matec®
machinery technology

TECHNICAL CATALOG

SLURRY DEWATERING THROUGH PRESSURE

To obtain perfectly dried mud cakes, Matec filter press is the best technical/economical solution.

Our machines use more pressure than those of our competitors, working up to 20 Bar.

More pressure means greater results, both in terms of cake dryness and cycle time.
Matec filter press guarantees:

DRY CAKES

The average residual moisture is 15%, but we can squeeze cakes to obtain 7-8% residual moisture.

CLEAN WATER

The water obtained from the dewatering is clean water ready to be reused or disposed of safely.

The filter press can be applied to many fields, thanks to its simplicity, versatility and efficiency. It is also known as a plate filter, deriving its name from the filtrating element, or as a chamber or diaphragm/membrane filter press, which gives a more specific and complete definition of the type of filter plate.
Matec filter press consists essentially of two main components: the framework and the filter pack.
The framework has the main function of supporting and keeping together the filter pack, and its most important elements are the head, the mobile plate, the hydraulic cylinder and the manifold.

We offer both side-beam and over-beam presses, and machines with one or two cylinders to meet the clients' requirements.

THE FILTRATION PROCESS

The actual filtration process occurs in the filter pack, consisting of a customized set of plates.
The cloths and under-cloths cover the filtrating surface of the plate, which has small projecting cylinders forming drainage channels.

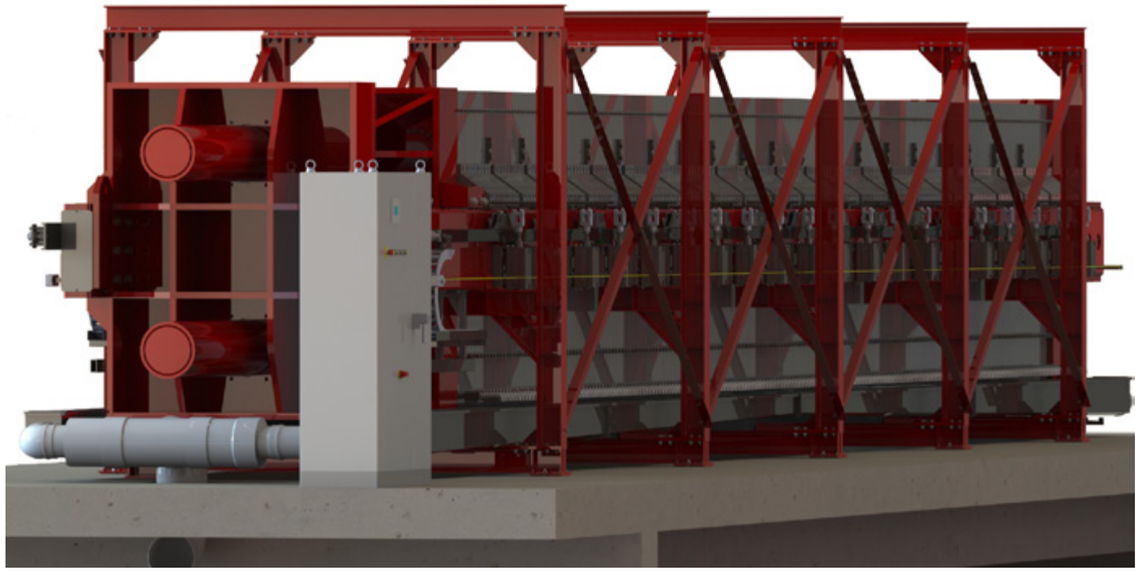
Once the filter pack is completely sealed, the filtration process begins from the head plate with the feed pump injecting the sludge into the filter plates chambers.

The cake will form uniformly all across the filtrating surface and is ready for discharging once the required moisture level has been reached.

MATEC PLUS

The Matec discharging system is one of the key elements of our machines.
The TT2 Fast opening system can discharge 200 plates in less than 4 minutes.
Total Traction Fast is driven by two small, fast-acting pistons that open the plates in sections.

In addition, the Gasser Shakers guarantee no filter cakes remain attached to the filter plates to ensure the filter press operates at its optimum.
Matec filter presses are specifically designed for each project. Other accessories may be added to further improve the final results in terms of moisture.



THE FILTER PRESS

Compliance with environmental laws has become important for plant owners in most countries.

Cutting-edge technologies have been developed in the industrial wastewater and slurry treatment field.

Matec technology complies with the latest environmental regulations, while maximizing the returns of the plant, through savings and earnings.

That is what clients have been asking for.

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.

OUR MACHINES' FEATURES ARE:

All made of single-block steel from thick slabs
Plasma, laser or water-jet manufacturing process
Purified water drained through external manifolds (to avoid external contacts or leaks)
First choice components by major manufacturers
Stainless steel accessories
High speed and high pressure hydraulic system

MATEC SUPPLIES COMPLETE TURNKEY PLANTS:

- 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.

WHAT MAKES MATEC THE BEST SOLUTION FOR YOUR BUSINESS

Matec can exhibit over 10 years of expertise in the manufacturing of filtration and clarification machines. We started with filter presses for aggregates, which require more pressure, to become a worldwide leader with references in all the main sectors and over 1200 installed plants.

The productivity of a filter press is given by m^3 per cycle and cycles per hour, and consequently by tons of dry mud cakes produced. We design and build plants to process from 0,5 to 100 m^3/h, every one automatic and customized.

More pressure (more speed) means better performances, a shorter cycle time, a lower humidity percentage and better results. We are the only 100% HPT company using pressures up to 16 and 21 Bar, twice as much as the pressures at which competitors work (8/10 Bar).

The faster the time for cake discharging and for restarting the filtration, the more productive is the machine. MATEC is the only company which uses the TT2 patented system that reduces discharging times of big machines from 15/20 minutes to less than 3 minutes.

The shaking system is fundamental for one filter press, to avoid a reduced cloth life, the machine spraying and, above all, one operator to be always present. MATEC uses the patented and high efficiency pneumatic GASSER system.

We only use AISI 304 stainless steel to guarantee every product for 10 years and to reduce maintenance costs drastically. We are also the only company which gives a 36 month full warranty for its plants, for the electrical, the hydraulic and the mechanical parts.

The use of important brands does not only mean quality, it is also an important guarantee for the availability of components locally. MATEC only uses top brands. Siemens and Allen Bradley for the electrical part, Bosch Rexroth for the mechanical part and feeding pumps 100% made in Italy.

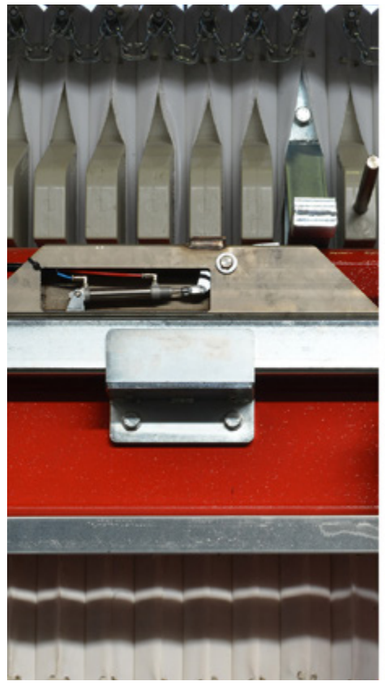
The assistance before, during and after the sale is fundamental for plants. MATEC has a technical office with 5 engineers dedicated to blueprint design, project engineering and the providing of different platforms, 1 dedicated engineer during installation, 10 technicians for the plant assembling and start-up, and for the after-sale assistance within 24/48 hours.

PLC - PROGRAMMABLE LOGIC CONTROLLER

MATEC high technology, with more than 20 types of controls and alarms, helps to avoid any kind of breakdown and plant stoppage.

Through Siemens, Allen Bradley or Schneider PLC and touch screens, it is possible to monitor the filtration times and the cubic meters produced in one hour or in one day.

The PLC is contained inside a cabinet properly sealed and isolated. Through its touch screen, it is possible to control the right functioning of the machine and also to force some operations, like discharging, or vary the pump speed.



MATEC ACCESSORIES - FOR A BETTER PRODUCTIVITY

TT2 FAST

The discharging time is a dead time in the productive cycle, so the faster is the opening the greater are the savings.

TT2 Fast is the fastest opening system in the market. This system is installed on filter presses with more than 50 plates and can discharge the cakes for 100 plates in less than 2 minutes and for 200 plates in less than 4 minutes.

It basically works through one steel bar per side which is moved by dedicated oledynamic pistons which start pulling to open the plate pack.

On the TT bar there is another piston whose purpose is to lift the metal dog which wedges in the special TT handle of the plate.

The anti-crossing system prevent any possible damage that may be caused by the non-perfect alignment of the plates.

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.

GASSER SHAKER

Through the Gasser Shaker system, Matec can guarantee the perfect discharging of cakes from the plates.

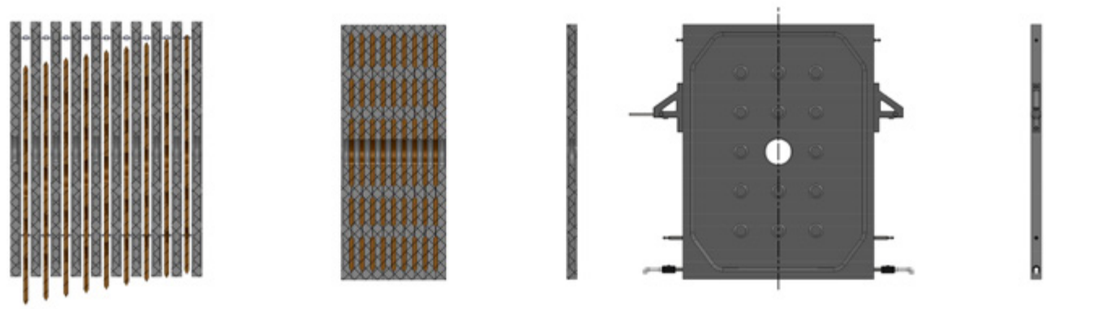
It shakes the plates automatically, in order to avoid that some mud remains attached to the plates.

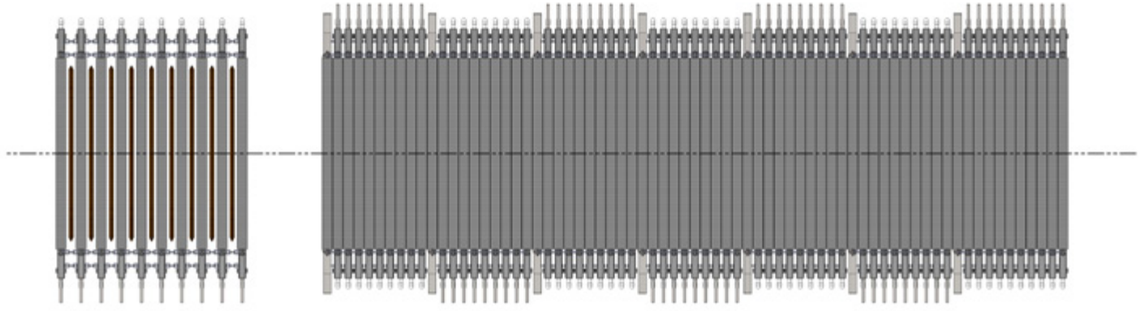
That would be very dangerous for the machine and may cause the breaking of plates during the next filtration process, when the piston closes the filter pack.

