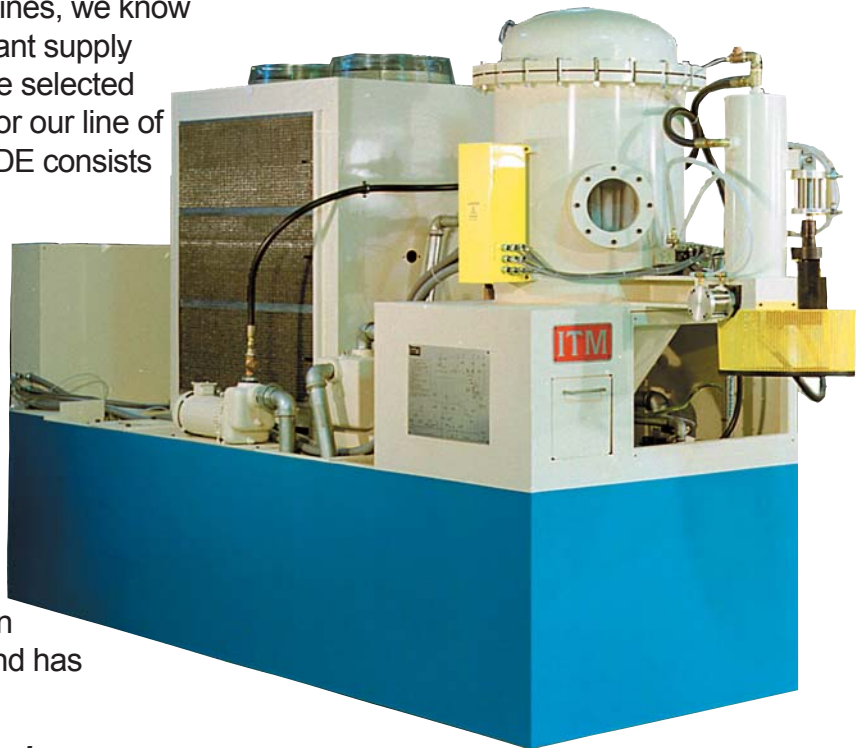


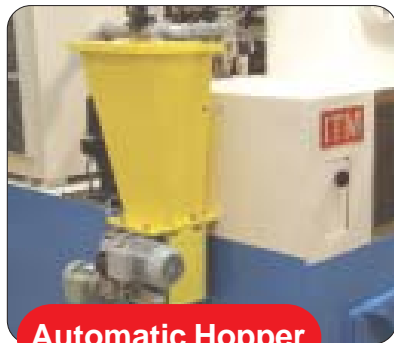
AFS 8-200 Coolant Filtration System

As a manufacturer of precision grinding machines, we know the importance of a precise, dependable coolant supply. After a long period of research and testing, we selected diatomaceous earth (DE) as the filter media for our line of automatic coolant delivery/filtration systems. DE consists of skeletal remains of microscopic aquatic organisms with sizes varying from 10 to 200 microns in diameter. Its natural structure is very intricate with sub-micron pores on the surface. Compared to conventional filter media, with plain and even surfaces, DE particles have a very large surface area in relation to their overall size. DE coated candles in ITM Filter Systems enable filtration of particles as small as 3 microns versus 20 microns with conventional systems. DE is being used as a filter media in the beverage and water cleaning industries and has proved its superiority and safety.



Cleaning Cycle:

Grinding swarf will collect on the outer surface of the coated candles as the coolant is drawn through the candles to the clean coolant reservoir. The flow rate of the filter will be reduced as the swarf collects on the outside of the candles. Using the built-in flow meter, the filter can be dumped once a pre-determined flow rate is reached. The candles in the dome will be back-flushed with clean coolant during this dumping cycle to assure that all the grinding swarf is removed from the candles. The



Automatic Hopper

swarf is prevented from settling in the holding tank with the use of an electric motor driven **agitator**. A **removable panel** allows for easy access to the sludge tank. An **automatic hopper** is used to deliver the correct amount of DE during the filter candle coating cycle.



