




FILTRATION TECHNOLOGY FILTER PRESS



**We will make a global enterprise
that will improve the global environment.**

Top-quality classification technology...

CLATEC is devoted to continuous research and development that enables us to develop solutions for classification, washing, sedimentation, and solid-liquid separation required industry-wide.

Our dedication to customers and the perfection of our products is fueled by various factors: the CEO's long experience, the expertise of professional and qualified employees, and our determination to provide all the necessary information and the most efficient answers for customers.

CLATEC focuses on developing products, solutions, and services needed in a variety of areas, including mining, food processing, chemical processing, and the water distribution and sewage systems.

[Grafting of know-how]

At CLATEC, our vast data base and long experience in the relevant fields help us create products and services that save energy, enhance productivity, and provide high performance and quality.

Differentiated services and products are part of CLATEC's efforts at earning and maintaining trust from customers.

OUR HISTORY

- Jun. 2003 Establishment of CLATEC., Inc
- Jun. 2004 Filed applications of 'New Design for Practical Use' regarding fixed screen structure for oscillating sorters.
- Jun. 2004 Filed applications of 'New Design for Practical Use' regarding sand drying devices.
- Nov. 2003 2 cases of trademark registration [CRAPACTOR] [SPREX SCREEN]
- Aug. 2006 Patent registration of CAKE separator of FILTER PRESS
- Apr. 2008 Patent registration of CAKE separator of FILTER PRESS
- Sep. 2008 Quality management certified by ISO 9001:2000
- Oct. 2008 Certified as an exclusive research and development body
- Dec. 2008 Certified as a venture company
- Dec. 2008 Filed an application of 'New Design for Practical Use' regarding a distributor cone of vertical impact crushers
- Dec. 2008 Filed an application of 'New Design for Practical Use' regarding a rotor of vertical impact crushers
- Jan. 2009 Certified as INNO-BIZ (Small-medium sized businesses engaged in technological innovations)
- Mar. 2009 CE-Machinery Directive 98/37/EC Filter Press SCFP-1200, 1500, 2000
- Mar. 2009 Application of a New Design for Practical Use for Filter Panel Pressure Device of Filter Press
- Mar. 2009 Patent Application of Dehydration Methodology and Device of Filter Press
- May. 2009 CE-Machinery Directive 98/37/EC Filter Press OCFP-1200, 1500, 2000
- May. 2009 K mark Performance Certified by Korea Test Laboratory FILTER PRESS SCFP-2000
- JUN. 2009 Patent registration of Filter Press having Multi-Functional Filter Plate
- JUL. 2009 Patent registration of Filter Press having Rotating Filter Cloth
- JUL. 2009 Patent registration of Apparatus for Washing Sand
- AUG. 2009 Patent registration of Filter Cloth Driving Apparatus of Filter Press
- AUG. 2009 CE - Machinery Directive 98/37/EC Fine Sander CFS-200, 250, 300
- AUG. 2009 Excellent Product certified by Public Procurement Service FILTER PRESS SCFP(Side Bar Type)
- SEP. 2009 Environment management certified by ISO 14001:2004



FEATURE

We design and produce systems that filter and dehydrate sludge and other raw materials from ordinary and industrial sewage.

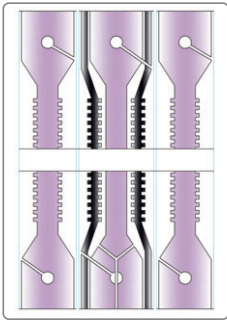
We suggest systemic solutions that can help optimize the overall productivity by designing solutions for the specific types of sludge that customers deal with.

The specifications of filtering systems that we design and produce are determined by the type, amount, and location of sludge to be processed.

- Automated operation
- Minimized cycle time using a continuous Cake discharger
- Improved Cake exfoliation with a filter plate oscillator or a filter cloth oscillator (option)
- Improved production efficiency with a filter cloth auto-cleansing device (option)
- Additional function of Cake dryer
- Cake cleansing function available

APPLICATION

- Acetylene gas production
- Chemical industries
- Electroplating / Chroming plant
- Food processing
- Iron / Steel mills
- Steel mills
- Leather tanneries
- Marble / Granite industries
- Metal surface treatment
- Paint industries
- PCB manufacturing plant
- Printing industries
- Semiconductor industries
- Servicing workshop
- Sewage treatment
- Titanium dioxide treatment
- Agar industries
- Agrochemical production
- Beer breweries
- Bentonite & Activated clay plants
- Cocoa butter manufacturing
- Kaolin clay production
- Textile dyeing
- Palm oil refineries
- Pharmaceutical manufacturing
- Portable water plants
- Power plants
- Rice flour plants (Bee-hoon)
- Sugar refining industries
- Tire manufacturing



Empty CHAMBER

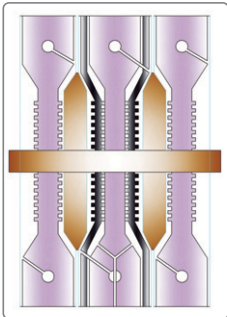
After exfoliation of the Cake is performed, the Filter Plates will be positioned apart from one another by a Demolding Unit.

Each of the Filter Plate that was separated by HYD.

Cylinder will be welded starting from the Tail Frame surface contact.

The welded Filter Plates will have an empty hall as presented in the figure.

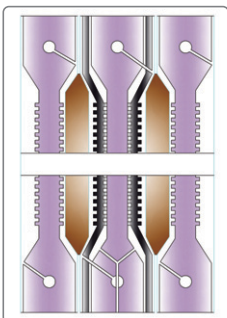
When all the Filter Plates are completely welded, the Slurry Feeding is ready and the Slurry Feeding Pump will start its operation.



Feeding

As the Slurry Feeding Pump begins to operate, the Butterfly Valve of the Slurry Inlet pipe will be unlocked so that the Slurry can be filled into the chamber of each Filter Plate. Slurry Feeding will come to a stop at the Pump's peak load point.

