

hymac

SCREW EXTRACTORS



The Hymac Maule Screw Extractor

A High Performance Thickener

The Hymac Maule vertical-inclined screw extractor is a thoroughly proven dewatering machine for medium discharge consistencies — inlets as low as 1%, discharges as high as 20%.

Hymac-designed and built in North America, the world's major forest-products market, these screw extractors have proved to be especially cost-effective in many different applications, ranging from deinking, as washers; through pre-thickening, in bleaching systems; to rejects thickening.

Designed from unmatched process experience

Hymac's six decades of experience in process dewatering has led to the broadest product line in the industry. It includes (in order of consistency): Drainers, Slushers, Deckers, Screw Extractors, and Screw Presses. From this broad selection, Hymac's engineers are able to examine a customer's thickening requirements and choose the best machine for the job. Machine variables of size, speed, screw compression, hole size, and open area are selected for the specific service. Stock drainage characteristics, inlet and outlet consistencies, and tonnages are compared to

previous system results to confirm the selection and ensure a high degree of customer confidence.

There are over two hundred operating installations of this extractor, when Hymac's North American units are added to other Maule installations throughout Europe and Japan where deinking and chemical pulp system successes of this technology are especially relevant.

Dewatering within the Hymac Maule Screw Extractor proceeds through three basic actions, complementing one another.

(1) In the lower section, where the stock enters the machine, dewatering is due to static head arising from the difference in liquid level between the pre-extractor head-box and the extractor barrel. Water is extracted from the pulp through the conically drilled screen plate, which is in turn cleared by the screw rotating at extremely close tolerance within the screen. Clearing is aided by paddles welded to the after-side of the screw flights.

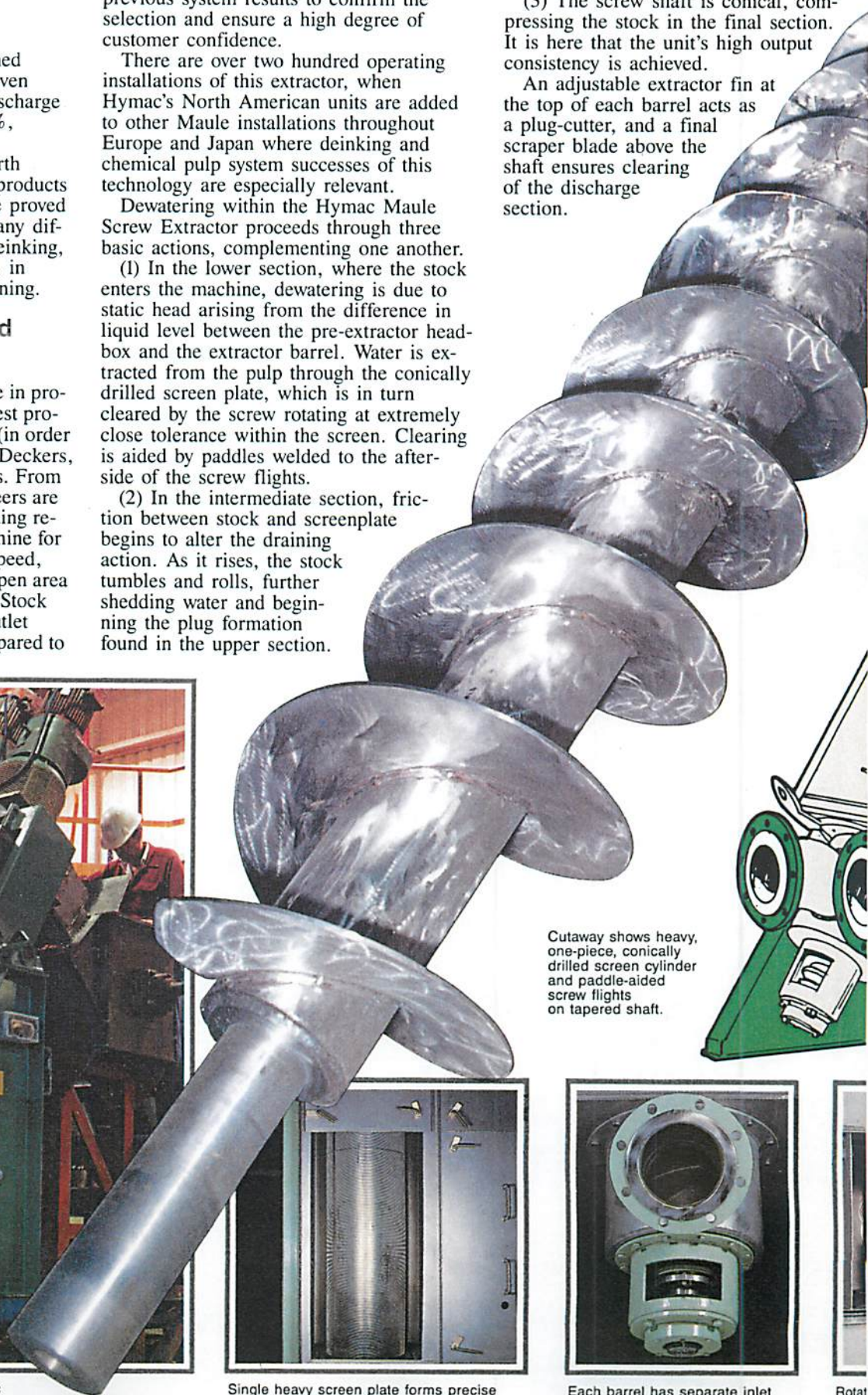
(2) In the intermediate section, friction between stock and screenplate begins to alter the draining action. As it rises, the stock tumbles and rolls, further shedding water and beginning the plug formation found in the upper section.