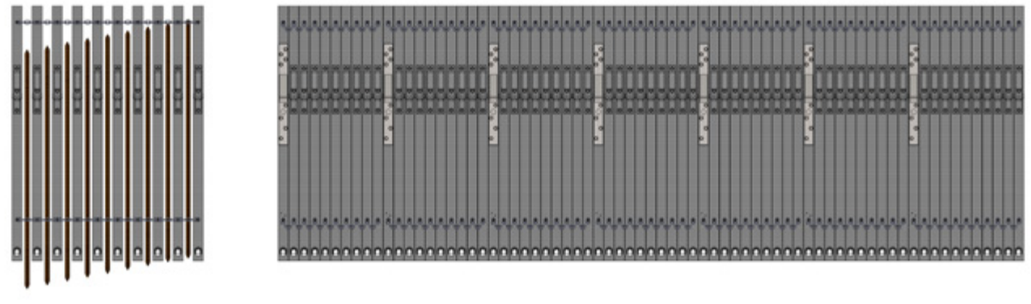
The Gasser Shaker system guarantees also low power consumption, because the pistons that shake the plates are pneumatic ones.

When the plates are held together in a unique pack, the corner outlets form individual manifolds which connect the drainage surface to the external pipes.

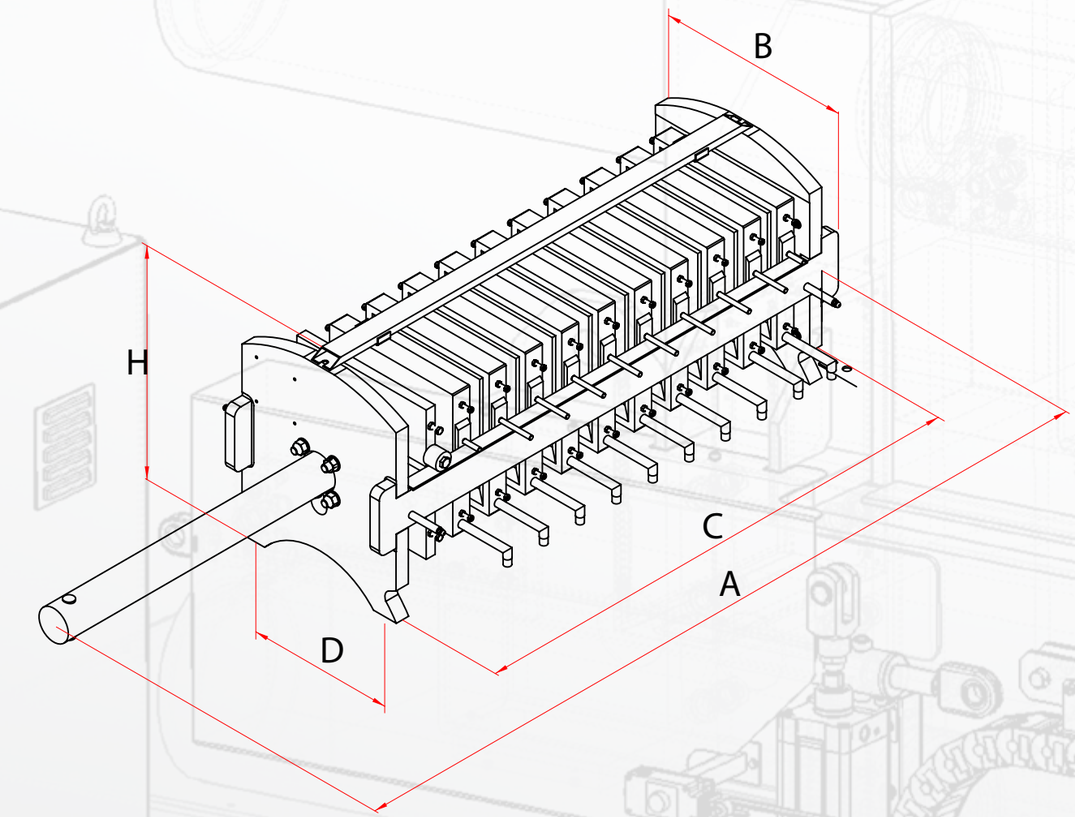
The central hole from which the sludge is injected (less frequently there are feeding holes in the corners) creates a manifold which connects to the chambers of the filter pack.

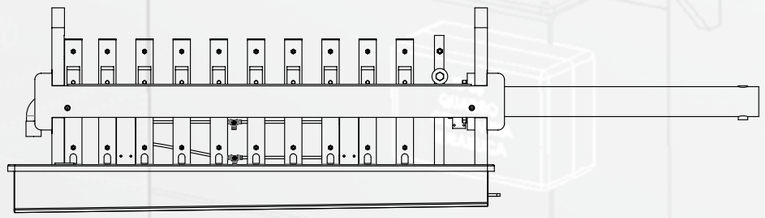


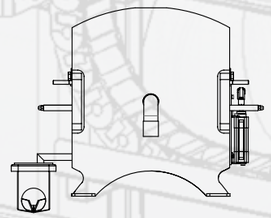




Acquæ 400x400





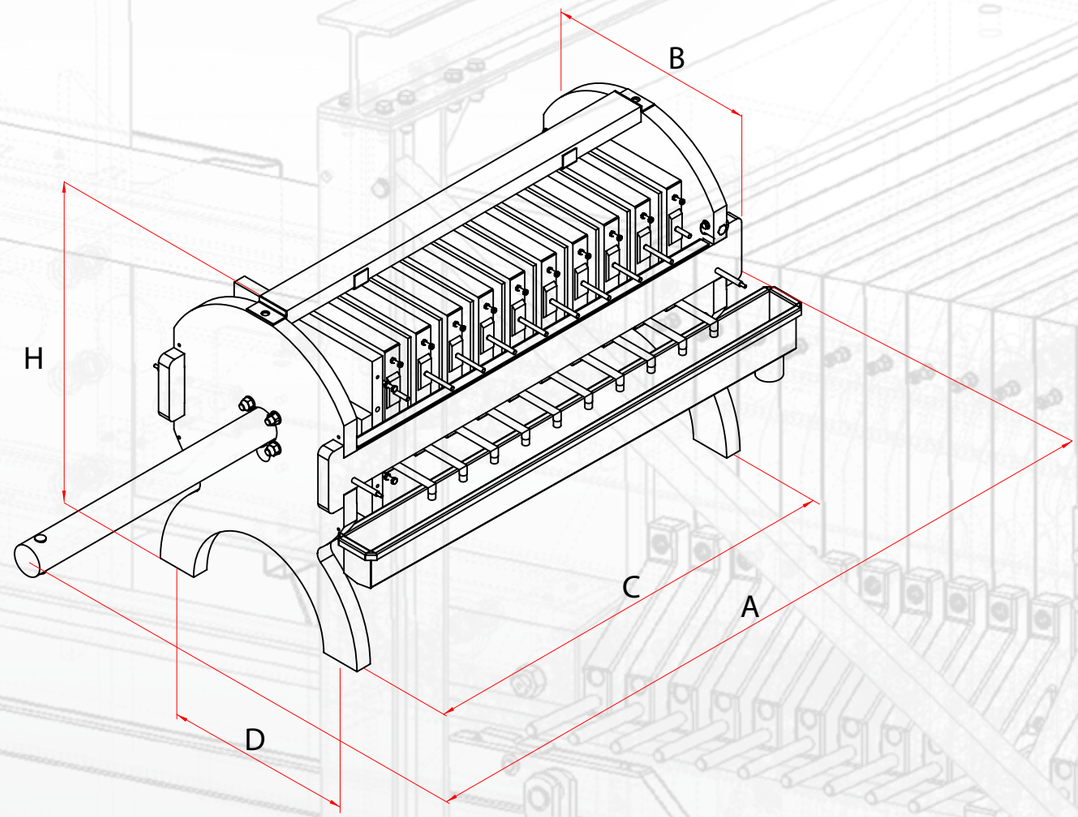


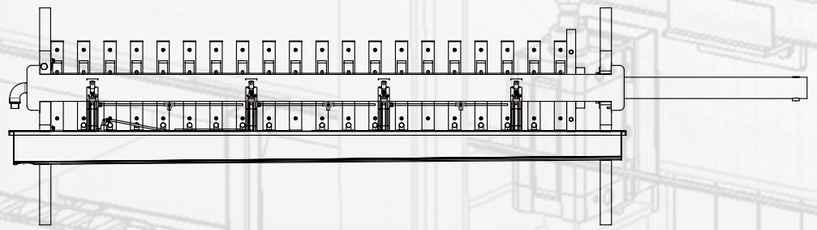
Specifications

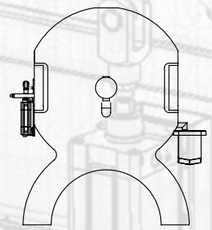
Acquæ model 400x400	A Length	B Width	C Foot Wheelbase	D Foot Wheelbase	H Total Height	Dry Weight (Kg)	Chamber Volume (Liters)	Capacity per cycle (Liters)	m^3/h (2 cycles)	Ton/h	m^3/h (3 cycles)	Ton/h
400/3	1290	770	510	430	800	350	4,2	12,60	0,03	0,05	0,04	0,07
400/5	1620	770	740	430	800	350	4,2	21,00	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
400/25	5520	770	3080	430	800	1200	4,2	105,00	0,21	0,39	0,32	0,58
400/30	6150	770	3670	430	800	1300	4,2	126,00	0,25	0,47	0,38	0,70
400/40	7940	770	4840	430	800	1600	4,2	168,00	0,34	0,62	0,50	0,93
400/50 TT	7080	770	4610	430	800	2000	4,2	210,00	0,42	0,78	0,63	1,17

*The ton/h and m3/h data in the table above are calculated on a material specific weight of 1,85 and a 35 mm cake thickness.