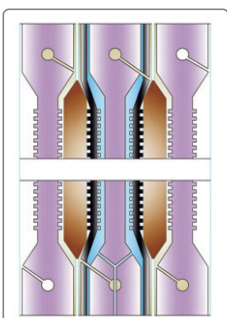
The load of the Pump will gradually reach its peak as the Slurry fills the inner side of the Filter Plate, where dehydration is also activated simultaneously.



Air Core Blowing

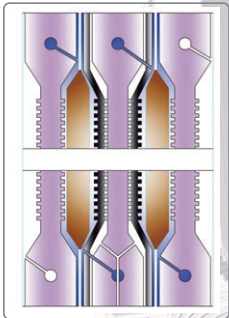
To prevent solidification of the sludge formed at the lead-in passage for the slurry in the Filter Plate, air will be blown into the opposite direction from the lead-in to get rid of the sludge.

At this moment, the slurry inlet valve will be closed while the core blowing outlet valve will be unlocked.



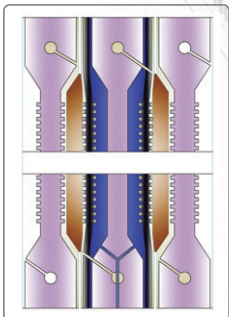
Pre Squeezing

This is a preparatory process for the 2nd dehydration of Cake, formed inside the Filter Plate, where the inner part of the membrane sheet will be filled with air or water so that part of the moisture can be reduced with this 1st dehydration process.



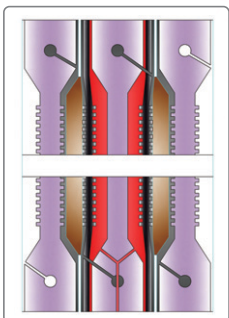
Cake Washing

This is a process of cleansing the Cake that is formed inside the Filter Plate Chamber, where clear water will be poured into the inner chamber to cleanse any residual foreign substances of the Cake.



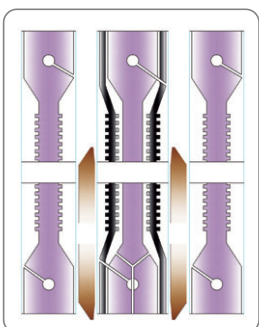
Squeezing

This is the 2nd dehydration process of Cake, formed inside the Filter Plate, where the inner part of the membrane sheet will be added with pressure in addition to water or air from the 1st process to reduce further amount of moisture contained in the Cake.



Cake Drying

This is a process of setting the right water content rate of the Cake, which passed through previous phases, where the inner part of the chamber on which Cake is formed will be made vacuous so that the Cake can have the desired water content rate.



Discharge

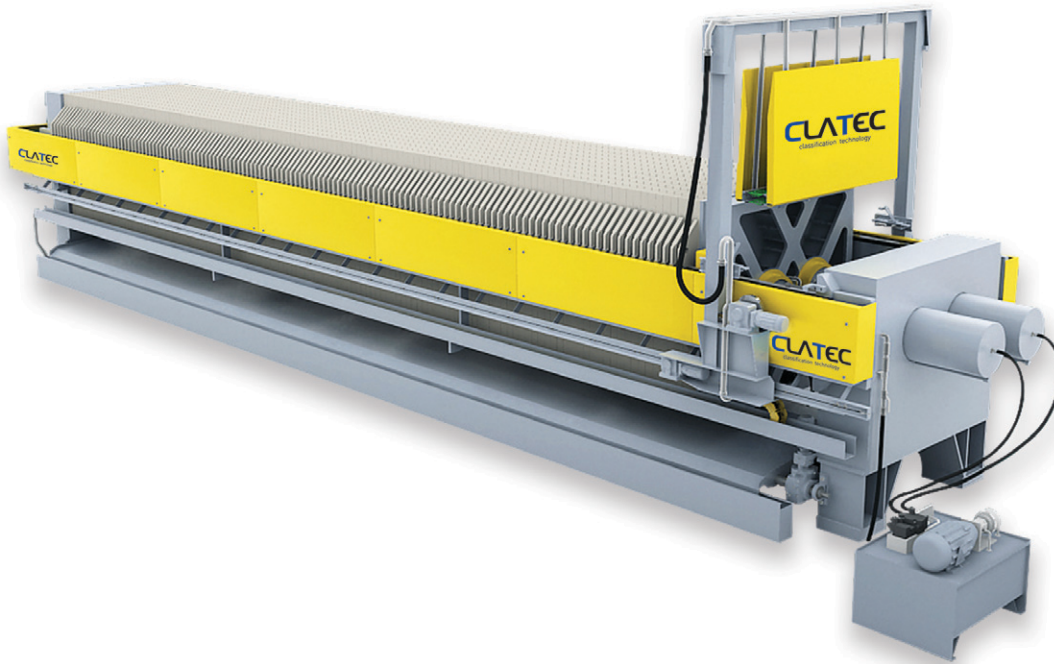
The time taken for exfoliation will be minimized through continuous separation of filter plates. Also, the pitch of separation can be manipulated on the control panel to suit different conditions (Patent No. 10-0615690)

 FILTER PLATE

 HOT FLUID

 SLURRY

 SQUEEZING WATER



SPECIFICATION

SCFP-1200

Maximum filter area range	m ²	50	84	113	147	176	210	244	273
Maximum filter plate range	pcs	24	34	54	70	84	100	116	130
Maximum filter volume range	m ³	0.89	1.45	2.00	2.56	3.12	3.68	4.23	4.79
Maximum pressure range	bar	10 - 16 - 30							
Total length	mm	5,200	6,200	7,200	8,200	9,200	10,200	11,200	12,200
Width	mm	2,300(3,350 with wash carriage)							
Height	mm	1,800 without wash carriage, 3,500 with wash carriage							
Installed power-filter	kW	7.5							
Installed power-wash device	kW	0.75							

