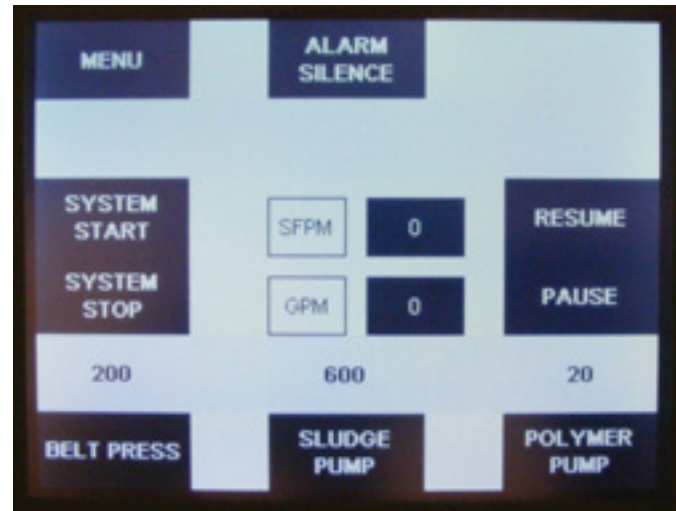


# STATE OF THE ART CONTROLS



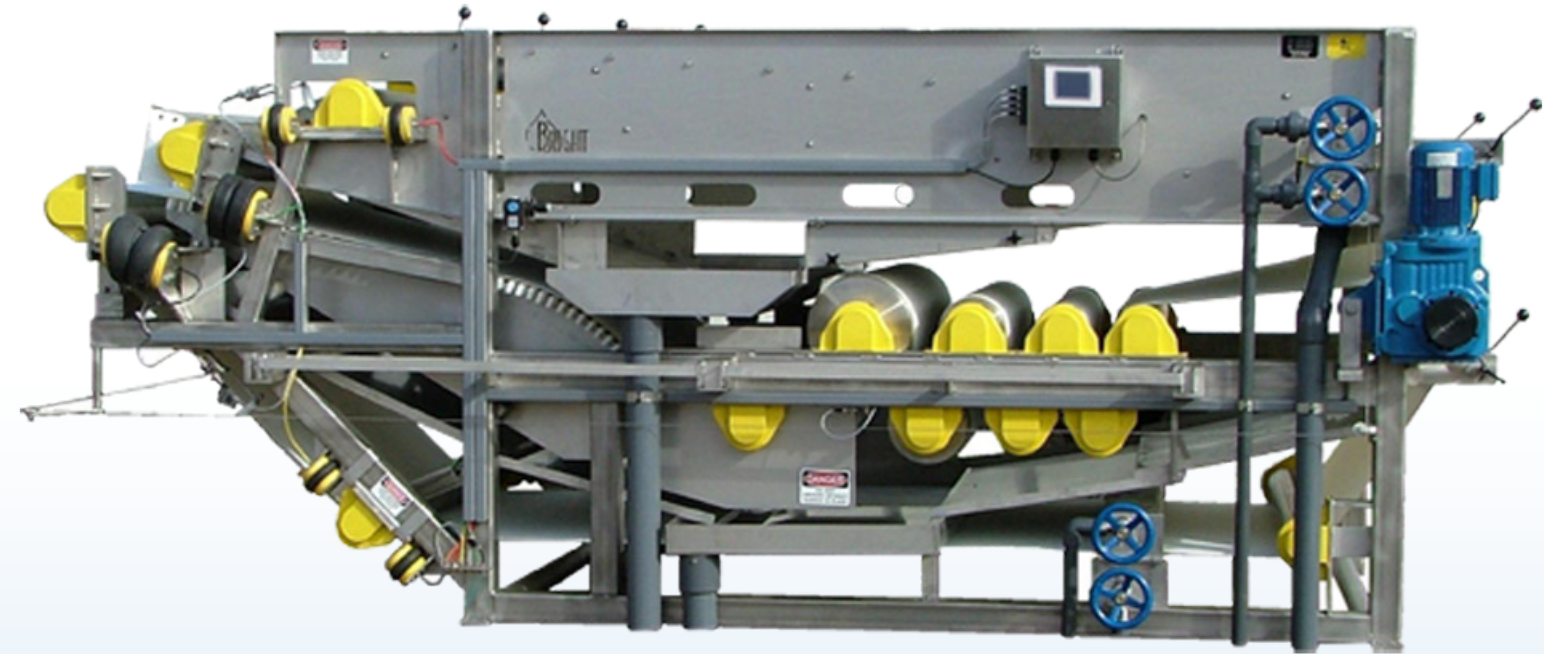
MAIN TOUCH SCREEN



BELT PRESS MOUNTED HDMI



# Belt Filter Press Systems



The Bright Technologies Belt Filter Press is a modern design that includes three (3) US Patents and many innovative features that provide high performance in a compact, high value package. Many competing products are based on 30 year old designs that do not utilize the filtration area effectively.

