OR-TEC *x-press* BELT PRESS

x-press 500,1000 &1500 Series

The **OR-TEC** *x-press* **Belt Press System** is the next generation in the Mk II Belt Press Series. It is designed for applications where the cake solids and throughput of a double belt press are required while keeping the ease of operation, low maintenance and cost effectiveness of an OR-TEC mono belt press.

The OR-TEC *x-press* features:

- **Gravity Zone with plows and dewatering roller**
- **Variable Wedge or low pressure zone**
- **High Pressure 5 roller squeezing zone**
- **Auto start-up, run and shutdown**
- **Automatic Belt Tracking**
- **Sludge Cake Monitoring System**
- **No Hydraulics**
- **No Air-Compressor required**

Don't just dewater it... *x-press* it

The OR-TEC x-*press* offers a completely operational, skid mounted and self-contained system which can include:

- **Belt Press**
- **Controls**
- **Sludge Pumps**
- **Belt Wash Pump**
- **Flocculation System**
- **Polymer Dosing Unit**
- **Sludge Cake Auger**

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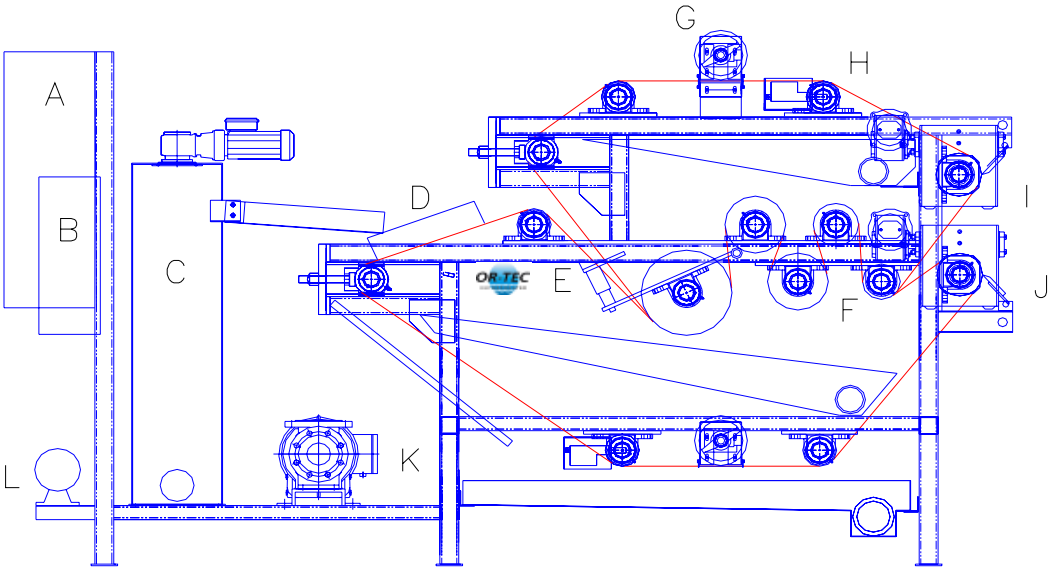
Legend
A.Control Panel
B.Polymer Dosing
C.Flocculation Tank
D.Gravity Zone
E.Wedge/Low Pressure Zone
F.Squeezing/High Pressure Zone
G.Belt Wash Station
H.Tracking Roller
I. Drive Rollers
J.Sludge Cake Discharge
K.Sludge Pump
L.Washwater Pump



Some typical results....

Type of sludge	Feed Sludge Conc %	Sludge Feed Rate (gph)	Dry Solids Feed Rate (1 lb./hr)	Poly Conc %	Poly Feed Rate (lbs/ton d.s.)	Final Cake %
Activated Sludge from Municipal WWTP	1.5	1598 (0.5m) 3197 (1.0m) 4796 (1.5m)	200 (0.5m) 400 (1.0m) 600 (1.5m)	0.25	8-10	18 plus
Activated Sludge from Anaerobic WWTP	3.6	865 (0.5m) 1748 (1.0m) 2597 (1.5m)	260 (0.5m) 525 (1.0m) 780 (1.5m)	0.25	8-12	21 plus
Primary and Secondary Activated Sludge from Municipal WWTP	3.25	1106 (0.5m) 2213 (1.0m) 3357 (1.5m)	300 (0.5m) 600 (1.0m) 910 (1.5m)	0.25	8-10	25
Tannery Sludge	2.4	749 (0.5m) 1148 (1.0m) 2198 (1.5m)	150 (0.5m) 290 (1.0m) 440 (1.5m)	0.17	4-8	20
Flotation Skimmings	8.2	570 (0.5m) 1155 (1.0m) 1725 (1.5m)	390 (0.5m) 790 (1.0m) 1180 (1.5m)	0.20	10-12	33
Oil and Grease Sludge	3.0	1878 (0.5m) 3756 (1.0m) 5635 (1.5m)	470 (0.5m) 940 (1.0m) 1410 (1.5m)	0.20	8-10	37

Process Description....

CHEMICAL DOSING
An OR-TEC Blend polymer feed system automatically makes up and delivers the polymer and water solution to the injection site.

FLOCCULATION
Thorough mixing occurs here, aided by a variable speed flocculator fitted in the stainless steel flocculation tank.

GRAVITY DRAINAGE AREA
The gravity drainage area allows for free water to drain from the sludge. Plows and a dewatering roller aid the gravity dewatering process.

WEDGE / LOW PRESSURE DEWATERING ZONE
The variable wedge zone slowly brings the two belts together incrementally increasing belt pressure on the sludge

SQUEEZING / HIGH PRESSURE DEWATERING ZONE
Further liquid removal is achieved as the belts with the sludge between travel through a 5 roller squeezing zone. The rollers in this zone decrease in size thereby increasing the pressure on the sludge.

SLUDGE DISCHARGE
Dewatered sludge is continuously removed by a fixed scraper blade acting against the final roller.

FILTER BELT WASHING
The filter belt is continually washed by pump generated high pressure water sprayed through fine nozzles.

CONTROLS
The system can be operated in automatic or manual modes. Start-up is simple and requires a minimum of time. A PLC monitors the system at all times during operation. Automatic Belt Tracking, a Sludge Cake Monitoring system and emergency systems help to ensure trouble free, easy operation.