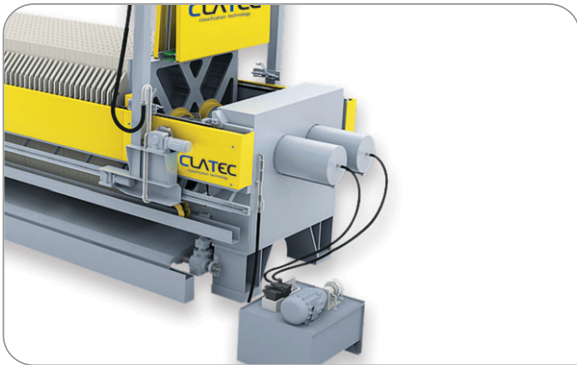
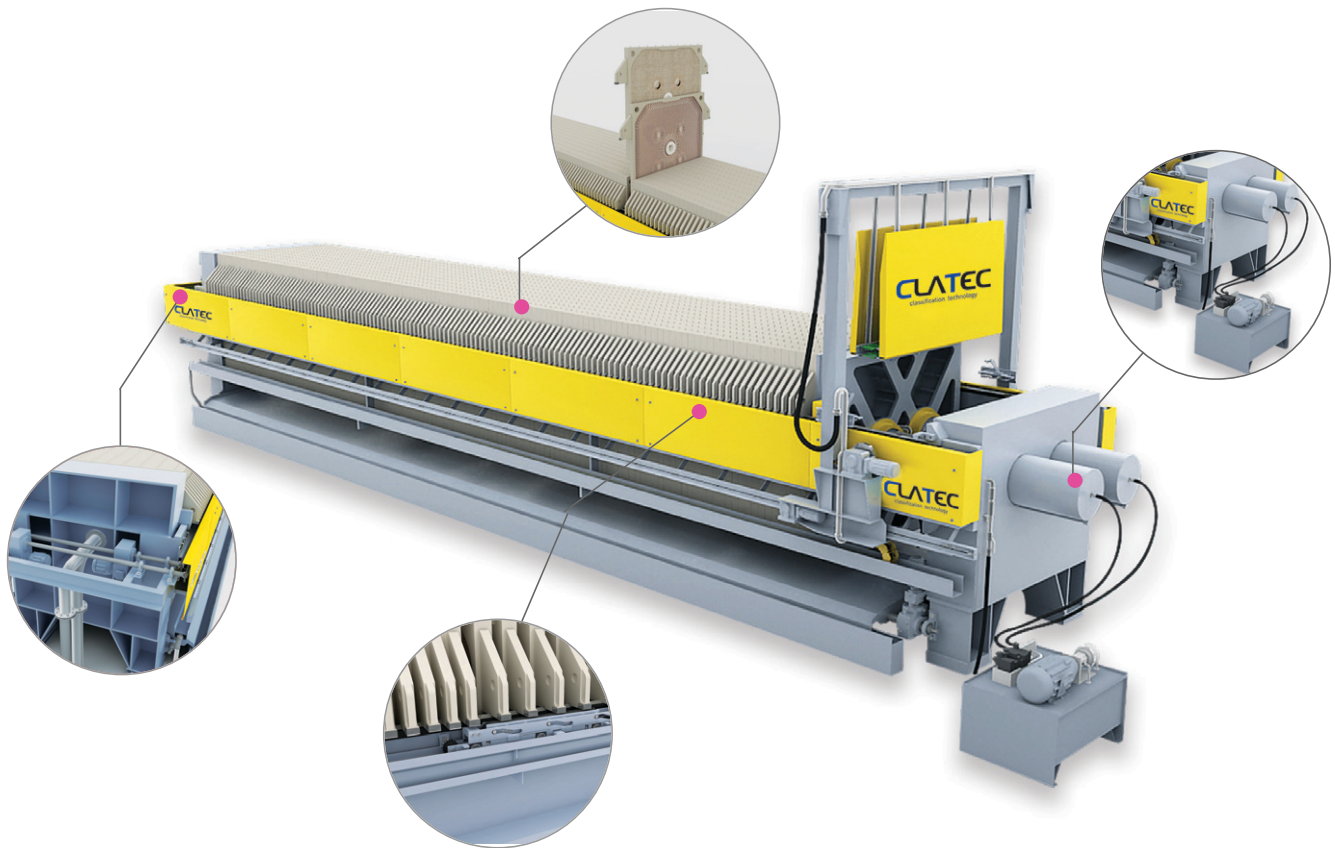
SCFP-1500

Maximum filter area range	m ²	177	231	279	333	381	428	483	442
Maximum filter plate range	pcs	52	68	82	98	112	126	142	130
Maximum filter volume range	m ³	3.28	4.19	5.10	6.01	6.92	7.83	8.75	9.66
Maximum pressure range	bar	10 - 16 - 30							
Total length	mm	7,200	8,200	9,200	10,200	11,200	12,200	13,200	14,200
Width	mm	2,600(3,650 with wash carriage)							
Height	mm	2,100 without wash carriage, 3,800 with wash carriage							
Installed power-filter	kW	11							
Installed power-wash device	kW	0.75							

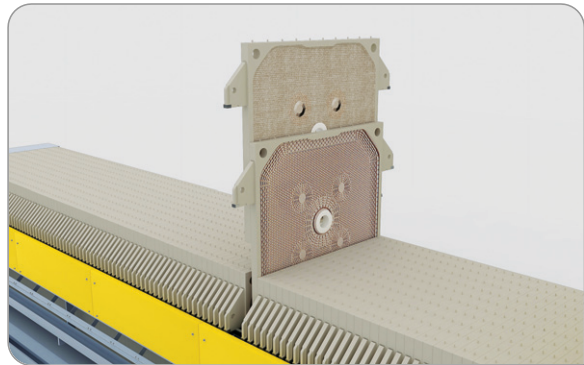
SCFP-2000

Maximum filter area range	m ²	498	587	676	765	855	944	1,033	1,123
Maximum filter plate range	pcs	78	92	106	120	134	148	162	176
Maximum filter volume range	m ³	8.25	9.79	11.34	12.89	14.18	15.72	17.27	18.82
Maximum pressure range	bar	10 - 16 - 30							
Total length	mm	9,200	10,200	11,200	12,200	13,200	14,200	15,200	16,200
Width	mm	2,800(3,850 with wash carriage)							
Height	mm	3,000 without wash carriage, 4,700 with wash carriage							
Installed power-filter	kW	15							
Installed power-wash device	kW	0.75							

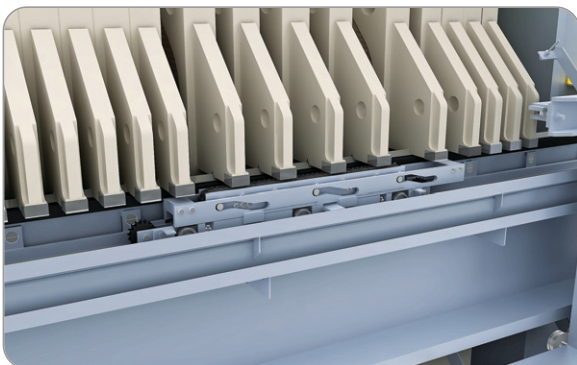
Any requirements not covered in the General Specification Table can be met through customization.



