THERMEX
MOLD DISK

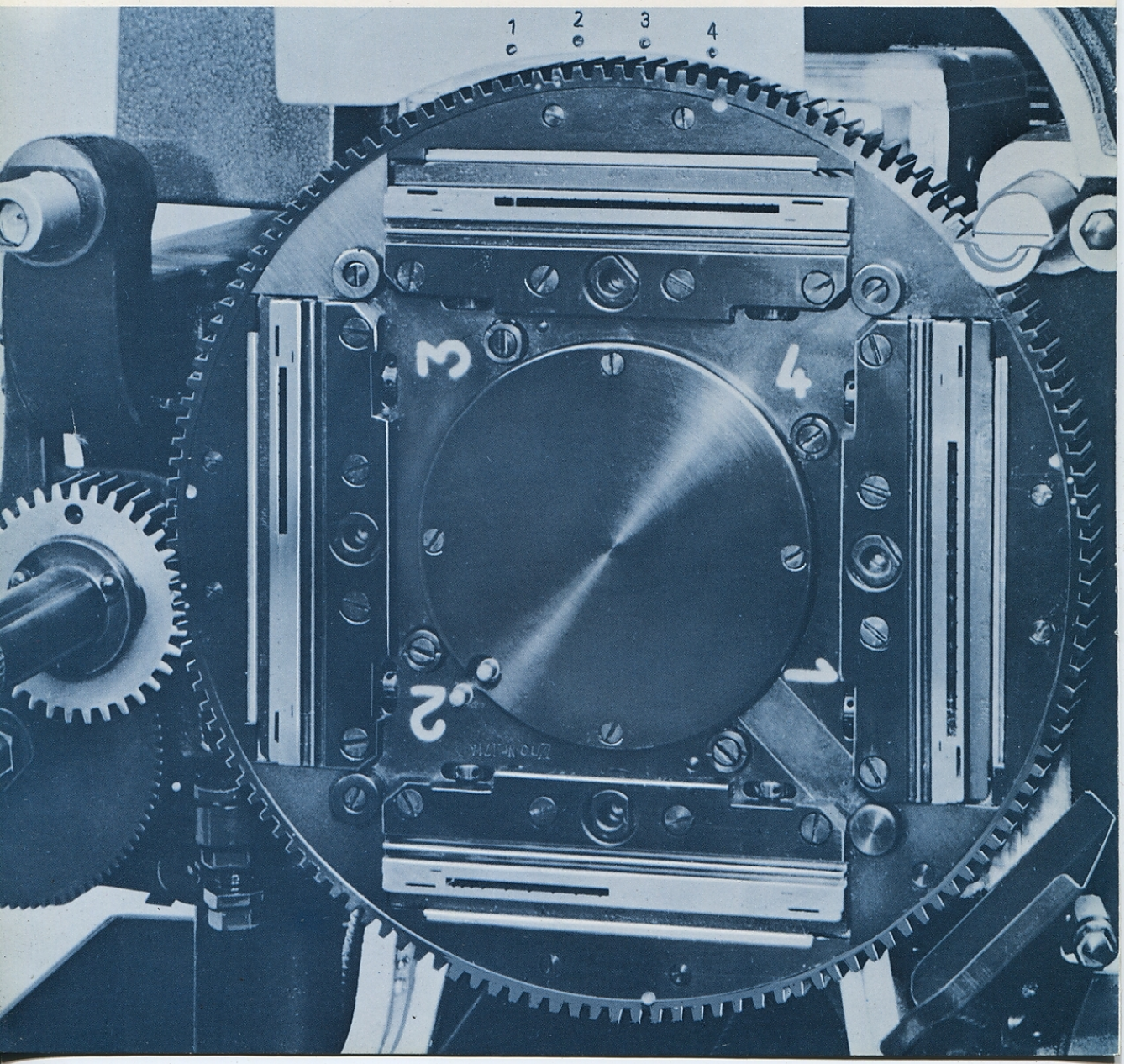
casts
display slugs
at unprecedented
speed--
without mold
alternation

speeds type
makeready

Mergenthaler

Now THERMEX gives you all of these advantages:

- *Continuous high-speed slug casting on one mold*
- *Faster wide-measure casting of display sizes*
- *Cooler operation for solid slugs . . . less matrix damage*
- *New back knife for perfect type-high*
- *Higher mouthpiece temperature aids type face quality*



THERMEX MOLD DISK

A Major Improvement in High-Speed Linecasting Efficiency

The Thermex is a newly designed water-cooled Linotype mold disk which greatly enhances efficiency and quality in high-speed linecasting. With the Thermex, slugs can be cast continuously on one mold at the fastest matrix assembly rates—even on a tape-operated Elektron. The Thermex offers full 4-magazine versatility with a 4-mold disk—no more mold alternation for cooling. Even with display sizes the potential speed of tape-operated composition can now be realized.

