



CONDITIONER TANKS

PRG-CT

Conditioner tanks are tanks that are designed and manufactured to condition the pulp with chemicals for a certain period of time before flotation, in other words, to prepare minerals for floating or sinking.

The correct number and volume of conditioners should be selected depending on the ore and the tests performed. The correct conditioner volume is very important for flotation efficiency as it determines the contact time of the ore with chemicals. With the propeller design selected according to the conditioner volume, its rate and its position in the tank, better mixing is ensured and collapses are prevented.

Specifications

- ✓ Effective mixing with four baffles that prevent rotation in the tank
- ✓ Output sheet to prevent short-circuiting of flow
- ✓ Single or double impeller
- ✓ Instant, quality and cheap spare parts supply
- ✓ Custom design from 1 m³ to 50 m³ in accordance with your process data.



FLOTATION TANK CELL

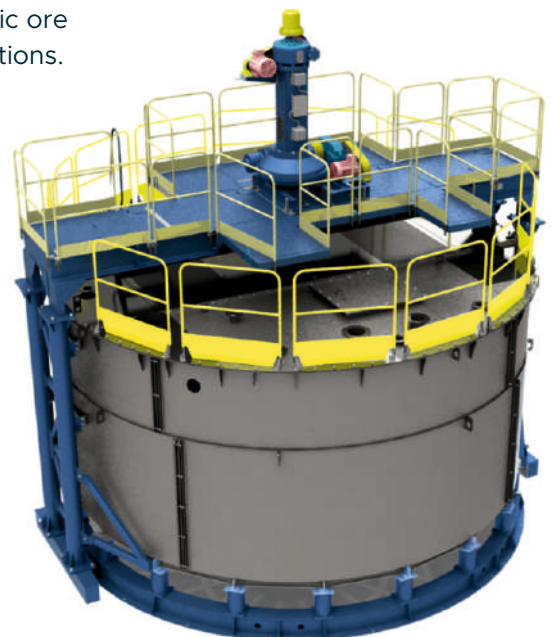
PRG-FC

The PARAGROUP Flotation Cell sets a new standard in mineral processing technology, offering a blend of advanced engineering, materials science, and precise control mechanisms. It empowers mining operations to achieve higher mineral recovery rates, reduce operating costs, and promote environmental responsibility.

By incorporating the latest innovations in fluid dynamics and process control, the PARAGROUP Flotation Cell is poised to revolutionize the way mining operations approach flotation processes, enabling them to meet their production targets efficiently and sustainably.

Key Technical Features:

- ✓ **Optimized Flow Dynamics:** The design of the PARAGROUP Flotation Cell focuses on improving fluid dynamics within the cell. The geometry of the cell minimizes turbulence, ensuring smoother particle-bubble attachment and detachment processes.
- ✓ **Bubble Generation:** A sophisticated air sparging system efficiently generates and controls bubbles of the desired size and distribution, crucial for effective mineral flotation.
- ✓ **High-Capacity Design:** The flotation cell's spacious design enables it to handle substantial ore volumes, ensuring high throughput and reducing the risk of process bottlenecks.
- ✓ **Hydrodynamic Control:** An adjustable impeller design allows for precise control of the pulp and froth heights, optimizing the flotation kinetics and maximizing mineral recovery.
- ✓ **Energy Efficiency:** The PARAGROUP Flotation Cell is engineered for exceptional energy efficiency. A combination of advanced materials and design innovations reduces energy consumption during operation, making it an environmentally responsible choice.
- ✓ **Customization Options:** Tailor the flotation cell to specific ore types and processing goals with customizable configurations. Adjust parameters such as impeller speed, froth depth, and air flow to meet your unique requirements.
- ✓ **Material Selection:** The cell's construction materials are carefully chosen to withstand the harsh conditions of mining environments, ensuring durability and longevity.
- ✓ **Control System:** The intuitive control system incorporates sensor feedback for real-time monitoring of important process variables, allowing operators to make data-driven adjustments for optimal performance.



Technical Benefits:

- ✓ **Enhanced Mineral Recovery:** The optimized flow dynamics and precise control mechanisms result in improved mineral recovery rates, maximizing the value of ore processing.
- ✓ **Process Stability:** Hydrodynamic control and advanced materials ensure process stability, reducing the risk of disruptions and ensuring consistent performance.
- ✓ **Reduced Environmental Impact:** Energy-efficient operation and reduced reagent consumption contribute to a lower environmental footprint, aligning with sustainability goals.
- ✓ **Customization:** The flexibility of the flotation cell allows for adaptation to various ore types and processing requirements, offering a versatile solution for mineral processing plants.
- ✓ **Reliability:** Robust construction and a focus on ease of maintenance ensure the flotation cell's long-term reliability, minimizing downtime.



