using settling ponds in which heavier particles settle down and where they are collected from the bottom to be stocked.

Recovery and storage of these materials, which must be disposed of with excavators, trucks and personnel at a later stage, have significant costs for aggregate production industry, also due to the fact that it is necessary to dedicate a large area to these operations. Matec filter press allows to get rid of settling ponds and produces dry cakes easy to stock and dispose of, it also recovers water which is particularly important in

In marble, granite and stone working, either in guarries or workshops or stone processing factories, water has multiple applications. From cutting to polishing, water is necessary to avoid the over-heating of tools and reduce dust produced in various processes. Then, water needs to be treated in order to be re-used in the closed production cycle or to be discharged in the environment safely.

Matec filter press is perfect to produce drv cakes with a **15% residual** moisture and recover 90% of water. occupying the minimum amount of space.

12





GLASS

CERAMIC



CONCRETE AND TUNNELING

The water used for the washing of trucks and mixers must be treated in order to be recovered and cement remains must be disposed of or recovered at the end of the working cycle.

MATEC offers two options in their plants for the clarification of water derived from pump and cement mixer washing in concrete and cement plants. Before the filtration and purification process is carried out by the filter press, the residue can be processed by a screw separator or a dewatering screen in order to separate and select aggregates.

RECYCLING AND SOIL WASHING

The recycling sector is the one dedicated to the recovery of material deriving from crushing processes and soil washing. The material has to be washed to remove the polluting part, decontaminating it.

The system works with attrition cells. special tanks where the sand is agita ted to eliminate contaminants through attrition, then the material is filtrated by the filter press.

An important application is for the recovery of construction materials.

In the glass workshops, the water must be treated to remove the residue deriving from glass working.

Whereas in the ceramic sector, the filter press can be used for the disposal of the slurry deriving from ceramic working or for the preparation of the ceramic pulp for the ceramic production process.

CHEMICAL PLASTIC, INDUSTRIAL APPLICATION

MATEC machines and plants can be applied to other sectors. Wherever there is slurry to be treated Matec is the best solution on the market.

OVER THAN 3000 APPLICATIONS **IN 50 SECTORS**

Huge projects, one simple Solution

AQUAE CNIS CERRAE MACNUM MEGALITH

AQUAE	Pag. 17
IGNIS	Pag. 21
TERRAE	Pag. 25
MAGNUM	Pag. 31
MEGALITH	Pag. 35
ACCESSORIES	Pag. 41

Smartness and Innovation

Mala



Perfect for small and medium pro- It is named after the Latin word for **Aquae** 400×400, 500×500 flow rates. and 630×630.

duction plants specialized in **ag-** Water, because it was created as a gregates, sand and gravel tre- project designed for the recovery atment in quarries and mines. of water even in case of minimum

BECAUSE WATER IS LIFE!





OPTIONAL



Gs	Aquae model 400x400	Length	Width	Foot Wheelbase (L)	Foot Wheelbase (W)	Total Height	Dry Weight (kg)	Chamber volume (Liters)	Capacity per cycle (Liters)	m³/h (2 cycles)	Ton/h	m³/h (3 cycles)	Ton/h
Gasser	400/3	1290	770	510	430	800	350	4,2	12,60	0,03	0,05	0,04	0,07
Shaker	400/5	1620	770	740	430	800	350	4,2	21,00	0,04	0,08	0,06	0,12
	400/10	2560	770	1320	430	800	450	4,2	42,00	0,08	0,16	0,13	0,23
	400/15	3510	770	1930	430	800	500	4,2	63,00	0,13	0,23	0,19	0,35
	400/20	4400	770	2520	430	800	600	4,2	84,00	0,17	0,31	0,25	0,47

7	Aquae model 500x500	Length	Width	Foot Wheelbase (L)	Foot Wheelbase (W)	Total Height	Dry Weight (kg)	Chamber volume (Liters)	Capacity per cycle (Liters)	m³/h (2 cycles)	Ton/h	m³/h (3 cycles)	Ton/h
V	500/10	2560	770	1320	430	800	800	5,9	59,00	0,12	0,22	0,18	0,33
1	500/15	3510	770	1930	430	800	1000	5,9	89,00	0,18	0,33	0,27	0,49
$\langle $	500/20	4400	770	2520	430	800	1200	5,9	118,00	0,24	0,44	0,35	0,65
	500/25	5520	770	3080	430	800	1300	5,9	148,00	0,30	0,55	0,44	0,82
	500/30	6150	770	3670	430	800	1450	5,9	177,00	0,35	0,65	0,53	0,98

Gasser Shaker

GS Gasser Shaker

7	Aquae model 630x630	Length	Width	Foot Wheelbase (L)	Foot Wheelbase (W)	Total Height	Dry Weight (kg)	Chamber volume (Liters)	Capacity per cycle (Liters)	m³/h (2 cycles)	Ton/h	m³/h (3 cycles)	Ton/h
	630/10	2880	1200	1545	770	1565	2600	10,8	108,00	0,22	0,40	0,32	0,60
	630/15	5290	1200	2885	770	1565	3000	10,8	162,00	0,32	0,60	0,49	0,90
	630/20	5690	1200	2885	770	1565	3500	10,8	216,00	0,43	0,80	0,65	1,20
	630/25	6175	1200	3555	770	1565	3800	10,8	270,00	0,54	1,00	0,81	1,50
	630/30	7300	1200	4255	770	1565	4000	10,8	324,00	0,65	1,20	0,97	1,80





Perfect for medium production plants specialized in **aggregates, sand** and **gravel treatment** in **quarries** and **mines**.

Ignis 800×800 and 1000×1000 it is named after the Latin word for **Fire**, because it is created from materials welded with fire.





STANDARD COLOR

RAL 3002

Optional



CLIENT CUSTOM RAL





OPTIONAL



800/10 - 800/40	Ignis model 800x800	Length	Width	Foot Wheelbase (L)	Foot Wheelbase (W)	Total Height	Dry Weight (kg)	Chamber volume (Liters)	Capacity per cycle (Liters)	m³/h (2 cycles)	Ton/h	m³/h (3 cycles)	Ton/h
Gs	800/10	4235	1530	2455	890	1760	2600	18,2	182,00	0,36	0,67	0,55	1,01
Gasser Shaker	800/15	4585	1530	2455	890	1760	3300	18,2	273,00	0,55	1,01	0,82	1,52
Shuker	800/20	5300	1530	3160	890	1760	3600	18,2	364,00	0,73	1,35	1,09	2,02
800/50 and more	800/25	7700	1530	4575	890	1760	4500	18,2	455,00	0,91	1,68	1,37	2,53
	800/30	7900	1530	4575	890	1760	4500	18,2	546,00	1,09	2,02	1,64	3,03
Gs Tt	800/40	8120	1530	5980	890	1760	5500	18,2	728,00	1,46	2,69	2,18	4,04
Gasser TT2	800/50 TT2 Fast	5780	1530	4520	890	1760	6000	18,2	910,00	1,82	3,37	2,73	5,05
Shaker Fast	800/60 TT2 Fast	6400	1530	5140	890	1760	6600	18,2	1092,00	2,18	4,04	3,28	6,06

1000/15 - 1	1000/40
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Gasser	
Shaker	