The cooler operation of the Thermex helps protect matrices from possible type metal accumulations which could produce damage under vice jaw pressures. The precise adjustment of mold temperature to the requirements of each type of work ensures high typeface quality.

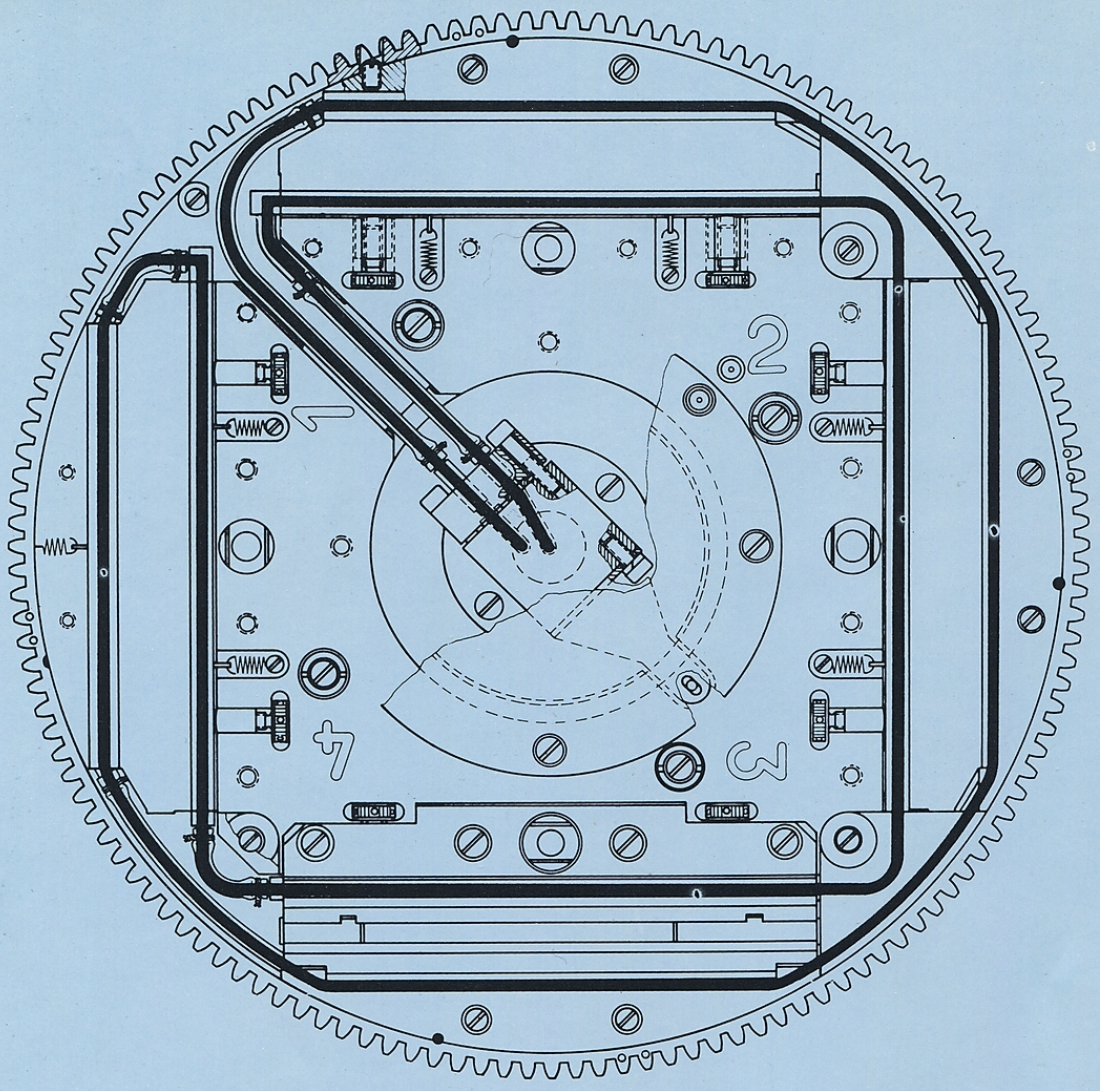
A SIGNIFICANT ADVANCE IN SLUG CASTING TECHNOLOGY

The widespread use of tape-operated Linotypes and the popularity of the new Auto-Controlled Elektron have created a need for increased mold disk heat dissipation, to permit full utilization of the higher matrix assembly rates. In response to the new requirements, Mergenthaler Linotype Company has developed the Thermex mold disk.

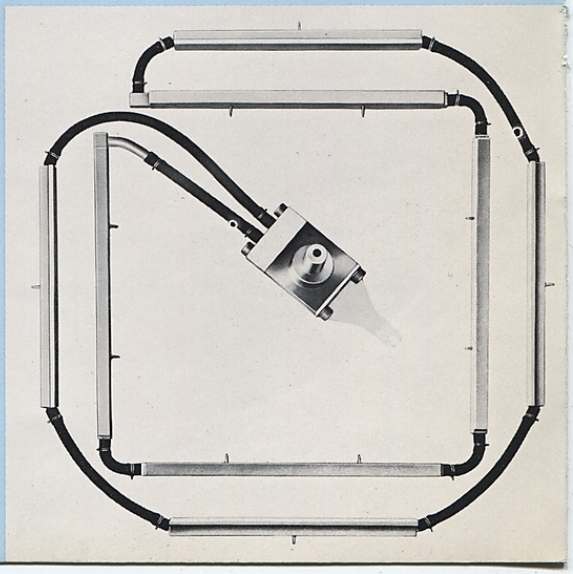
But the importance of the Thermex goes beyond its application to tape-operated equipment. Both the efficiency and operational convenience of practically *all* Linotypes now in use can be greatly improved with the Thermex.

Large display type can be cast continuously on one mold, even at the speed of the new Auto-Controlled Elektron. The slug is always solidified completely before the mold is moved away from the pot mouthpiece; this insures slug homogeneity and maintains the correct shrinkage patterns for which the matrices have been designed. Cooler operation also prevents adhesion of type metal to matrices and spacebands, thereby reducing damage to matrix edges from type metal accumulations. Improved mold temperature uniformity maintains typeface quality.

The new Thermex disk is mechanically interchangeable with conventional Linotype mold disks.



