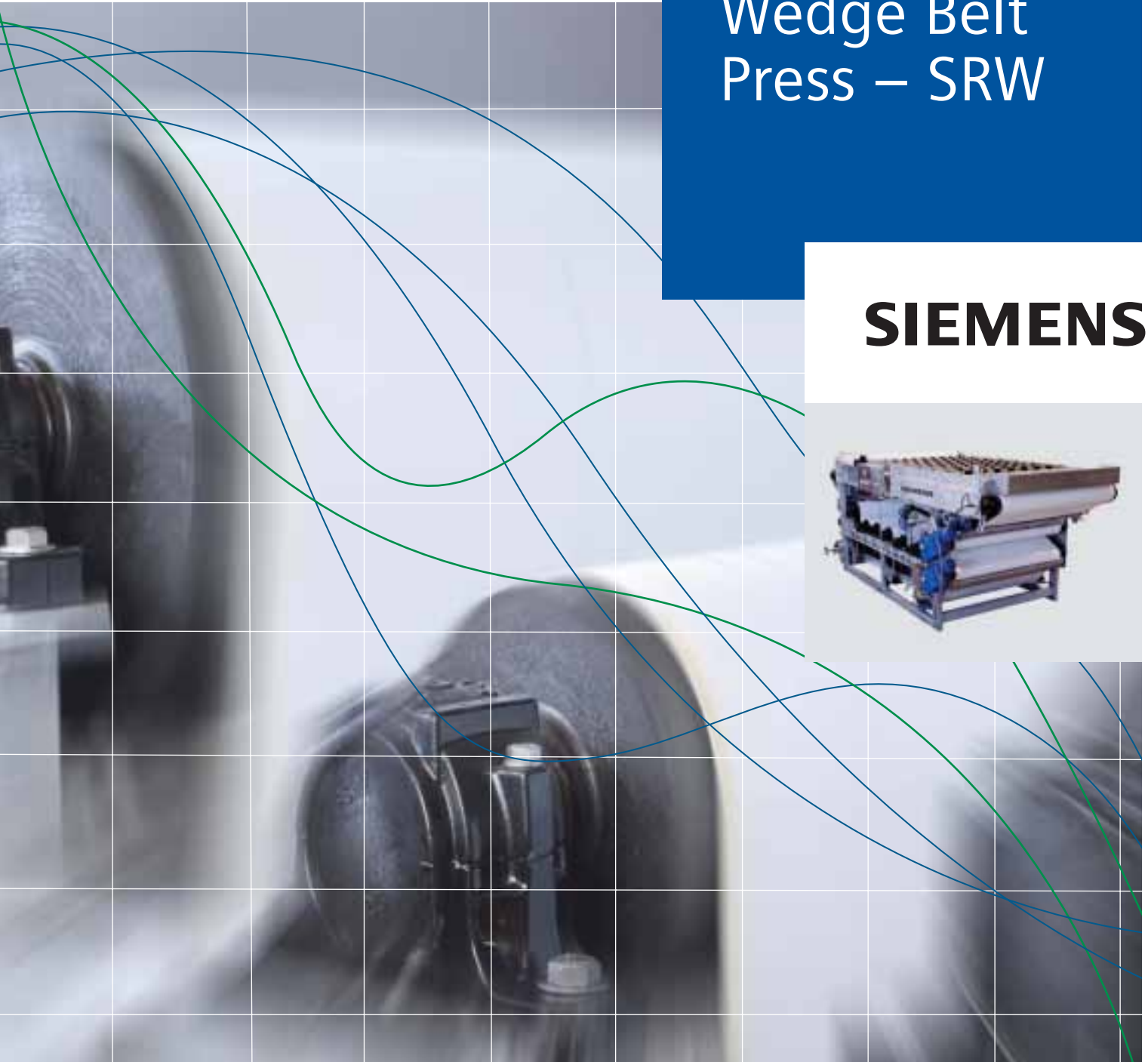


Water Technologies

Static Radial Wedge Belt Press – SRW

SIEMENS



Water Technologies

SRW Offers Superior Performance

The SRW Belt Press – higher flow rates, higher cake solids, lower operating costs



Superior Dewatering Solution for a Wide Variety of Municipal and Industrial Applications

The Static Radial Wedge (SRW) belt press combines world-class dewatering technologies in an efficient, high performance design. The result is maximum cake solids at the lowest cost. The SRW belt press is rugged, versatile, and simple to operate. It will provide years of dependable performance in the harshest of environments.