Acquæ 500x500





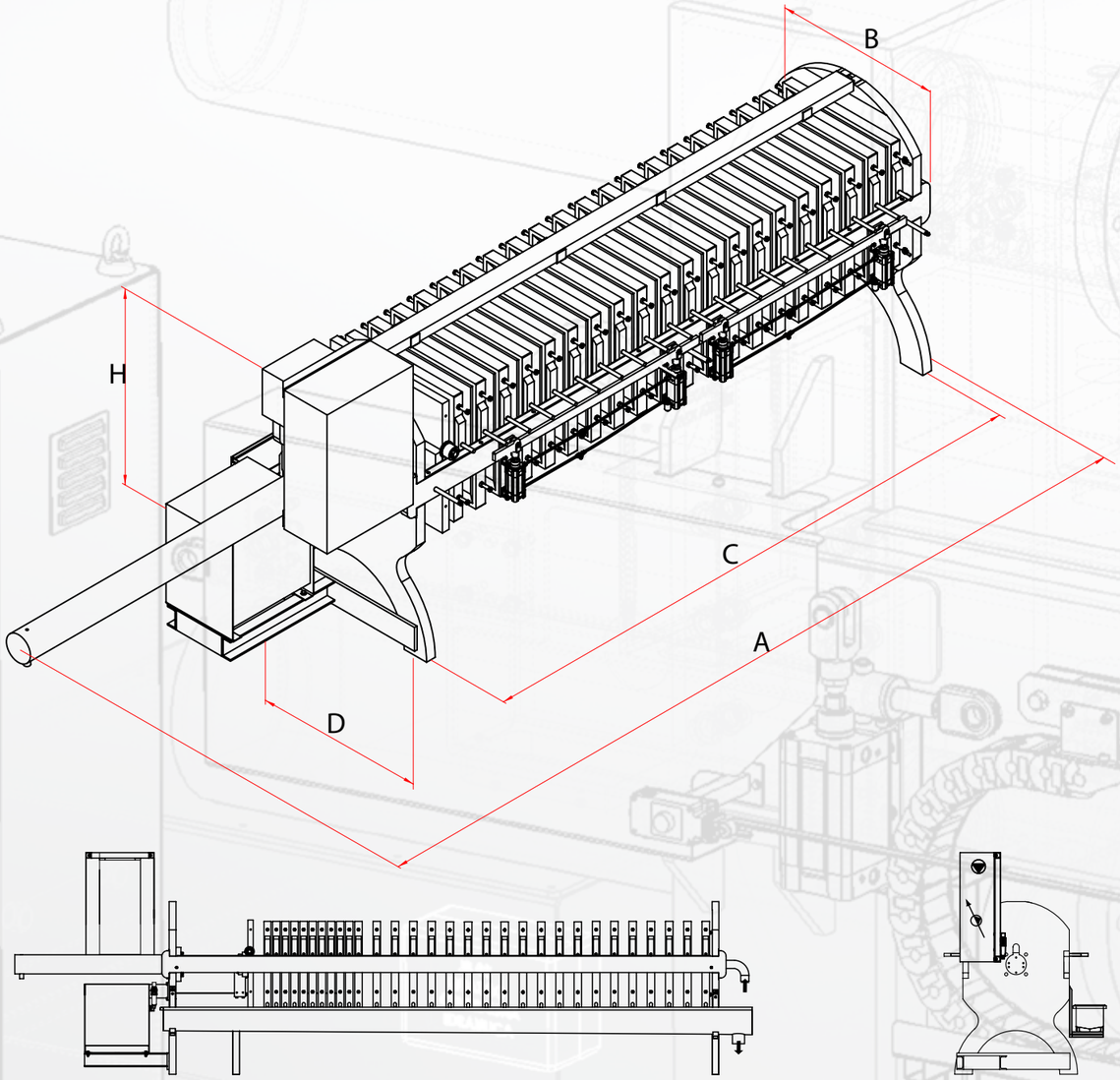


Specifications

Acquæ model 500x500	A Length	B Width	C Foot Wheelbase	D Foot Wheelbase	H Total Height	Dry Weight (Kg)	Chamber Volume (Liters)	Capacity per cycle (Liters)	m^3/h (2 cycles)	Ton/h	m^3/h (3 cycles)	Ton/h
500/10	2560	770	1320	430	800	800	5,9	59,00	0,12	0,22	0,18	0,33
500/15	3510	770	1930	430	800	1000	5,9	89,00	0,18	0,33	0,27	0,49
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
500/40	7940	770	4840	430	800	1600	5,9	236,00	0,47	0,87	0,71	1,31
500/50 TT	7080	770	4610	430	800	1700	5,9	295,00	0,59	1,09	0,89	1,64

*The ton/h and m3/h data in the table above are calculated on a material specific weight of 1,85 and a 35 mm cake thickness.

Acquæ 630x630

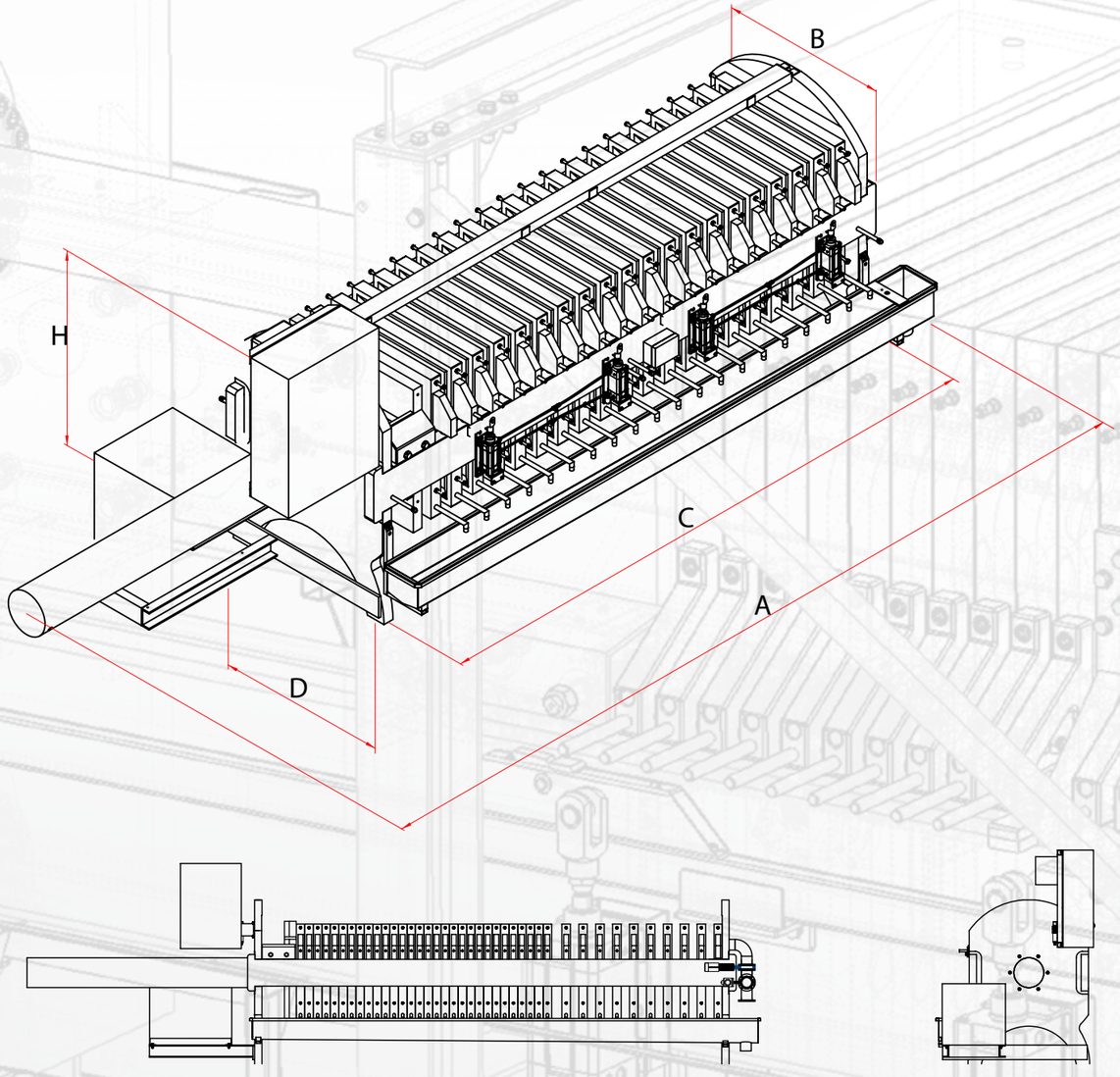


Specifications

Acquæ model 630x630	A Length	B Width	C Foot Wheelbase	D Foot Wheelbase	H Total Height	Dry Weight (Kg)	Chamber Volume (Liters)	Capacity per cycle (Liters)	m^3/h (2 cycles)	Ton/h	m^3/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	5290	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
630/40	9610	1200	5685	770	1565	4300	10,8	432,00	0,86	1,60	1,30	2,40
630/50 TT	11825	1200	7070	770	1565	4600	10,8	540,00	1,08	2,00	1,62	3,00

*The ton/h and m3/h data in the table above are calculated on a material specific weight of 1,85 and a 35 mm cake thickness.

Ignis 800x800

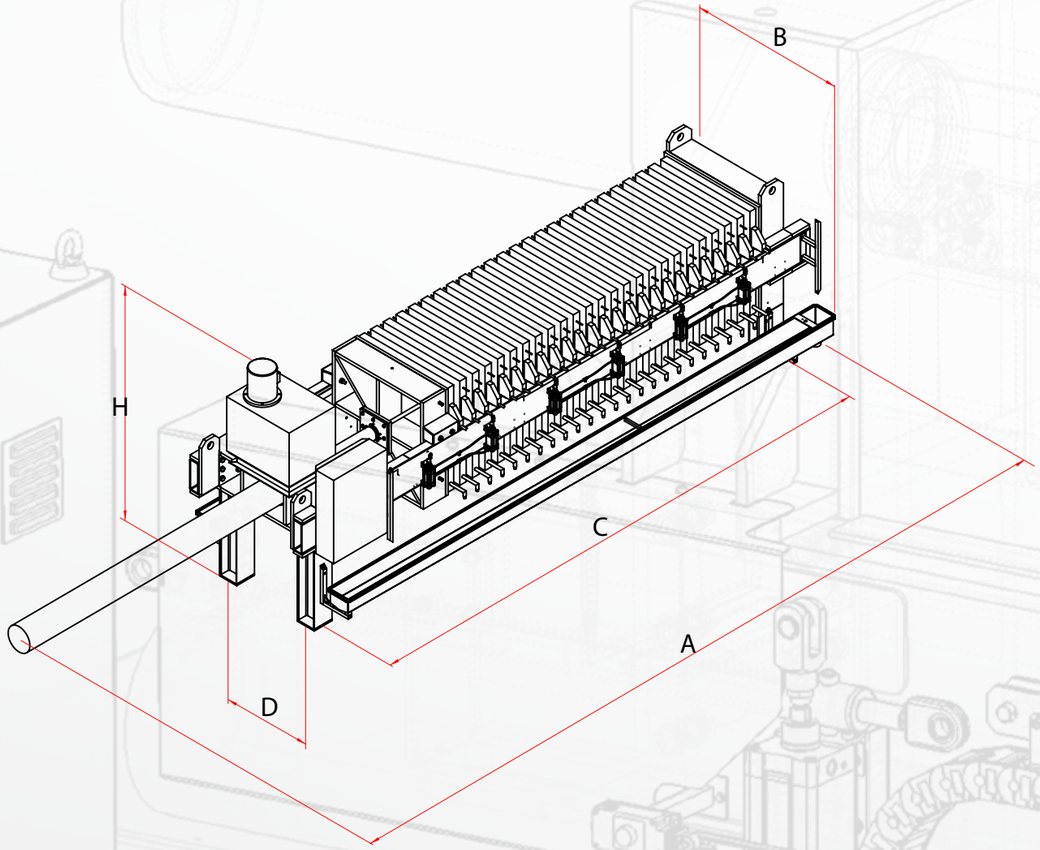


Specifications

Ignis model 800x800	A Length	B Width	C Foot Wheelbase	D Foot Wheelbase	H Total Height	Dry Weight (Kg)	Chamber Volume (Liters)	Capacity per cycle (Liters)	m^3/h (2 cycles)	Ton/h	m^3/h (3 cycles)	Ton/h
800/10	4585	1530	2455	890	1760	2600	18,2	182,00	0,36	0,67	0,55	1,01
800/15	4235	1530	2455	890	1760	3300	18,2	273,00	0,55	1,01	0,82	1,52
800/20	5300	1530	3160	890	1760	3600	18,2	364,00	0,73	1,35	1,09	2,02
800/25	7900	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
800/40	8120	1530	5980	890	1760	5500	18,2	728,00	1,46	2,69	2,18	4,04
800/50 TT2 Fast	5780	1530	4520	890	1760	6000	18,2	910,00	1,82	3,37	2,73	5,05
800/60 TT2 Fast	6400	1530	5140	890	1760	6600	18,2	1092,00	2,18	4,04	3,28	6,06
800/70 TT2 Fast	7210	1530	5950	890	1760	7200	18,2	1274,00	2,55	4,71	3,82	7,07
800/80 TT2 Fast	8660	1530	6695	890	1760	7800	18,2	2184,00	4,37	8,08	6,55	12,12
800/90 TT2 Fast	9345	1530	7380	890	1760	9400	18,2	1456,00	2,91	5,39	4,37	8,08
800/100 TT2 Fast	10030	1530	8065	890	1760	10500	18,2	1638,00	3,28	6,06	4,91	9,09

*The ton/h and m3/h data in the table above are calculated on a material specific weight of 1,85 and a 35 mm cake thickness.