Model / Item	Volume M ³	Required Air m ³ /min		Air Pressure Shell (kPag)	Drive Type	Power (Kw)
		Min	Max			
PRG-FC3	3	1,5	2,5	16	V-Belt	12
PRG-FC5	5	2	3,5	20	V-Belt	15
PRG-FC10	10	4	6	25	V-Belt	22
PRG-FC20	20	6	8	30	V-Belt	37
PRG-FC30	30	8	11	32	V-Belt	45
PRG-FC40	40	11	13	34	V-Belt	55
PRG-FC50	50	13	16	36	V-Belt	75
PRG-FC70	70	18	22	38	V-Belt	90
PRG-FC100	100	24	25	40	V-Belt / Gear	100

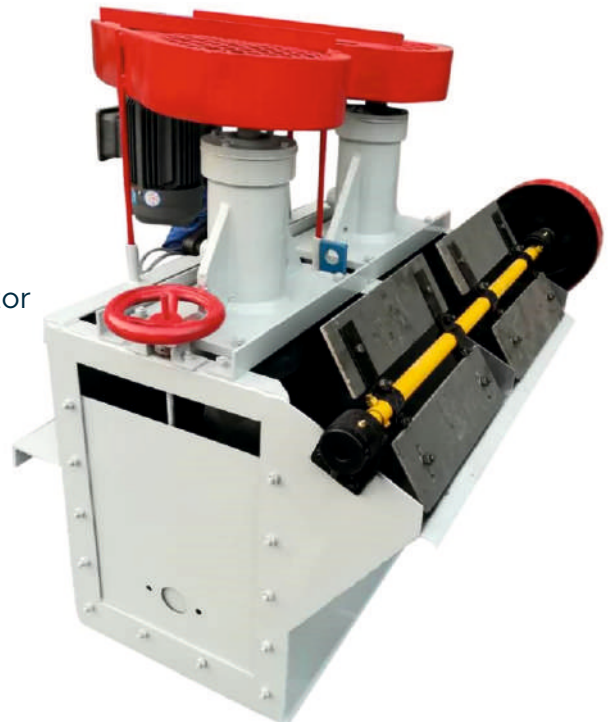
SUB-A TYPE FLOTATION CELL

The “Sub-A” Flotation Cell has been applied to all types of flotation problems and these machines have continuously demonstrated their superiority. They have given very successful results through a wide range of problems, and their supremacy is fully proven by world-wide acceptance and application. The feature of the “Sub-A” is the design. The “Sub-A” incorporates all of the basic principles and requirements of the flotation process and these, coupled with the special and exclusive wear features, make it the ideal Flotation Cell.

Pulp level adjustment plates between the cells prevent back flow and enable control of the pulp level in each cell. These cells aspirate air required for flotation by themselves. They can also be operated with forced air when desired.

Specifications

- ✓ Convenient for harsh working conditions
- ✓ Optional single or double froth scimmers
- ✓ Easy maintenance and easy replacement of worn out parts
- ✓ Wear resistant rubber lined impeller and stator
- ✓ Optiona rubber lining of all surfaces in touch with the pulp
- ✓ Prompt supply of high-quality spare parts at a reasonable cost



Model / Item	Volume M ³	MIXER QUANTITIY	POWER (kW)	Motor Speed (RPM)	Weight (Kg)
PRG-SUBAFC-035-S	0,35	1	4	1000	480
PRG-SUBAFC-035-T	0,35	2	4	1000	850
PRG-SUBAFC-070-T	0,70	2	7	1000	1100
PRG-SUBAFC-100-T	1	2	8	1000	1750
PRG-SUBAFC-150-T	1,5	2	10	1000	2100
PRG-SUBAFC-300-T	3	2	12	1000	3200
PRG-SUBAFC-600-T	6	2	18	1500	4600

ROTOR AND STATOR FOR FLOTATION CELL MACHINE

PRG-RS

Our company supplies high quality and high strength polyurethane rotor and stator for flotation cell machine. The rotor and stator are key components in a flotation cell, which is used to separate minerals from their ore. The rotor is the rotating component that creates the centrifugal force necessary for mineral separation, while the stator is stationary and designed to maximize turbulence within the cell. Together, they create a complex system of fluid dynamics that allows for efficient separation of minerals from their ore.