.0	Ignis model 1000x1000	Length	Width	Foot Wheelbase (L)	Foot Wheelbase (W)	Total Height	Dry Weight (kg)	Chamber volume (Liters)	Capacity per cycle (Liters)	m³/h (2 cycles)	Ton/h	m³/h (3 cycles)	Ton/h
	1000/15	6160	1840	3665	870	2135	4000	29,1	437,00	0,87	1,62	1,31	2,42
	1000/20	6760	1840	3665	870	2135	4500	29,1	582,00	1,16	2,15	1,75	V3,23
	1000/25	8305	1840	5065	870	2135	5000	29,1	728,00	1,46	2,69	2,18	4,04
2	1000/30	8705	1840	5065	870	2135	5500	29,1	873,00	1,75	3,23	2,62	4,85
	1000/40	10115	1840	6515	870	2135	6500	29,1	1164,00	2,33	4,31	3,49	6,46
	1000/50 TT2 Fast	7600	1840	5450	870	2155	7000	29,1	1455,00	2,91	5,38	4,37	8,08
	1000/60TT2 Fast	8080	1840	5940	870	2155	7500	29,1	1746,00	3,49	6,46	5,24	9,69
	1000/70 TT2 Fast	9080	1840	6940	870	2155	8100	29,1	2037,00	4,07	7,54	6,11	11,31
	1000/80 TT2 Fast	9480	1840	7700	870	2155	8700	29,1	2328,00	4,66	8,61	6,98	12,92
re	1000/90 TT2 Fast	9845	1840	7340	870	2155	9300	29,1	2619,00	5,24	9,69	7,86	14,54
Ts	1000/100TT2 Fast	11355	1840	9215	870	2155	11000	29,1	2910,00	5,82	10,77	8,73	16,15
Tilt	1000/120TT2 Fast	12400	1840	10900	870	2155	12500	29,1	3492,00	6,98	12,92	10,48	19,38
ensor	1000/140 TT2 Fast	13825	1840	11875	870	2155	14500	29,1	4074,00	8,15	15,07	12,22	22,61
					I								





Perfect for medium and large It is named after the Latin word for production plants specialized in aggregates, sand and gravel treatment in quarries and mines. **Terrae** 1200×1200, 1300×1300, 1500×1500 and 1500×2000.

Earth, because it is specially created for and completely dedicated to every kinds of applications in quarries and mines, that is to say for areas where men use the Earth for progress.





STANDARD COLOR

RAL 3002

Optional

RAL 7024



CLIENT CUSTOM RAL



OPTIONAL

2270

2270

2270

2270

12723

14710

15460

16220

10600

12710

13460

14220



Capacity per cycle (Liters)

597

796

995

1194

1592

1990

2388

2786

3184

3861

4641

5461

5811

6201

Chamber volume (Liters)

39.8

39,8

39,8

39,8

39,8

39,8

39,8

39,8

39,8

39,8

39,8

39,8

39,8

39,8

Dry

Weight (kg)

5700

8100

9500

10900

12000

12400

13500

14600

15500

16800

18400

20400

22400

2060 24400

Total

Height

2060

2060

2060

2060

2060

2060

2060

2060

2060

2060

2060

2060

2060

Real	Robo	Sc
Vashing	Wash	M

m³/h (2 cycles)

1,19

1,59

1,99

2,39

3,18

3,98

4,78

5,57

6,37

7,72

9,28

10,84

11,62

Sensor

Ton/h

2,21

2,95

3,68

4,42

5,89

7,36

8,84

10,31

11,78

13,46

17,36

20,48

21,94

12,40 23,40

m³/h

1,79

2,39

2,99

3,58

4,78

5,97

7,16

8,36

9,55

11,58

13,92

16,26

17,43

(3 cycles)

Ton/h

3,31 4,42

5,52

6,63

8,84

11,04

13,25

15,46

17,67

20,19

26,04

30,72

32,91

18,60 35,10

1200/15 - 1200/40	Terrae model 1200x1200	Length	Width	Foot Wheelbase (L)	Foot Wheelbase (W)
Gs	1200/15	5388	2270	3485	1170
Gasser Shaker	1200/20	5580	2270	3475	1170
	1200/25	7410	2270	4955	1170
1200/50 and more	1200/30	9850	2270	6995	1170
	1200/40	11680	2270	8425	1170
Gs Tt	1200/50 TT2 Fast	8173	2270	6050	1170
Gasser TT2	1200/60 TT2 Fast	9363	2270	7120	1170
Shaker Fast	1200/70 TT2 Fast	9850	2270	7312	1170
1200/100 and more	1200/80 TT2 Fast	10469	2270	8344	1170
1200/100 and more	1200/100 TT2 Fast	11863	2270	9740	1170

1200/120 TT2 Fast

1200/140 TT2 Fast

1200/150 TT2 Fast

1200/160 TT2 Fast

and and				
ŝS	Tt	Cb	Ts	
sser aker	TT2 Fast	Core Blow	Tilt Sensor	

0/15 - 1300/40	Terrae model 1300x1300	Length	Width	Foot Wheelbase (L)	Foot Wheelbase (W)	Total Height	Dry Weight (kg)	Chamber volume (Liters)	Capacity per cycle (Liters)	m³/h (2 cycles)	Ton/h	m³/h (3 cycles)	Ton/h
	1300/15	5388	2270	3465	1170	2060	6000	47,3	710	1,42	2,63	2,13	3,94
	1300/20	5580	2270	3475	1170	2060	8500	47,3	946	1,89	3,50	2,84	5,25
	1300/25	7410	2270	4955	1170	2060	10000	47,3	1183	2,37	4,38	3,55	6,56
V/EQ and mana	1300/30	9850	2270	6995	1170	2060	11500	47,3	1419	2,84	5,25	4,26	7,88
0/50 and more	1300/40	11680	2270	8425	1170	2060	13000	47,3	1892	3,78	7,00	5,68	10,50
Tt	1300/50 TT2 Fast	8173	2270	6050	1170	2060	13200	47,3	2365	4,73	8,75	7,10	13,13
П2	1300/60 TT2 Fast	9363	2270	7120	1170	2060	14500	47,3	2838	5,68	10,50	8,51	15,75
Fast	1300/70 TT2 Fast	9850	2270	7312	1170	2060	15800	47,3	3311	6,62	12,25	9,93	18,38
1100 1	1300/80 TT2 Fast	10469	2270	8344	1170	2060	17100	47,3	3784	7,57	14,00	11,35	21,00
/100 and more	1300/90 TT2 Fast	10700	2270	8575	1170	2060	18400	47,3	4257	8,51	15,75	12,77	23,63
Tt Cb Ts	1300/100 TT2 Fast	11863	2270	9740	1170	2060	20000	47,3	4730	9,46	17,50	14,19	26,25
TT2 Core Tilt	1300/120 TT2 Fast	12723	2270	10600	1170	2060	22000	47,3	5676	11,35	21,00	17,03	31,50
Fast Blow Sensor	1300/140 TT2 Fast	14710	2270	12710	1170	2060	24000	47,3	6622	13,24	24,50	19,87	36,75
	1300/150 TT2 Fast	15460	2270	13460	1170	2060	26000	47,3	7095	14,19	26,25	21,29	39,38
	1300/160 TT2 Fast	16220	2270	14220	1170	2060	27250	47,3	7568	15,14	28,00	22,70	42,00

