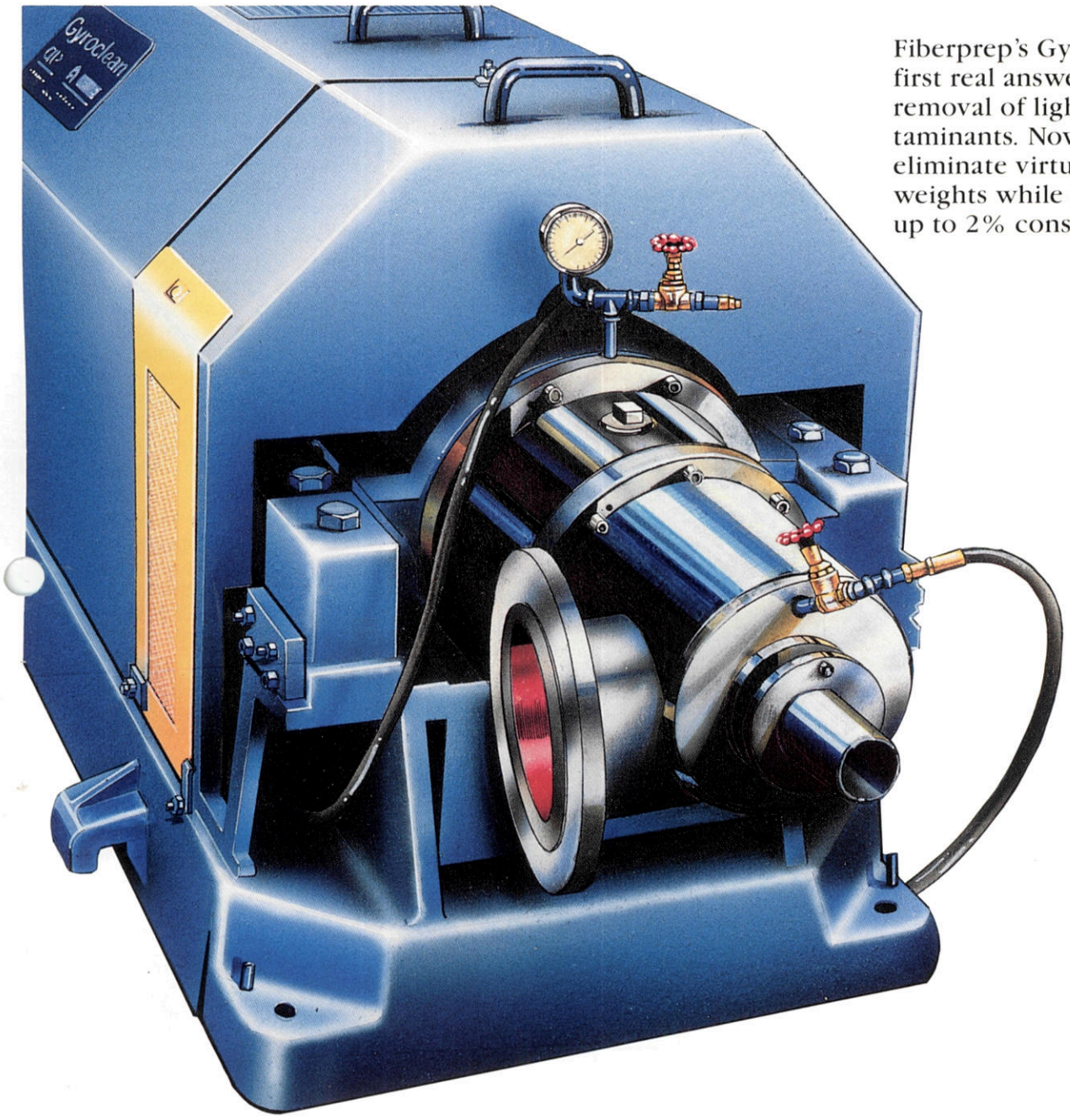
FIBERPREP
AIKAWA • LAMORT • THERMO ELECTRON

Gyroclean

Light Reject Rotary Cleaner



Fiberprep's Gyroclean is the first real answer to efficient removal of lightweight contaminants. Now you can eliminate virtually all lightweights while operating at up to 2% consistency.