Flotation is a physico-chemical separation process that is used in mining to separate fine-grained solids (e.g. calcium carbonate). The solid is stirred in a mixture of water and various chemical additives, rises and can be extracted. In the flotation process, wear parts such as the rotor or stator are subject to high mechanical and chemical loads. This is exactly where the very good mechanical and chemical properties of polyurethane come into play. Compared to rubber linings, our polyurethane coatings have a significantly longer service life and thus significantly reduce operating costs. Because we develop polyurethane recipes ourselves, we can specifically cater to your process with the polyurethane system (MDI, TDI, ether, ester, polycarbonate) that promises the longest service life.

Key Features

- ✓ Very abrasion resistant
- ✓ Resistant to hydrolysis
- ✓ Resistant to acids, bases, oils
- ✓ High strength as plastic and as high elastic as rubber
- ✓ Different materials can be available
- ✓ Wear-resistant polyurethane, Anti-corrosion, and long service life
- ✓ Used in Gold mining, Copper mining, Heavy metals mining, Light metals mining, Coal mining and processing, etc.



POLYURETHANE EQUIPMENT

PRG-PU

While Rubber and Polyurethane protect your facility against wear and corrosion in many ways, they may sometimes need additional features to increase their performance. PARAGROUP AIS produces specially designed products for you, taking into account your specific needs and operating parameters.

We prepare formulations with premium rubber and polyurethane compounds to suit the intended use, but can also include steel, polyethylene, ceramics, aluminium, magnets and more to enhance the performance of the product. Producing rubber and polyurethane with these materials as a whole requires knowledge and experience. PARAGROUP AIS has products that have proven this superior adhesion strength in the field.

MILL LININGS

Mekakim produces and develops rubber mill linings that operate under the most difficult conditions of the mining industry, in close cooperation with its customers. We design and produce our products by combining the unique and constantly improving properties of rubber with years of knowledge and experience. With the power we get from this, we provide longer product life and increase the efficiency of your mill.

Mill types

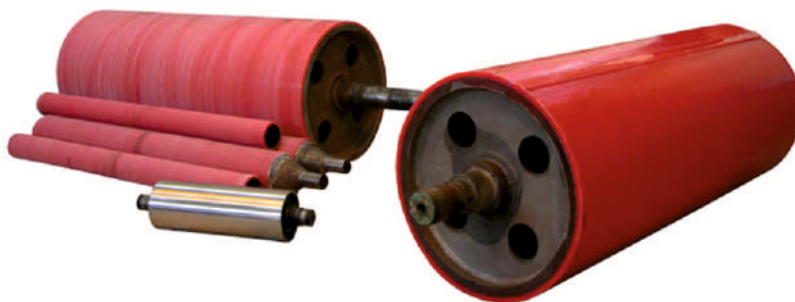
Rubber mill linings provide high performance in a variety of applications.

- ✓ Autogenous mills (AG)
- ✓ Semi-autogenous mills (SAG)
- ✓ Ball mills
- ✓ Rod mills
- ✓ Gravel mills
- ✓ Washing Drums



ROLLER AND DRUM COATINGS

The polyurethane coatings on the rollers used for drive, deflector and tensioning purposes are resistant to abrasion and breakage as they are suitable for heavy working conditions. It lasts 3-4 times longer than rubber coatings. Therefore, it ensures that your system works for a long time and minimizes downtimes on the production line and related production losses. For this reason, polyurethane coating provides great advantages to businesses.



POLYURETHANE SIEVES

Polyurethane screens have a longer life than any known material with high wear resistance and good corrosion resistance,

Due to the long life of polyurethane screens, your work continues in your facility without interruption for short periods of time,

It minimizes material and time loss,

Can perform wet and dry sieving with polyurethane sieves,

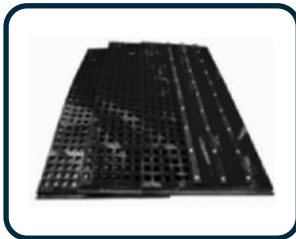
It has high screening efficiency,

It is easy to assemble and lightweight,

It minimizes noise pollution,

Your total cost will decrease

The product range is very wide and can be designed and produced according to customer requests.



POLYURETHANE MUD PUMP FANS AND LINES

In the mining sector, pump fans and linings in the flotation sections of ore preparation facilities are coated with polyurethane material, ensuring their lifespan is 3-4 times longer than equivalent tires and rubber.





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