Ignis 1000x1000

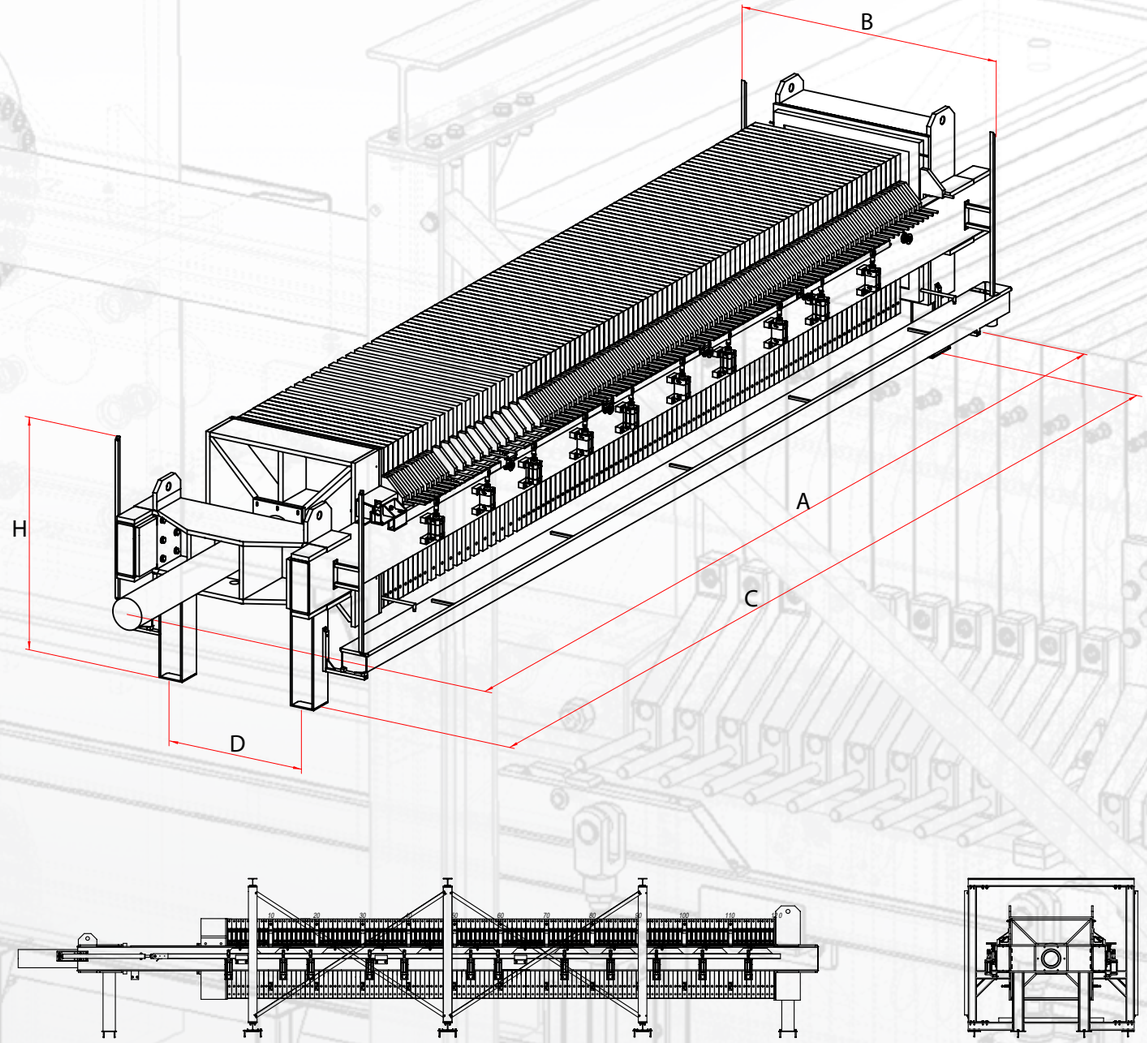


Specifications

Ignis model 1000x1000	A Length	B Width	C Foot Wheelbase	D Foot Wheelbase	H 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	6160	1840	3665	870	2135	4500	29,1	582,00	1,16	2,15	1,75	3,23
1000/25	8305	1840	5065	870	2135	5000	29,1	728,00	1,46	2,69	2,18	4,04
1000/30	8305	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
1000/60 TT2 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	9845	1840	7700	870	2155	8700	29,1	2328,00	4,66	8,61	6,98	12,92
1000/90 TT2 Fast	9480	1840	7340	870	2155	9300	29,1	2619,00	5,24	9,69	7,86	14,54
1000/100 TT2 Fast	11355	1840	9215	870	2155	11000	29,1	2910,00	5,82	10,77	8,73	16,15
1000/120 TT2 Fast	12400	1840	10900	870	2155	12500	29,1	3492,00	6,98	12,92	10,48	19,38
1000/140 TT2 Fast	13825	1840	11875	870	2155	14500	29,1	4074,00	8,15	15,07	12,22	22,61
1000/150 TT2 Fast	14585	1840	12635	870	2155	15500	29,1	4365,00	8,73	16,15	13,10	24,23
1000/160 TT2 Fast	15345	1840	13395	870	2155	16500	29,1	4656,00	9,31	17,23	13,97	25,84
1000/170 TT2 Fast	16105	1840	14155	870	2155	18000	29,1	4947,00	9,89	18,30	14,84	27,46
1000/180 TT2 Fast	16865	1840	14915	870	2155	19500	29,1	5238,00	10,48	19,38	15,71	29,07
1000/190 TT2 Fast	17625	1840	15675	870	2155	21500	29,1	5529,00	11,06	20,46	16,59	30,69
1000/200 TT2 Fast	18358	1840	16435	870	2155	23500	29,1	5820,00	11,64	21,53	17,46	32,30

*The ton/h and m3/h data in the table above are calculated on a material specific weight of 1,85 and a 35 mm cake thickness.

Terræ 1200x1200

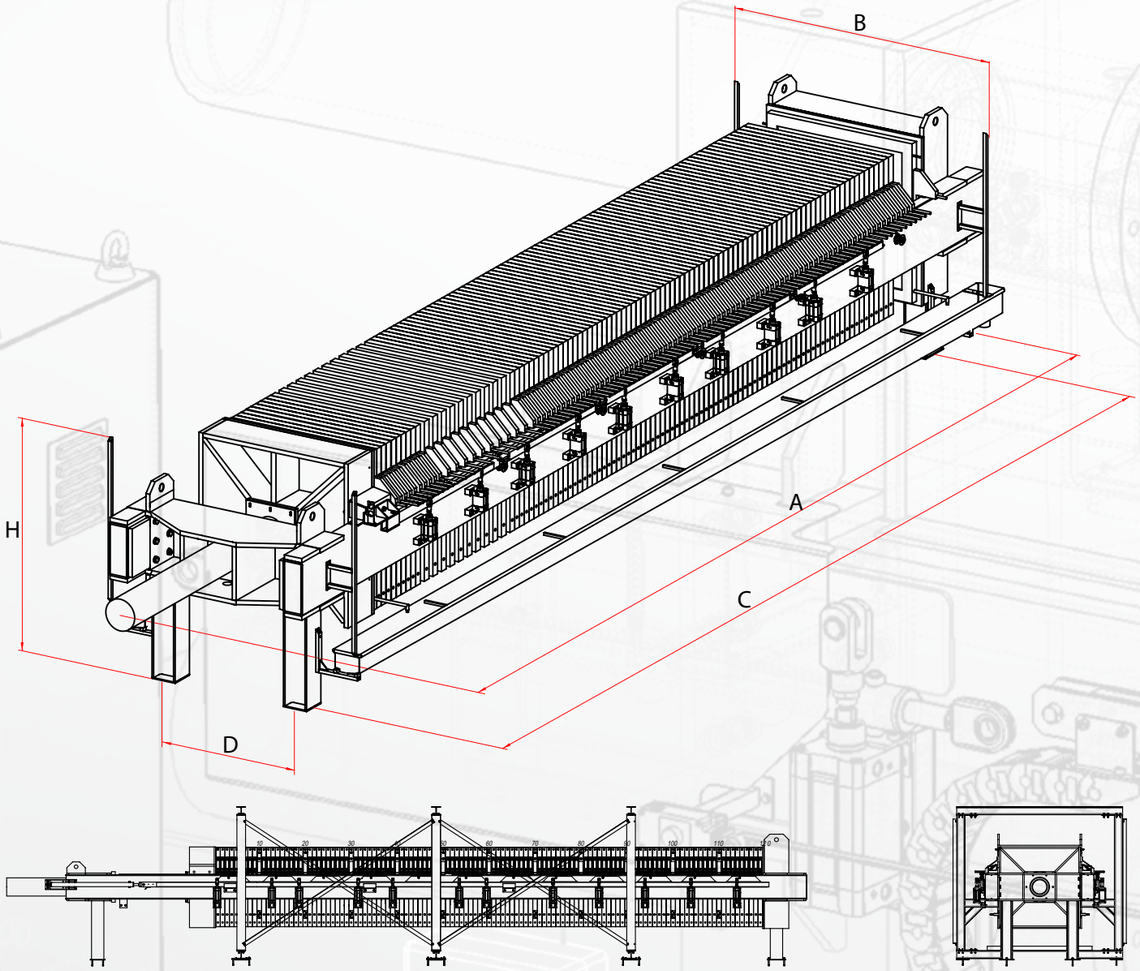


Specifications

Terræ model 1200x1200	A Length	B Width	C Foot Wheelbase	D Foot Wheelbase	H Total Height	Dry Weight (Kg)	Chamber Volume (Liters)	Capacity per cycle (Liters)	m³/h (2 cycles)	Ton/h	m³/h (3 cycles)	Ton/h
1200/15	5388	2270	3465	1170	2060	5700	39,8	597	1,19	2,21	1,79	3,31
1200/20	5580	2270	3475	1170	2060	8100	39,8	796	1,59	2,95	2,39	4,42
1200/25	7410	2270	4955	1170	2060	9500	39,8	995	1,99	3,68	2,99	5,52
1200/30	9850	2270	6995	1170	2060	10900	39,8	1194	2,39	4,42	3,58	6,63
1200/40	11680	2270	8425	1170	2060	12000	39,8	1592	3,18	5,89	4,78	8,84
1200/50 TT2 Fast	8173	2270	6050	1170	2060	12400	39,8	1990	3,98	7,36	5,97	11,04
1200/60 TT2 Fast	9850	2270	7120	1170	2060	13500	39,8	2388	4,78	8,84	7,16	13,25
1200/70 TT2 Fast	9363	2270	7312	1170	2060	14600	39,8	2786	5,57	10,31	8,36	15,46
1200/80 TT2 Fast	10469	2270	8344	1170	2060	15500	39,8	3184	6,37	11,78	9,55	17,67

*The ton/h and m3/h data in the table above are calculated on a material specific weight of 1,85 and a 35 mm cake thickness.