FIBERPREP

PERFORMANCE

The Fiberprep Gyroclean® is a significant advance over conventional reverse cleaners for removal of lightweight contaminants. Fast becoming the standard in deinking, the capabilities of the Gyroclean are now being recognized in applications such as OCC stock preparation, virgin pulp and approach flow.

In these applications the Gyroclean provides a superior solution to removing lightweight contaminants. But in other cases, such as tea bag, cigarette papers and currency, the Gyroclean is the *only* solution to the complete removal of lightweights.

The Gyroclean delivers these performance advantages in removing lightweight contaminants:

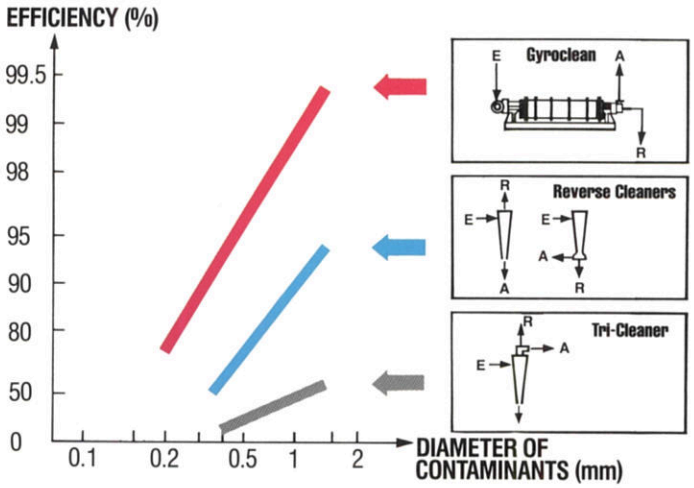
High Efficiency. Remove up to 99% of all lightweight contaminants, including polyethylene, polystyrenes, stickies and hotmelts.

Efficient Air Removal. Air is separated from the slurry by the same process that removes the lightweight contaminants. Because the air is removed with the reject, you save on capital equipment for subsequent thickening.

Low Installed Cost. Complete removal of lightweights in a single process without fiber loss and without dilution makes for greater system efficiencies and significant savings in installed cost.

Process Output

Model	Process Flow Gallons/Minute	Cubic Meters/Hour
GYS1	295 to 750	67 to 160
GYS2	510 to 1,050	115 to 240
GYS3	670 to 1,495	150 to 330
GYT3	1,320 to 1,585	300 to 360
GYT4	1,585 to 1,940	360 to 440
GYT5	1,940 to 2,290	440 to 520



No Fiber Loss. The Gyroclean offers complete contaminant removal with virtually no fiber loss, eliminating the requirement for expensive fiber-saving stages.

No Dilution. Eliminate contaminants without increasing thickening and pumping requirements. The Gyroclean processes pulp at up to 2% consistency.

Single-Stage Operation. Because of its remarkable efficiency at operating consistencies, the Gyroclean saves you valuable floor space and eliminates the capital cost of installing multistage reverse cleaning systems.

HOW THE GYROCLEAN WORKS

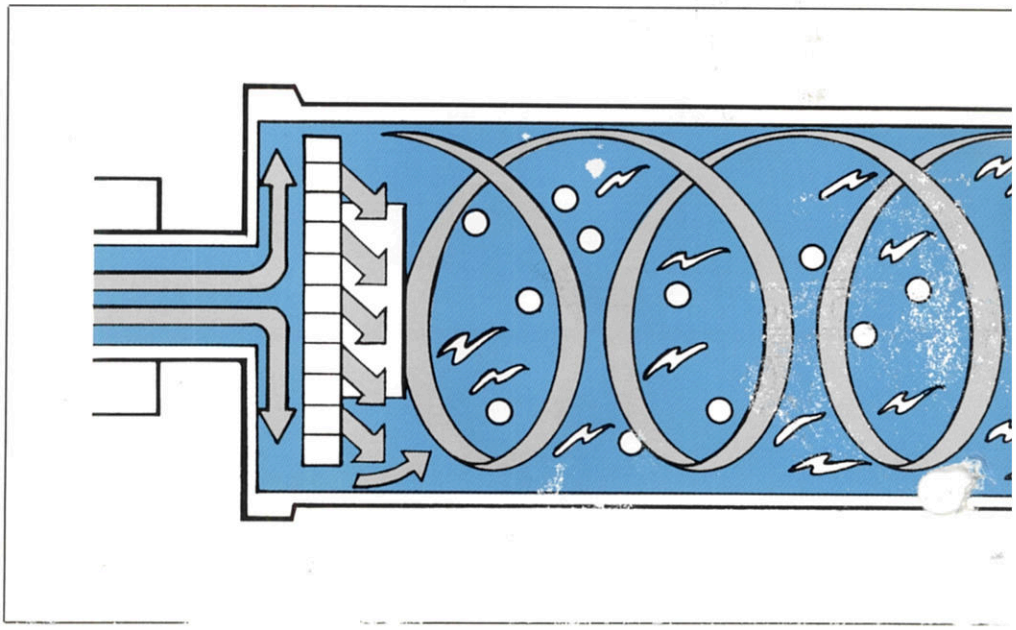
Using a patented design developed by Lamort and the Center for P Technology in Grenoble, France, the Gyroclean rotary cleaner employs centrifugal force to separate acceptable fibers from lighter contaminants such as polystyrene, polypropylene, stickies and hotmelts.

