



Filter Housings

Product Core Line

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3M Purification Past and Present

3M Purification, formerly called CUNO, is a world leader in the design, manufacture, and marketing of filtration products for the separation, clarification, and

purification of fluids and gasses. Its proprietary products are widely used throughout the global healthcare, industrial, and water markets to make customers more successful.

3M is fundamentally a science-based company. As a member of the 3M family, we create imaginative solutions, and we are a leading filtration provider in a wide range of markets, from the coarsest industrial filtration to the finest DNA separation.

We have been supplying pressure vessels in support of our consumable filter media products for over fifty years and we have a vast experience in providing the trusted solutions that our customers demand and expect.

Our success is built on our ability to apply our technologies and expertise to an endless array of real-world customer needs. Coupled with the 3M world class and truly global logistics and engineering network, we are able to confidently deliver the right product, to the right quality – and at the right price.

Virtually anywhere you go, 3M Purification technologies are at work – making life easier and better for people around the world.

3M Purification Housing Capabilities and the Core Line range

3M Purification Housing Capabilities

3M Purification's engineering experience in metal goods is extensive. We were the first to offer metal edge type filters, and we continue to do so fifty years later – and continue to support some of the earliest installations that are still in operation.





Core to our strategy in supply vessels for filtration applications is our European based Design & Engineering team who are responsible for ensuring that all vessels supplied to the region meet the relevant regulatory requirements and comply with the latest market driven needs for operational excellence.

Whilst the team has specialists for the various industry sectors we serve, their close cooperation ensures that vessels for all applications, from coarse strainers to pharmaceutically validated Clean-In-Place systems benefit from the combined experience and know-how they possess.

From single cartridge housings with flow rates of 106 litre per minute, to large industrial housings featuring flow rates measured in the thousands of gallons per minute, 3M Purification can provide housings capable of exceeding the most stringent customer requirements.

As our customers are very often global operators, so is 3M Purification - with the European team having access to the 3M World-Wide network of vessel engineering facilities, laboratories, and the 3M supplier base.

The Core Line Housing Range

The 3M Purification “Core Line” range of filter element pressure housings is a comprehensive family of standard housings that have been conceived and designed to meet the vast majority of customer needs using standard, readily available, products.

By using a high level of common parts and components to maximise flexibility and reduce production lead-times, the range represents a value for money solution for our customers and enables 3M Purification to deliver a guaranteed high level of service.



Manufacturing Competence, Housing Engineering & Design and Bespoke Housings

Manufacturing Competence

The vessel design and supply activities are fully approved to ISO 9001 standards.

Vessels are made by a network of specialist suppliers. These suppliers are fully approved and managed by 3M using the organisation's extensive expertise in supply chain, logistics and quality assurance to ensure the product meets the highest standards.

Vessel Engineering and Design

All European vessel design and supply is in full compliance with the European Pressure Vessel Equipment Directive; PED 97/23/EC, and with the European Directive for Equipment and Protective Systems Intended for Use in Potentially Explosive Atmospheres; ATEX 94/9/EC.

