



AUTOMATION SYSTEM SPARE PARTS

Saint-Petersburg, 2020



CONTROL OF THE PULP LEVEL AND AIR FLOW (SPARE PARTS)

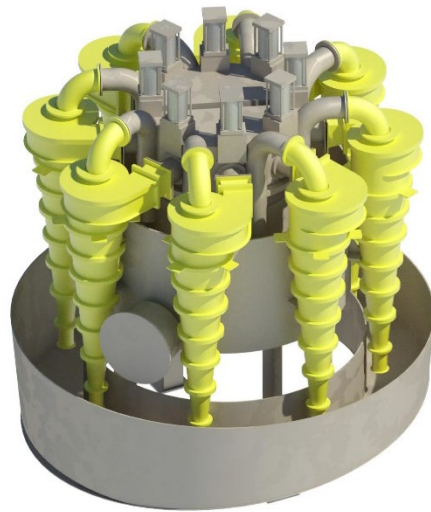
When supplying automated systems providing stabilization of the pulp level and air flow rate (PL&AF SAS, PLSAS) of pneumatic-mechanical flotation machines for one year of operation, the following spares and tool kit is offered for delivery:



No	Name of components
1	PL&AF SAS CC parts (1 kit per one system): fuses, external pneumatic fittings, filter cartridges for reducing filter, switches and indicators
2	PL&AF SAS CC parts (1 kit for 5-10 systems): power supply unit, controller assembly, control panel, reducing filter, safety valve, manual controls on the cabinet door
3	Pneumatic cylinder repair kit - O-rings and sleeve gaskets (for each pneumatic cylinder supplied)
4	Pneumatic cylinder repair kit - pneumatic fittings, feedback and positioner mounting kit (1 kit per each pneumatic cylinder size supplied)
5	Positioner Repair Kit
6	Repair kit for butterfly valve pneumatic drive (for each valve)
7	Butterfly valve (1 piece for each standard size supplied)
8	Butterfly Valve Repair Kit: pneumatic fittings, positioner mounting kit (1 kit per each standard size supplied)
9	Pneumatic cylinder shut-off valve (1 piece for 10 pneumatic cylinders supplied)
10	Positioner for pneumatic cylinder, butterfly valve (1 pce for 10 positioners supplied)
11	Spare seals and pneumatic fittings for restriction orifice
12	Float with bar and reflective pad for ultrasonic level gauge (for each system supplied)
13	Float fittings for ultrasound level gauge (1 pce for 5 systems)
14	Fittings for piezometric level gauge, density meter (1 pce for 5 systems)

PUMP-HYDROCYCLONE UNITS (SPARE PARTS)

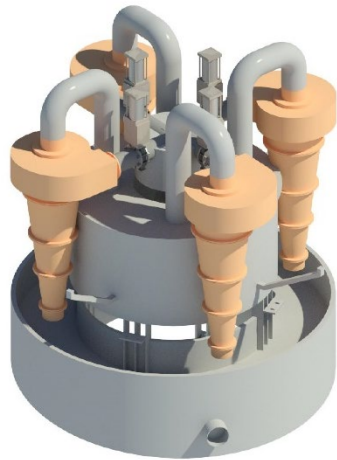
When supplying automated systems providing monitoring and control of technological process of pump-hydrocyclone units (HUACS) for one year of operation, the following spares and tool kit is offered for delivery



No.	Name of components
1	Control cabinet parts: fuses (set)
2	Shut-off valve control cabinet parts: external pneumatic fittings, spare filter cartridges
3	Repair kits for pneumatic cylinder, pneumatic actuators for slide gate, ball valve, butterfly valve
4	Position sensors for pneumatic cylinder, slide gate, ball valve
5	Repair kit for a butterfly valve (collar) or a butterfly valve if the valve is with a non-removable collar
6	Butterfly valve positioner repair kit
7	Spare collar of pulp discharge pinch valve
8	Repair kit for slide gate

PUMP-HYDROCYCLONE UNITS (SPARE PARTS)

Delivery of the following components is possible upon additional request and agreement during delivery and operation.



No.	Name of components
1	Control cabinet or separate parts
2	Shut-off valve control cabinet or separate parts
3	Pneumatic cylinder with position sensors and shut-off valve (or parts)
4	Slide gate with pneumatic actuator and position sensors (or separate parts)
5	Ball valve with pneumatic actuator and position sensors (or separate parts)
6	Repair kits for pneumatic cylinder, pneumatic actuator for slide gate
7	Hydraulic cyclone pressure transducer
8	Radioisotope source of pulp density meter
9	Radioisotope Density Meter Mounting Kit
10	Ultrasonic level gauge (level in the sump), mounting rack
11	Butterfly valve with pneumatic actuator and positioner (or separate parts and repair kits)
12	Electromagnetic flowmeter (or separate parts)
13	Pulp dump pinch valve plus spare cuffs

DOSING OF CEMICALS AND MILK OF LIME (SPARE PARTS)

When supplying automated systems providing dosing of cemicals and milk of lime (CDS, LDS) for one year of operation, the following spares and tool kit is offered for delivery



No.	Name of components
1	Dosing control cabinet parts: fuses, power supply unit, controller assembly, control panel, switches and indicators, circuit breakers
2	Air conditioning cabinet parts: pneumatic fittings, spare filter cartridges, reducing filter
3	Consumables for dosing pump wet ends: diaphragm, dosing head, seals
4	Repair kits for pneumatic cylinder, positioner (lime dosing system)
5	Dosing valve assembly (for valve-based dosing system) - 1 pce of each standard size for 5 pcs supplied
6	Repair kit for segment valve with pneumatic actuator and positioner (dosing system "Flowmeter + valve")
7	Seals for PVC shut-off valves (ball valves, return valves)

DOSING OF CEMICALS AND MILK OF LIME (SPARE PARTS)

Delivery of the following components is possible upon additional request and agreement during delivery and operation.