With the Gyroclean, stock is guided into a cylindrical stainless steel body which is rotating at a high speed creating 700 Gs of centrifugal force. The inlet head drives the stock to the periphery of the vortex created by the rotation of the shell.

Acceptable fibers are forced to the edges of the shell, while the lighter contaminants are separated from the fibers and move to the low pressure zone in the center of the shell. This same action also removes air from the slurry. The rejects and the air are removed through a centrally located axial outlet tube. Free of usable fiber, the rejects are ready for disposal.

The accepts flow from the shell wall through divergent channels. With troublesome contaminants having been completely remove the accepts are then suitable for further processing.

® The Gyroclean is a patented development of Lamort and the Centre Technique du Papeterie (CTP) in Grenoble, France.



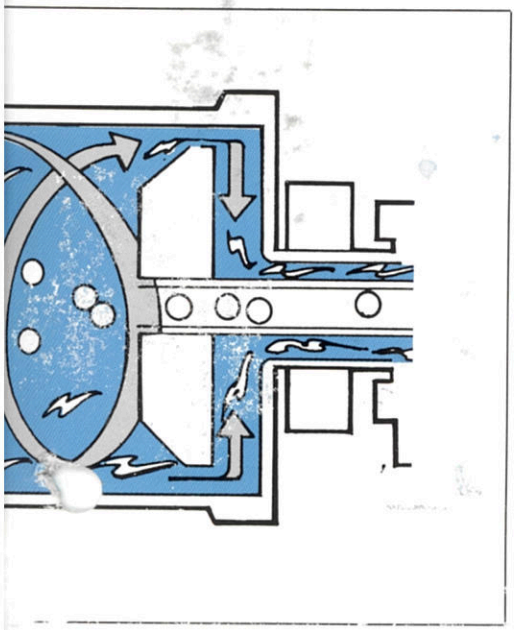
APPLICATIONS

Deinking. The Gyroclean is used extensively in both the primary and reject positions in deink systems to remove hot-melts, plastic particles and stickies. Figure 1 shows the Gyroclean as the final operation in a fine screen and lightweight removal system.

OCC and Mixed Waste. As the final stage in OCC and mixed waste applications, the Gyroclean removes fine stickies. In one configuration (Figure 2) the Gyroclean is used in conjunction with Fiberprep CH pressure screens to recapture fiber from the screen reject system. Fiber content in the reject from the Gyroclean can be as low as 0.3 percent.

Virgin Pulp. Because it works so effectively at high consistencies, the Gyroclean has proven to be an excellent solution for removing plastic contaminants from virgin pulp. Installed after reject refiners in a virgin pulp mill (Figure 3), the Gyroclean eliminates fine plastics that would otherwise cause problems in the final product.

Approach Flow. The Gyroclean provides positive removal of lightweight contaminants from the first phase of the approach flow screening loop. The Gyroclean assures that these contaminants will not be recycled through the reject equipment and eventually accepted into the paper machine.