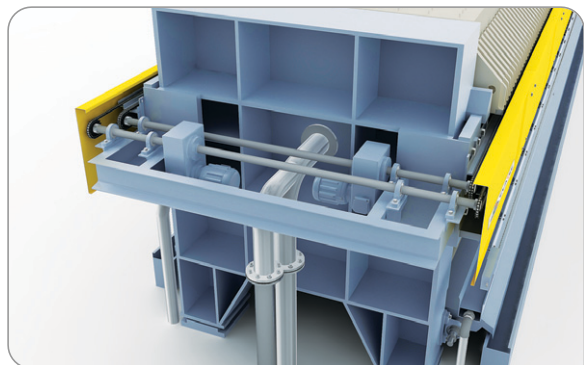
HYD UNIT



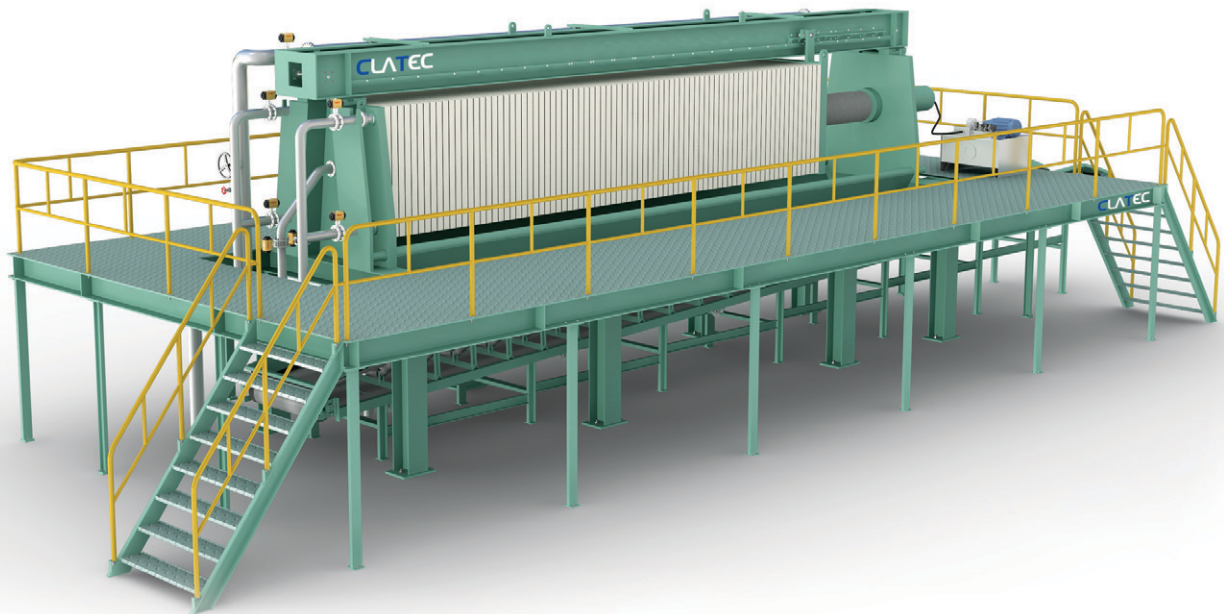
FILTER PLATE



DEMOLD UNIT



PIPING



SPECIFICATION

OCFP-1200

Maximum filter area range	m ²	79	105	130	155	180	206	231	256
Maximum filter plate range	pcs	38	50	62	74	86	98	110	122
Maximum filter volume range	m ³	1.4	1.85	2.3	2.7	3.2	3.6	4	4.5
Maximum pressure range	bar	10 - 16 - 30							
Total length	mm	5,600	6,400	7,200	8,000	8,800	9,600	10,400	11,200
Width	mm	2,460							
Height	mm	2,940							
Installed power-filter	kW	7.5							
Installed power-wash device	kW	0.75							