No.	Name of components
1	Dosing control cabinet or separate parts
2	Air conditioning cabinet or separate parts
3	Chemical (lime) dosers:
3.1	Dosing pumps
3.2	Pneumatic cylinder with positioner for lime dosing system
3.2	Dosing valves or parts thereof
3.4	Segment valve with pneumatic actuator and positioner and electromagnetic flowmeter (or their separate parts)
4	Spare parts for dosing pumps: diaphragm, dosing head, seals
5	Repair kits for pneumatic cylinder, positioner
6	Dosing Pump Installation Tables
7	Ultrasonic level gauges and mounting racks
8	Shut-off valves (ball valves, return valves)

CONTROL OF BOTTOM GATES (SPARE PARTS)

When supplying automated systems providing control of bottom gates (BGCS) for one year of operation, the following spares and tool kit is offered for delivery:

Delivery of the following components is possible upon additional request and agreement during delivery and operation:

No.	Name of components
1	Bottom gate control cabinet parts: power supply fuses, spare filter cartridges for the reducing filter, pneumatic fittings set, set of switches and indicators
2	Pneumatic cylinder repair kit (rings, collars) - for each pneumatic cylinder
3	Pneumatic cylinder fittings, position sensors, rod plug, shut-off valve and mounting bracket (1 kit per supply)

No.	Name of components
1	Bottom gate control cabinet (or parts thereof)
2	Pneumatic cylinder with position sensors and shut-off valve (or separate parts)
3	Pneumatic cylinder repair kit

SHUT-OFF VALVES CONTROL SYSTEMS (SPARE PARTS)

When supplying automated systems providing control of shut-off valves (SVCS) for one year of operation, the following spares and tool kit is offered for delivery:

No	Name of components
1	Parts of the shut-off valve control cabinet: fuses, spare filter cartridges for the reducing filter, set of pneumatic fittings, set of switches and indicators
2	Pneumatic cylinder repair kit (rings, collars) - for each pneumatic cylinder
3	Slide gate repair kit (gate and pneumatic actuator)
4	Butterfly valve repair kit (valve and pneumatic actuator)
5	Spare pinch valve collar
6	Pneumatic cylinder rod plug, shut-off valve, pneumatic fittings, position sensors (1 set for supply)
7	Position sensor for slide gate, butterfly valve, ball valve (1 piece of each size supplied)

Delivery of the following components is possible upon additional request and agreement during delivery and operation:

No.	Name of components
1	Shut-off valve control cabinet (or parts thereof)
2	Pneumatic cylinder with position sensors and shut-off valve (or separate parts)
3	Slide gate with pneumatic actuator and position sensors (or separate parts)
4	Butterfly valve with pneumatic actuator and position sensors (or separate parts)
5	Ball valve with pneumatic actuator and position sensors (or separate parts)
6	Pinch valve
7	Repair kits for pneumatic cylinder, slide gate pneumatic actuators, butterfly valve, ball valve
8	Repair kits for slide gate, butterfly valve, ball valve
9	Spare pinch valve collar

SHUT-OFF VALVES AND PUMPING UNITS CONTROL SYSTEMS (SPARE PARTS)

When supplying automated systems providing control of shut-off valves and pumping units (PUCS) for one year of operation, the following set of spares and tool kit is offered for delivery:

No	Name of components
1	Parts of the pump unit control cabinet and shut-off valve control cabinet: fuses, switches, buttons and indicators on the cabinet door, filter cartridge for reducing filter, external pneumatic fittings
2	Pneumatic cylinder repair kit
3	Repair kit for shut-off valves in delivery (slide gates, butterfly valves, ball valves and pneumatic actuators)

Delivery of the following components is possible upon additional request and agreement during delivery and operation:

No.	Name of components
1	Pump unit control cabinet (or parts thereof)
2	Shut-off valve control cabinet (or parts thereof)
3	Pneumatic cylinder with position sensors and shut-off valve (or separate parts)
4	Pneumatic cylinder repair kit
5	Ultrasonic level gauge (level in the pump sump)
6	Shut-off valves with pneumatic actuator and position sensors, and separate parts
7	Repair kits for shut-off valves and pneumatic actuators

SPTA for automation of air preparation systems, compressor equipment

When supplying automated systems providing control of compressors and other air preparation and distribution systems, the following spares and tool kit is offered for delivery for one year of operation :

No.	Name of components
1	Service kit for 1 year of compressor operation
2	Service kit for 1 year of air dryer operation
3	Compressor oil (for 1 year of compressor operation)
4	Air preparation cabinet parts: replacement filter cartridges, pneumatic fittings

Delivery of the following components is possible upon additional request and agreement during delivery and operation:

No.	Name of components
1	Service kits for compressor maintenance (after 1, 2, etc. years of operation)
2	Spare parts for compressor: controllers (control panels), fans, motors, screw blocks, radiators, hydraulic hoses, pressure relays, inlet (unloading) valves, sensors, etc.
3	Compressor consumables (air filters, oil filters, oil separators, drive belts, compressor oil, fuel filters, oil seals, thermostats, solenoid and inlet valves)
4	Air preparation cabinet (or parts thereof)
5	Receiver
6	Service set of air dryer maintenance (after 1, 2, 4 years of operation)



THANK YOU FOR YOUR ATTENTION!

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