Terræ 1300x1300

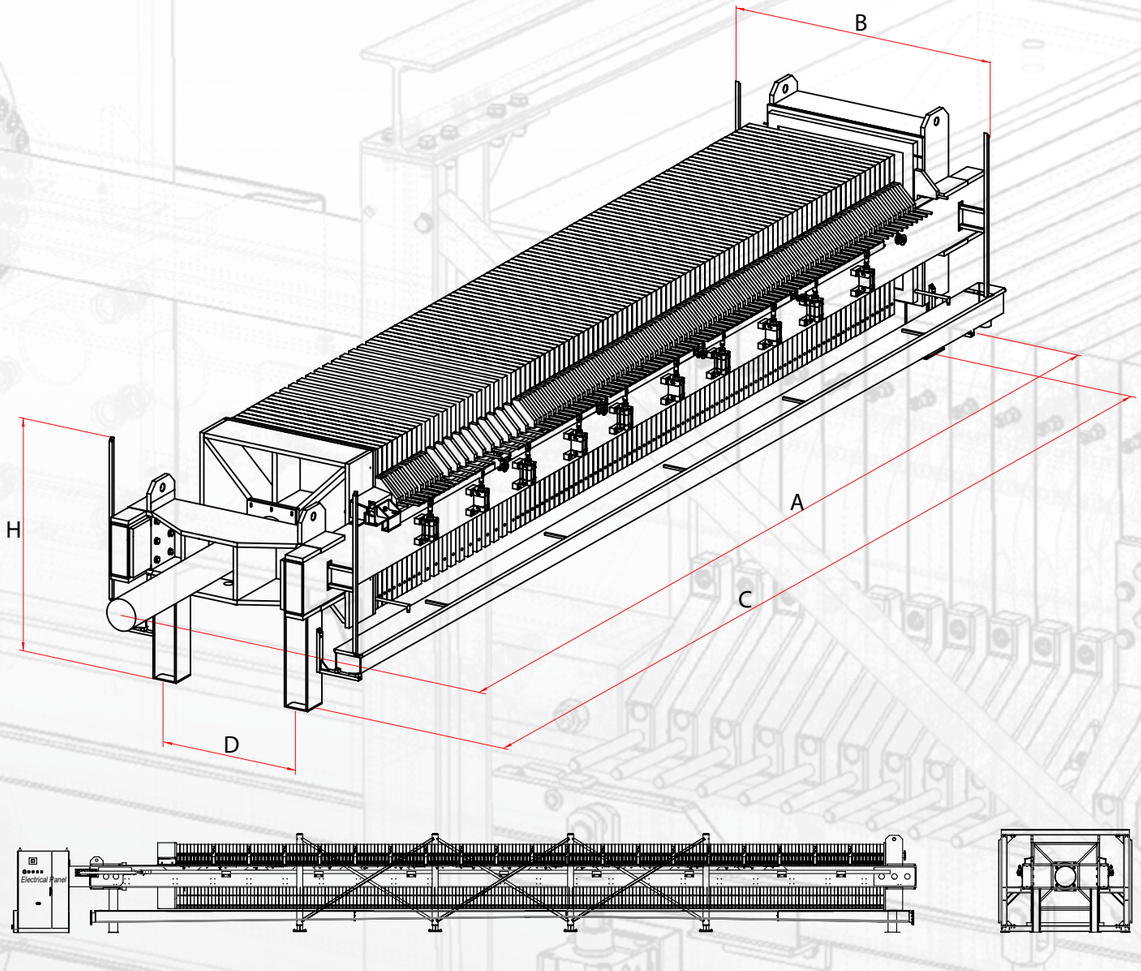


Specifications

Terræ model 1300x1300	A Length	B Width	C Foot Wheelbase	D Foot Wheelbase	H Total Height	Dry Weight (Kg)	Chamber Volume (Liters)	Capacity per cycle (Liters)	m^3/h (2 cycles)	Ton/h	m^3/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
1300/30	9850	2270	6995	1170	2060	11500	47,3	1419	2,84	5,25	4,26	7,88
1300/40	11680	2270	8425	1170	2060	13000	47,3	1892	3,78	7,00	5,68	10,50
1300/50 TT2 Fast	8173	2270	6050	1170	2060	13200	47,3	2365	4,73	8,75	7,10	13,13
1300/60 TT2 Fast	9850	2270	7120	1170	2060	14500	47,3	2838	5,68	10,50	8,51	15,75
1300/70 TT2 Fast	9363	2270	7312	1170	2060	15800	47,3	3311	6,62	12,25	9,93	18,38
1300/80 TT2 Fast	10469	2270	8344	1170	2060	17100	47,3	3784	7,57	14,00	11,35	21,00
1300/90 TT2 Fast	10700	2270	8575	1170	2060	18400	47,3	4257	8,51	15,75	12,77	23,63
1300/100 TT2 Fast	11863	2270	9740	1170	2060	20000	47,3	4730	9,46	17,50	14,19	26,25
1300/120 TT2 Fast	12723	2270	10600	1170	2060	22000	47,3	5676	11,35	21,00	17,03	31,50
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
1300/180 TT2 Fast	17740	2270	15740	1170	2060	29000	47,3	8514	17,03	31,50	25,54	47,25
1300/200 TT2 Fast	19260	2270	17260	1170	2060	31000	47,3	9460	18,92	35,00	28,38	52,50

*The ton/h and m3/h data in the table above are calculated on a material specific weight of 1,85 and a 35 mm cake thickness.

Terræ 1500x1500

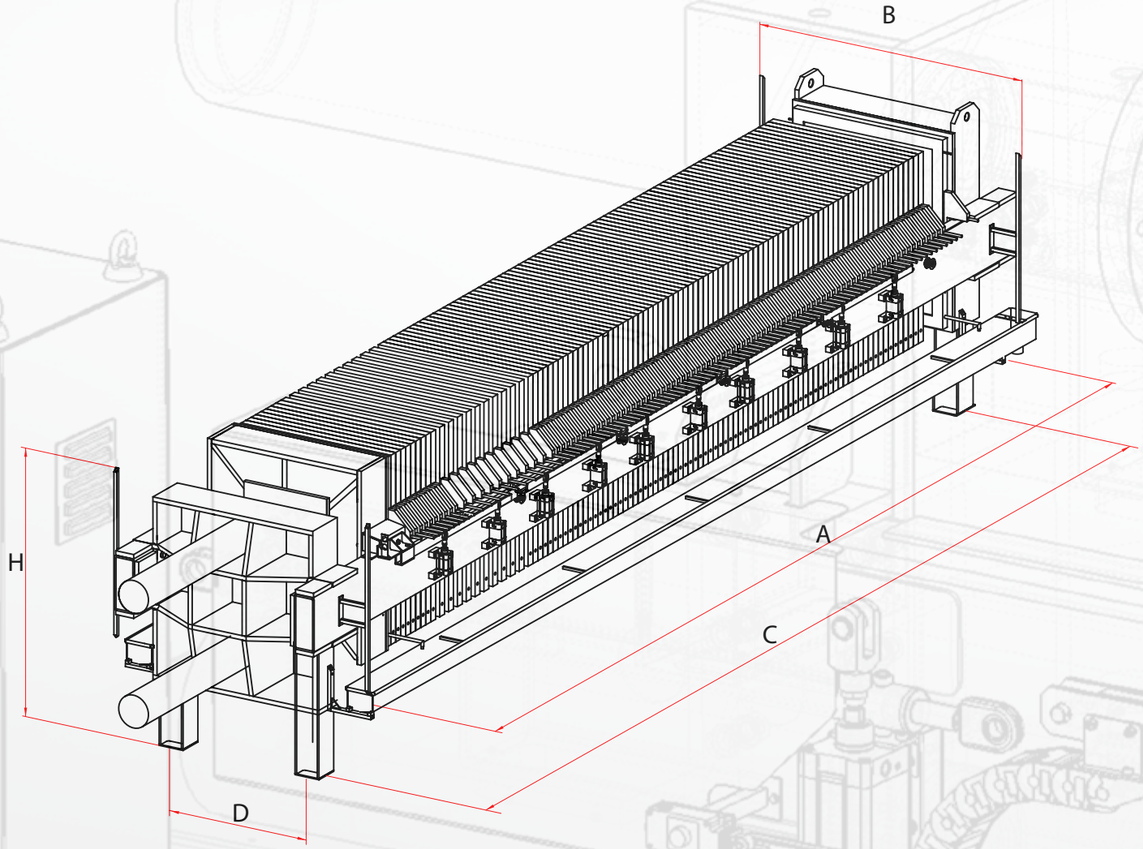


Specifications

Terræ model 1500x1500	A Length	B Width	C Foot Wheelbase	D Foot Wheelbase	H Total Height	Dry Weight (Kg)	Chamber Volume (Liters)	Capacity per cycle (Liters)	m^3/h (2 cycles)	Ton/h	m^3/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	12635	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
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

*The ton/h and m3/h data in the table above are calculated on a material specific weight of 1,85 and a 35 mm cake thickness.

