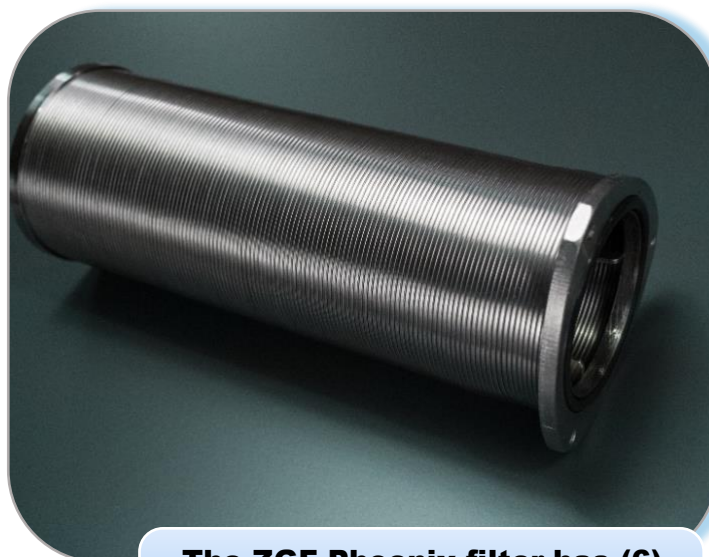


ZGF Phoenix Filter - Eliminates Bag Filters and Lowers Total Operating Costs in Machining Operation



Metalworking / Machining



The ZGF Phoenix filter has (6) proprietary ZGF Spring Filter elements with 50 μ Absolute Gap



ZGF Electro-Pneumatic Phoenix provides uninterrupted flow of clean machining coolant to the machine

Customer Challenge:

Water-based machining coolants are used to lubricate and cool both the cutting tool and component part, as well as continuously flush away the chips/ fines during the machining process. This coolant must be filtered.

A large machining operation was changing 50 μ bag filters six times per day per machine. The bag filter cost was \$36.00 per day or \$10,800 per year per machine. This cost did not include purchasing, shipping, inventory, bag changeout labor, lost production time or disposal costs.

Process Overview: The dirty coolant flows from the machine tool to a settling tank equipped with a drag conveyor to remove the larger chips. The coolant then flows over a weir to the dirty tank. The dirty tank coolant is pumped through a 50 μ bag filter and into a clean tank for re-use. Each machining center is equipped with a dedicated set of bag filters, one on-line and one on stand-by, the company was looking for a better option.

ZGF Solution:

Install a ZGF Phoenix filter on each machining center. The Phoenix filter is fully automatic and fitted with (6) 50 μ Absolute Gap, ZGF Spring Filters. The Phoenix provides uninterrupted flow of clean coolant. The backwash from the Phoenix filter is directed to a 55-gallon drum. The backwash solids settle to the bottom and the recovered coolant overflows back into the dirty tank. The ZGF Spring Filter elements are a non-disposable, stainless-steel coil with a 5-year warranty.

Results:

- The Phoenix filter provided payback of approximately 1-year, and the life-cycle savings are tremendous.
- Test results from an independent lab concluded that the 50 μ ZGF Spring Filter element provided more consistent and finer filtration than the 50 μ bag filter.
- Changing bag filters was a significant burden on maintenance. The Phoenix filter requires virtually no maintenance
- Bag filters and the associated purchase, shipping, inventory, changeout and disposal costs have been eliminated.

Lower Total Operating Costs, Reduced Labor, and More Consistent and Reliable Filtration