Our belt press is designed with long term value and ease of operation in mind. Stainless steel frame and roller construction are standard. An Allen Bradley touch screen and PLC integrate the press and support equipment so that unattended operation and integration into SCADA systems are easily accomplished. The optional press mounted operator walkways and handrails are easily removed for press maintenance and allow the operator good visibility of the process.

**\*Our belt filter press is capable of superior results such as:**

- WWTP Primary - Cake Solids of up to 37%
- Aerobic Digested - Cake solids of up to 24% TS
- ATAD Process - Cake solids 30% @ 2,000 Lbs./hr/meter
- Lagoon Sludge - Solids loadings of 2500 Lbs./hr/meter producing 20% solids
- Mineral Sludge - Cake solids of 50 - 70% TS at rates of 6000 Lbs/hr/meter
- Lime Treated Septage - Cake Solids 47% @ 1400 Lbs/hr/meter

\*While the above results have been attained with our belt filter press equipment, results may vary with the characteristics of the sludge and other process variables.

- NEMA 4X Control Enclosures Standard
- Allen Bradley PLC, Touch Screen, VFD's, BFP HMI and Motor Starters
- Ethernet Communication included, Aids in remote operation and SCADA integration
- Belt Press Mounted Operators Station (a monochrome HMI on the belt press allows the operator to view the gravity deck and make adjustments to the system).
- Adjustable feed high probe automatically pauses the sludge pump and polymer upon high sludge level at the gravity deck. Resumes operation after low level.
- Easily Expandable Control System The PLC and Touch Screen can be Programmed to control more ancillary equipment without adding push buttons and pilot lights etc..
- Alarm and System Timers are Adjustable by the Operator via the Touch Screen and the belt press mounted remote
- Alarm History - review the past alarms with time/date stamp via touch screen
- Auto / Manual selection of all ancillary equipment by the operator - each piece can be started individually for maintenance
- Hour Meters for all equipment built into the touch screen for maintenance purposes
- All external devices are 24 VDC for Operator Safety
- Belt speed displayed in FPM and Percent of Maximum Pump Speed
- Sludge Flow G.P.M., gallons processed and resettable gallons processed are displayed on the touch screen with an optional flow meter

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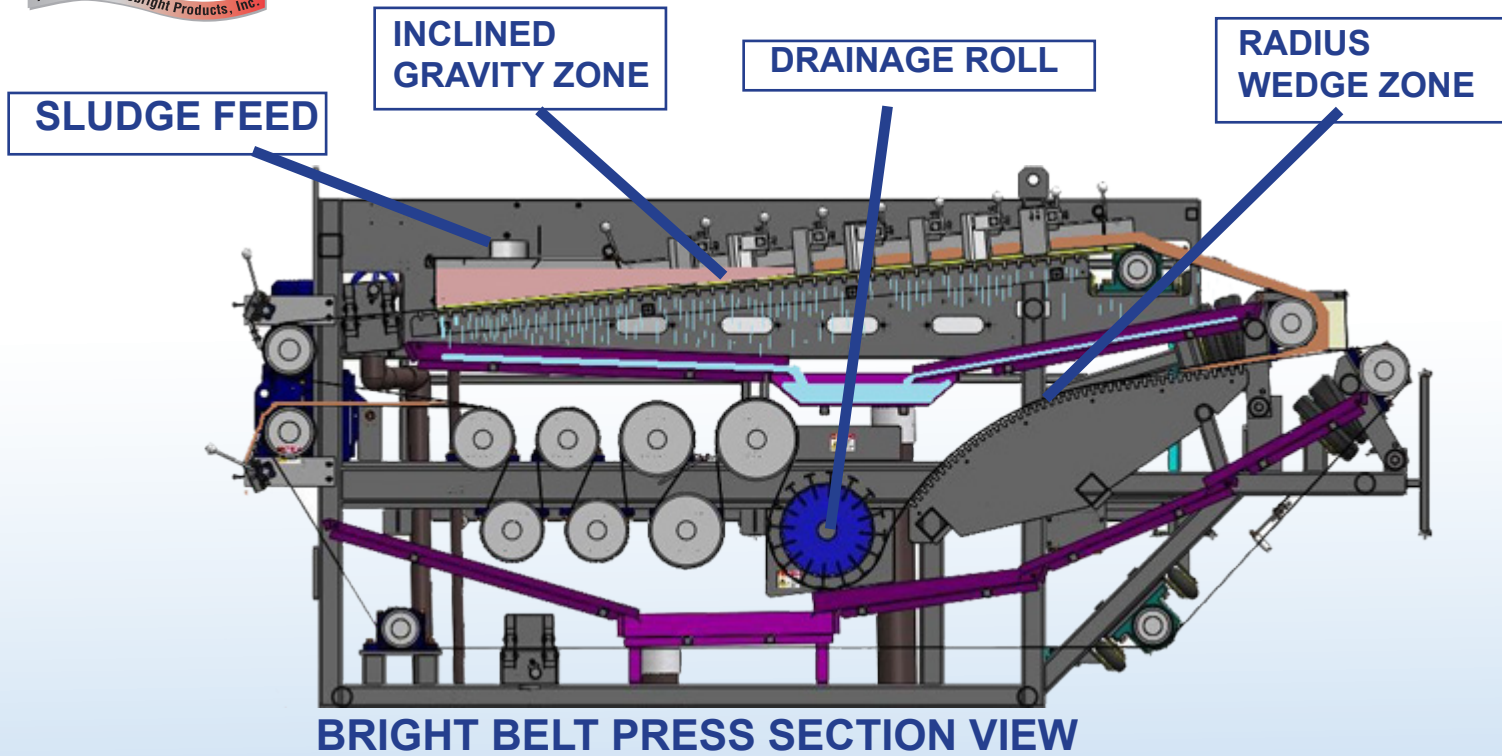
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# Bright BFP FEATURES