Water circulation circuit in Thermex reaches the mold pockets directly. It effectively dissipates the heat produced in casting display slugs at high speed.



The heart of the Thermex—rugged cooling tubing with specially adapted mold clamps.

PERFECT TYPE-HIGH UNIFORMITY

In addition to its unmatched slug casting efficiency, the Thermex offers another great composing room bonus —significant reduction of type makeready time. The all-new "floating" back knife trims the slug flush with the back of the mold, maintaining uniform type-high.

Although maintenance of type-high is not related to heat dissipation, other engineering problems encountered in the development of the Thermex disk led to a study of the mechanical factors responsible for type-high variation. These factors have now been overcome in the Thermex through a complete redesign of the back knife mounting arrangement.

NEW SPRING-LOADED BACK KNIFE

With the Thermex disk, type-high variation is reduced to the vanishing point by trimming the slug flush with the face of the mold. This has been accomplished by spring-loading the back knife fixture. Solid contact is maintained between the blade and the mold face, with ample pressure to insure precise flush trimming, without danger of abrasion and wear on the mold face.

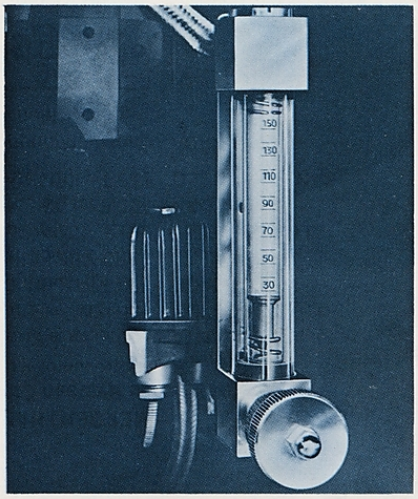
As the disk revolves from casting to ejection positions, a system of mechanical linkages to a cam on the main drive shaft raises and lowers the knife assembly. The blade is therefore protected from damage, since it is brought into contact with the mold face only when the mold is in the trimming position.