The SRW belt press uses a multi-zone approach to dewater even the most difficult sludges.

Conditioning Zone

Sludge is conditioned with polymer prior to the actual dewatering process in a unique 2-stage upflow flocculation tank or a venturi style mixing system.

Gravity Zone

The dewatering process begins in the gravity zone where the majority of entrained water in the sludge is removed. The unique plow design assists in water removal by gently rolling and turning the sludge as it is moved through the gravity zone.

Wedge Zone

The dewatering process continues in the wedge zone where the sludge is captured between two belts and increasing pressure is applied. Pressure is gradually and automatically increased by the large radial wedge as the belts move through the wedge zone.

High Pressure Zone

Final dewatering is achieved in the high pressure zone where maximum pressure is applied. Pressure is incrementally increased by passing the belts over rollers that successively decrease in diameter. The SRW belt press is available with up to 14 rollers in the high pressure section, providing extended dewatering time under maximum pressure for highest cake solids.

The SRW is available in 1.0, 1.5 and 2.0 meter belt widths. Features such as open architecture, unique roller design and modular construction make it a proven performer in the most demanding of applications.

Key Engineering Features of the SRW Belt Press:

Radial Wedge Zone

Higher throughput. The radial wedge on the SRW belt press provides more throughput per meter than conventional linear wedge designs.

Improved performance. The long radius design provides more time in the wedge zone, improving water removal and enhancing performance. The two belts move at slightly different speeds through the large curved wedge, creating a shearing action that further enhances dewatering performance.

Longer belt life. The long radius design results in lower friction. This reduces power requirements and greatly improves belt life.

Modular Design

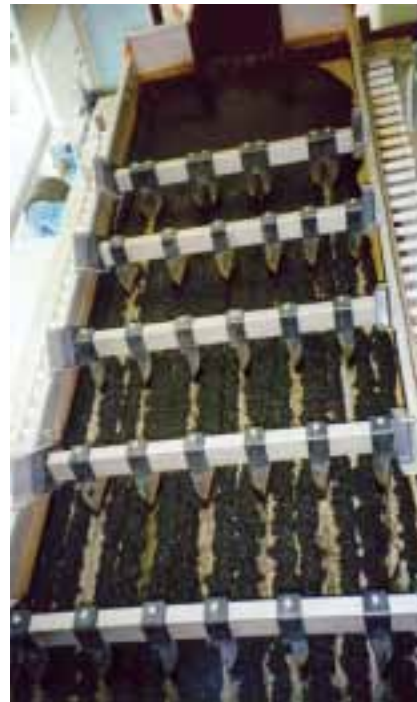
Higher performance. The SRW belt press offers the ability to add additional high pressure rolls for cake solids *without* altering the footprint of the press. The press can be purchased with the additional rollers installed or they can be added later if operating conditions or disposal requirements change.

