

Screw Press and Rotary Screen Thickener for Pulp and Paper Applications



High Consistency Rotary Screen Thickener Model HC-RST W630D X 3000 L



DIP Screw Press Model SHX-1250

Stock Thickening



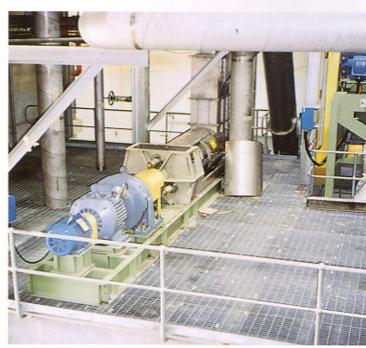
FKC screw presses are used to thicken recycled fiber, kraft pulp, NSSC pulp, TMP and other mechanical pulps. FKC pulp thickening presses supply premium performance, easy operation and extremely low maintenance. Pulp presses are available in sizes up to 1,250mm diameter screws.

Stock Thickening

Model	Capacity (BDMT/24hours)
SHX-550	25-60
SHX-600	35-90
SHX-700	45-120
SHX-800	65-165
SHX-850	75-190
SHX-900	80-210
SHX-1000	100-250
SHX-1050	110-280
SHX-1100	130-320
SHX-1200	150-370
SHX-1250	160-410

^{*}The above assumes an inlet consistency of 3-10%, freeness of 120-250 CSF, and an outlet consistency of 30%.

Knots & Rejects Dewatering



Rejects Dewatering Screw Press at a Recycled Paper Mill

FKC screw presses are supplied to handle small and large quantities of rejects or knots. These presses are typically smaller in size, run at comparatively fast screw speeds, and are of extremely heavy duty construction. Common applications include dewatering pulp mill knots, screen and cleaner rejects, and recycle mill rejects.

^{*}Bigger size (capacity) model than above is available, depending on the requirement.

Sludge Dewatering

- Primary Sludge
- Secondary Sludge
- Tertiary Sludge
- Deink Sludge
- Alum Sludge
- Debarking Sludge
- Coating Sludge
- Blended Sludge



FKC Sludge Screw Press with High Consistency Rotary Screen Thickener (HC-RST)

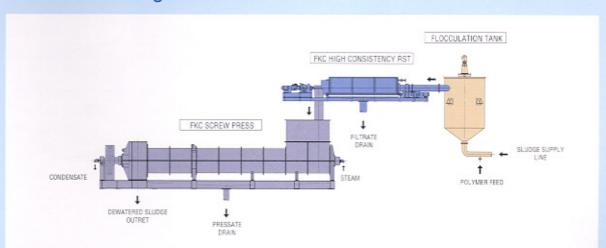
FKC has extensive experience with all types of pulp and paper mill sludge. Even low, or no fiber sludges such as secondary sludge can be effectively dewatered with a FKC equipment. Each FKC screw press is custom designed to meet our customer's unique sludge and performance requirements.

In most sludge dewatering applications a rotary screen thickener (RST) is used prior to the screw press to prethicken the sludge. FKC manufactures a complete line of two types of rotary screen thickeners. A comparative case study of the conventional vs. high consistency (HC) model RST is summarized on the following page. RSTs stabilize screw press inlet consistency and reduce inlet volume thereby increasing screw press capacity. RSTs are also used in stand alone thickening applications.



FKC Sludge Screw Press with Rotary Screen Thickener (RST)

Process Flow Diagram



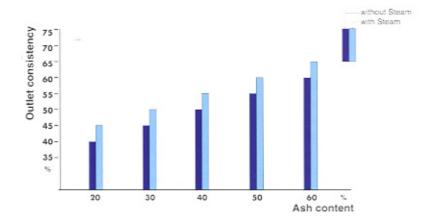
A typical FKC sludge dewatering system utilizes a flocculation tank, rotary screen thickener, and screw press. Sludge is fed to the system from a sludge blend tank or clarifler. Polymer, when required, is added to the sludge just prior to the flocculation tank. From the flocculation tank the conditioned sludge flows by gravity into the high consistency rotary screen thickener (HC-RST) where the dewatering process begins. The thickened sludge is gravity fed from the HC-RST into the screw press where final dewatering occurs.

Pulp & Paper Mixed Primary & Secondary Sludge Dewatering

Model	Capacity (BDMT/24hours)
SHX-500	9-18
SHX-550	11-21
SHX-600	13-25
SHX-700	17-34
SHX-800	23-45
SHX-850	26-52
SHX-900	29-58
SHX-1000	34-69
SHX-1050	38-76
SHX-1100	43-86
SHX-1200	50-100
SHX-1250	55-110

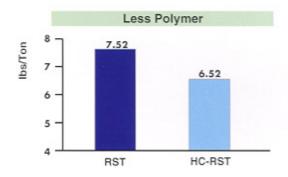
^{*}The above assumes use of prethickening equipment prior to the screw press.

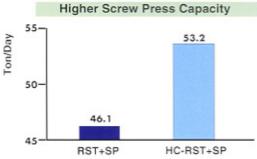
Outlet consistency vs. Ash content



Case Study

Rotary Screen Thickener vs. High Consistency Rotary Screen Thickener

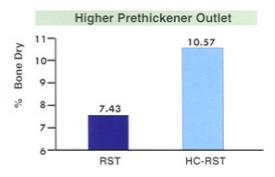


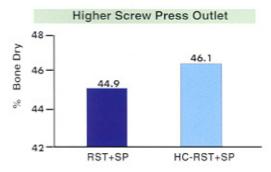


Rotary Screen Thickener Model RST-W630×3000L High Consistency RST Model HC-RST W630D×3000L FKC Screw Press Model SHX-1000×8000L RST: HC-RST

Sludge: 80% Primary: 20% Secondary DIP Sludge

Fiber content: 8-10% Ash content: 35-38%





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^{*}Capacity will vary depending on ash content, fiber content, mix ratio, and other sludge characteristics.

^{*}Bigger size (capacity) model than above is available, depending on the requirement.