



3M Science.
Applied to Life.™

3M Separation and
Purification Sciences Division

3M™ High Flow Filters

Cool your cans.

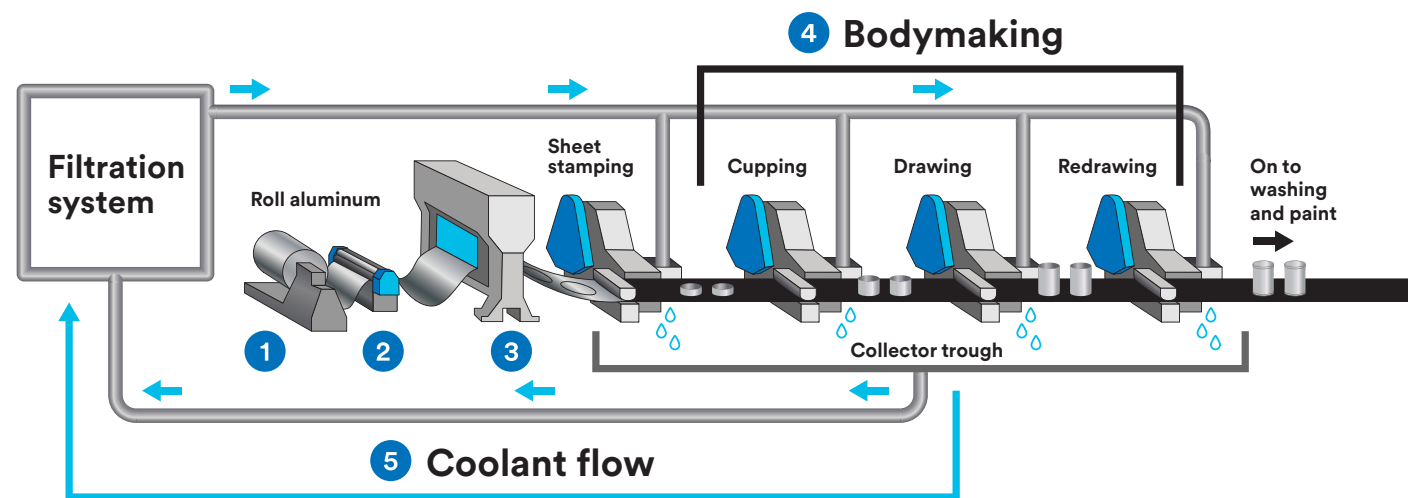
Cost-effective coolant filtration for
aluminum beverage can production.

Filter out variability.

Reduce aluminum loadings and tearoff. Improve your production process.

In high value operations where millions of identical parts are produced daily, even minor improvements can have significant impact on overall process yield. Designed for high performance and easy operation, the 3M™ High Flow Filter System delivers a high flow filter in a compact housing design.

Steps in the Can Manufacturing Process



- 1 Uncoiler unwinds the aluminum coil into the lubricator.
- 2 Lubrication applies a thin film of lubricant to the aluminum sheet and then feeds the metal into the stamper that cuts out circular aluminum blanks.
- 3 The circular aluminum blanks are fed to the cupper that forms aluminum cups.
- 4 Bodymakers deep draw the aluminum cups into aluminum cans at high speed and very tight tolerances.
- 5 The coolant filtration system provides a high-quality fluid, needed for the deep drawing process that is performed by the bodymakers, and recirculated.

Reduce aluminum loadings.

Maximize your operational efficiencies with 3M™ High Flow Filters:



Reduce defects

Reduce contaminant buildup, streaking and dimensional variations.



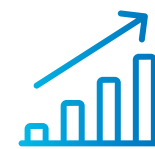
Reduce production downtime

Reduce tear off rate, extend tool life.



Reduce labor

Reduce number of filters and frequency of changeouts.



Increase plant capacity

Reduce tearoffs, increase production yield.



Minor variations. Multiplied by millions.