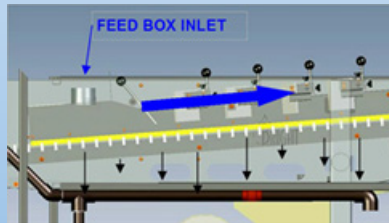


**BRIGHT BELT PRESS SECTION VIEW**

## STAINLESS STEEL CONSTRUCTION

Stainless steel frame and roll construction is standard on all Bright Technologies Belt Filter Presses.

## GRAVITY SECTION



The Inclined Gravity Deck features 1/2" UHMW support bars on 2 1/2" centers designed to maximize drainage by breaking surface tension and the use of capillary action. The moving belts, in contact with the support bars break the surface tension allowing the water to flow through the pores in the belt. As the water travels through the belt it creates a vacuum effect on the top side of the belt, pulling in more water. This principle can be illustrated by touching the inside of a wet tent and causing it to leak. The incline of our gravity deck keeps liquids near our feed box and conveys solids out to increase zone retention time. These features make our gravity deck more effective per given unit of the belt area.

## RADIUS WEDGE



Our patented radius wedge section simulates a large diameter roll, which quickly brings the belts together to apply gentle pressure and better condition the sludge for the pressure section. The typical straight wedge zone used by others typically requires operator adjustment and does not apply any pressure over most of its surface area. Our radius design, also supports superior drainage by breaking lower belt surface tension with our radius support grid and does not require additional user adjustments.

# Bright BFP FEATURES



**Bright Skid Mounted System**

## HIGH PRESSURE ZONE

Our presses feature eight pressure rolls that have four decreases in roll diameter, which allow for greater pressure to be applied to the sludge cake.

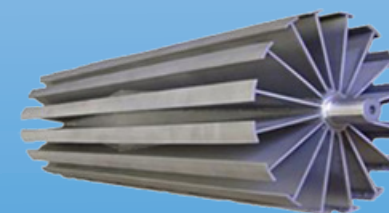
## PNEUMATIC BELLOWS

The belt tension and steering is accomplished by pneumatic bellow assemblies. These bellows are not subject to "freeze up" from corrosion as may happen with pneumatic cylinders. Further, with the bellows design there is no concern of a leaking hydraulic system.

## BELT STEERING

The belt steering is accomplished by a patented belt following assembly that utilizes solid state stainless steel proximity sensors. These sensors activate pneumatic valves that are protected from the environment by a NEMA 4X cabinet. The sensors for Belt Steering, Belt Off Track, and Belt Breakage are identical and easily replaced. The accuracy of our belt steering allows us to have more usable gravity zone width than other designs.

## DRAINAGE ROLLER



Our patented drainage roll is a large diameter fabricated roll that features 50% open area drainage. Unlike perforated rolls, which are typically 30-35% open area, our patented Wing Roll channels water to the outside of the roll as the roll rotates upward and washes the majority of any solids present out of the roll so they do not impede drainage in subsequent operation. The Wing Roll is also easy to clean at the end of the day's operation, unlike perforated rolls, which stubbornly retain solids buildup inside the roll leading to diminished dewatering capacity and odors.