Open Architecture

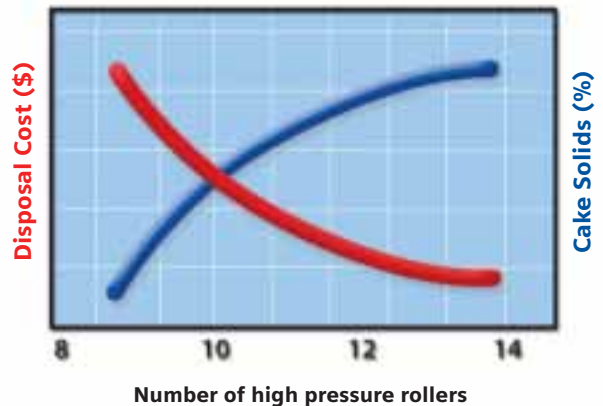
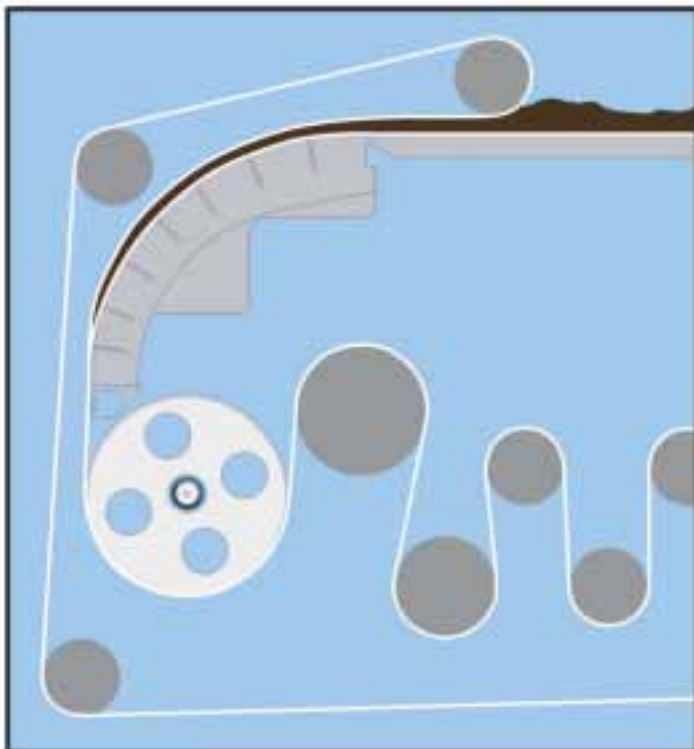
Lower O&M costs. The SRW belt press is engineered with an open frame for easy access to all bearings, belts, and other critical components.

ISO 9001:2000 QMS

The quality management system governing the manufacture of the SRW Belt Press is ISO 9001:2000 certified.