(3) The screw shaft is conical, compressing the stock in the final section. It is here that the unit's high output consistency is achieved.

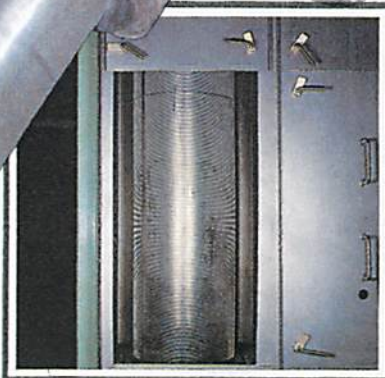
An adjustable extractor fin at the top of each barrel acts as a plug-cutter, and a final scraper blade above the shaft ensures clearing of the discharge section.



Typical deinking tissue mill employing Hymac extractors for washing.



Cutaway shows heavy, one-piece, conically drilled screen cylinder and paddle-aided screw flights on tapered shaft.



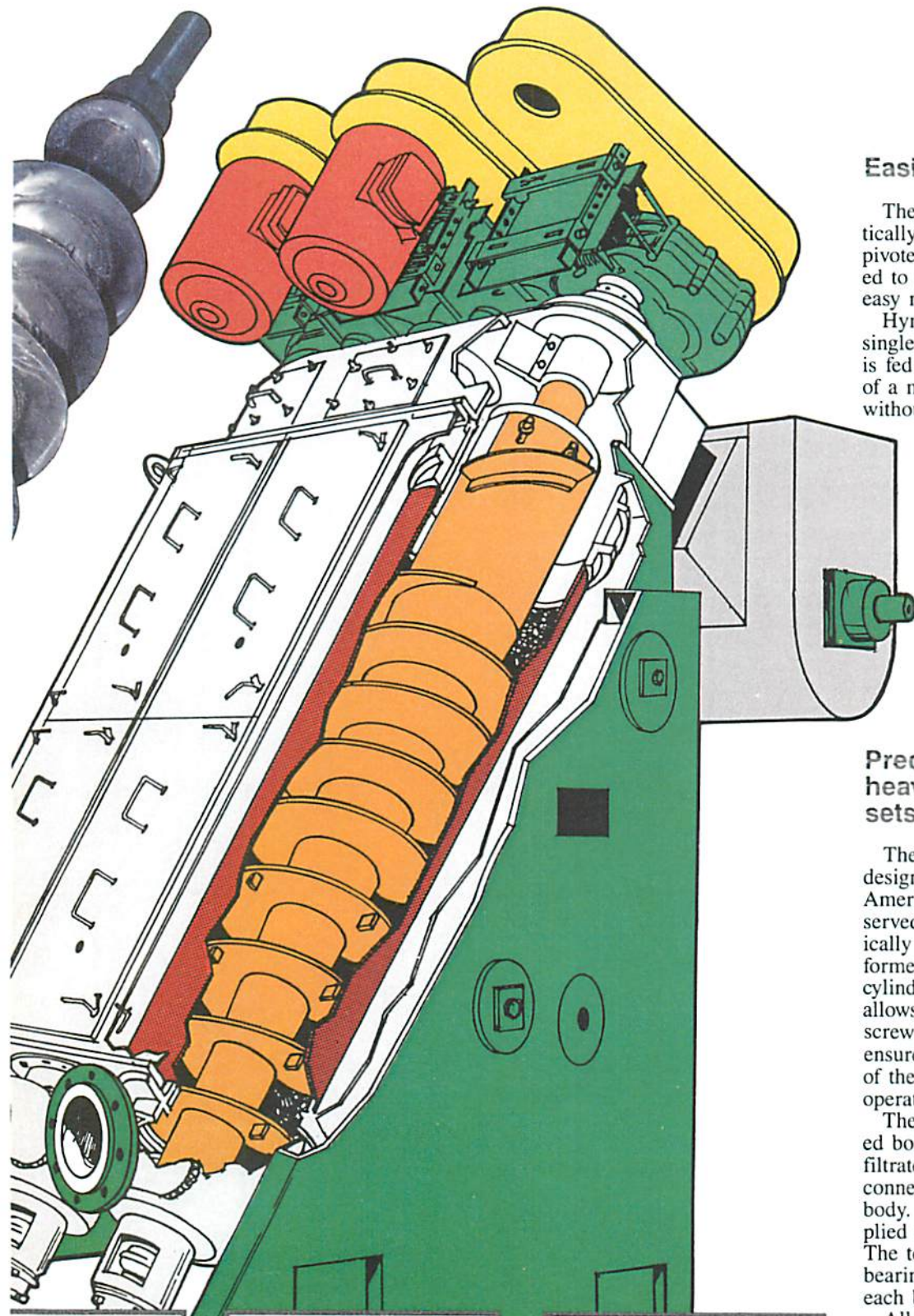
Single heavy screen plate forms precise cylinder



Each barrel has separate inlet



Rotat disch



Easily maintained and serviced

The screw extractor is mounted in a vertically inclined position. The mounting is pivoted so the extractor body can be rotated to a horizontal or vertical position for easy maintenance.

Hymac supplies the Screw Extractor in single or multiple barrel units. Each barrel is fed through its own inlet, so one barrel of a multi-barrel unit may be serviced without shutting down any other barrel.

Normally fed from an adjustable-level headbox, the Hymac Maule Extractor may optionally be pump-fed. Thickened stock from the extractor is either discharged into the next process stage directly or removed by screw conveyor.

Screw Extractors are supplied with shaft-mounted gear reducers. These are V-belt driven from individual motors for easy speed-change and torque protection.

Precise manufacturing and heavy duty construction sets new standards

The Screw Extractors are built with many design features specialized to the North American industry which the company has served over the long term. The thick, conically drilled one-piece screen plate is formed into a precise true and straight cylinder on a mandrel, and this forming allows clearance between screen and screw flights to be minimized. This ensures effective continuous clearing of the screen by the screw flights during operation.