1170

1170

1170

1170





Cd	Cw	Dt	Rw	Rc
Cake	Cake	Drip	Real	Rob

Tray

Washing

Dryer

Washing

Wash

Torbidity Membrane Sensor Plates

	Terrae model 1500x1500	Length	Width	Foot Wheelbase (L)	Foot Wheelbase (W)	Total Height	Dry Weight (kg)	Chamber volume (Liters)	Capacity per cycle (Liters)	m³/h (2 cycles)	Ton/h	m³/h (3 cycles)	Ton/h
	1500/50 TT2 Fast	8540	2505	6360	1360	2270	15800	63,1	3155	6,31	11,67	9,47	17,51
	1500/60 TT2 Fast	9300	2505	6840	1360	2270	17800	63,1	3786	7,57	14,01	11,36	21,01
	1500/70 TT2 Fast	10200	2505	8020	1360	2270	19800	63,1	4417	8,83	16,34	13,25	24,51
	1500/80 TT2 Fast	11020	2505	8840	1360	2410	21500	63,1	5048	10,10	18,68	15,14	28,02
	1500/90 TT2 Fast	11680	2505	9265	1360	2410	24000	63,1	5679	11,36	21,01	17,04	31,52
	1500/100 TT2 Fast	12635	2505	10415	1360	2410	25000	63,1	6310	12,62	23,35	18,93	35,02
	1500/120 TT2 Fast	13850	2505	10415	1360	2410	27000	63,1	7572	15,14	28,02	22,72	42,02
	1500/140 TT2 Fast	15825	2505	14100	1360	2410	29000	63,1	8834	17,67	32,69	26,50	49,03
5	1500/150 TT2 Fast	16840	2505	14660	1360	2410	30000	63,1	9465	18,93	35,02	28,40	52,53
-	1500/160 TT2 Fast	17670	2505	15490	1360	2410	32000	63,1	10096	20,19	37,36	30,29	56,03
~	1500/170 TT2 Fast	18295	2505	16285	1360	2410	33000	63,1	10727	21,45	39,69	32,18	59,53
	1500/180 TT2 Fast	19125	2505	17150	1360	2410	34000	63,1	11358	22,72	42,02	34,07	63,04
	1500/190 TT2 Fast	19955	2505	17980	1360	2410	35000	63,1	11989	23,98	44,36	35,97	66,54
	1500/200 TT2 Fast	20935	2505	18960	1360	2410	36000	63,1	12620	25,24	46,69	37,86	70,04
	\backslash												

US	ΙL	CD	15
Gasser	TT2	Core	Tilt
Shaker	Fast	Blow	Sens

Terrae 1500x2000	Length	Width	Foot Wheelbase (L)	Foot Wheelbase (W)	Total Height	Dry Weight (kg)	Chamber volume (Liters)	Capacity per cycle (Liters)	m³/h (2 cycles)	Ton/h	m³/h (3 cycles)	Ton/h
1500/50 TT2 Fast	9650	2550	6385	1310	2445	22200	84,7	4235	8,47	15,67	12,71	23,50
1500/60 TT2 Fast	10490	2550	7260	1310	2445	23900	84,7	5082	10,16	18,80	15,25	28,21
1500/70 TT2 Fast	11330	2550	8100	1310	2445	25600	84,7	5929	11,86	21,94	17,79	32,91
1500/80 TT2 Fast	12170	2550	8940	1310	2960	27300	84,7	6776	13,55	25,07	20,33	37,61
1500/90 TT2 Fast	13010	2550	9780	1310	2960	29200	84,7	7623	15,25	28,21	22,87	42,31
1500/100 TT2 Fast	13850	2550	10620	1310	2960	31200	84,7	8470	16,94	31,34	25,41	47,01
1500/120 TT2 Fast	15530	2550	12300	1310	2960	33100	84,7	10164	20,33	37,61	30,49	56,41
1500/140 TT2 Fast	17210	2550	13980	1310	2960	35200	84,7	11858	23,72	43,87	35,57	65,81
1500/150 TT2 Fast	18050	2550	14820	1310	2960	36350	84,7	12705	25,41	47,01	38,12	70,51
 1500/160 TT2 Fast	18890	2550	15660	1310	2960	37500	84,7	13552	27,10	50,14	40,66	75,21
1500/170 TT2 Fast	19730	2550	16500	1310	2960	38650	84,7	14399	28,80	53,28	43,20	79,91
1500/180 TT2 Fast	20570	2550	17340	1310	2960	39800	84,7	15246	30,49	56,41	45,74	84,62
1500/190 TT2 Fast	21410	2550	18180	1310	2960	41300	84,7	16093	32,19	59,54	48,28	89,32
1500/200 TT2 Fast	22250	2550	19020	1310	2960	42800	84,7	16940	33,88	62,68	50,82	94,02





Perfect for very large plants spe- Machine, created for and complecialized in aggregates, earth and gravel treatment in quarries and mines.

Magnum 2000×2000. It is named Earth for progress. after the Latin word for Magnificent, because it is our top-of-the-range.

tely dedicated to every kinds of applications in quarries and mines, that is to say for areas where men use the







OPT	IONAL

CdCwDtRwRoCakeCakeDripRealRoboDryerWashingTrayWashingWash

Squeezing Torbidity Membrane Sensor Plates

Gs	Tt	Cb	Ts	
Gasser	TT2	Core	Tilt	
Shaker	Fast	Blow	Sensor	

7	Magnum 2000x2000	Length	Width	Foot Wheelbase (L)	Foot Wheelbase (W)	Total Height	Dry Weight (kg)	Chamber volume (Liters)	Capacity per cycle (Liters)	m³/h (2 cycles)	Ton/h	m³/h (3 cycles)	Ton/h
	2000/100 TT2 Fast	14210	3430	12070	1356	3795	41960	115	11500	23,00	42,55	34,50	63,83
	2000/120 TT2 Fast	16060	3430	13920	1356	3795	43360	115	13800	27,60	51,06	41,40	76,59
	2000/140 TT2 Fast	17910	3430	15770	1356	3795	45760	115	16100	32,20	59,57	48,30	89,36
	2000/160 TT2 Fast	18810	3430	16670	1356	3795	48750	115	18400	36,80	68,08	55,20	102,12
	2000/180 TT2 Fast	21610	3430	19470	1356	3795	51740	115	20700	41,40	76,59	62,10	114,89

Heavy duty Designed more 1111111111 A DEPENDENT OF A DEPE The second second state of the second s ec a



MECHANICAL DEWATERING WITH HIGH-PRESSURE TECHNOLOGY

Dewatering by high/pressure technology (HPT) means a higher force to drive or compress the filter cake, achieving a dryer filter cake as low as **10% residual moisture**, giving back up to 98% water to the process.

The **NEW HPT30 BAR** allows you to filter at an even higher pressure than before.

The **MEGALITH** with its simple design, consisting of 6 pushing type hydraulic cylinders, used to close the filter press, distributing the closing pressure evenly, and open the filter press of which the first 10 plates are shifted.

Also consists of the **NEW TT2** opening for the remainder of the filter plates, opening in patches of 10, and at a rate that makes the **TT2** the fastest opening technology on the market.

Simple also means the filter press consists of recessed chamber plates, linked together by chain, and a shaker system consisting of pneumatic cylinders, all standard with the **MEGALITH** filter press. Structurally sound and all put together by a fixed carbon steel head, and 4 lengths of double welded rectangular tubing, for side beams. Making this filter press the only filter press capable in reaching **30 bar** safely. With the demand for filtration technology increasing and the material to be filtered becoming more challenging, the need for NEW technology becomes more prominent.

By creating the **BIGGEST** filter press out there that makes use of the Highest feed pressures currently possible, we are solving dewatering problems by giving a single solution.





MEGALITH Benefits

REINFORCED FRAMEWORK

With **6 PISTONS** for an evenly distributed seal and sound structural integrity.

RECESSED CHAMBER / EXTERNAL FILTRATE

Filter plates which means lower operational cost and minimum down time.

GASSER SHAKER

For a perfect release of dry cakes.

ROBOWASH

For a fully automated washing system which extends the life of the filter cloth and increases overall performance.

HPT30 HIGH PRESSURE TECHNOLOGY

Filter press feed which means the quickest cycle with driest filter cake possible.

NEW TT2 FAST

The fastest opening technology on the market.

PLC CONTROL PANEL

For a reliable automatic monitoring system.



The **MATEC** filter press makes use of reinforced framework consisting of double rectangular tubing welded together and plated on the sides, running the span of the filter press and supported by a support structure. The rectangular shape design assures better rigidity against forces of **HPT** (High Pressure Technology). 6 Cylinders are used to distribute the closing pressure evenly as needed to equalize and overcome the high pressure of the feed slurry by our **HPT** pumps that accompanies our biggest range of filter presses.