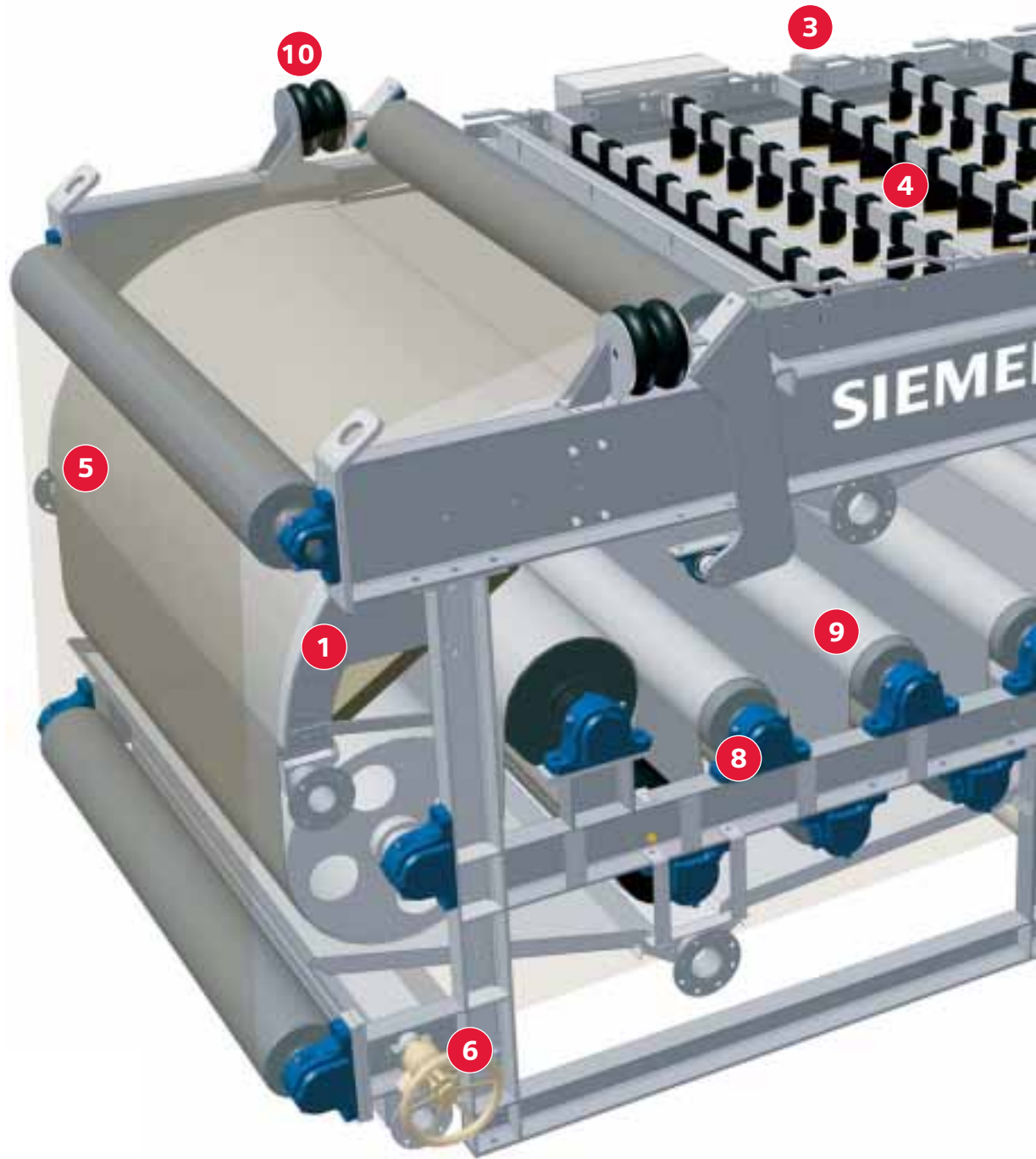


Conditioned sludge travels through the gravity zone, where specially designed plows efficiently roll the sludge for maximum water drainage.

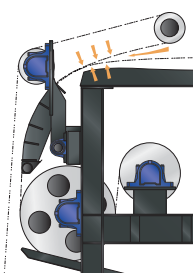


Additional rollers provide higher cake solids, reducing disposal cost.

The long radial wedge zone is more efficient than traditional designs due to longer residence time and the shearing action developed between the two belts.