Aluminum loadings, corrosion by-products and environmental contaminants are generated during the drawing process and carried away by the coolant. Without proper filtration, these particles can impact quality, increase tearoff, and limit production yield. To improve your manufacturing process and sustainability, 3M has an effective solution that results in cost reduction and labor savings.



Discover a cool way to improve efficiency.

3M™ High Flow Filter System

▶ Reduced footprint

Takes up as little as one-half the size of competitive housings for a given flow rate. The result is lower capital investment costs and a footprint that saves valuable plant space.



▶ Ergonomic design

The horizontal housing design and cartridge handle allow for quick and easy installation and removal while reducing changeout time and worker exposure.



▶ Fewer filters required

Highly efficient design requires less filters in use, helping to reduce changeout times and disposal costs.

3M™ High Flow Filters



▶ “Twist-to-lock” cartridge sealing mechanism

Provides positive seal.



▶ Ergonomic design

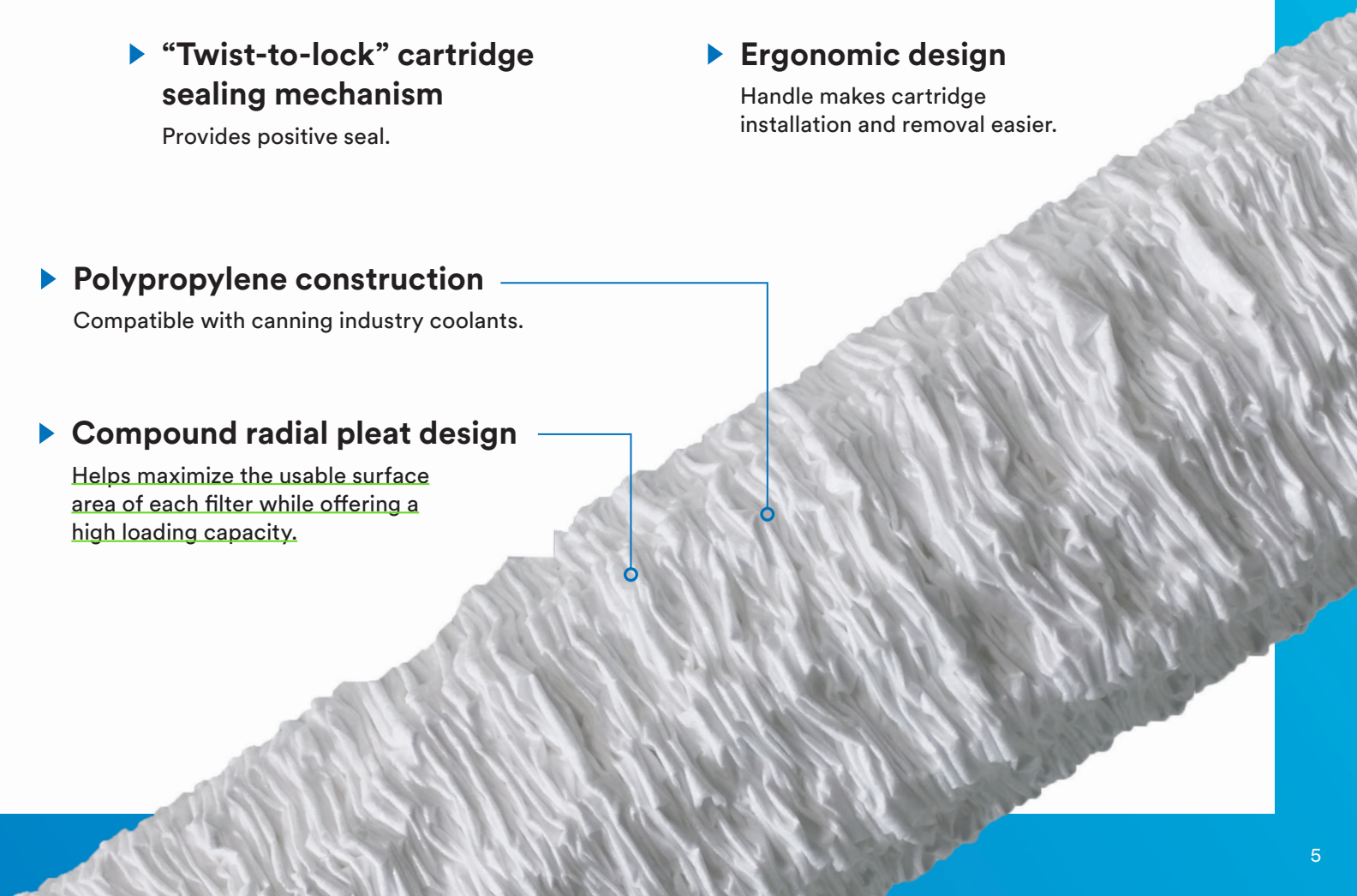
Handle makes cartridge installation and removal easier.

