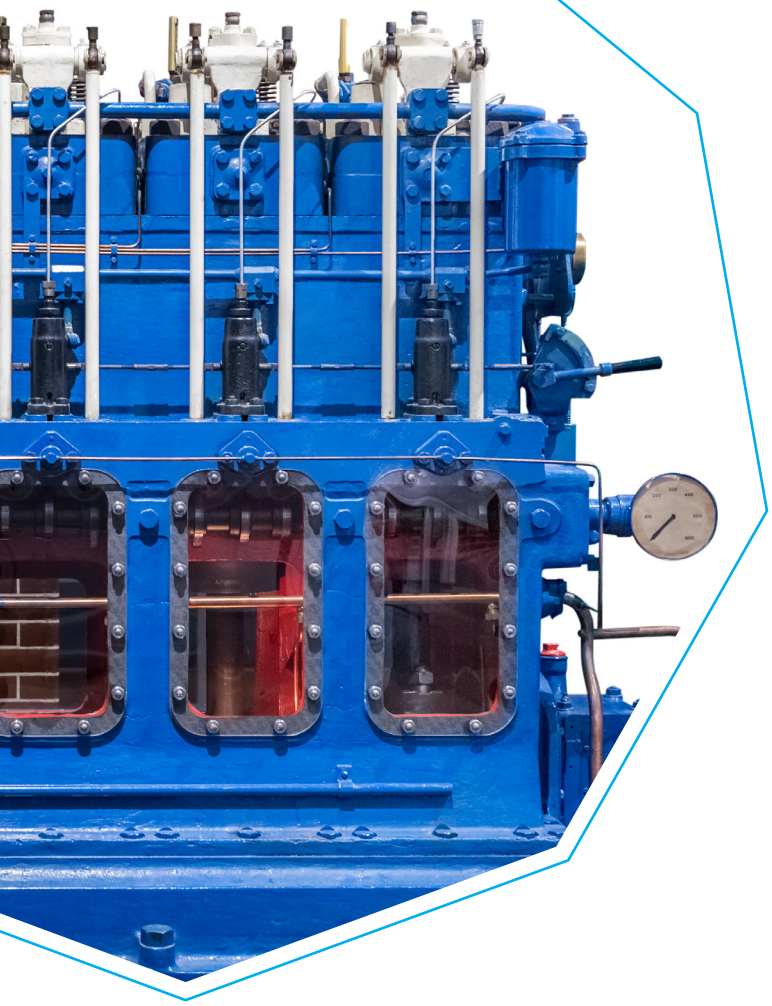
ASKCHEMICALS

EXACTPORE™ TUBULAR FILTER



MORE SAFETY AND LOWER COSTS IN BIG CASTINGS WITH EXACTPORE™ TUBULAR FILTERS

The use of filter products is common practice and at the same time a critical factor for success in foundries. Depending on the filter technology used, not only is metal cleanliness improved, but production costs can also be drastically reduced by cutting down on rework and scrap.

More specifically, the demands placed on large-scale casting processes require innovative solutions to exploit the advantages of filtration. This is because these processes must combine the efficient use of filter material for large tonnages with a high degree of process reliability. Especially in big castings, with low quantities but very high tonnage per piece, the avoidance of filter breakage is an extremely relevant aspect. With such casting dimensions, errors caused by filters or other process steps must be avoided at any time to prevent excess scrap and high costs.

The tubular EXACTPORE™ filter with the EXACTFILL™ filter housing combines these advantages optimally.

TECHNOLOGICAL ADVANTAGES

- 3 times the filter area compared to conventional standard filters of the same size
- Open and repeatable pore structure of the tubular EXACTPORE™ filter
  - Reproducible capacity and flow rate
  - High efficiency
- Optimized self-supporting geometry
  - Compact size and design
  - Easy assembly and flexible, optional horizontal or vertical placement
- Use of different refractory materials adaptable to highest demands

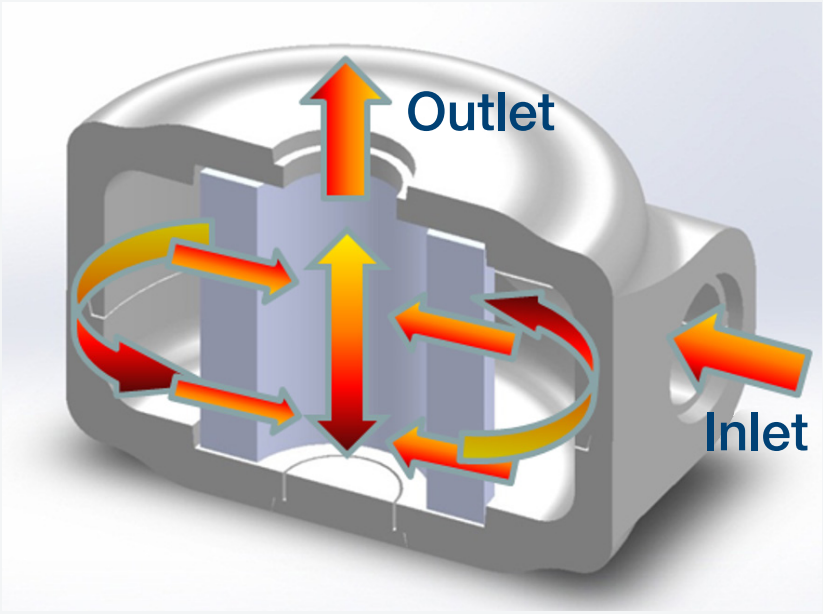


Figure 1: Melt flow in the EXACTPORE™ tubular filter with filter housing

Customizable EXACTPORE™ filter
EXACTPORE™ filters avoid loose particles thanks to the highest structural integrity. In addition, the new filters offer almost all possibilities regarding pore design. The filter materials can also vary. EXACTPORE™ filters are offered in both standard zirconia (PSZT) and higher purity zirconia (PSZM), as well as in aluminum oxide. This enables the production of completely customized variations.

Tubular filter for large castings
The design of tubular and cylindrical ceramic filters has been further improved for utilization in the largest steel and iron castings. Thanks to the sophisticated structures and geometries, coupled with a housing system designed for easy and safe handling, fast and effective installation is possible. By using the available casting systems, numerous combinations are possible, offering a solution for almost every application.

High performance filtration with tubular EXACTPORE™ filters and EXACTFILL™ filter housing
Together, tubular EXACTPORE™ 3D filters with EXACTFILL™ filter housings provide a powerful combination for metal filtration. The high-performance system shows its strength in terms of process costs: Due to the enormous filtration capacity, robustness of the material, pore structure as well as the self-supporting geometry of the tubular EXACTPORE™ filters, the solution offers particularly great advantages for the very cost-intensive areas of casting rework and machining. Foundries can therefore achieve considerable savings in terms of energy consumption, tool wear and working time.

Figure 2: EXACTPORE™ cross-section of a tubular filter.

YOUR SUSTAINABILITY **PLUS**

Profitability
- Improved productivity
  - Fewer casting defects due to filter breakage
  - Better capacity and flow rate
  - Repeatability of filter performance
- Cost savings
  - Less tool wear
  - Less rework

Environment & Social
- Easy and safe handling
- Less energy consumption