Deink Fine Screening and Lightweight Removal System

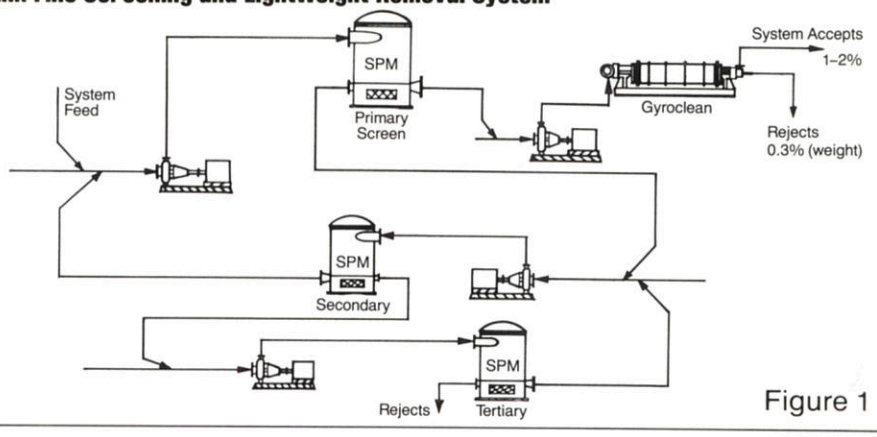


Figure 1

OCC on Mixed Waste Fine Screen and Lightweight Removal System

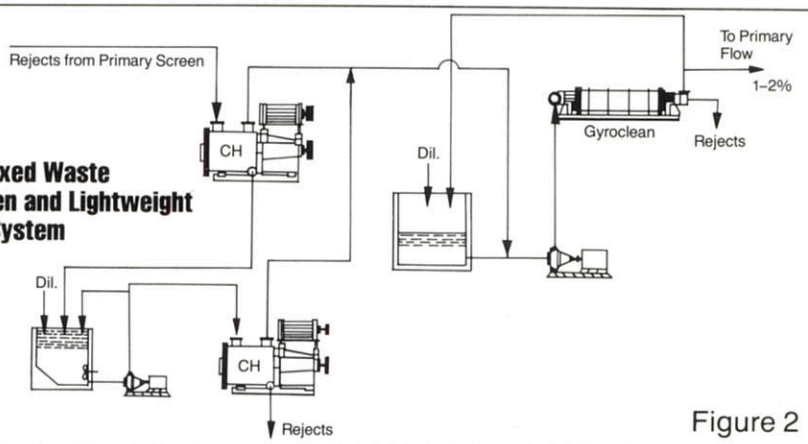


Figure 2

Refined Reject Plastic Removal System for Virgin Pulp

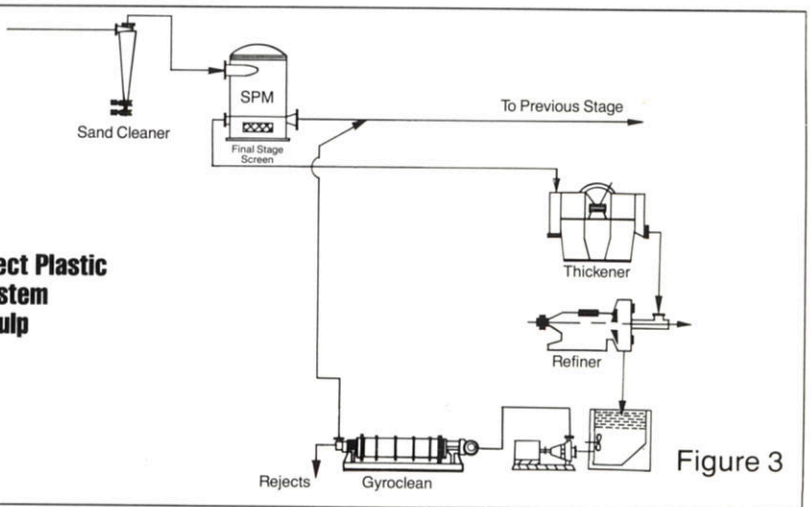


Figure 3

Gyroclean Sticky Removal System at Paper Machine

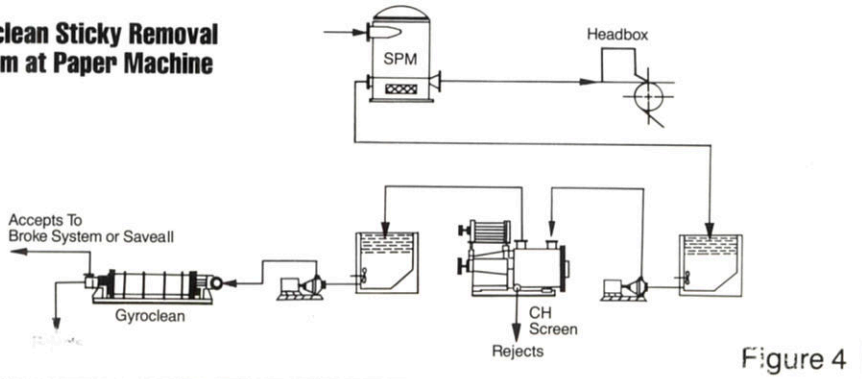


Figure 4

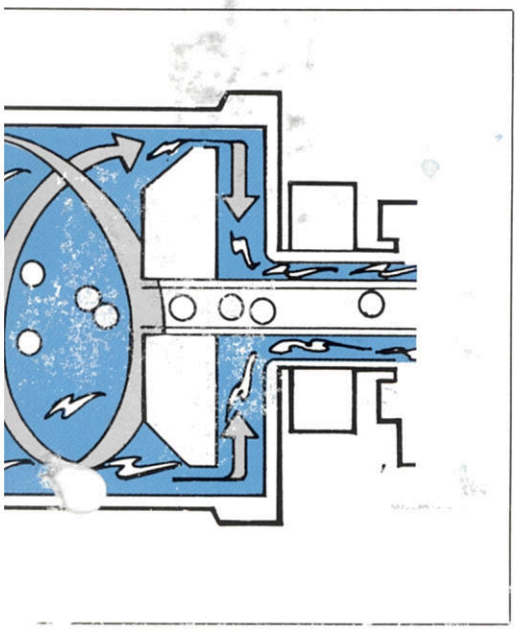
APPLICATIONS

Deinking. The Gyroclean is used extensively in both the primary and reject positions in deink systems to remove hot-melts, plastic particles and stickies. Figure 1 shows the Gyroclean as the final operation in a fine screen and lightweight removal system.

OCC and Mixed Waste. As the final stage in OCC and mixed waste applications, the Gyroclean removes fine stickies. In one configuration (Figure 2) the Gyroclean is used in conjunction with Fiberprep CH pressure screens to recapture fiber from the screen reject system. Fiber content in the reject from the Gyroclean can be as low as 0.3 percent.

Virgin Pulp. Because it works so effectively at high consistencies, the Gyroclean has proven to be an excellent solution for removing plastic contaminants from virgin pulp. Installed after reject refiners in a virgin pulp mill (Figure 3), the Gyroclean eliminates fine plastics that would otherwise cause problems in the final product.

Approach Flow. The Gyroclean provides positive removal of lightweight contaminants from the first phase of the approach flow screening loop. The Gyroclean assures that these contaminants will not be recycled through the reject equipment and eventually accepted into the paper machine.