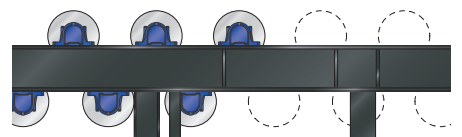


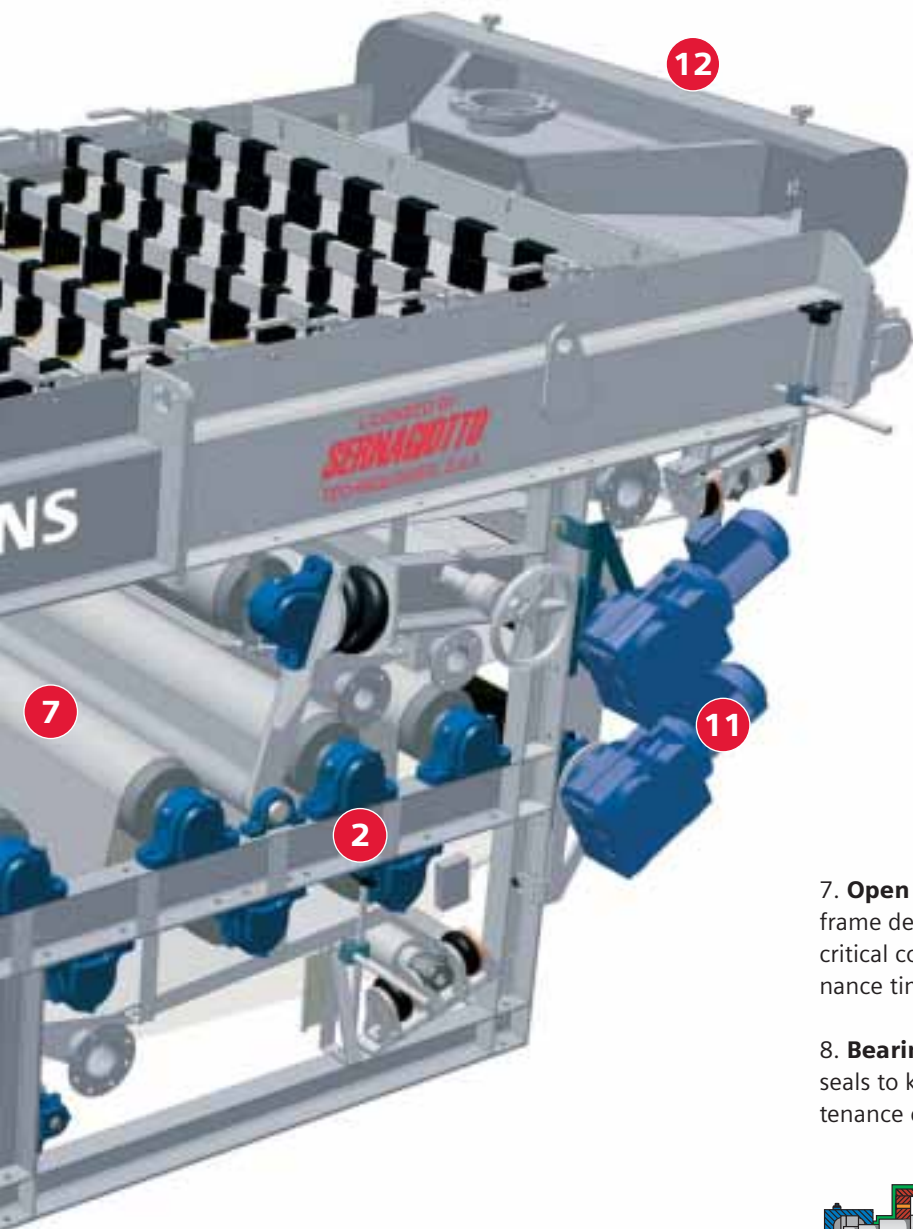
**SRW
Belt Press,
Key Features**



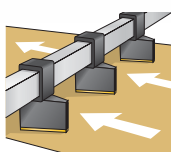
1. Long Radial Wedge Zone — The radial wedge design provides a uniform pressure for maximum dewatering throughout the wedge zone. With the radial design, the upper belt is in contact with the sludge throughout the entire zone. A long wedge zone means that more water is removed from the sludge before it enters the high pressure zone. This improves overall dewatering performance.

2. Modular Design — The SRW can be ordered with 8 high pressure rolls for good performance on most sludges. Up to 6 additional rollers can be added at any time without any change to the press footprint. The modular frame is pre-drilled for the additional rollers, making the addition an easy, cost effective answer to changes in sludge conditions or new disposal requirements.





3. **Large Filtration Area** — The gravity, wedge and high pressure zones are designed to maximize filtration areas, resulting in excellent performance on all applications.



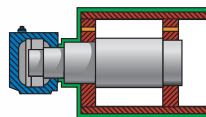
4. **Furrowing Action** — Specially designed plows turn the sludge for maximum drainage in the gravity zone. Replaceable bottom shoes minimize maintenance costs.

5. **Equal Length Belts** — Equal length belts means that only one belt needs to be inventoried for emergencies. This reduces maintenance costs and simplifies belt replacement.

6. **Rugged Frame Construction** — Heavy duty C channel construction minimizes the potential for frame deflection and distortion. A strong, stiff frame improves belt tracking and component life. This allows the use of higher belt tension, which improves performance and produces higher cake solids.

7. **Open Architecture** — The SRW is engineered with an open frame design for easy access to all bearings, belts, and other critical components. Routine maintenance is easier and maintenance time and cost are reduced.

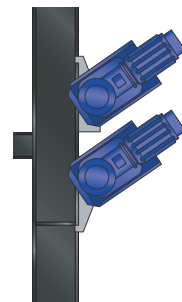
8. **Bearings** — Heavy duty spherical roller bearings with triple seals to keep out water are used for long life and reduced maintenance cost.



9. **Roller Construction** — An interference fit process is used that eliminates weld stress – the leading cause of roller failure. The rollers are coated with Buna rubber for complete corrosion protection and long life.

10. **Pneumatic Tensioning and Tracking System** — Pneumatic bellows for tensioning and belt tracking eliminate the mess and problems associated with hydraulic systems. With no oil or oil filters to change, maintenance costs are reduced. The heavy duty rubber bellows eliminate problems with shaft seal leaks and corrosion on pneumatic or hydraulic cylinders.

11. **Dual Belt Drives** — Each belt is individually driven by a separate motor/gear reducer combination. The dual drive system reduces stress on the belts and increases belt life.



12. **Flexible Feed Inlet** — The SRW has been designed with flexibility in mind. The feed inlet can be tailored for the specific needs of the installation; overhead or from underneath. Contact factory for additional information on available configurations.