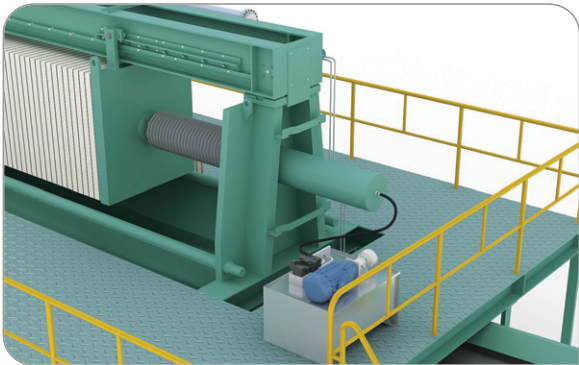
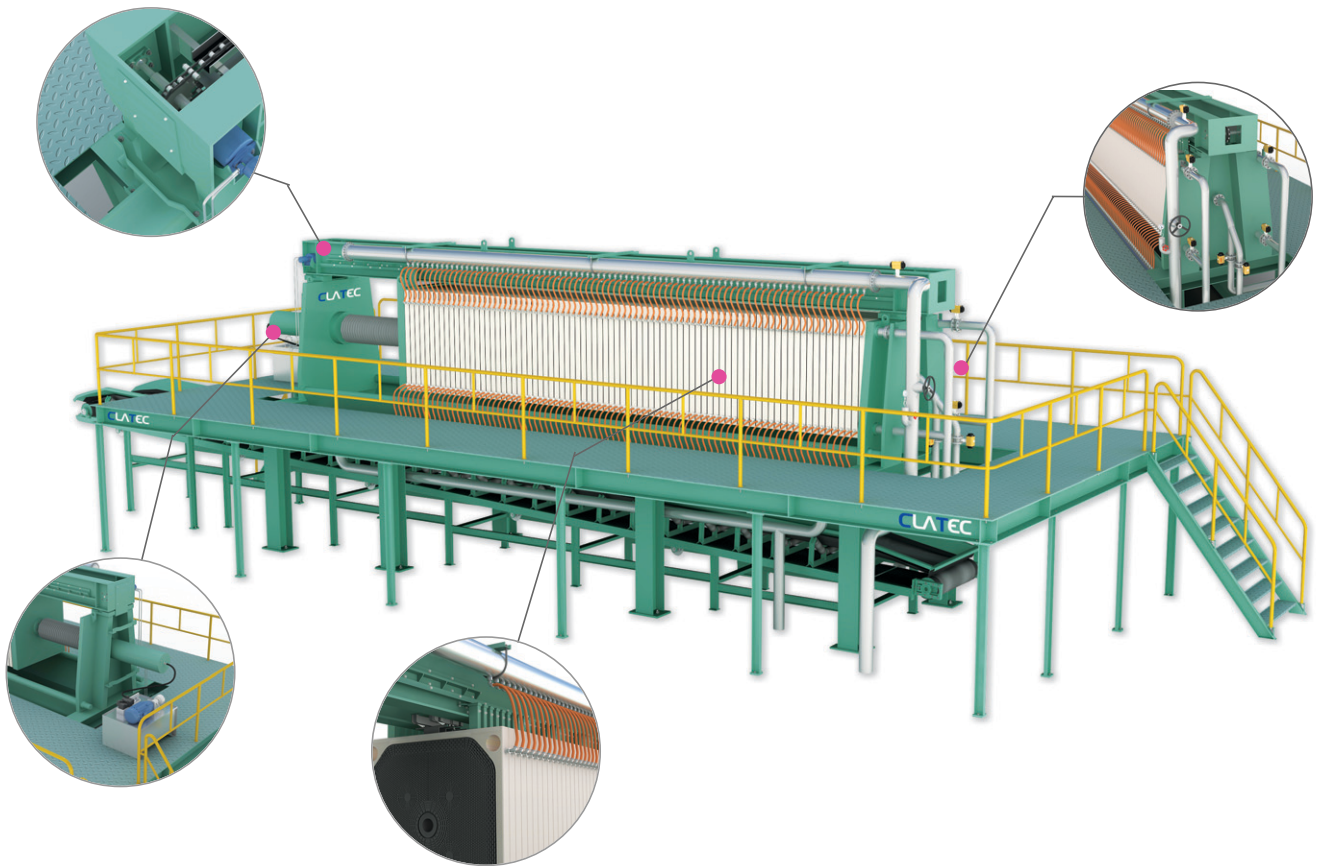
OCFP-1500

Maximum filter area range	m ²	177	205	258	299	340	381	422	462
Maximum filter plate range	pcs	52	64	76	88	100	112	124	136
Maximum filter volume range	m ³	2.87	3.54	4.2	4.87	5.53	6.19	6.86	7.52
Maximum pressure range	bar	10 - 16 - 30							
Total length	mm	6,900	7,800	8,700	9,600	10,500	11,400	12,300	13,200
Width	mm	2,720							
Height	mm	3,480							
Installed power-filter	kW	11							
Installed power-wash device	kW	1.1							

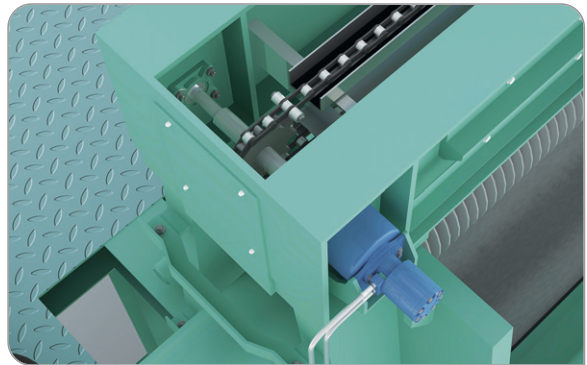
OCFP-2000

Maximum filter area range	m ²	498	574	651	727	804	880	957	1,034
Maximum filter plate range	pcs	78	90	102	114	126	138	150	162
Maximum filter volume range	m ³	7.45	8.59	9.74	10.88	12.03	13.17	14.32	
Maximum pressure range	bar	10 - 16 - 30							
Total length	mm	11,500	12,300	13,100	13,900	14,800	15,600	16,400	17,200
Width	mm	3,960							
Height	mm	3,890							
Installed power-filter	kW	15							
Installed power-wash device	kW	1.5							

Any requirements not covered in the General Specification Table can be met through customization.