The extractor is supplied with a fabricated body which acts as a collector for the filtrate or effluent. A filtrate exit flange connection is supplied at the rear of the body. One inlet flange connection is supplied for each extractor barrel in the body. The top of the body houses the upper bearing and the discharge opening for each barrel.

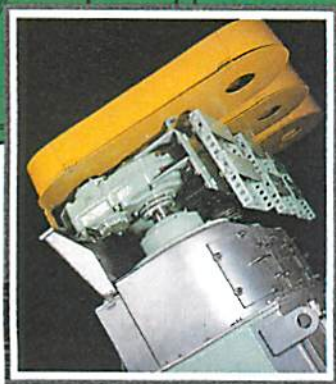
All wetted parts are of stainless steel.

Carefully engineered

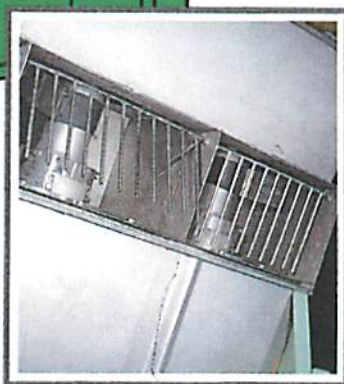
To maintain the small clearance between screw and basket the usual water bearing has been replaced by a full spherical roller bearing and stuffing box. The result is a standard of output unmatched in the industry. The screw extractor achieves its high consistency by a combination of tapered screw which is machined on the outside and unique one-piece basket.



Taper blade clears outlet



Top section houses motor mount and upper bearing



Thickened stock discharges under guards

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*Opco Pulping Process is a trademark of the Ontario Paper Company.

HyMac's business activities are conducted through three principal divisions: High Yield Pulping, Recycled Fiber and Stock Preparation Equipment.

The Single Disc Cantilevered Refiner, Pulp Sulfonation Reactor Vessel, TMP and/or CTMP/CMP System auxiliaries (chip washing lines, preheaters, plug screw feeders, heat recovery cyclones, etc.) form the heart of the activities of the High Yield Pulping Group directed mainly at major system deliveries.

In the field of recycled fiber processing, the company is active in both deinking, board and supplementary kraft pulping lines. Some of the more noteworthy machine elements are: HyMac/Hunter Centrifetal Pressure Screens, HyMac's Lancaster Type Deink Washers, Turbo-flex Pulpers, HyMac/Mauler Screw Extractors and Dispersion Kneaders.

The Stock Preparation Equipment Division has a broad product range for both mechanical and chemical pulp and paper mills including agitators, under the machine broke pulpers, low pulse head box screens, shishers, centrifugal cleaner systems, high consistency HyMac/Thune dewatering presses (for rejects, for washing, and for bleaching systems) and delakers.

Founded in 1906, the company has specialized since 1930 in the development and manufacture of process machinery for the Pulp and Paper Industry. Some pioneering achievements are: Cowan Screen, Hunter Screen, first major two stage pressurized TMP system with heat recovery for paper drying without recompression in Canada and the co-development of equipment for the *Opco Pulping Process®.

The long experience culminates in HyMac's greatest resource: its people. All sales, engineering, manufacturing and technical service people are committed to ensuring that every HyMac supplied machine starts up and keeps operating at optimum performance level.

HyMac: Commitment and Technology for the World's Pulp and Paper Industry.

106,500.00

Basket dia.

Model	Motor Hp	L	W	H	Φ ⁽¹⁾
HM 75/3	3 @ 15	92"	81"	148"	14.75"
HM 75/2	2 @ 15	92"	57"	148"	14.75"
HM 75/1	1 @ 15	92"	34"	148"	14.75"
HM 70/3	3 @ 10	81"	71"	122"	9.06"
HM 70/2	2 @ 10	81"	55"	122"	9.06"
HM 70/1	1 @ 10	81"	39"	122"	9.06"