Terræ 1500x2000

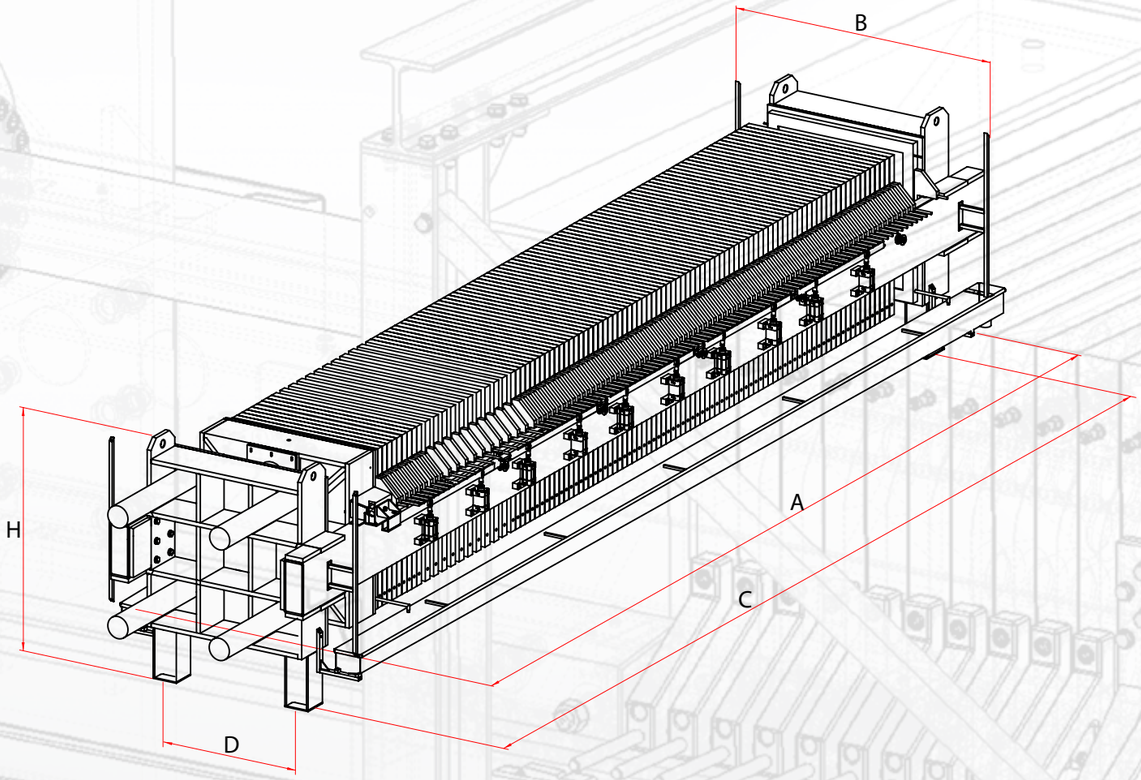


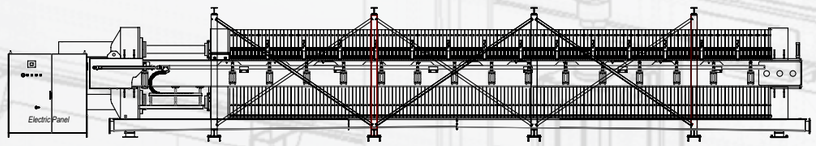
Specifications

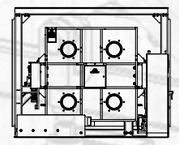
Terræ model 1500x2000	A Length	B Width	C Foot Wheelbase	D Foot Wheelbase	H Total Height	Dry Weight (Kg)	Chamber Volume (Liters)	Capacity per cycle (Liters)	m^3/h (2 cycles)	Ton/h	m^3/h (3 cycles)	Ton/h
1500/50 TT2 FAST	9650	2550	6385	1310	2445	22200	84,7	4235	8,47	15,67	12,71	23,50
1500/60 TT2 FAST	10490	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

*The ton/h and m3/h data in the table above are calculated on a material specific weight of 1,85 and a 35 mm cake thickness.

Magnum 2000x2000



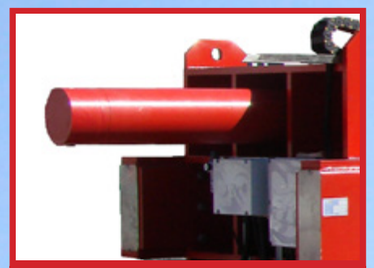




Specifications

Magnum model 2000x2000	A Length	B Width	C Foot Wheelbase	D Foot Wheelbase	H Total Height	Dry Weight (Kg)	Chamber Volume (Liters)	Capacity per cycle (Liters)	m^3/h (2 cycles)	Ton/h	m^3/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
2000/200 TT2 Fast	23460	3430	21320	1356	3795	55640	115	23000	46,00	85,10	69,00	127,65

*The ton/h and m3/h data in the table above are calculated on a material specific weight of 1,85 and a 35 mm cake thickness.



TESTED 10.000 PSI
(700 BAR)

TT2FAST
THE FASTER OPENING

OPEN FILTRATE DESIGN

AUTOMATIC REAL WASHING

SHAKER "GASSER"

ALLEN BRADLEY
SIEMENS TECHNOLOGY

HIGH THICKNESS STEEL

matec®
machinery technology

BORN TO BE PERFECT

TURNKEY WATER TREATMENT AND FILTER PRESS

NO PERSON, NO POLYMER, NO PROBLEMS!

Turn Hard-To-Handle Sludge Into Easy-To-Handle Dry Cakes
With The Matec Plate & Frame Press

MOISTURE < 20%

HPT HIGH PRESSURE TECHNOLOGY

20 BAR

MATEC ACCESSORIES - FOR PERFECT RESULTS

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.

CORE BLOW

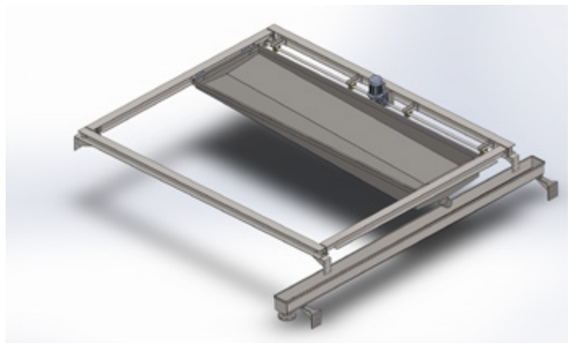
The core blow system is a system conceived to clean out the central feeding residual liquid mud which remains in the diffusion conduit through the plates. The blowing occurs when the filtration cycle has ended, but before the cake discharging. One dedicated valve system allows the blown mud to bypass the mud feeding pump and to be discharged in the mud homogenizer tank again.

CAKE DRYER

The cake dryer system is installed to lower the residual moisture of the cakes by injecting air into the filter press. The air dries the cakes and is discharged through the drainage system.

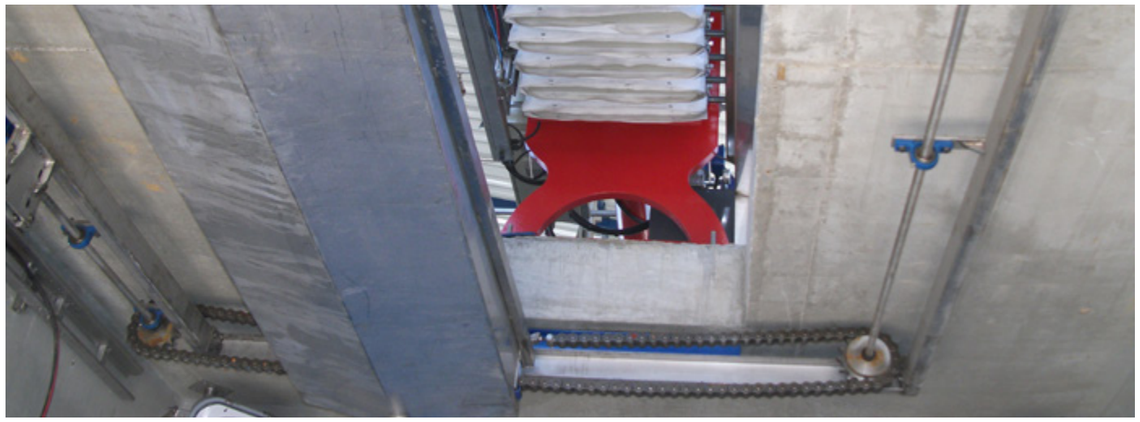
DRIP TRAY

The Drip Tray System is a system conceived to prevent the dripping of water on the already discharged mud cakes. It works automatically and it is controlled by the PLC and moved by a dedicated motor / gearbox system. The tray is placed under the filter press during the filtration cycle and it shifts away when the filter press opens for the cakes' discharging.



MUD 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.



FILTER PRESS FEEDING PUMPS

The pump is the beating heart of the filter press and which one you choose will influence the performances of the plant, in terms of number of cycles and m³ of produced sludge per hour.

The pump type is also responsible for the mud moisture percentage of the cakes.

SINGLE CASE CENTRIFUGAL PUMP

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

It can be installed with double speed motors for an homogenous filling of the filter, with the first speed, and more compact cakes, with the second.
Centrifugal pumps can be supplied with a motor controlled by an inverter.

DOUBLE CASE CENTRIFUGAL PUMP

By using double case centrifugal pumps, it is possible to reach performances which double the ones obtained with single case pumps, that is to say an increased mud dehydration and an operating pressure up to 21 Bar.

PNEUMATIC DOUBLE-DIAPHRAGM PUMP

Matec pumps are easy-to-use, highly-resistant to dry working, self-priming (up to 7.5 meters). They can work while submersed and can be adjusted by varying the pressure of the compressed air.

They stand out for their high performances and reduced weight, which make these pumps ideal for many applications, thanks also to wide range of available materials:
They are perfect for pumping very viscous, abrasive fluids containing solid particles (up to 19 mm in size), solvents, acids and even flood liquids, which can be processed on specific conditions.

The range includes special versions for the food industry and for high pressures up to 17 Bar. A wide range of accessories is the finishing touch of this range.

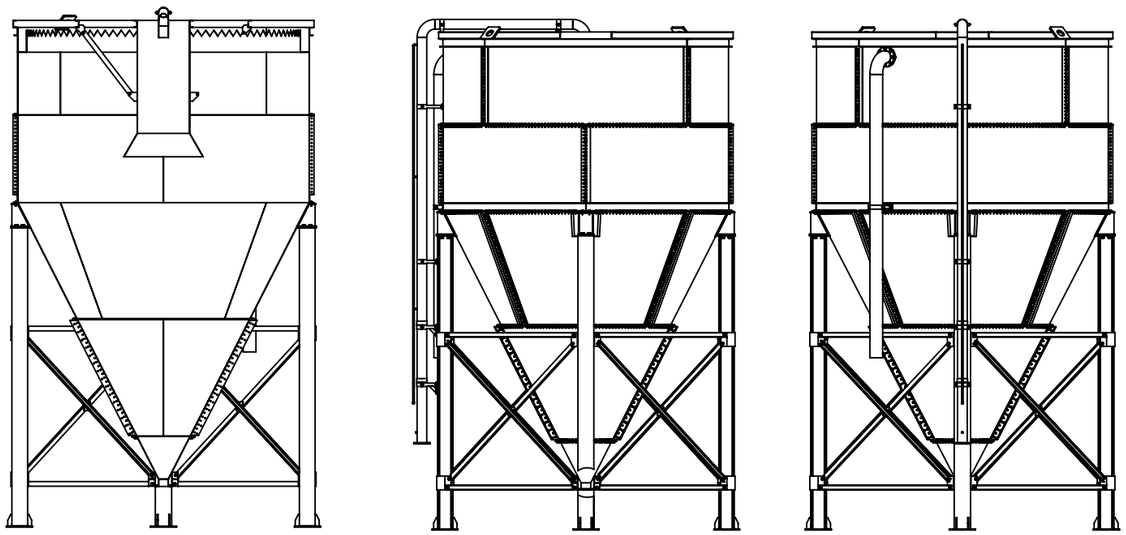
- Pair of cast-iron bodies with vulcanized rubber coatings made of special RAP 27 thick abrasion-proof rubber
- Rotor with 4 open vanes in wear-proof super-alloy Hardalloy-PEMO, (dynamically balanced, hardness 75 ÷'d6 80 HRC, approximately 700 ÷'d6 750 HB), extremely abrasion-resistant
- Three-phase electric motor, closed type, external vent, two speeds, two separate windings – (pump revs/min 960/1450 6/4 poles)
- Pump/motor coupling via V-belts (pump revs/min approximately 960/1450)
- Double mechanic seal with tungsten carbide rings (widia), cooled by disposable water, 4 – 8 litres/min.