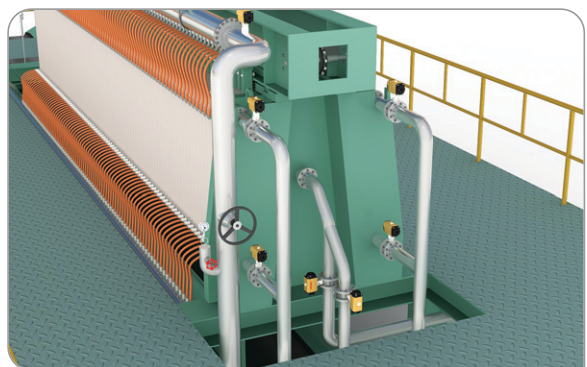
HYD UNIT



DRIVE UNIT

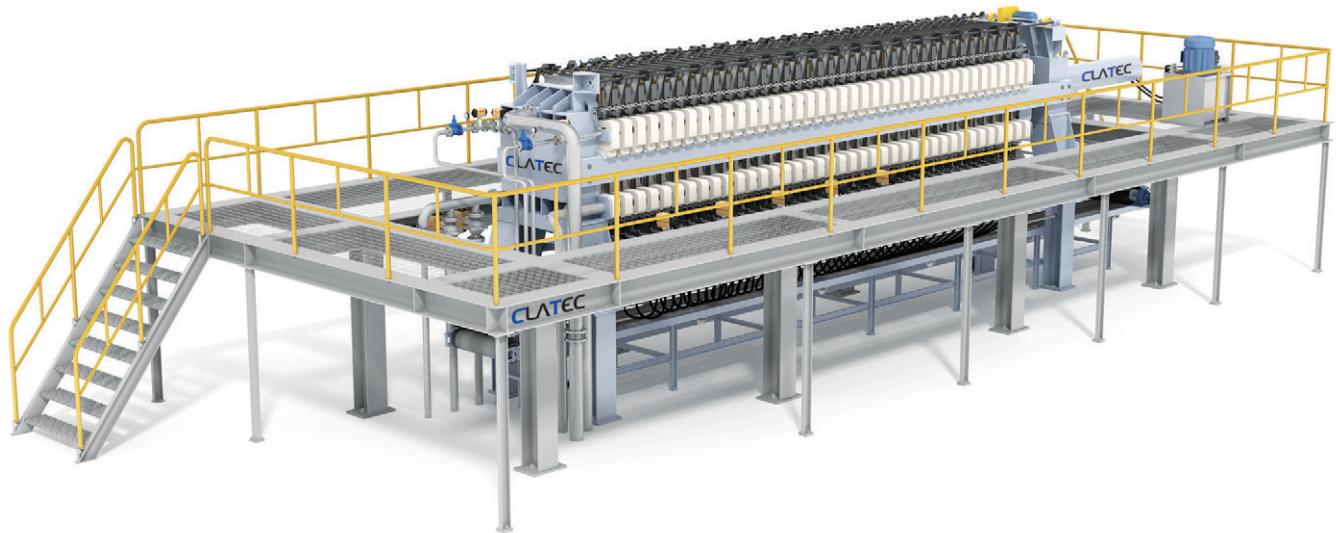


RATCHET&FILTER PLATE



PIPING

MOVING CLOTH



SPECIFICATION

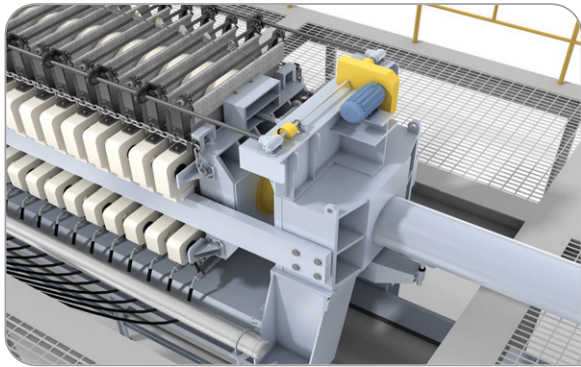
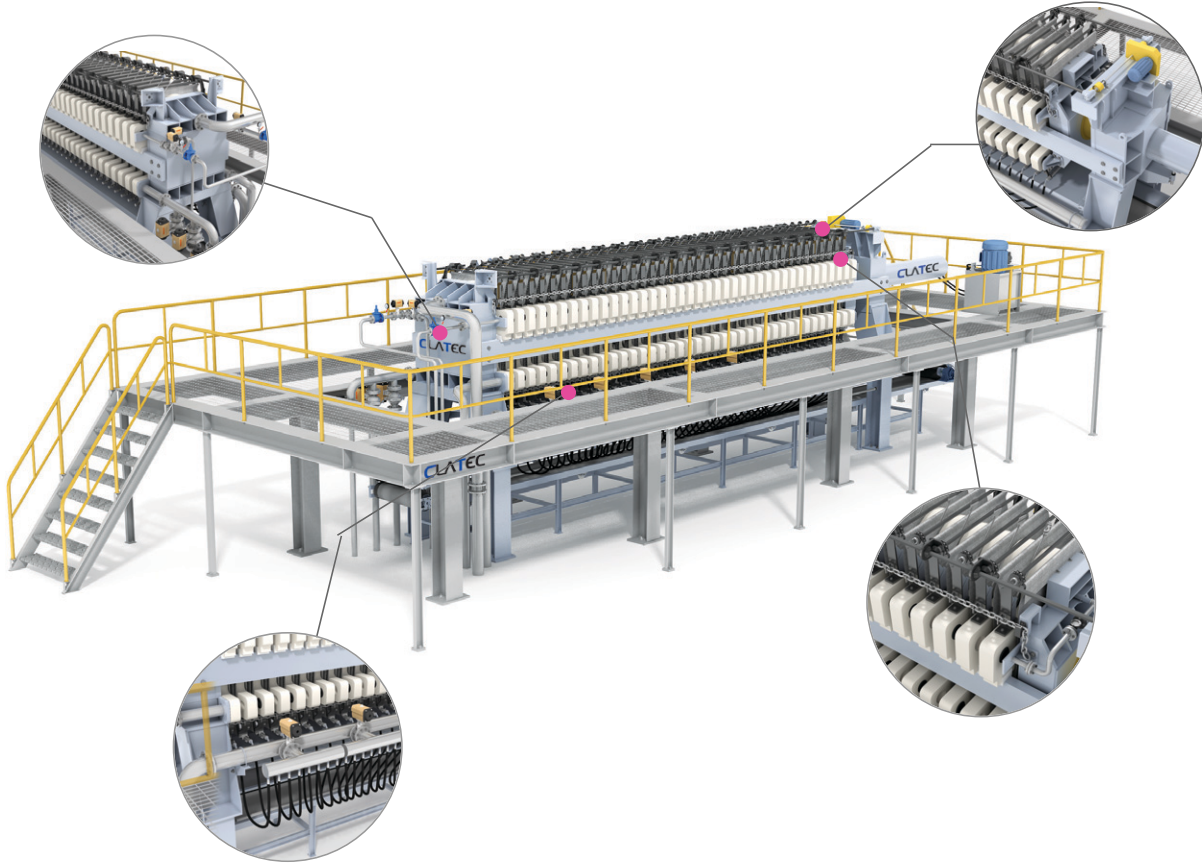
MCFP-1200