On-site Analysis



The belt press simulator uses sophisticated mathematical modeling technology to enable extremely accurate reproduction of belt press performance.



The mobile pilot test unit provides on-site analysis to ensure accurate assessment of performance and operating costs.

Technology Services



Siemens Water Technologies in Holland, Michigan maintains a fully staffed, state-of-the-art feasibility laboratory for dewatering studies. Predictive Technology Services range from laboratory simulation to large scale portable pilot units for on-site testing. This customer focused resource produces tangible results that can determine the most effective dewatering solution for your specific application.

In addition to ensuring accurate data for system design, this valuable service is also available to help you maintain maximum performance when process conditions change or new regulatory standards are implemented.

Variable Energy Mixing Solutions

Optimum dewatering begins with proper sludge conditioning; an efficient mixing of sludge and polymer along with sufficient time and energy to ensure proper flocculation before dewatering.

Venturi mixing devices are compact, economical solutions. Polymer is introduced into the feed stream through a series of ports arranged concentrically around the feed line. As the sludge and polymer are forced through the adjustable venturi opening, a turbulent flow is created, resulting in rapid mixing. Retention time is provided by downstream piping prior to the press.

Mechanical mix tanks offer more precise mixing and additional retention time that can provide improved performance on difficult applications. These vertical tanks have a variable speed, multi-impeller mixer that provides a rapid mix at the base followed by up to 60 seconds of retention time to allow complete floc formulation. Thorough mixing occurs independent of flow rates, and can be precisely adjusted.

The ideal system utilizes both an inline venturi device and a mixing tank for robust, controllable mixing. Your Siemens Water Technologies engineering support staff can design a mixing system that factors in your sludge characteristics, throughput and system configuration.



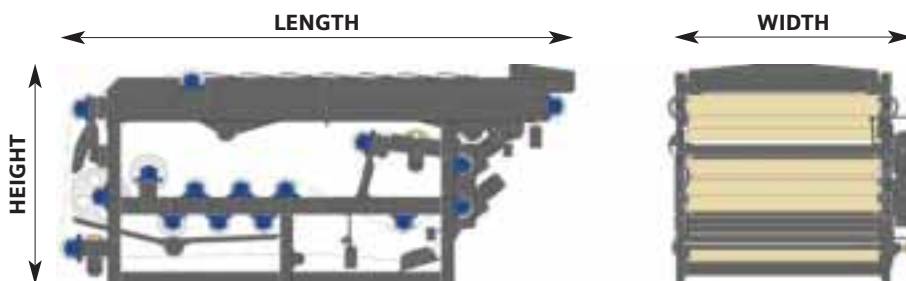
High velocity Venturi mixer



Variable speed mixing tank

SRW Technical Info

| Model | BPS1000 | | | | BPS1500 | | | | BPS2000 | | | |
|-------------------------------------|---------|--------|--------|--------|---------|--------|--------|--------|---------|--------|--------|--------|
| Effective Belt Width (mm) | 1000 | | | | 1500 | | | | 2000 | | | |
| # of rollers | 8 | 10 | 12 | 14 | 8 | 10 | 12 | 14 | 8 | 10 | 12 | 14 |
| Overall Length (in.) | 240 | 240 | 240 | 240 | 240 | 240 | 240 | 240 | 240 | 240 | 240 | 240 |
| Overall Width (in.) | 76 | 76 | 76 | 76 | 96 | 96 | 96 | 96 | 114 | 114 | 114 | 114 |
| Overall Height (in.) | 104 | 104 | 104 | 104 | 105 | 105 | 105 | 105 | 105 | 105 | 105 | 105 |
| Weight - Dry (estimated lbs.) | 13,300 | 14,900 | 16,500 | 18,250 | 15,750 | 17,750 | 19,750 | 21,950 | 18,300 | 21,100 | 23,900 | 26,900 |
| Weight - Operating (estimated lbs.) | 14,800 | 16,400 | 18,000 | 19,750 | 17,600 | 19,600 | 21,600 | 23,800 | 20,600 | 23,400 | 26,200 | 29,300 |



Siemens reserves the right to change equipment specifications, options and/or discontinue models and options at any time without notice or obligation.

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