MATEC 6 cylinders solution guarantees that the machine will perform at its most optimum with no deformation on the filter plates. The 6 cylinders and reinforced framework allow you to run **MATEC** filter presses safely at higher pressures.

Because more pressure (more speed) means better performances, a shorter cycle time, a lower residual moisture and better results. We are the only **100% HPT** company using pressures up to **30 Bar**, way above our competitors.

This is achieved by means of **MATEC** double and triple stage feed pumps, produced only in Italy. Virgin polypropylene recessed chamber plates ensure that you get the longest life span out of your filter plates with maximum performance.



Keeping it simple means that high pressure is all that is required for the driest filter cake. High wear / High cost membrane plates are a thing of the past.

External filtrate discharge allows you to be on top of your maintenance, allowing you to identify problems as they occur and rectify with minimum down time experienced.



OPTIONAL



	Megalith 2500x2600	Length	Width	Foot Wheelbase (L)	Foot Wheelbase (W)	Total Height	Dry Weight (kg)	Chamber volume (Liters)	Capacity per cycle (Liters)	m³/h (2 cycles)	Ton/h	m³/h (3 cycles)	Ton/h
	2500/100 TT2 Fast	16130	3410	12595	2340	3170	110845	234	23166	46.33	85.71	69.49	128.55
	2500/120 TT2 Fast	18010	3410	14475	2340	3170	125260	234	27846	55.69	103.02	83.53	154.53
3	2500/140 TT2 Fast	19890	3410	16355	2340	3170	139675	234	32526	65.05	120.34	97.57	180.50
	2500/160 TT2 Fast	21770	3410	18235	2340	3170	154090	234	37206	74.41	137.6	111.61	206.47
_	2500/180 TT2 Fast	23650	3410	20115	2340	3170	168505	234	41886	83.77	154.97	125.65	232.45
	2500/200 TT2 Fast	25530	3410	21995	2340	3170	182920	234	46566	93.13	172.29	139.69	258.42

Details make the Difference

No concerne

.......

Accessories

CAKE DRYER

The Cake-Dryer is a 100% automatic system for the drying of the cakes of mud through the use of compressed air.

The system is similar to the Core-Blow; the jet of compressed air is blown into the central hole of supply of the plates, thus allowing a drying of block 20 plates, to have a **final cake completely dry.**

CAKE WASHING

A close circuit system for special mud with chemicals. It usually works together with the membrane plate system, allowing a clean water flow inside the plate chambers before cakes are discharged.

This process rinses the cakes, to lower chemicals level under the **"special mud"** threshold.

CORE BLOW

Core blow system is projected to **clean the core** at the end of the filtering process from the residual unsqueezed mud gathered in the diffusion conduit through the plates.

The Filter press is equipped with an air conduit in the mobile plate to blow, at the end of the filtration process, the residual liquid mud back out of the plates.

An appropriate valve system let the blown mud bypass the mud pump and be discharged in the mud tank again.

DRIP TRAY

During the filtering cycle a few drops of water can escape from the cloths, especially if these are new, so to avoid that fall of water on the mud cakes already discharged, Matec has created two particular types of drip. The **"drip tray"** system consists in a tray, composed by one or two tanks shifted, which occupies the part underneath the filter press during the filtering phase, then **collecting the drops of water that escape**; once the filtering phase has finished, the tanks are then moved by a motor to allow the discharge of the cakes.

The **"bomb doors"** model has two doors that rotate to occupy the space below the filter. They are positioned with an inclination that allows them to collect the water that comes out, and then redirect it to **lateral drips**, where it will be sent back to the waste water tank.







THE SECRET OF OUR **SUCCESS**



HPT

TECHNOLOGY

HPT"

TECHNOLOGY

Matec filter presses have been created for the aggregates sector where HPT is essential for obtaining excellent results with difficult muds, while our competitors come from sectors such as food, marble, and chemicals. HPT is more expensive, it needs **MORE QUALITY** and better components:

- BIGGER PISTON BORE
- BIGGER OLEODYNAMIC POWER UNIT
- MORE IRON FOR THE FRAME STRUCTURE



MATEC FILTER PRESS WORKS AT 16-30 BAR (230-435 PSI)

BAR pressure











MORE PRESSURE

MORE RESULTS

LESS WATER IN THE CAKE SHORTEST CYCLES



AIR GASSER[®] AUTOMATIC SHAKER

Pneumatic system to guarantee the detachment of the filtering cloth panels created with a series of high efficiency pneumatic cylinders. They lift a stainless steel bar by means of special pivots and then release the plate in order to give it a suitable vertical stress. Our shaker does not wear out and guarantees an **efficient vertical shaking of the plate** and the complete detachment of the mud cake.

Protection and safety systems :

• Emergency ropes

(Standard equipment for every Filter press)

- Stainless steel cover AISI 304 for machine protection and safety
- Photoelectric barriers
- Safety gates



REAL WASHING

The filter press can be equipped with an **automatic washing system for plates and cloths**. The system is composed by one valve and one system of pipes on the mud head side of the filter press, and discharging valves on every single plate.

The feeding pump sends clean water to wash the residual mud. The sytem washes the **plates 20 by 20**. The frequency of the washing cycle is set through the operator panel.







ROBO WASH



The RoboWash washing operation is a **fully automated cloth washing system** that can be put into operation at the touch of a button.

The high pressure sprayer located at the end of a drop down curtain, slides between each plate and applies high-pressure wash water to the full area of the filter cloth, dislodging and cleaning any build up of dirt on the filter cloth.



CAKE SQUEEZING MEMBRANE PLATES

The membrane plates are special plates with one internal chamber and one membrane.

The membrane allows a **better mechanical squeezing** of drying mud cakes.

Basically, the membrane is inflated with water and grows in volume pressing on the sludge which is pumped into the chamber. A non-fixed volume is the main difference with standard plates. The special plate, together with the drainage system, guarantees a dryer final product and a more efficient filtration cycle, also the discharging of the cakes is benefited.

The material for the membrane may vary using different techno-polymers to meet customers' requirements and depending on the material to be treated, usually it is a variety of polypropylene.

TILT SENSOR

This system consists of **proximity sensors**, upper and lower ones, to control the tilting of the last closing plate. In the software that manages the filter press you can set the delay time between the two sensors. If the second sensor activates within the set time after the first one, the machine can continue its cycle normally. Otherwise an alarm will go off.





Cake squeezing pump



Optionals

TT2 FAST SYSTEM

The **TT2 System** is **patented by Matec** to solve the problem of sludge discharging opening and closing dead time in filter presses. Thanks to this system that reduces also the length of the machine, the process of plate discharging has decreased from the usual 15/20 min to **3 min for 150 plates**. This system guarantees also a **30% increase in productivity** and a **reduction in operating and maintenance electrical costs**, in addition to an easier use of the machine. The TT2 works by opening the main cylinder just once, then it closes, in order to open the first 10 plates. The quick opening of the plates is used to open 10 plates at a time through the back and forth shifting.

The two oleodynamic cylinders "**TT2 Fast**", installed on lateral bars and provided with mechanical modules. The opening of 2 cylinders works at high speed through the oleodynamic power unit.



TORBIDITY SENSOR

It is placed in the fresh water storage tank. Torbidity meter consisting of a **candle measuring machine** (sensor) immersed in water, with dissolved particles.

Based on the feedback that is obtained from the measurement system, it is possible to **determine where to direct the flow of water**. Through pre-set values, if it is detected a too high level of torbidity, the system switches two valves and diverts the flow of water from the fresh water tank to the waste water collection tank, to resubmit the water to the clarification phase.