▶ Polypropylene construction

Compatible with canning industry coolants.

▶ Compound radial pleat design

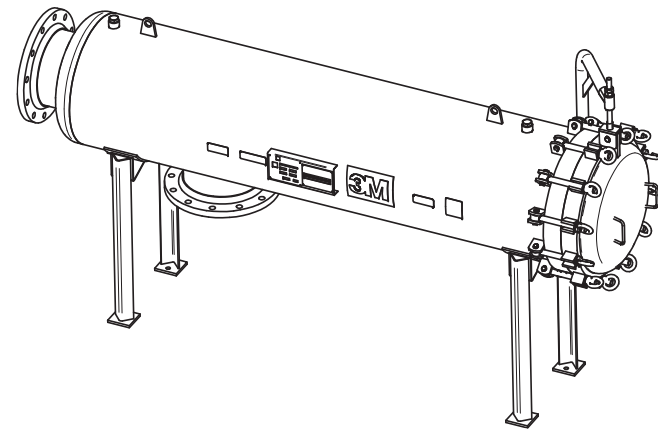
Helps maximize the usable surface area of each filter while offering a high loading capacity.



3M™ High Flow Series Filter Systems

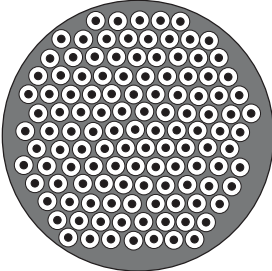
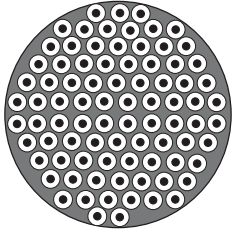
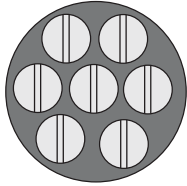
The 3M High Flow filter product family has a supporting family of filter housings constructed of 316L stainless steel (housing body) and 316 stainless steel (flanges, cartridge plug base).

For can manufacturing, the 7 round variation of the 60" housing (7HF60) is best suited for meeting performance goals.



Fewer cartridges. Smaller footprint. Faster change-outs.

Comparison of Required Filter Cartridges and their Housing Diameters

Conventional 2.5" (63.5mm) depth cartridges	Conventional 2.5" (63.5mm) pleated cartridges	3M™ High Flow Filter System
		
120 Cartridges in a 36" (914mm) diameter housing	85 Cartridges in a 30" (762mm) diameter housing	7 Cartridges in a 24" (610mm) diameter housing

3M™ High Flow Filter Multi-Around Cartridge Housing, Model 7HF60

Housing Model	Housing OD (in/mm)	Inlet & Outlet Flange Size (in/DN)	Vent & Drain NPT (in/mm)	Empty Weight (lbs/kg)	Housing Dimension, approximate length x width x height (in/mm)
7HF60 (BHAACC)	22/560	12/300	1/25.4	1084.7/492	L – 100.2/2545 W – 22.1/560 H – 39.4/1000

3M™ High Flow Filter specifications.