The new spring-loaded back knife eliminates meticulous manual adjustment of knife-blade clearance. In addition, type-high variations requiring correction through time-consuming insertion and manipulation of equalizing shims, are significantly reduced.

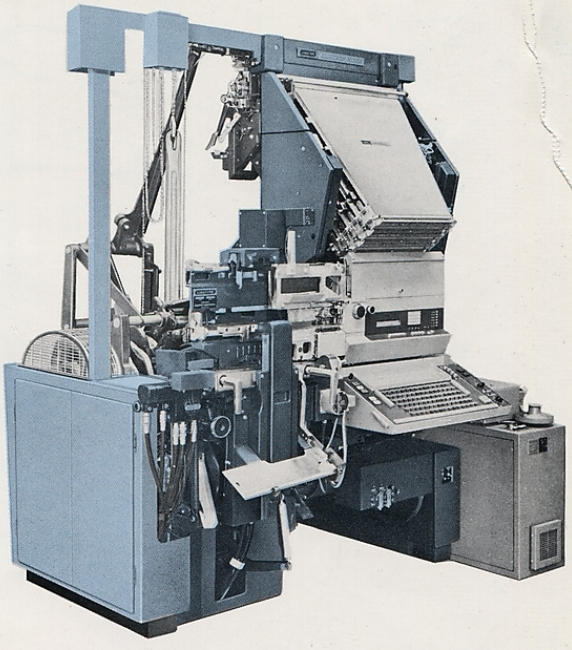
CONTROLLED COOLING

Sensitive water-flow control is provided through a precise regulatory system. This system consists of a water flow adjustment screw and gauge, and an automatic valve which prevents excessive cooling by stopping water flow during the ejection cycle. A switch is provided to permit continuous water flow when needed for display point sizes.

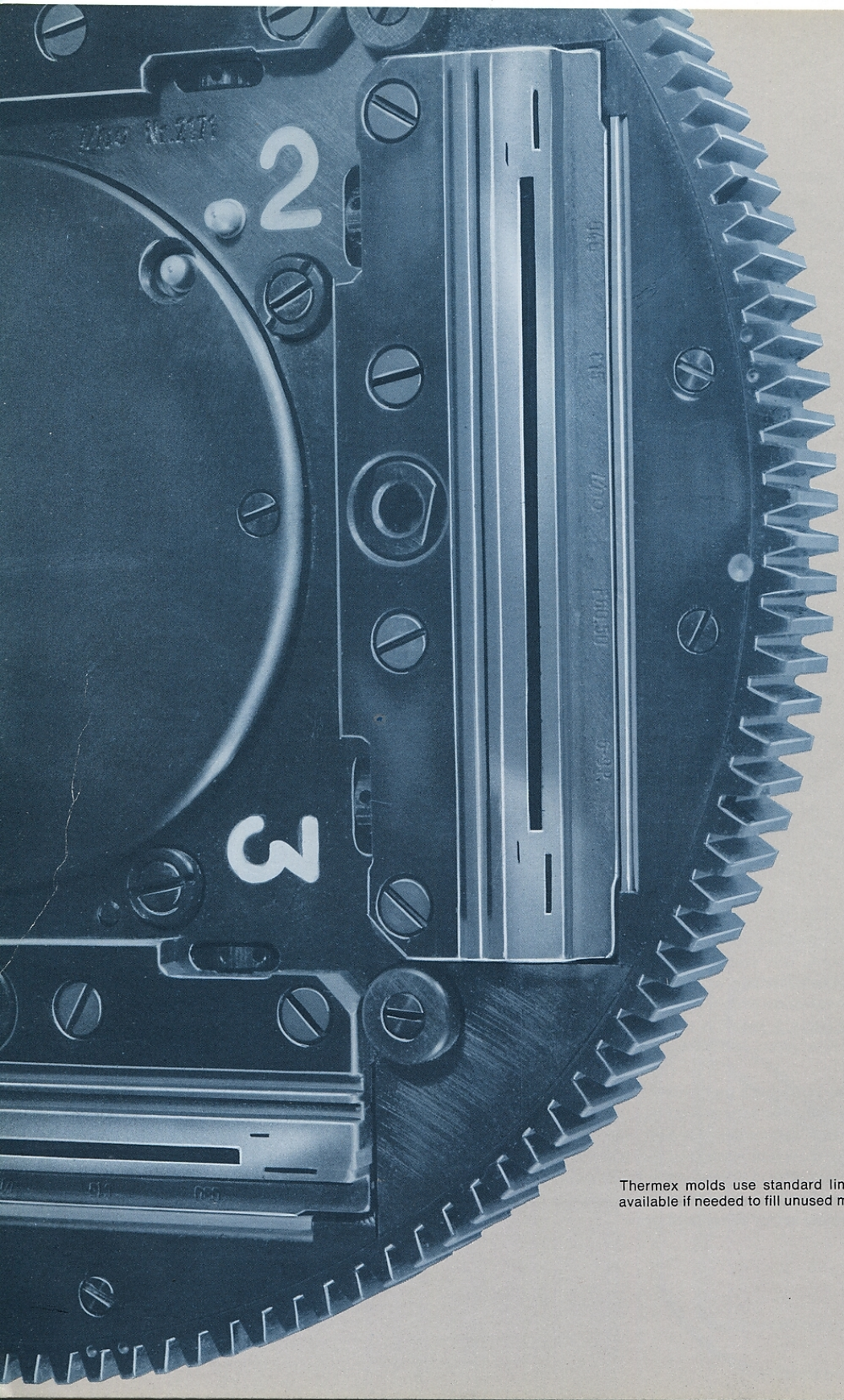
Guided by actual equipment performance under the particular evironmental conditions prevailing in his plant, the Linotype operator determines the best water flow rate for each kind of work and marks the corresponding float level on the glass tube indicator of the flow gauge. Thus after a brief period of use experience, mold temperature can be accurately set for all types of work.