The **Matec Mass Contoller (MMC)** is an automatic system to monitor a filtration cycle. It crosses the data received by a mass flow sensor with those received by an analogic pressure switch to know exactly when a filtration cycle is complete to prevent the variation in the cake thickness, and to prevent the cakes sticking on the cloths.





Benefits





24 Hours on site assistance

24 Months full warranty

I 10 Years warranty on stainless steel products



HPT technology



Best brand high technology components

Automatic shaking

and washing



TT2 fast opening time less than 3 minutes



Clearness of Results

machinery technology

aquat p

THICKENER DECANTER SILOS

VERTICAL THICKENER DEEP CONE	Pag. 51
RAKE THICKENER	Pag. 55
PASTE THICKENER	Pag. 59





VERTICAL THICKENER DEEP CONE

The **vertical decanters** are based on the principle of static The shaded action and the natural precipitation of suspended between solid particles. During decantation occurring inside Matec thanks decanters, the solid particles (the mud) sink down to the bottom of the structure, while the clean water overflows mud an 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 guarantees 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.





VERTICAL THICKENER RANGE LINE

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.

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.

-	Model	Capacity / It	Diameter	Silos tot. Height mm	Cylinder Height mm	Cone Height mm		Model	Capacity / It	Diameter	Silos tot. Height mm
	SILINOX 2000i	2000 single-piece	1250	3210	1250	1260		SILINOX 90000s	90000 sections	5000	8600
1	SILINOX 3500i	3500 single-piece	1500	3710	1500	1510		SILINOX 100000s	100000 sections	5500	8100
V	SILINOX 5000i	5000 single-piece	2000	4200	1500	2000		SILINOX 110000s	110000 sections	5500	8700
	SILINOX 7000i	7000 single-piece	2280	3490	1250	1540		SILINOX 120000s	120000 sections	5500	9200
V	SILINOX 8000i	8000 single-piece	2000	4700	2000	2000		SILINOX 130000s	130000 sections	5800	9700
1	SILINOX 10000i	10000 single-piece	2080	5200	2500	2000		SILINOX 150000s	150000 sections	6300	9900
1	SILINOX 12000i	12000 single-piece	2200	5090	2500	1890	SII	SILINOX 190000s	190000 sections	6500	10700
	SILINOX 15000i	15000 single-piece	2300	6060	3500	1860		SILINOX 200000s	200000 sections	6500	11000
-	SILINOX 20000i	20000 single-piece	2300	6950	4100	2150		SILINOX 240000s	240000 sections	7000	11950
	SILINOX 25000i	25000 single-piece	2350	8070	4870	2500		SILINOX 280000s	280000 sections	7000	11660
	SILINOX 30000i	30000 single-piece	2350	9090	5890	2500		SILINOX 300000s	300000 sections	8000	11500
	SILINOX 30000s	30000 sections	3000	7150	3350	3100		SILINOX 350000s	350000 sections	8000	11090
	SILINOX 35000s	35000 sections	3200	7250	3350	3200		SILINOX 370000s	370000 sections	8000	11390
	SILINOX 40000s	40000 sections	3400	7250	3250	3300		SILINOX 380000s	400000 sections	8000	11890
	SILINOX 50000s	50000 sections	3700	7700	3500	3500		SILINOX 450000s	450000 sections	8000	13390
7	SILINOX 60000s	60000 sections	4000	8050	3750	3600		SILINOX 470000s	470000 sections	8000	14590
_	SILINOX 70000s	70000 sections	4000	8800	4500	3600		SILINOX 500000s	500000 sections	8000	15550
	SILINOX 75000s	75000 sections	4500	8050	3750	3600					

Cone

Heigh

Height

Endless Recovery

at and a dama de

CLARIFICATION SYSTEM accurate by the system of the system

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.





RAKE THICKENER RANGE LINE

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

WHEN TO USE A HORIZONTAL RAKE THICKENER

24 meters 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 meters height**.

STAINLESS STEEL

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

MODEL	Capacity It/min	Clarifier diameter (mm)	Clarifier height (mm)
HZ 0900	4000	9000	4500
HZ 1200	6000	12000	4500
HZ 1500	8500	15000	5000
HZ 1800	11000	18000	5000
HZ 2100	13500	21000	5000
HZ 2400	16000	24000	5500

Simplicity in Clarification



CLARIFIER / PASTE THICKENER

The overall function of the thickener is to increase the density of a slurry stream. This is achieved by feeding the slurry stream into the thickener and by allowing the solids to settle. The supernatant overflows for further processing or disposal.

In the case of a clarifier, the main function is to provide a clear overflow. The settled solids are raked to the centre cone of the thickener/clarifier and are removed as thickened slurry suitable for further processing or disposal as the case maybe.





MODEL	DIAMETER
PS 0006	6 mt
PS 0008	8 mt
PS 0010	10 mt
PS 0012	12 mt
PS 0014	14 mt
PS 0016	16 mt
PS 0018	18 mt
PS 0020	20 mt
PS 0022	22 mt
PS 0024	24 mt
PS 0030	30 mt
PS 0036	36 mt
PS 0040	40 mt
PS 0050	50 mt
PS 0060	60 mt

THE THICKENER TANK SPECIFICATIONS **ARE AS FOLLOWS**

- The tank is constructed from steel plate not less than 6 mm thick
- The tank has a scalloped bottom and sloped tank floor supported on steel legs, an underflow cone and overflow launder and all components
- Shorter erection time
- No tunnels with escape routes required
- Flexibility to change components, say launder sizing, when process conditions change
- The bridge will be supported on a separate structure
- Minimal excavation
- No design cost incurred by yourselves





AUTOMATIC FLOCCULANT UNIT

BIFLOC DOSON SYSTEM Pag. 64 Pag. 67

BIFLOC SYSTEM AUTOMATIC FLOCCULANT UNIT



Flocculant station

BIFLOC POLYELECTROLYTE FLOCCULANT PREPARATION STATION

Matec allows a **fast and automatic dilution** of the powder in water for the perfect reaction of the flocculant in turbid water.

Thanks to the 2/3 tanks the perfect maturation of the product is guaranteed in order to activate all the electric charges **speeding up the decantation** reaction and significantly reducing the consumption, guaranteeing water with suspended solids below 80 ppm/mgl.

- Perfect dilution
- Fast decantation
- Clean waters





Reduced consumption

COCLY

up to 50,000 liters of product without stopping and it is **need for an operator.** completely autonomous. Cocly is fully made of stainless steel and includes:

• Hopper: 25-50-75-100 Kg Screw metering pump • Digital or manual regulator, this accessory reduces the consumption of flocculant by about 15%

The Cocly is the **automatic powder metering acces-** The accessories of the metering plants make the setup sory. It adjusts the powder automatically and it starts process even more complete and automatic by reducing the water inlet valve and the pale stirrer. Cocly produce **the consumption of the product and eliminating the**

> Matec's plants are all made of **stainless steel**. The right dose, the best result and great savings.



Bifloc 2000

BIFLOC RANGE

Model	Capacity / It	Widht (mm)	Lenght (mm)	Height (mm)	Screw Pump (kw)	Stirrer (kw)	Pump (kw)
loc 300 round	300	400	900	800	0,22	0,37	0,25
loc 500 round	500	450	900	1220	0,22	0,37	0,25
loc 1000 round	1000	685	1600	950	0,22	1,1	0,25
loc 2000 square	2000	900	1800	1250	0,22	1,1x2	1,5
loc 3000 square	3000	1100	2200	1250	0,22	1,1x2	1,5
loc 4500 square	4500	1400	2670	1250	0,22	1,1x3	1,5
loc 6000 square	6000	1250	4000	1250	0,22	1,1x3	4
loc 9000 square	9000	1500	4500	1500	0,22	1,1x3	4
loc 12000 square	12000	1500	5400	1500	0,22	1,1x3	4



Bifloc 4500 with doson

SAMPLING

SETTLING

WASH CHECK





DOSON

Doson is a photocell-based system pa- WHY INSTALLING DOSON tented by MATEC for monitoring and

adjusting the flocculant according to the Water is always clarified in the best amount of suspended solid particles in possible way. It is essential when the water. The Doson system regularly ta- the properties of the sludge treated kes few samples of the sludge and analyzes them in a closed chamber by using electronic sensors. It adjusts the dose of the product according to the materials it contains and also the decantation speed in that specific time of the cycle.

change during the days.

