

## Automatic Sludge-dewatering Press



The Cequesta ASP Automatic Sludge-dewatering Press offers a simple and economic alternative to existing dewatering systems for small to medium capacity water and wastewater treatment plants. Unlike traditional systems, the Cequesta ASP has few moving parts and consumes very little energy. Moreover, this innovative and well-proven dewatering solution employs a fully automated batch-treatment approach, requiring little human intervention.

The Cequesta ASP press addresses the ever increasing problem of dealing with sludges from water and wastewater

treatment plants and the resultant financial and legislative implications associated with transportation and disposal of these sludges. The Cequesta ASP is very versatile and ideally suited for use in the following applications: metal finishing, microelectronics, printing, paints, inks, resins manufacture, tanneries, food processing, large printing presses, animal manure, corrugated board, parts cleaning, high pressure cleaning, shipyards, wineries, olive oil, paper, textile, leather, municipal and activated sewage plants for small/medium sized communities.

- **Skid-Mounted or Containerised**
- **Cost Effective (both CAPEX and OPEX)**
- **Simple to Operate and Maintain**
- **Robust Stainless Steel Construction**
- **Flexible (permanent or mobile) Operation**
- **Environmentally Friendly**

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FROM WATER SUPPLY TO WATER RE-USE

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## HOW IT WORKS:

The Cequesta ASP press works on a batch principle, controlled by a sophisticated on board controller. The controller allows the operator to readily change parameters in order to optimise the press operation, increase throughput or alter the output dryness, depending on the specific sludge being dewatered.

### FILLING

Sludge is pumped into the mechanical flocculator where it mixes with flocculent. The flocculated sludge enters the space between the screen and the internal membrane with the excess filtrate percolated through the screen slots, while the thickened sludge (about 10% DS), is retained. The semi dry sludge accumulates at the bottom of the cylindrical screen and settles upward.

### PRESSING

When the screen is full, a sensor signal stops the filling/thickening sequence and the pressing sequence starts, the internal flexible membrane is inflated, pushing the solids against the screen surface with a radial force, which is the fastest and most efficient way to dewater sludges. This step is time controlled for few minutes with both pressing and pulse pressing steps controlled by the PLC program. The excess fluid is drained out externally.

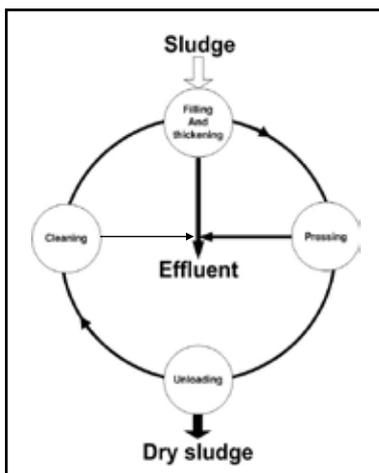
### SCRAPING

At the end of the pressing sequence the lower door membrane deflates and the door retracts. The scraper carriage is then activated cycling up and down the internal



20 cu.m of sludge can be dewatered to 15-30% dry solids daily in one press requiring only a single phase power supply

surface of the wedge screen dislodging the sludge cake allowing it to fall freely into a skip or onto a conveyor.



### WASHING

After the scraping sequence has been completed the screen is automatically backwashed by a ring of spray heads moving up and down the outside surface forcing any remaining sludge caught in the screen back through the screen. Once complete a new filling sequence is started automatically.

Once in operation the press will dewater the sludge until there is not enough sludge, at which point the press will remain in "Stand By" mode until re-activated. The PLC program includes a diagnostic feature that will prevent any faulty operation and allows the operator to fix the problems easily and safely. If there is a problem within the cycle the press will cease operation and automatically give an alarm.

SPECIFICATIONS	FIGURES
Typical inlet, DS%	0.5-5
Typical dewatering outlet, DS%	15-30
Dewatering capacity, cu.m/day (Max.) at 2.5%	20
Sludge bin volume, liters	1000, 1500, 2000, custom, conveyor
Power supply	110/220 V, single phase, 16 amperes
Energy, kWh/day (approx.)	12
Washing water pressure, bars	3-8
Washing water consumption	7-15 liters per cycle at 5 bars, or 0.8-2 m3/day
Air pressure, bars	6-8, dry not lubricated
Weight empty, kg	400
Chemicals	Flocculants and coagulants



Containerised, single or multiple, ASP presses with conveyors provide flexible fixed or mobile sludge dewatering capability.



Dewatered sludge from the ASP is stable and easy to handle, simplifying daily sludge disposal.