Water flow gauge with precise flow control allows exact adjustment of mold temperature to suit each type of work and the conditions of the composing room environment.



Full four-mold utilization at uninterrupted speeds results with a Thermex-equipped Elektron Mixer or Auto-Controlled Elektron.



Thermex molds use standard liners. Dummy molds are available if needed to fill unused mold pockets of the disk.

RECIRCULATING WATER COOLING UNIT

Where water supply is limited, the Thermex disk may be operated with a recirculating water cooling unit. Moreover, this arrangement is advantageous in all installations, since it offers thermostatically controlled water temperature. It also allows the use of distilled or demineralized water to insure trouble-free water circulation.

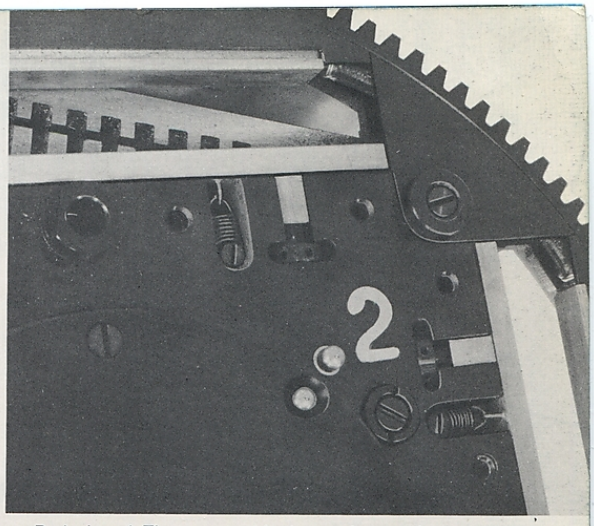
The unit incorporates a ⅓ horsepower hermetic compressor, a blower-cooled condenser, a cast aluminum cooling tank, a seven gallon water storage tank, and a valve-regulated pump which permits adjustment of water discharge pressure to the exact requirements of the installation. A thermostatic temperature control maintains optimum water temperature in the storage tank. A single recirculating water cooling unit can maintain sufficiently low water temperature for good casting quality with a thermal load for four molds in continuous operation.