Removable Panel

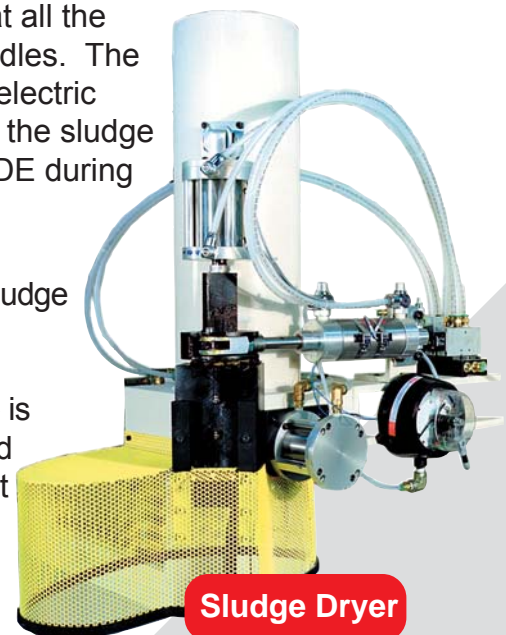
Automatic Sludge Drying Cycle:

ITM filters are equipped with a fully automatic sludge dryer in place of a standard vacuum system, to separate oil from the grinding sludge. After the filter has been dumped, the dirty oil with sludge is pumped into the dryer unit. The oil is separated and returned to the cleaning cycle by pressing it



Agitator

out of the sludge with the use of up to 6 bar (90 psi) air pressure. The cake, which is left, is then dried and automatically dumped into a disposal bin or further compressed by an automatic compactor.



Sludge Dryer

Advantage through Knowledge

AFS-8-200 Coolant Filtration System

Automatic Sludge Compacting Cycle:

To further reduce the volume of the sludge, an optional sludge compactor is available. ITM's **Super Squeezer** presses the sludge into very dense "pucks", reducing the volume of the dried sludge and disposal costs.

High Pressure Pumps



High Pressure Coolant Pumps

A variety of quality proven high pressure coolant pumps up to 800psi are available from selected manufacturers worldwide. Multiple pumps can be attached to each AFS-8-200 filter including pumps for "wheel scrubbing".



**Also available:
Stand-alone Sludge Drying Unit**

Stand-Alone Sludge Drying Unit

The same ITM automatic sludge dryer found on our AFS-8-200 filtration systems is used on the stand-alone sludge dryer. This unit is designed to dry sludge from existing central systems. It is more effective than traditional vacuum, centrifugal, or gravity drying systems. The sludge storage tank size and sludge-processing capacity can be adjusted according to the customer's needs.



Operator Interface

Easy and safe operation by PLC or manual override with the use of simple controls and reference graphics and a LCD status panel that allows for manual adjustment of filter flush time and sludge dryer drying time.



**Available as single units
or multi-unit central system**

Benefits of ITM's Coolant Filtration Systems:

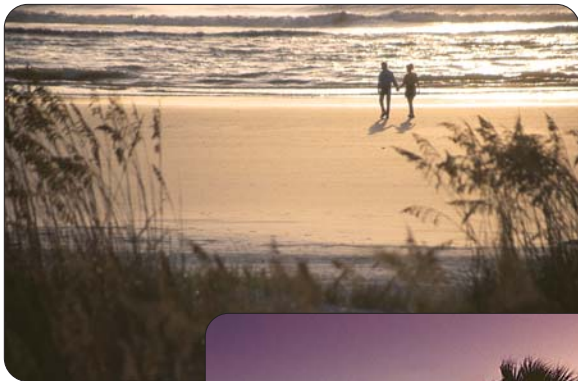
- Cleaning rate per filter dome 200 - 300 l/min (53-80 gpm)
- Filtration of particles as small as 3 Microns
- Up to 50 bar (800 psi) coolant pressure
- 8 m² (86 ft²) filter area per dome
- Chiller rating 92,000 btu/h (options available)
- Extends coolant lifecycle
- Large Oil Reservoir up to 2000 liters(530 gallons)
- Recovers more coolant than vacuum or centrifuge systems
- For filtration of steel, carbide, ceramic, glass & other materials
- Coolant temperature maintained within 0.5 °C (1°F) for ultra precision grinding



PALM COAST, FLORIDA USA



ITM's design and manufacturing facility is located in Palm Coast, Florida. The Florida location, with its year round mild climate, good schools, and low cost of living, provides the employees of ITM with a high standard of living. The attractive Florida location has also made it easier to recruit new talent from around the world. Palm Coast is located 5 minutes from the Atlantic Ocean and offers numerous recreational activities such as boating, fishing, golf, tennis, motorcycling, biking trails, hiking, equestrian sports, live shows, and many fine restaurants.



Advantage through Knowledge