Standard Pumps

Model	Capacity m3/h	Pressure m.c.l.	Pressure bar	Piping Suc.	Piping Send.	Motor kw
MT403 AO/AB/AS-B3	30-40	45	6	80	50	11 / 5,5-11
MT503 AO/AB/AS-B3	50-60	45	6	100	65	11 / 15 / 5,5-11 / 7,5-15
MT603 AO/AB/AS-B55	90-120	55	7	125	80	15 / 18,5 / 22 / 7,5-15 / 9-20
MTK125 AO/AB/AS-B75	150-180	55	7	150	100	37 / 16,5-37
MT1004 A0/AB/AS-B75	200-250	45	6	200	150	37 / 45 / 22-45 (+)
MTP200 AO/AB/AS-B75	300-560	45	5,5	250	200	55 / 75
MTP200 AO/AB/AS-B10	300-560	53	6,5	250	200	45-64 (+) / 45-75 (+)
MTI270 AO/AB/AS-B10	500-900	45	6	300	250	132
MTC300 AO/AB/AS-B10	800-1200	45	6	350	300	160
MT503 AO/AB/DC/AS-B55	60-70	100	12,5	100	65	22 / 30 / 13-31
MT603 AO/AB/DC/AS-B75	90-120	100	12,5	125	80	30 / 37 / 9,5-31 / 16-37
MTK125 AO/AB/DC/AS-B75	150-180	100	12,5	150	100	45 / 55 / 30-55
MT1004 AO/AB/DC/AS-B10	200-250	100	12,5	200	150	55 / 75 / 45-75 (+)
MTP200 AO/AB/DC/AS-B10	300-560	95	12	250	200	110 / 132

Hardalloy Pumps

Model	Capacity m3/h	Pressure m.c.l.	Pressure bar	Piping Suc.	Piping Send.	Motor kw
MTS-FP AO/AB/AS-B3	60-70	55	7	100	65	11 - 15
MTS-FP AO/AB/AS-B55	60-70	75	9	100	80	18,5 - 22
MT60-H A0/AB/AS-B55	90-120	65	8	125	80	15 - 18,5 - 22 - 30
MT60-H A0/AB/AS-B75	90-120	75	9	125	100	37
MT125-H A0/AB/AS-B75	150-180	85	10	150	100	30 - 37 - 45 - 55
MT100-H A0/AB/AS-B75	200-250	70	9	200	150	37 - 45 - 55 - 75
MT200-H A0/AB/AS-B75	300-560	65	8	250	200	45 - 55
MT200-H AO/AB/AS-B10	300-560	75	9	250	200	75 - 90
MTS-FP AO/AB/DC/AS-B55	60-70	120	15	100	65	22 - 30 - 37
MTS-FP AO/AB/DC/AS/BX-B75	60-70	160	22	100	80	55 - 75
MT60-H A0/AB/DC/AS-B75	90-120	115	14	125	80	37
MT60-H AO/AB/DC/AS/BX-B75	90-120	140	17	125	80	45 - 55
MT125-H AO/AB/DC/AS-B75	150-180	115	14	150	100	45 - 55
MT125-H AO/AB/DC/AS/BX-B75	150-180	140	17	150	100	75
MT125-H AO/AB/DC/AS/BX-B10	150-180	150	18	150	100	90
MT100-H AO/AB/DC/AS-B10	200-250	115	14	200	150	55 - 75
MT100-H AO/AB/DC/AS/BX-B10	200-250	130	16	200	150	90
MT200-H AO/AB/DC/AS-B10	300-560	120	15	250	200	132 - 160 - 220
MT200-H AO/AB/DC/AS-B10 HS	500-600	150	16	250	200	132 - 160 - 220



SILOS DEEP CONE - VERTICAL 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.

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.

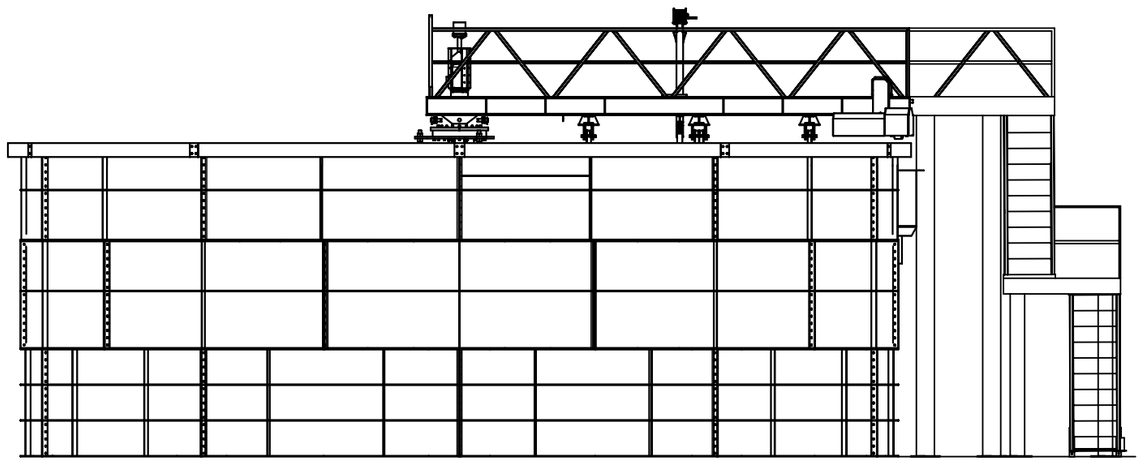
The cone's inclination degree perfects the thickening of the mud and the upper cylinder can be used also an extra stocking space.

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.

Specifications

Model	Capacity / lt	Diameter	Silos Tot. Height mm	Cylinder Height mm	Cone Height mm	Model	Capacity / lt	Diameter	Silos Tot. Height mm	Cylinder Height mm	Cone Height mm
SILINOX 2000i	2000 single-piece	1250	3210	1250	1260	SILINOX 90000s	90000 sections	5000	8600	3000	4900
SILINOX 3500i	3500 single-piece	1500	3710	1500	1510	SILINOX 100000s	100000 sections	5500	8100	2750	4650
SILINOX 5000i	5000 single-piece	2000	4200	1500	2000	SILINOX 110000s	110000 sections	5500	8700	3000	5000
SILINOX 7000i	7000 single-piece	2280	3490	1250	1540	SILINOX 120000s	120000 sections	5500	9200	3500	5000
SILINOX 8000i	8000 single-piece	2000	4700	2000	2000	SILINOX 130000s	130000 sections	5800	9700	3500	5500
SILINOX 10000i	10000 single-piece	2080	5200	2500	2000	SILINOX 150000s	150000 sections	6300	9900	3500	5700
SILINOX 12000i	12000 single-piece	2200	5090	2500	1890	SILINOX 190000s	190000 sections	6500	10700	3500	6500
SILINOX 15000i	15000 single-piece	2300	6060	3500	1860	SILINOX 200000s	200000 sections	6500	11000	3800	6500
SILINOX 20000i	20000 single-piece	2300	6950	4100	2150	SILINOX 240000s	240000 sections	7000	11950	3750	7500
SILINOX 25000i	25000 single-piece	2350	8070	4870	2500	SILINOX 280000s	280000 sections	7000	11660	5460	5500
SILINOX 30000i	30000 single-piece	2350	9090	5890	2500	SILINOX 300000s	300000 sections	8000	11500	6000	5500
SILINOX 30000s	30000 sections	3000	7150	3350	3100	SILINOX 350000s	350000 sections	8000	11090	4200	6890
SILINOX 35000s	35000 sections	3200	7250	3350	3200	SILINOX 370000s	370000 sections	8000	11390	4500	6890
SILINOX 40000s	40000 sections	3400	7250	3250	3300	SILINOX 380000s	380000 sections	8000	11890	5000	6890
SILINOX 50000s	50000 sections	3700	7700	3500	3500	SILINOX 450000s	450000 sections	8000	13390	6500	6890
SILINOX 60000s	60000 sections	4000	8050	3750	3600	SILINOX 470000s	470000 sections	8000	14590	7000	6890
SILINOX 70000s	70000 sections	4000	8800	4500	3600	SILINOX 500000s	500000 sections	8000	15550	7700	6890
SILINOX 75000s	75000 sections	4500	8050	3750	3600						



HORIZONTAL RAKE THICKENER

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

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.

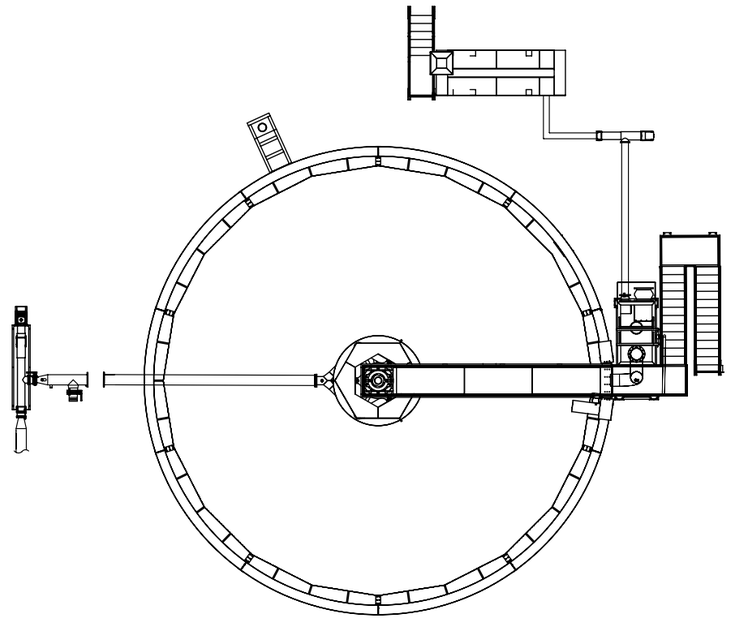
The discharging is automatic and adjusted to the rake effort, in order to reach the desired thickness. Sensors will give the opening input to the thickener discharging valve and the sludge will go through, to the Bifang.

WHEN A HORIZONTAL RAKE 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.

STAINLESS STEEL

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



Specifications

Model	Capacity lt/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

ACCESSORIES - VALVES & PUMPS

VALVES

Silo decanters and piping for the measuring of lime in gang-saw can be equipped with automatic and manual valves.
They have a special rubber sheath and can have one or two chambers. The automatic valves are all air-operated.

SUBMERSIBLE PUMPS

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 sub-mersed and watertight. All pumps have seals which guarantee a longer life and are made of the best steels to resist high abrasion. Rubberized submersible pumps further cut down maintenance costs.