A full complement of safety devices is provided, including a "Klixon" thermal overload protector for the compressor and fan motors, a relief valve to prevent excessive back pressure at the pump when the Linotype flow control valve is shut off, and a circuit breaker which cuts off all power if the pump motor is overloaded.

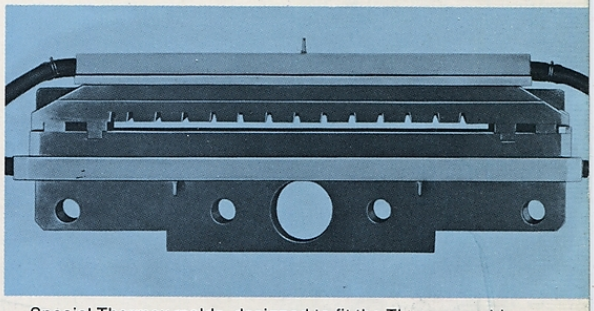
An armored hose is supplied with the Thermex disk for tap water installations; inlet and outlet hose-connecting "T" adapters (supplied) will permit the use of standard Mergenthaler hydraulic hose (#41-0226-01), and provide for branch connections to several disks. Dimensions (approx.): 2½′ long x 2′ high x 1′ wide.

THERMEX MOLDS

Special molds are required for use with the Thermex. On a Thermex disk, the upper mold clamp is in the form of a straight, square metal bar instead of the curved shape found in conventional disks. This makes it possible to pass the tubing directly through the clamp, while allowing a tubing configuration inside the disk that will tolerate the necessary radial movement of the clamp. Redesigned molds, with accessory filler bars to reduce tube flexure in clamping molds of varying point sizes are therefore required. The Thermex molds are also specially designed to produce standard .918″ type-high slugs in conjunction with the flush trimming back knife. The mold complement for the Thermex disk has been worked out to meet all significant current slug configuration and point size demand as efficiently as possible. Unusual mold requirements can be provided at moderate cost.

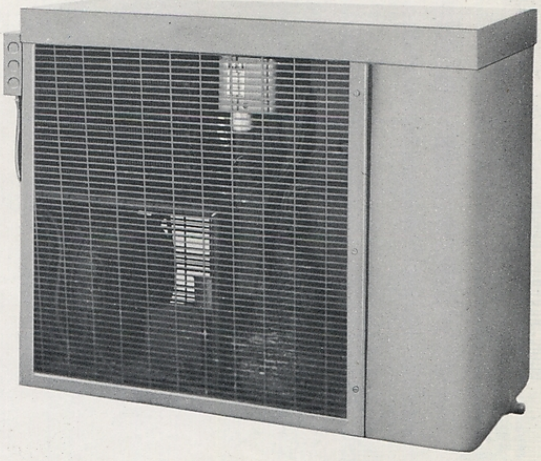


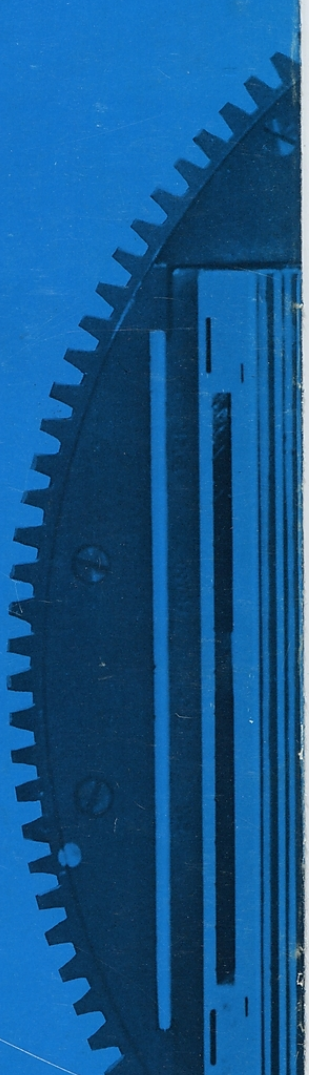
Redesigned Thermex mold clamps insure dependable conduction of heat from the mold.



Special Thermex molds, designed to fit the Thermex mold clamps, are available to meet all significant slug configuration and point size needs as efficiently as possible.

Optional water cooling unit economizes water use, provides thermostatic temperature control, and protects the circulatory system against water impurities.





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