REDUCED CONSUMPTION

DOSON reduces the consumption of flocculant by 30% and it is fully automatic, no operator needed.



The storage of your Process

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machinery technology

Machinery Bachware

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SLURRY HOMOGENIZER TANK

BIFANG SLURRY HOMOGENIZER TANK



MATEC PROBE SYSTEM

The four probe system is something peculiar of Matec, because we want the system to be always efficient. It consists of a **steel tank and one or two stirrers driven by a motor**. The mud arrives in the Bifang discharged from the decanter silo. One peculiarity of our homogenizer tank is that it has four probes:

- two of them detect the level of the mud (maximum and minimum).
- the one which almost reaches the bottom of the tank is the one connected to the low mud alarm, when the mud level is below the threshold.
- then there is another probe which resets the low mud alarm.

WHY A BIFANG

The perfect complement, which guarantees the best performances of your filter press.

OPERATION

The slurry homogenizer tank is used to keep in **constant movement the slurry discharged by the decanter silo**, in order to maintain a certain density and avoid its settling.

Bifang homogenizer tank

The Bifang keeps the mud at the right thickness by stirring it, in order to facilitate the filtration process. The mud arrives into the Bifang tank from the decanter silos. The mud is sent to the filter press from the homogenizer tank (Matec Bifang).

Model	Capacity / It	Diameter (mm)	Height (mm)	Stirrer (kW)
Bifang 300	300	750	750	0,37
Bifang 500	500	750	1200	0,37
Bifang 1000	1000	950	1500	1,5
Bifang 2000	2000	1300	1500	1,5
Bifang 3000	3000	1600	2000	1,5
Bifang 5000	5000	1800	2000	1,5
Bifang 10000	10000	2050	3500	1,1
Bifang 20000	20000	3500	2100	2,2x2
Bifang 30000	30000	3500	3350	2,2x2
Bifang 40000	40000	4000	3200	2,2x2
Bifang 50000	50000	4000	4000	2,2x2
Bifang 60000	60000	4500	3800	2,2x2
Bifang 80000	80000	5000	4100	2,2x2
Bifang 100000	100000	5000	5100	2,2x2
Bifang 150000	150000	6000	5350	2,2x2
The core of the Power

Ab 127

Ak 99

Ab 1777

Ab 12

PUMPS & VALVES

FLOCCULANT PUMPS	Pag. 74
VERTICAL & SUBMERSIBLE PUMPS	Pag. 75
HORIZONTAL CENTRIFUGAL PUMPS	Pag. 76
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VALVES	Pag. 79

FEEDING PUMPS PUMPS & VALVES

The silo-feeding pumps are essential in order to pump the **dirty water** from the well into the silo decanter.

Matec supplies all kind of pumps starting from the ones for the highly corrosive and abrasive liquids to the ones for the clarified water with a capacity range from **100 lt/min to 10.000 lt/min**.

FLOCCULANT PUMPS

Matec can supply two different kind of flocculant pumps:

SCREW PUMP

This kind of pump is used to manage big flow rate. This pumps are also used when the optional DOSON is included.

PISTON PUMP

This kind of pump is used to manage small and medium flow rate. Generally the maximum flow rate managed with these pump is 500 l/h of flocculant solution.

THICKENER FEEDING PUMPS

We can use 2 types of pumps to transfer the collected slurry. A pump then transfers the collected slurry to the feed well of the thickener. The pumps are managed by level sensors fixed inside the pit.

VERTICAL PUMP

In the **waste water** treatment, an application of pumps usually used in the granite industry is sending sludge to the silo decanter and the feeding of the hydrocyclones, especially for **abrasive waste water**.

SUBMERSIBLE PUMP

High resistant feeding pumps made of cast iron and special steels.

They are used to pump waste water and sludge and ideal to be placed in deep pits, no needing any wall interventions. The motor is completely submersed and watertight.



CENTRIFUGAL PUMPS & VALVES

HORIZONTAL CENTRIFUGAL PUMPS

They are divided into **3 types**, depending on the necessary feeding pressure.

ADVANTAGES:

- Less humidity in the cakes
- Shorter cycle time

SINGLE BODY HORIZONTAL CENTRIFUGAL PUMP

The centrifugal pump for filter press feeding guarantees the **maximum speed filling** and a final mud panel with a **low residual dampness**.

Matec horizontal pump can be installed with double speed motors guaranteeing an homogeneous filter filling by the first and more mud compaction by the second or with inverter controlled motor.





DOUBLE BODY HORIZONTAL CENTRIFUGAL PUMP

Using double casing centrifugal pumps it is possible to reach **doubled performances**. compared to the single casing, obtaining an **increased mud dehydration** and an operating pressure up to **16 bar**.



TRIPLE BODY HORIZONTAL CENTRIFUGAL PUMP

Using triple casing centrifugal pumps it is **possible to reach even more performances**, obtaining an increased mud dehydration and an operating pressure up to **21 bar**.





OTHER PUMPS & VALVES PUMPS & VALVES



PNEUMATIC **DIAPHRAGM PUMP**

A diaphragm pump is a positive displacement pump which utilizes flexible diaphragms that reciprocate back and forth, creating a temporary chamber.

m³/h
15
23
45
50
60
80

CLEAN WATER PUMP

Horizontal axis **monoblock pumps** with the pump body and impellers in cast iron or bronze, mechanical seal Widia / Widia, stainless steel shaft with electric motor closed to external ventilation - IP 55 protection

- Suitable for continuous service
- Also for clean water group

VALVES - MANUAL OR PNEUMATIC



manual or pneumatic

manual or pneumatic

KNIFE GATE VALVES manual or pneumatic



AUTOMATIC FILTERS FILTERS WITH BATTERIES OF AUTOMATIC VALVES MID/HIGH FLOW RATES

Filter material :

manual

- quartz sand for DP
- activated carbon for KP
- catalytic mixture based on Pyrolusite (manganese dioxide) for DFP.
- battery valve set composed by 5 diaphragm valves in cast iron, for models up to DN100 size.
- battery valve set composed by 5 butterfly valves, formodels starting from DN100 size.
- distribution system made of ABS and PP and arm collector system

Tailor-made for your Needs

SPECIAL PROJECTS

THE CUBE MARBOLINE KOMPACT BIG BAG

Pag. 83 Pag. 89 Pag. 90 Pag. 91

Mobility is the Answer



ATTENTION TO DETAILS

The **CUBE** plant uses the same "hardware" of a fixed plant:

- THICK IRON TO WITHSTAND HPT PRESSURE.
- SINGLE CHAMBER DRAINAGE SYSTEM.
- ACCESSORIES TO PERFECT PLANT.

The same **quality** is obtained through the attention to details, perfection was required for an ambitious project and an ambitious design.

SECTORS

no

Apart from the usual sectors, the **CUBE** can be largely used in the following applications:

- TEMPORARY WORK
- DREDGING















THE "PIECES" OF THE CUBE

The **Cube** consists of a number of containers, from **3** to **10**. The core of the plant is the filter press, as always, for which we dedicate one or more containers (according to the number of machines). The other parts of the Cube are: **the decanter(s)**, **the Bifloc system, the Bifang system, the dirty water tank and the clean water tank**.

1. MATEC HTP FILTER PRESS

The compact and proven solution for highest throughput and driest cake results with an integrated removal system.