VERTICAL PUMPS

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 Pumps

Model	Capacity (m^3/h)	Power (kw)
MTSOM12	12	0,75
MTSOM18	18	1,2
MTSOM30	30	1,8
MTSOM60	60	3,5
MTSOM90	90	6,5
MTSOM100	100	9
MTSOM120	120	11
MTSOM150	150	13
MTSOM180	180	15
MTSOM200	200	16
MTSOM220	220	17

Model	Capacity (m^3/h)	Power (kw)
MTSOM240	240	18
MTSOM250	250	18,5
MTSOM280	280	19
MTSOM300	300	20
MTSOM320	320	22
MTSOM350	350	25
MTSOM400	400	25
MTSOM500	500	30
MTSOM600	600	37
MTSOM700	700	43
MTSOM800	800	45

Rubberized Pumps

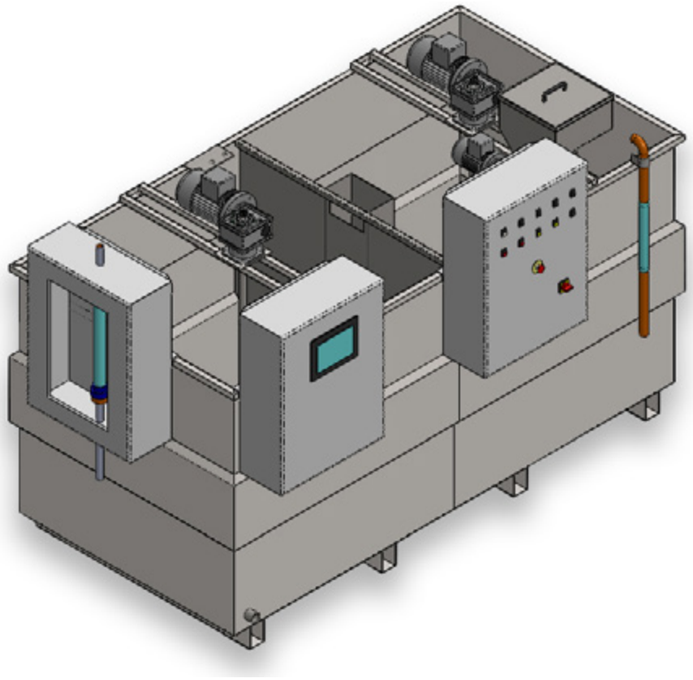
Model	Capacity (m^3/h)	Power (kw)
PMSOM 408	Up to 100	10-20-30
PMSOM 4001	Up to 300	20-30-40-50
PMSOM 4021	Up to 500	30-40-50-60
PMSOM 6071	Up to 700	50-60-80-100
PMSOM 0026	Up to 1000	80-100-120-150

Vertical Pumps

Model	Capacity (m^3/h)	Power (kw)
PMVERT 408	Up to 100	10-20-30
PMVERT 4001	Up to 300	20-30-40-50
PMVERT 4021	Up to 500	30-40-50-60
PMVERT 6071	Up to 700	50-60-80-100
PMVERT 0026	Up to 1000	80-100-120-150

Valves

Model	Operation
MN25	Manual
PA25	Pneumatic Automatic
MN40	Manual
PA40	Pneumatic Automatic
MN50	Manual
PA50	Pneumatic Automatic
MN80	Manual
PA280	Pneumatic Automatic
MN100	Manual
PA2100	Pneumatic Automatic
MN125	Manual
PA2125	Pneumatic Automatic
MN150	Manual
PA2150	Pneumatic Automatic
MN200	Manual
PA2200	Pneumatic Automatic



BIFLOC - FLOCCULANT PLANT

The accessories of the metering plants make the setup process even more complete and automatic by reducing the consumption of the product and eliminating the need for an operator.

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

WHY INSTALLING DOSON

Water is always clarified in the best possible way. It is essential when the properties of the sludge to be treated change during the days.

REDUCED CONSUMPTION

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

COCLY

The Cocly is the automatic powder metering accessory. It adjusts the powder automatically and it starts the water inlet valve and the pale stirrer. Cocly produce up to 50,000 liters of product without stopping and it is completely autonomous.
Cocly is fully made of stainless steel and comprises:

- Hopper: 25-50-75-100 Kg
- Screw metering pump
- Digital or manual regulator

This accessory reduces the consumption of flocculant by about 15%.

DOSON

Doson is a photocell-based system patented by MATEC for monitoring and adjusting the flocculant according to the amount of suspended solid particles in the water.

The Doson system regularly takes 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.

Specifications

Model	Capacity / L	Width (mm)	Lenght (mm)	Height (mm)	Screw Pump (kw)	Stirrer (kw)	Pump (kw)
Bifloc 300 round	300	400	900	800	0,22	0,37	0,25
Bifloc 500 round	500	450	900	1220	0,22	0,37	0,25
Bifloc 1000 round	1000	685	1600	950	0,22	1,1	0,25
Bifloc 2000 square	2000	900	1800	1250	0,22	1,1x2	1,5
Bifloc 3000 square	3000	1100	2200	1250	0,22	1,1x2	1,5
Bifloc 4500 square	4500	1400	2670	1250	0,22	1.1x3	1,5
Bifloc 6000 square	6000	1250	4000	1250	0,22	1.1x3	4
Bifloc 9000 square	9000	1500	4500	1500	0,22	1.1x3	4
Bifloc 12000 square	12000	1500	5400	1500	0,22	1.1x3	4

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).

WHY A BIFANG

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

MATEC PROBE SYSTEM

The four probe system is something peculiar of Matec, because we want the system to be always efficient.

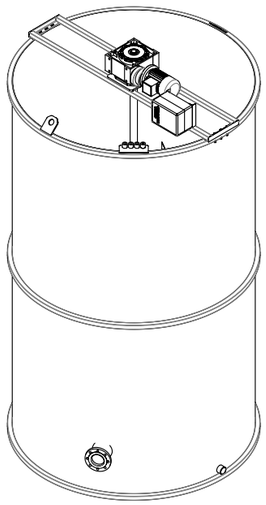
It consists of a steel tank and one or two stirrers driven by a motor.

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.

Specifications

Model	Capacity / L	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	2,2 x 2
Bifang 30000	30000	3500	3350	2,2 x 2
Bifang 40000	40000	4000	3200	2,2 x 2
Bifang 50000	50000	4000	4000	2,2 x 2
Bifang 60000	60000	4500	3800	2,2 x 2
Bifang 80000	80000	5000	4100	2,2 x 2
Bifang 100000	100000	5000	5100	2,2 x 2
Bifang 150000	150000	6000	5350	2,2 x 2



1 - DIRTY WATER PIT
2 - BIFLOC FLOCCULANT PLANT
3 - SILOS DEEP CONE/VERTICAL THICKENER
4 - CLEAN WATER TANK/PIT
5 - BIFANG/HOMOGENIZER TANK
6 - HPT PUMP
7 - TERRÆ FILTER PRESS 1500X2000/200 TT2 FAST

TECHNICAL

Technical Support

Thanks to our highly skilled engineers, our global supplying/dealing network and our factory service personnel we can guarantee you an extensive range of services whenever you require them. Whatever business is yours it is important to us.

Matec provides all supplying/dealing service staff with a comprehensive training program. Our staff is equipped with the correct skills, exhaustive knowledge, methods and practices to support with pre-sales and after-sales service.

QUALITY

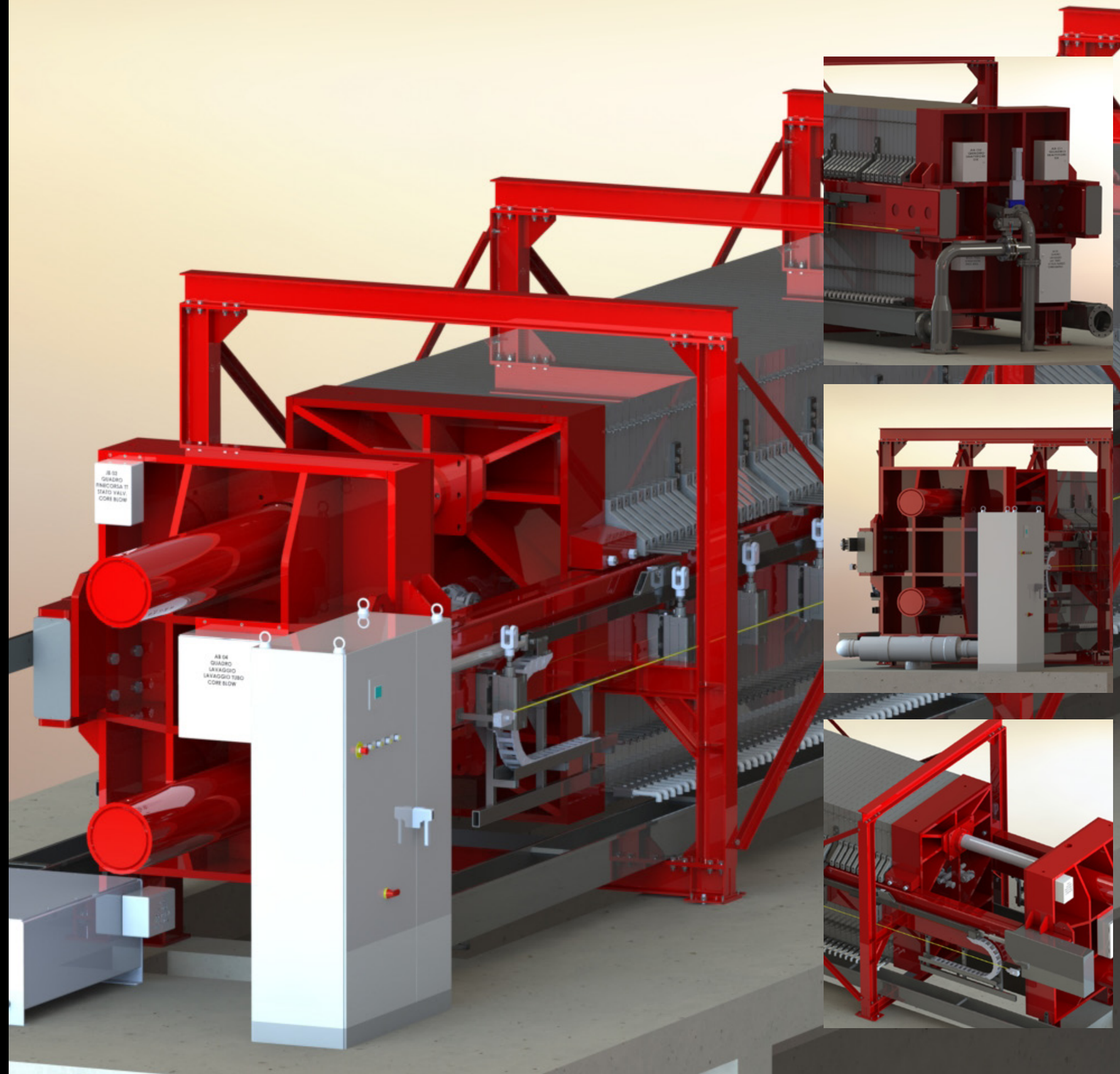
Quality & Warranty

Matec equipment is rigorously tested, with high quality standards set for each step of the manufacturing process from design to distribution. Thus we can guarantee high quality and reliability.

If you experience problems with our equipments, your local supplier can access the online warranty system to solve the problem as soon as possible. Your feedback will be also incorporated into our R&D program to continue the development of our products.

24 MONTHS Guarantee

Member of CISQ Federation
RINA
ISO 9001:2008
Certified Quality System
Sistema di gestione aziendale certificato n° 16124/07/S
Management system certificated n° 16124/07/S



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