Maximum filter area range	m ²	29	57	86	115	144	172	201	230
Maximum filter plate range	pcs	10	20	30	40	50	60	70	80
Maximum filter volume range	m ³	0.3	0.6	1.0	1.3	1.8	2.2	2.6	3.1
Maximum pressure range	bar	5 - 15							
Total length	mm	3,000	5,100	7,600	10,200	13,000	15,400	18,000	20,500
Width	mm	2,200							
Height	mm	3,000							
Installed power-filter	kW	5.5 / 9.5 / 11 / 15 / 19							
Installed power-wash device	kW	22							

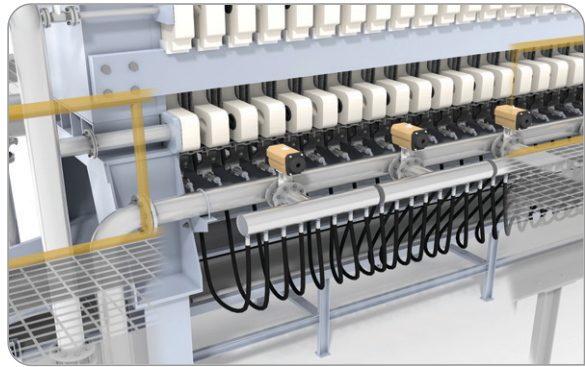
MCFP-1500

Maximum filter area range	m ²	36	72	108	144	180	216	252	288
Maximum filter plate range	pcs	10	20	30	40	50	60	70	80
Maximum filter volume range	m ³	0.4	0.8	1.3	1.8	2.3	2.8	3.4	4.0
Maximum pressure range	bar	5 - 15							
Total length	mm	3,000	5,100	7,600	10,200	13,000	15,400	18,000	20,500
Width	mm	2,700							
Height	mm	3,500							
Installed power-filter	kW	9.5 / 11 / 15 / 19 / 22							
Installed power-wash device	kW	30							

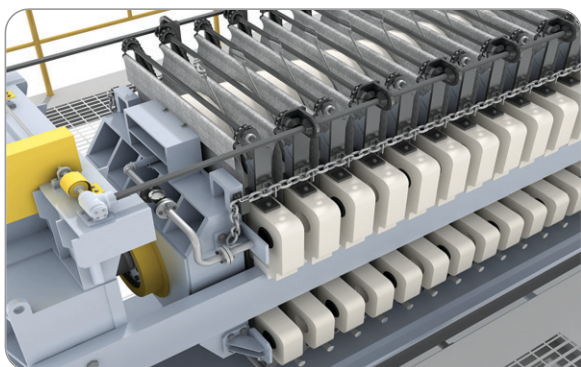
Any requirements not covered in the General Specification Table can be met through customization.



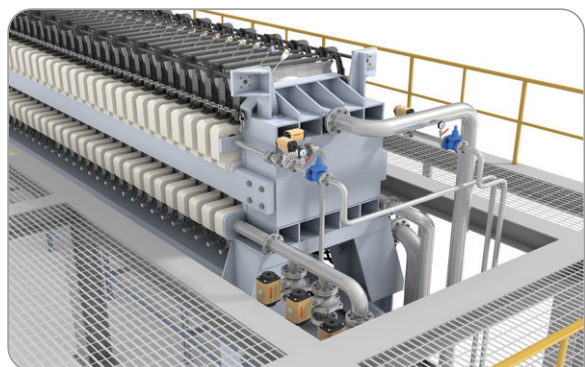
JACKING UNIT



WASHING UNIT



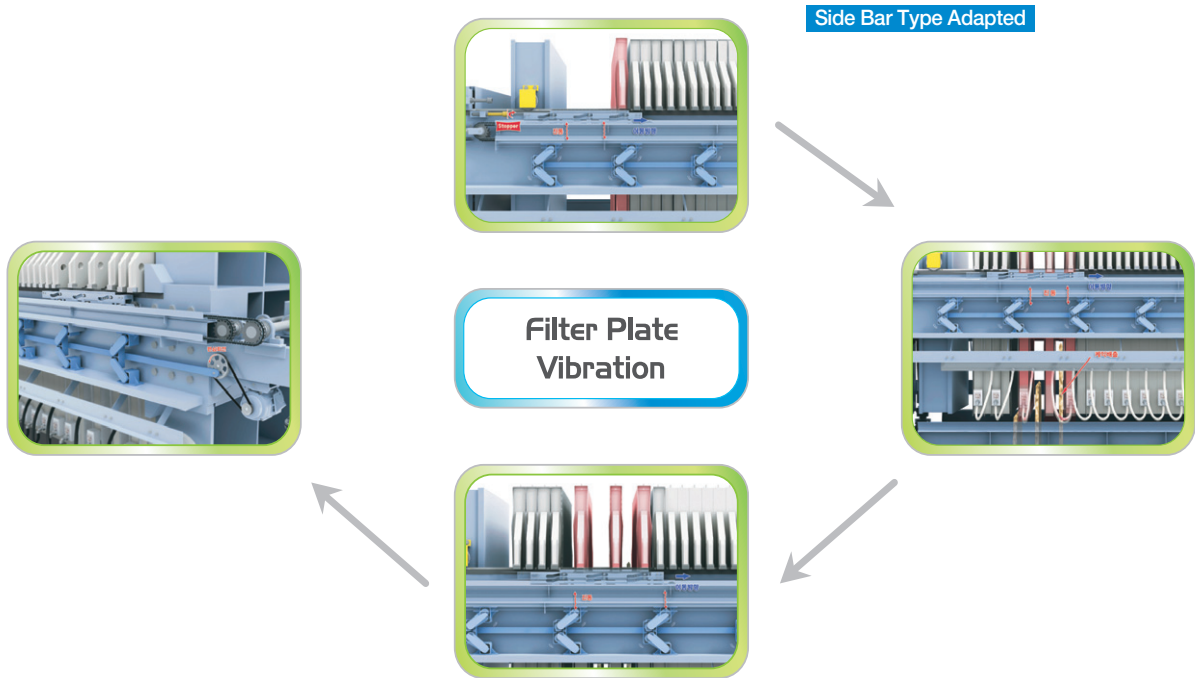
CLOTH MOVING UNIT



PIPING

Filter Plate Vibration

- This is a device to be used if it is difficult to separate dehydrated cake from filter cloth.