2. DECANTER

Made of stainless steel and perfectly sized even for the mobile application, the Matec decanter guarantees great results in terms of water clarification.

3. BIFLOC

The **MATEC** flocculant preparation system that is fully integrated in one container.

4. BIFANG

The Bifang container may house multiple homogenizer tanks to keep the sludge at the perfect thickness for the filter press.

5. DIRTY WATER CONTAINER

Container that receives the waste water and slurry to be treated.

6. CLEAN WATER CONTAINER

Container for the clarified water, also the clean water source for the flocculant preparation.





PERFECTLY SIZED A closer look at the filter press perfectly fitting in its container.



CAREFULLY DESIGNED The drainage system with water discharged from the taps.



AS PRODUCTIVE AS ALWAYS The screw of the conveyor system below the filter press.

READY TO GO The loading operation of the Cube is way faster than the standard's.

CUBE: STANDARD SPECIFICATIONS

Filter press Model	Container Length (mm - ft)	Container Width (mm - ft)	Container Height (mm - ft)	Dry Weight (kg - lb)	Chamber Volume (I - gal)	Capacity per cycle (I - gal)	m³/h (2,5 cycles)	Ton/h
CUBE IGNIS 800x800	12200 - 40'	2350 - 7' 9"	2700 - 8' 11"	17000 - 37500	18,2 - 4,8	2184 - 577	5,46	10
CUBE IGNIS 1000x1000	12200 - 40'	2350 - 7' 9"	2700 - 8' 11"	18000 - 39700	29,1 - 7,7	3492 - 922	8,73	14
CUBE TERRÆ 1300x1300	13800 - 45'	2350 - 7' 9"	2700 - 8' 11"	29000 - 64000	47,3 - 12,5	5676 - 1500	14,19	20
CUBE TERRÆ 1500x1500	13800 - 45'	2350 - 7' 9"	2700 - 8' 11"	35000 - 77200	63,1 - 16,7	7572 - 2000	18,93	30
CUBE TERRÆ 1500x2000	13800 - 45'	2350 - 7' 9"	2700 - 8' 11"	40000 - 88200	84,7 - 22,4	10164 - 2685	25,53	40

Decanter Model	Diameter (mm - ft)	Total Height (mm - ft)	Cone Height (mm - ft)	1 Container Volume (m ³)	2 Container Volume (m ³)	3 Container Volume (m ³)	4 Container Volume (m ³)
ROUND 20	2350 - 7,7	4000 - 13,1	2000 - 6,6	20	40	60	120
ROUND 40	2350 - 7,7	9000 - 29,5	2000 - 6,6	42	84	126	252
ROUND 20 FLAT	2500 - 8,2	4000 - 13,1	2000 - 6,6	23	46	69	138
ROUND 40 FLAT	2500 - 8,2	9000 - 29,5	2000 - 6,6	50	100	150	300
ROUND 20 EUROPE	3000 - 9,9	6000 - 19,7	2000 - 6,6	47	94	141	282
ROUND 40 EUROPE	3000 - 9,9	9000 - 29,5	2000 - 6,6	70	140	210	420

Decanter Model	Container Length (mm - ft)	Container Width (mm - ft)	Container Height (mm - ft)	Container Number	Volume (m ³)
SQUARE 100	12200 - 40'	2350 - 7' 9"	2700 - 8' 11"	2	100
SQUARE 200	12200 - 40'	2350 - 7' 9"	2700 - 8' 11"	4	200
SQUARE 300	12200 - 40'	2350 - 7' 9"	2700 - 8' 11"	6	300
SQUARE 400	12200 - 40'	2350 - 7' 9"	2700 - 8' 11"	8	400

Any project can be customized in accordance to the client's requirements, including filter press number and dimensions, decanters. Round decanters can be transported it by truck, whereas square ones can be installed and moved in container or flat reck.





MARBOLINE

The Matec 100% mobile plant on skid "**MARBOLINE**" is designed and manufactured for the quarry, in which there are different collecting points for water and plant mobility is an essential requirement. The plant is an efficient solution also for stone processing workshops.

Through a complete and compact solution, Matec guarantees great results in terms of quantity and quality to recover and reuse the water used for quarrying and processing. Meanwhile, the dry cake output can be dispose of easily and cheaply.

A Matec plant on skid installs one **AQUÆ 400** filter press with a variable number of plates and also all the other components a complete and compact system for the purification and filtration of water consists of:

100% AUTOMATIC 100% MOBILE NO CIVIL WORKS PRE-WIRED

Every project is fully customizable in its configuration



2

Aquæ 400x400 Model	Total Length (mm)	Total Width (mm)	Footbase Length (mm)	Footbase Width (mm)	Total Height (mm)	Dry Weight (Kg)	Chamber Volume (L)	Capacity per cycle (L)	m³ per cycle	Ton per cycle
400/3	1290	770	510	430	800	350	4,2	12,60	0,02	0,03
400/5	1620	770	740	430	800	350	4,2	21,00	0,03	0,04
400/10	2560	770	1320	430	800	450	4,2	42,00	0,04	0,08
400/15	3510	770	1930	430	800	500	4,2	63,00	0,07	0,11

KOMPACT & BIG BAG SPECIAL PROJECTS

KOMPACT

The Kompact plant is the plant that guarantees the quality of larger plants at the service of small businesses. It is designed for users who have flow rates from 200 to 700 I / min and who have a limited storage space that requires compact mud.

Everything is integrated into the plant structure, and the clear water tank and the settler are combined. In a small space of about $2.5 \times 2.5 \times 5$ meters in height, Kompact brings together all the components and quality standards typical of larger plants:

- Stainless steel decanter, from **5000** to **15000** liters
- **Bifloc** system
- Filter press **Aquae** 400 × 400

OPTIONAL:

The installation of a special structure for easier mobility, ideal on building sites, in quarries or wherever there is a need to filter different water collection points:

- Cloth washing
- Unloading containers
- Ramps for transferring mud (Big bag)



BIG BAG

To respond to the requests of medium-small laboratories in the stone sector, **Matec** produces plants for the purification of waste water and sludge flows up to **400-550 liters per minute**, with the **same quality** and the **same clarification levels typical of larger plants**.

Matec manufactures systems equipped with filter bags, known as **Big Bags** (90 cm x 90 cm x 120 cm), made to measure of stainless steel silos.

Plants with 1 or 5 **Big Bags** can produce from **1500 Kg to 7500 Kg** of mud, with or without a plant for the flocculant.









We don't just Filtrate we Wash anything

William to free 1/ 3 Prilling Propresent 1.5

the sector sector per sub-

-

MATEC WASHING

SANDTEC AGGRETEC SCREENTEC BUCTEC SCRUBTEC ATTRITEC Pag. 96 Pag. 97 Pag. 98 Pag. 99 Pag. 100 Pag. 101



WASHING

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

manufacturing and installation of purification and filtration plants. in Massa, in one of our branches worldwide (USA, Brazil and India) After over **15 years of experience** and hundreds of washing plants or on site, thanks to the work of a great team of engineers and we have started our dedicated line of washing systems, to offer our technicians. customer a solution which has been conceived to work with our purification and filtration plant. Thus, the best result is guaranteed. In addition, Matec will offer you pre-sale assistance for your

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.

Matec is a well-established leading company in the designing, **100% Made in Italy** products to be assembled in our headquarters

customized plant, perfect for your needs, and after-sale assistance The creation of systems which harmonize cutting-edge industry and 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.



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.