Materials of construction

For can manufacturing, 3M™ High Flow HFM Series 60" Filter Cartridges are the recommended solution to meet performance requirements.

Filter media

3M High Flow filters are manufactured from meltblown polypropylene microfiber media, providing high particle removal efficiency with broad chemical compatibility.

O-rings

For the 3M High Flow HFM Series Filters, O-rings are available in the standard nitrile.

Construction

Filter micron rating (microns)	HFM 5µm Nominal
Filter media, center core, end caps, outer sleeve	Polypropylene
Sealing o-ring options	Nitrile

Cartridge dimensions

Inside diameter (nominal)	3" (76.2mm)
Outside diameter (nominal)	6.5" (165mm)
Cartridge length (nominal)	60" (1524mm)

Operating conditions

Maximum forward differential pressure	50 psid @ 68°F (3.4 bar @ 20°C)
Recommended change-out differential pressure	35 psid @ 68°F (2.4 bar @ 20°C)

Make the 3M™ High Flow Filter System part of your process.



Reduce costs, improve quality, and increase production with 3M™ High Flow Filters.

As your coolant filtration system experts, we can help you benefit from the latest technology.

We understand the unique challenges of the aluminum beverage can industry. Our team can help make your transition to the 3M High Flow Filter System a success. For more information, visit 3M.com/cancoolant.

To schedule a trial, please [contact your 3M sales representative.](#)

Technical Information: The technical information, guidance, and other statements contained in this document or otherwise provided by 3M are based upon records, tests, or experience that 3M believes to be reliable, but the accuracy, completeness, and representative nature of such information is not guaranteed. Such information is intended for people with knowledge and technical skills sufficient to assess and apply their own informed judgment to the information. No license under any 3M or third party intellectual property rights is granted or implied with this information.

Product Selection and Use: Many factors beyond 3M's control and uniquely within user's knowledge and control can affect the use and performance of a 3M product in a particular application. As a result, end-user is solely responsible for evaluating the product and determining whether it is appropriate and suitable for end-user's application, including completing a risk assessment that considers the product leachable characteristics and its impact on drug safety conducting a workplace hazard assessment and reviewing all applicable regulations and standards (e.g., OSHA, ANSI, etc.). Failure to properly evaluate, select, and use a 3M product and appropriate safety products, or to meet all applicable safety regulations, may result in injury, sickness, death, and/or harm to property.

Warranty, Limited Remedy, and Disclaimer: Unless a different warranty is specifically stated on the applicable 3M product packaging or product literature (in which case such warranty governs), 3M warrants that each 3M product meets the applicable 3M product specification at the time 3M ships the product. 3M MAKES NO OTHER WARRANTIES OR CONDITIONS, EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, ANY IMPLIED WARRANTY OR CONDITION OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, OR ARISING OUT OF A COURSE OF DEALING, CUSTOM, OR USAGE OF TRADE. If a 3M product does not conform to this warranty, then the sole and exclusive remedy is, at 3M's option, replacement of the 3M product or refund of the purchase price.

Limitation of Liability: Except for the limited remedy stated above, and except to the extent prohibited by law, 3M will not be liable for any loss or damage arising from or related to the 3M product, whether direct, indirect, special, incidental, or consequential (including, but not limited to, lost profits or business opportunity), regardless of the legal or equitable theory asserted, including, but not limited to, warranty, contract, negligence, or strict liability.

Scan to visit
3M.com/cancoolant



3M Purification Inc.
3M Separation and Purification Sciences Division
400 Research Parkway, Meriden, CT 06450 USA

Phone 1-800-243-6894 1-203-237-5541
Web 3M.com/cancoolant

3M is a trademark of 3M Company.
All other trademarks are property of their respective owners.

Please recycle. Printed in USA © 3M 2023.
All rights reserved. 70-2016-0395-1 0423