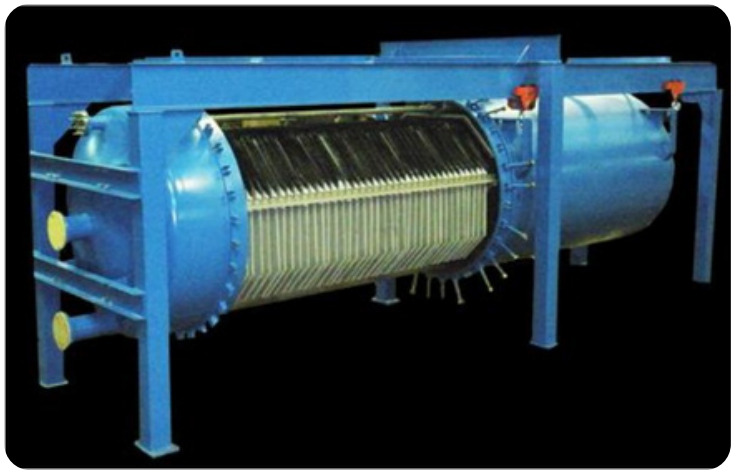
The STRAINRITE Companies | World Class Filtration

CASE STUDY

REPLACING A FILTER PRESS WITH STRAINRITE'S MADD-MAXX FILTERS

BACKGROUND

A manufacturing facility using a traditional filter press system faced persistent challenges: reliance on filter aid (like diatomaceous earth), safety risks, high operational expenses, labor-intensive changeouts, and inconsistent product quality due to downstream contamination and haze. The company sought a solution that would improve efficiency, reduce costs, and deliver a cleaner final product.



THE CHALLENGE

01 **OPERATIONAL INEFFICIENCY:**
The filter press required significant setup and cleanup time, often taking hours per batch.

02 **SAFETY & CONTAMINATION RISKS:**
Use of filter aid introduced safety concerns and risked contaminating downstream processes.

03 **YIELD LOSS:**
Product loss during changeouts and cleaning reduced overall yield.

04 **QUALITY ISSUES:**
Haze and particulate contamination affected the clarity and quality of the final product.

05 **EXPENSE:**
Ongoing costs for filter aid and labor were substantial.

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CONSULTATIVE APPROACH

Strainrite's team engaged the customer using a consultative sales process:

Qualification:

The team asked targeted questions about press size, number of plates, use of filter aid, batch times, yield loss, and quality goals.

Process Assessment:

Detailed review of operational data (batch size, flow, pressure, temperature, viscosity) to ensure the right fit and performance.

Compatibility Evaluation:

Assessed sizing, and applications used and recommended proper housing solution tailored to the end-user process needs.

SOLUTION:
MADD-MAXX HYBRID ELEMENTS

Strainrite recommended the MADD-MAXX MF and GF filters:

MF (Polypropylene Media):

This element offers the ease and dirt-holding capacity of bag filtration with the high efficiency of cartridge filtration. Its inside-out flow design traps contaminants inside during changeout, minimizing downstream contamination. Made from 100% polypropylene, it ensures broad chemical compatibility and meets CFR 21 requirements for food and beverage contact.

GF (Micro-Glass Media):

Strainrite's MADD-MAXX GF filters are engineered for critical high purity applications, optimizing throughput while maintaining an absolute rated performance that is consistent and reliable. Our microglass filter elements feature a media structure with high surface area and increased void volume, as well as optimized pore size geometry.

MADD-MAXX filter

IMPLEMENTATION STEPS:

01 Test-fit kits ensured proper seal and fit in the customer's existing housing.

02 Sample filters were provided for pilot testing and validation.

03 Move to a full-scale production, set scale and size.

RESULTS & BENEFITS REALIZED:

01 **Elimination of Filter Aid:**
No need for diatomaceous earth, reducing both cost and safety risks.

02 **Reduced Batch Time:**
Example: Batch processing time dropped from 6 hours to 2 hours-a 66% reduction.

03 **Labor Savings:**
Setup and cleanup time reduced from several hours to just 10 minutes, lowering operational costs.

04 **Yield Increase:**
Actual results showed a 10–20% increase in product yield.

05 **Cleaner Product:**
Elimination of haze and downstream contamination.

06 **Higher Throughput:**
Increased flow rate and reduced downtime between batches.

CONCLUSION:

By replacing the traditional filter press with Strainrite MADD-MAXX hybrid filter elements, the customer achieved safer, faster, and more cost-effective filtration. The consultative approach ensured the solution was tailored to the facility's unique needs, delivering measurable improvements in yield, quality, and operational efficiency.

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