MODEL	Waste wa	ater flow	Max sand output	Ν	Aax sand out	put		Dewatering screen				Pump Power	DS Power	Wei	ight
	Lpm	Gpm	tph	n°	Ømm	Øin	Larghezza mm	Larghezza ft	Lunghezza mm	Lunghezza ft	Modello	KW	KW	Kg	Lb
SH-035-180	3000	792	35	1	500	19,69	900	2,95	1750	5,74	W 6/4	22	1.6+1.6	5000	11000
SH-045-180	3000	792	45	1	500	19,69	1200	3,94	1750	5,74	W 6/4	30	2.2+2.2	5700	12540
SH-065-250	4000	1056	65	1	650	25,59	1200	3,94	2750	9,02	W 6/4	30	2.2+2.2	7300	16060
SH-045-300	5000	1320	45	1	650	25,59	1200	3,94	1750	5,74	W 6/4	37	2.2+2.2	6000	13200
SH-065-300	5000	1320	65	1	650	25,59	1200	3,94	2750	9,02	W 6/4	37	2.2+2.2	7500	16500
SH-080-300	5000	1320	80	1	650	25,59	1500	4,92	2750	9,02	W 6/4	37	3.6+3.6	8000	17600
SH-100-300	5000	1320	100	1	650	25,59	1500	4,92	2750	9,02	W 8/6	37	3.6+3.6	8800	19360
SH-120-350	6000	1584	120	2	500	19,69	1500	4,92	2750	9,02	W 8/6	45	3.6+3.6	9800	21560
SH-120-500	8000	2112	120	2	500	19,69	1500	4,92	2750	9,02	W 8/6	55	3.6+3.6	9900	21780
SH-150-500	8000	2112	150	2	650	25,59	1800	5,91	3000	9,84	W 8/6	55	6+6	12600	27720
SH-150-600	10000	2640	150	2	650	25,59	1800	5,91	3000	9,84	W 8/6	75	6+6	12800	28160
SH-200-600	10000	2640	200	2	650	25,59	1800	5,91	4000	13,12	W 10/8	75	7+7	13700	30140
SH-160-750	12500	3300	160	2	800	31,50	1800	5,91	3000	9,84	W 10/8	90	6+6	14300	31460
SH-160-850	14000	3696	160	2	800	31,50	1800	5,91	3000	9,84	W 10/8	90	6+6	14500	31900
SH-200-750	12500	3300	200	2	800	31,50	1800	5,91	4000	13,12	W 10/8	90	7+7	16000	35200
SH-200-850	14000	3696	200	2	800	31,50	1800	5,91	4000	13,12	W 10/8	90	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.

Aggretec

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.



	AGGRETEC AGT 50		AGGRETEC	AGT 100	AGGRETEC	AGT 150	AGGRETEC	AGT 200	AGGRETEC	AGT 250
COMPONENT	MODEL	POWER	MODEL	POWER	MODEL	POWER	MODEL	POWER	MODEL	POWER
Hopper+grid+hydraulic unit	8 m ³ capacity	4	8 m ³	4	10 m ³	4	10 m ³	4	10 m ³	4
Belt feeder	W650 L3900	4+VFD	W800 L3900	4 + VFD	W1000 L3900	5.5 + VFD	W1000 L3900	7.5 + VFD	W1000 L3900	7.5 + VFD
Main conveyor belt	W650 L15000	4 x 2	W800 L15000	4 x 2	W1000 L18000	5.5 x 2	W1000 L18000	7.5 x 2	W1000 L21000	9 x 2
Inclined vibrating screen	W1200 L4000 3D	11	W1500 L4000 3D	11	W1500 L5000 3D	15	W1800 L5000 3D	18.5	W1800 L6000 3D	22
Dewatering screen	W1200 L2000 2C	4 x 2	W1200 L3000 2C	5.5 x 2	W1500 L3000 2C	6 x 2	W1800 L3000 2C	7 x 2	W1800 L4000 2C	7.5 x 2
Slurry centrifugal pump for sand 0/8	model 4/3 DAH	22 + VFD	4/3 DAH	30 + VFD	6/4 DAH	37 + VFD	8/6 DAH	45 + VFD	8/6 DAH	55 + VFD
Slurry centrifugal pump for sand 0/2	model 4/3 DAH	22 + VFD	4/3 DAH	30 + VFD	6/4 DAH	37 + VFD	8/6 DAH	45 + VFD	8/6 DAH	55 + VFD
Hydrocyclone for sand 0/8	D500		D600		D800		D800		D800	
Hydrocylone for sand 0/2	D400		D500		D600		D600		D600	
Storage conveyor belts (n°5)	W500 L10000	3 x 5	W500 L10000	3 x 5	W650 L10000	4 x 5	W650 L10000	4 x 5	W650 L10000	4 x 5

Screentec



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 or 3 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.



MODEL	Deck	width	Deck	length	Screen	ing area	Deck	Capacity		Weight			Weight P			Power	
	mm	feet	mm	ft	m ²	ft ²	Number	tph		Kg			Lbs				
VS-150-400	1500	4.92	4000	13.12	6.0	64.58	234	30-100	2500	3000	3500	5500	6600	7700	7.5	11	11
VS-150-500	1500	4.92	5000	16.40	7.5	80.73	234	50-200	5000	6000	6500	11000	13200	14300	15	15	18,5
VS-180-500	1800	5.91	5000	16.40	9.0	96.88	234	50-250	6000	7000	7500	13200	15400	16500	18,5	18,5	22
VS-180-600	1800	5.91	6000	19.68	10.8	116.25	234	50-280	6500	7500	8000	14300	16500	17600	18,5	18,5	22
VS-210-600	2100	6.89	6000	19.68	12.6	135.63	234	90-300	7000	8000	9000	15400	17600	19800	18,5	22	30
VS-210-700	2100	6.89	7000	22.97	14.7	158.23	234	90-300	7500	8500	10000	16500	18700	22000	22	30	37
VS-240-700	2400	7.87	7000	22.97	16.8	180.84	23	110-350	9000)	9500	1980	0	20900	37		45
VS-240-800	2400	7.87	8000	26.25	19.2	206.67	23	130-400	1500	0 1	18000	3300	0	39600	45		55

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.





MODEL	Wheel diameter		Bucke	t width	Max c	apacity	We	Power	
	mm	ft	mm	in	m³h	tph	Kg	Lbs	KW
BT-200-030	2000	6,56	500	19,69	20	30	1700	3740	2
BT-200-050	2000	6,56	750	29,53	30	50	2000	4400	3
BT-240-080	2400	7,87	1000	39,37	50	80	2700	5940	4
BT-240-110	2400	7,87	1300	51,18	70	110	3000	6600	5,5
BT-300-160	3000	9,84	2x800	2x31,50	100	160	4500	9900	11
BT-400-220	4000	13,12	2x800	2x31,50	140	220	6500	14300	7,5x2
BT-500-400	5000	16,40	2x1500	2x59,6	250	400	12000	26400	11x2



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.



MODEL LW	Blades d	liameter	Shaft	Shaft length		Max feeding size		Weight		Power
	mm	ft	mm	ft	mm	inch	tph	Kg	Lb	kW
LW-080-500	800	2,62	5000	16,40	70	2,75	75	10500	23148	2x18.5
LW-095-600	950	3,11	6000	19,69	100	3,93	150	13500	29762	2x30
LW-095-700	950	3,11	7000	22,96	100	3.93	150	14500	31967	2x37
LW-120-600	1200	3,94	6000	19,69	100	3,93	220	16000	35273	2x45
LW-120-700	1200	3,94	7000	22,96	100	3.93	220	17500	38580	2x45

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

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.



	MODEL	VOL m ³	Power (kW)
		100	5.5x2
	.=	220	7.5x2
	AT-200 (2 cells)	270	9.2x2
	(2 ccn3)	650	15x2
- 2 material		1300	22x2
		100	5.5x3
	17.000	220	7.5x3
North Star	AT-300 (3 cells)	270	9.2x3
	(0 cens)	650	15x3
		1300	22x3

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

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