Deink Fine Screening and Lightweight Removal System

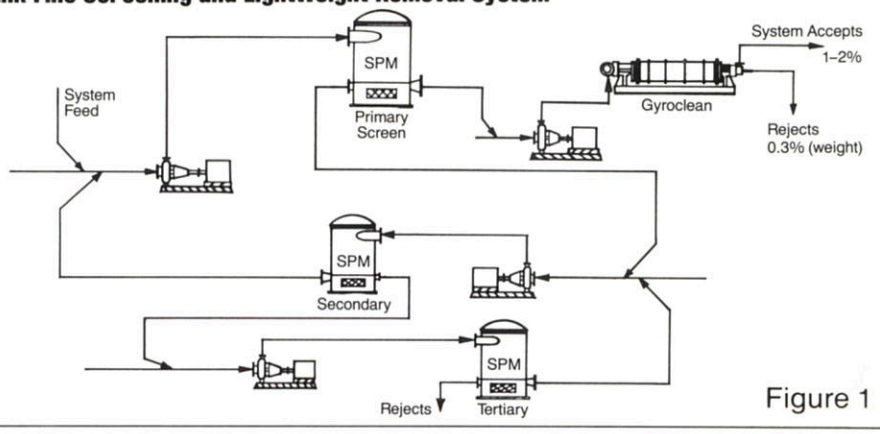


Figure 1

OCC on Mixed Waste Fine Screen and Lightweight Removal System

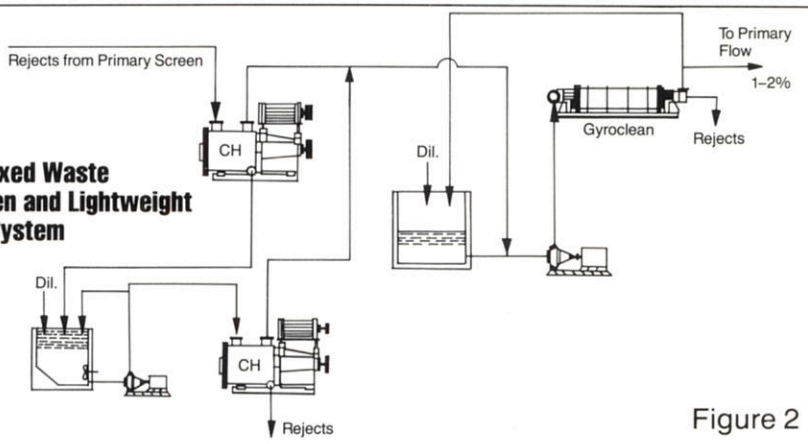


Figure 2

Refined Reject Plastic Removal System for Virgin Pulp

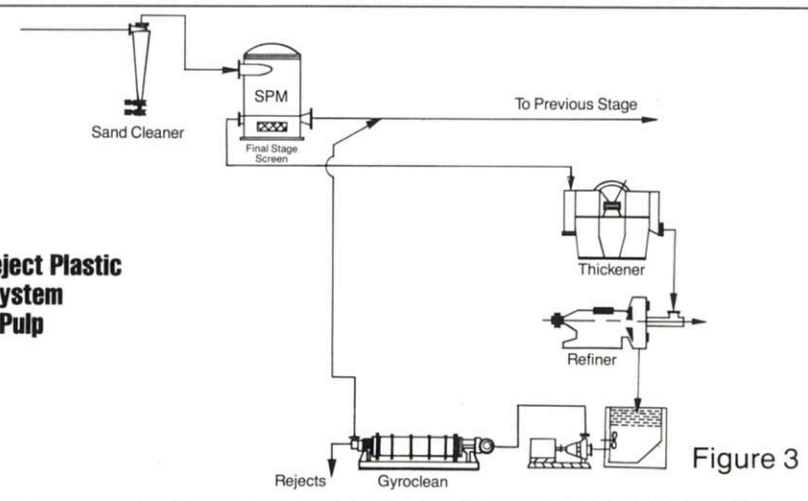


Figure 3

Gyroclean Sticky Removal System at Paper Machine

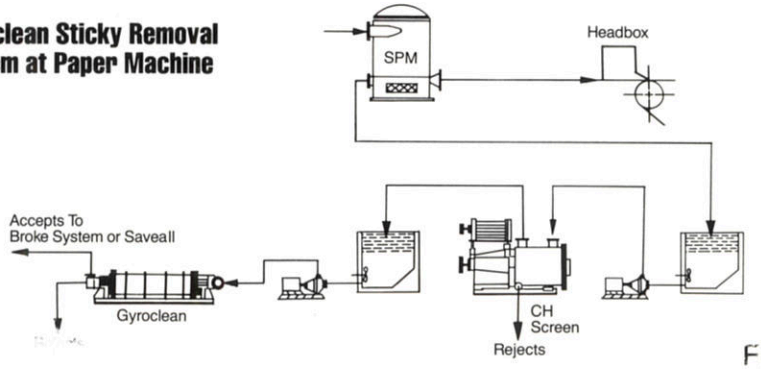
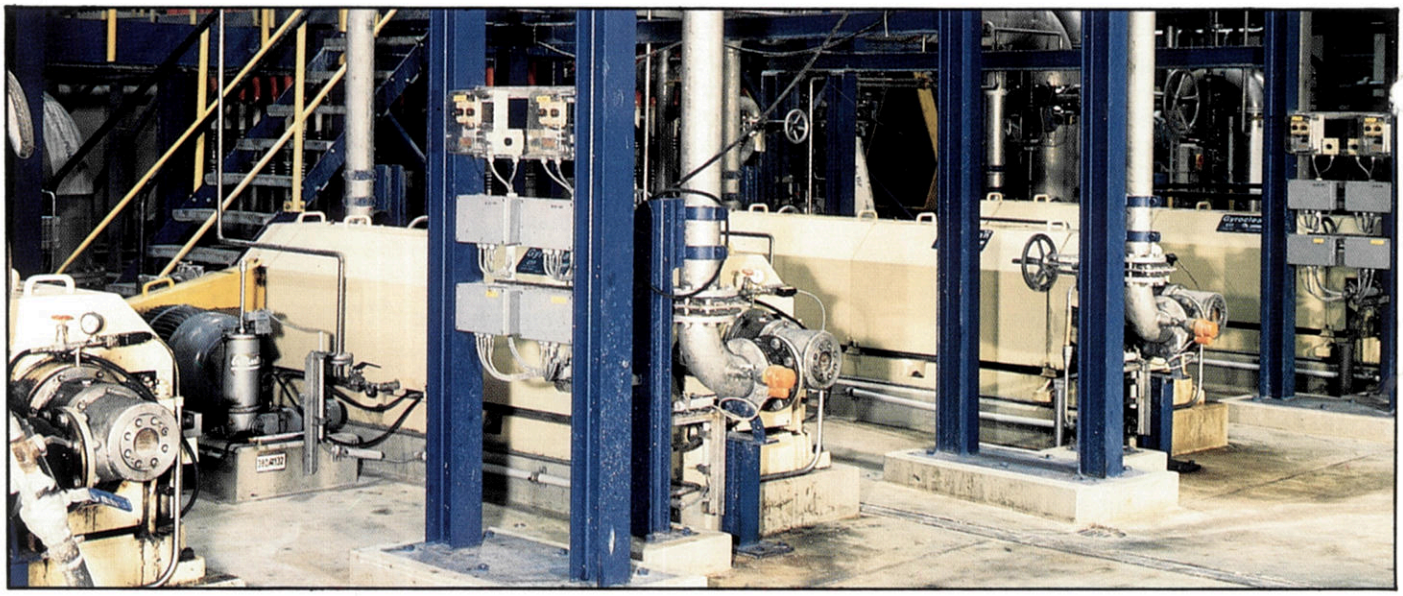
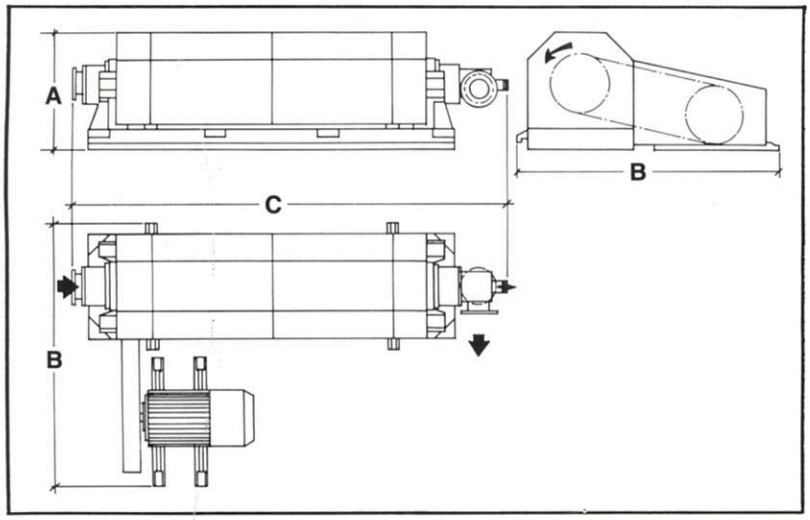


Figure 4



The Gyroclean system is being used in applications around the world to provide the first real answer to efficient removal of lightweight contaminants.

Model Dimensions, Weights and Motor Power



Model	Dimensions			Weight (empty; (without motor)	Motor HP/KW
	A	B	C		
GYS	35.4 in	74.1 in	156.3 in	5,170 lb	50/35 connected
	900mm	1,883mm	3,970mm	2,350 kg	23/17 operating
GYT	46.3 in	84.9 in	158.3 in	6,615 lb	75/55 connected
	1,175mm	2,155mm	3,970mm	3,000 kg	28/21 operating

FIBERPREP

Fiberprep, headquartered in Taunton, Massachusetts, engineers high-performance stock preparation, papermaking and recycling systems. It applies technical innovations such as gyrocleaning, inward-flow screening and double separation, and develops reliable cost-effective solutions for some of the toughest problems in papermaking.

Fiberprep is an independent engineering and manufacturing company formed by three international leaders in the pulp and paper industry, Aikawa of Japan, Lamort of France and Thermo Electron Corporation of the U.S.

FIBERPREP
AIKAWA • LAMORT • THERMO ELECTRON

125 John Hancock Road
Taunton, Massachusetts 02780
508/823-3358
FAX 508/823-4155

FRP 90-11 BA NLP