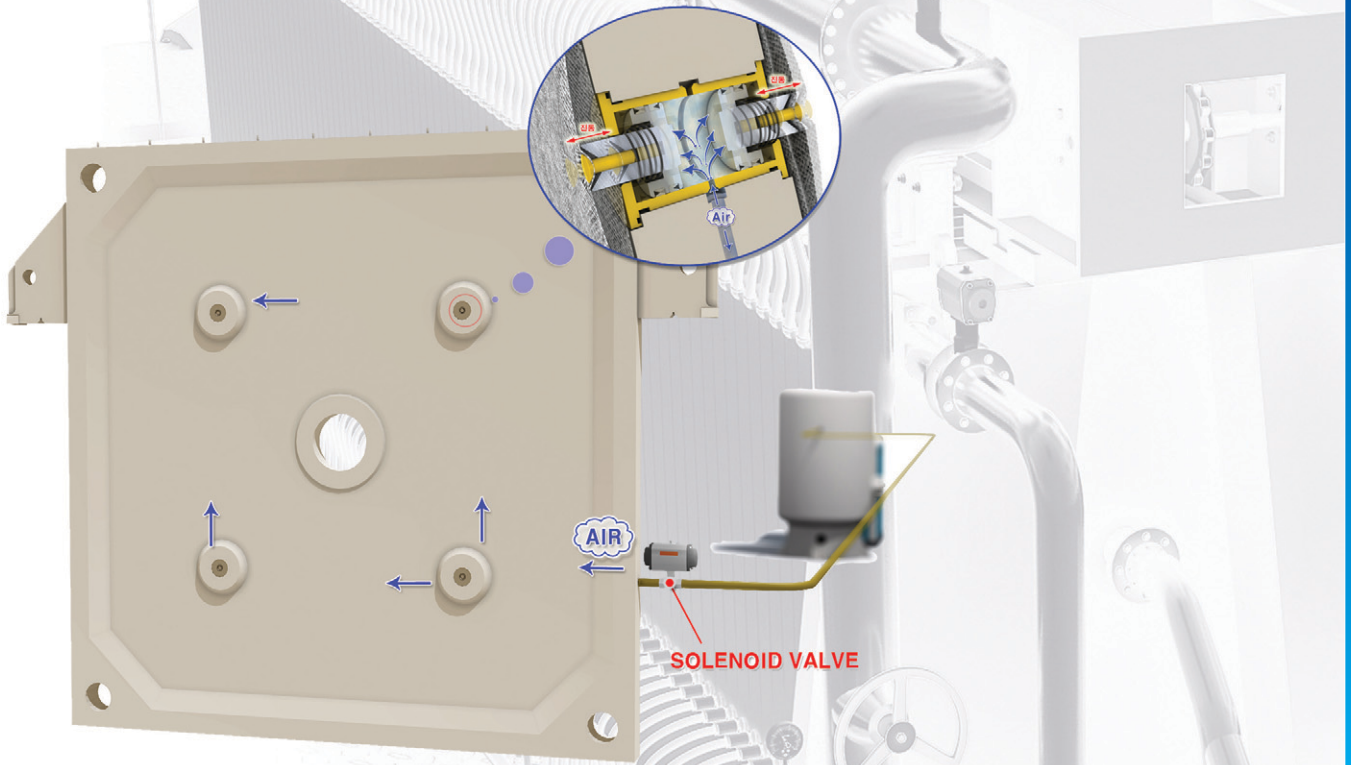
A link designed to add oscillation to the rail of filter plate transfer unit and a shaft rotating off center creates oscillation to help cake come off easily from filter cloth.

Filter Cloth Washing Unit



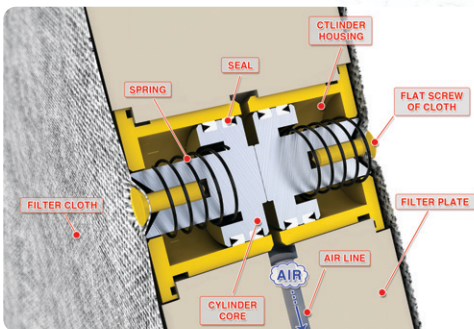
After certain hours of use, filtering membrane of the filter cloth is clogged by sludge finer than filtering membrane, which may reduce service life of pump and damage filter cloth. To prevent such phenomenon, filter cloth-cleaning device is added. Residual cake clogging filter cloth is washed off by water sprayed from high-pressure cleaning nozzle and brush to enhance dehydration efficiency.

Filter Cloth Vibration

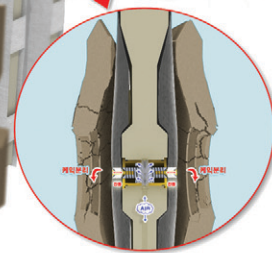
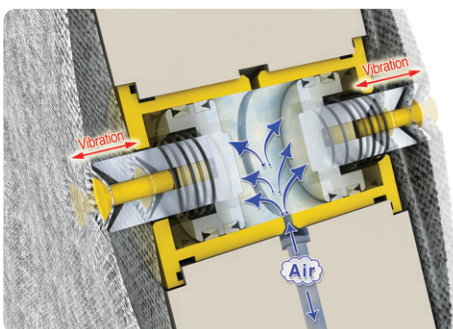


It is inevitable in many cases to separate cake, depending on ingredients, viscosity and feeding conditions of sludge to be dehydrated. If dehydrated cake is not easily separated from filter cloth, filter cloth is shaken by actuator mounted within filter cloth to help with cake separation.

Detail Section "A"



Detail Section "B"



SPECIAL TECHNICAL



DEMOLDING UNIT





SERVICE

Depending on the ingredients and their amount in the sludge to be filtered, the **FILTER PRESS** may require different parts in different sizes.

Therefore, we will suggest the optimum equipment condition through our **PILOT** equipment testing process upon your sample request.

In the event no sample is available, we can also make a suggestion based on our strong database built upon years of experience.



ISO9001



ISO14001



CE INNOBIZ
Innovation Business Association



CLATEC Classification Technology 크라텍(주)
Clarification Technology

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