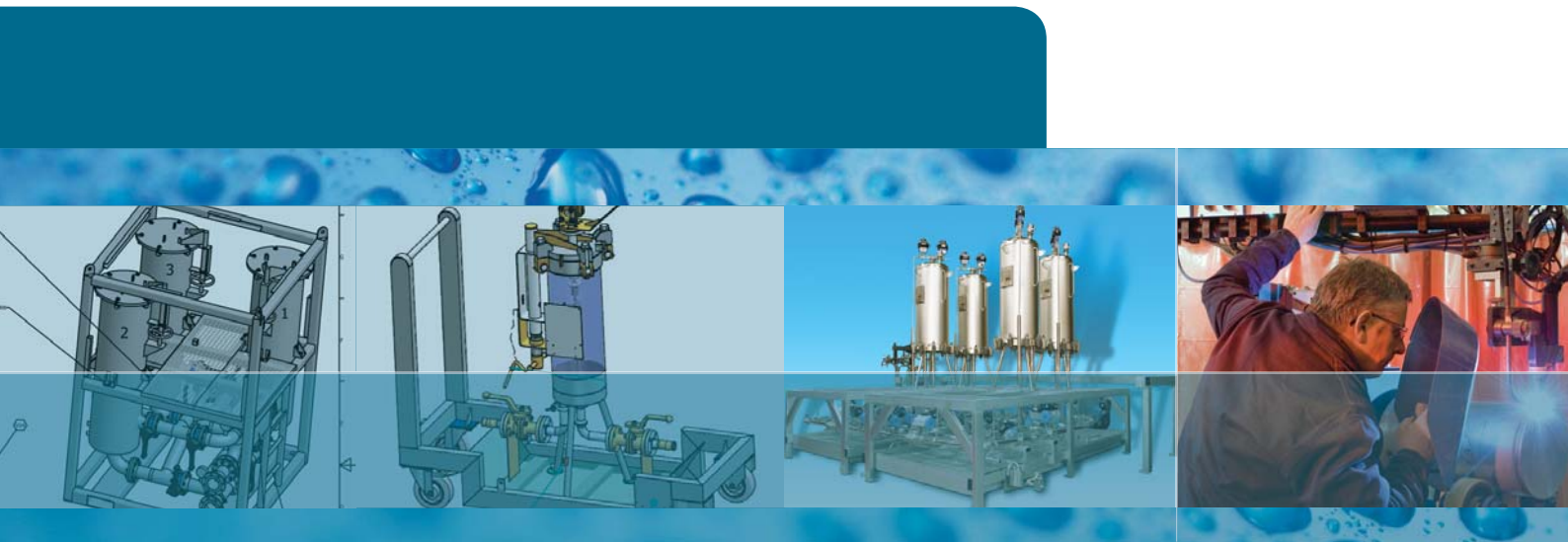
The 3M Purification team of highly qualified and skilled design engineers are located centrally within Europe and are supported by a network of local in-country engineers who provide a service direct to clients.

The central team works using the latest state of the art 3D solid modelling CAD/CAM software. This work is fully supported by dedicated pressure vessel design calculation software capable of dealing with multiple design and construction codes including AD Merkblätter, CODAP, ASME and the new unified European Standard EN13445.

Finite Element Modelling software is also available where needed, as are the services of our other pressure vessel design and supply groups across the globe.

Bespoke Vessels

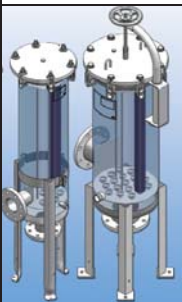
Where required, 3M Purification has a mature and developed ability to supply special vessels according to a customer's specific needs. These can include requirements such as high temperatures and pressures, heating jackets (steam and electrical), specialist materials (Hastelloy and low ferrite stainless steels) and well as multiple vessel, skid mounted, complete systems.



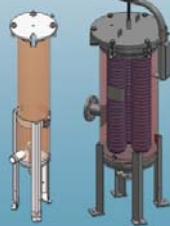


Our Core Range in Filter Housings

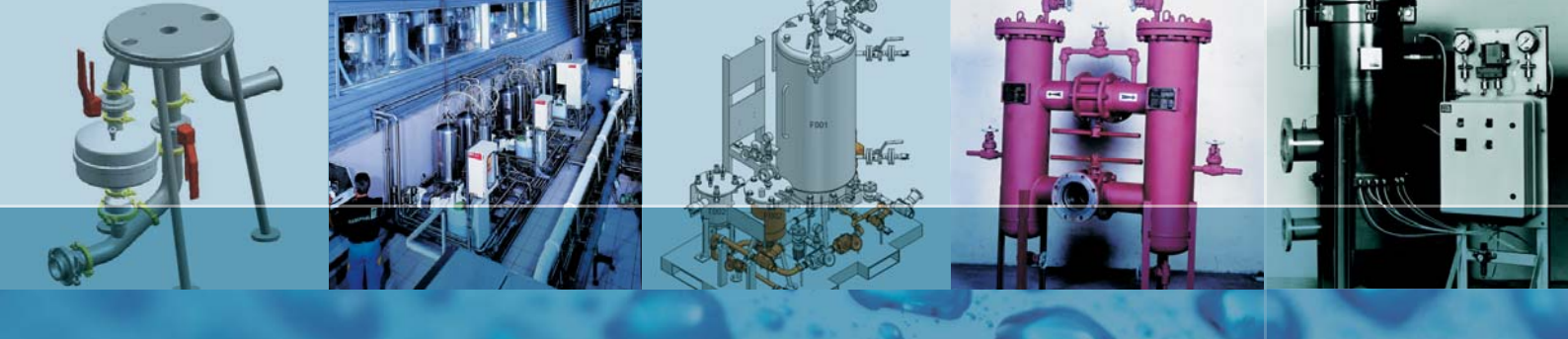
Overview of the 3M Purification Filter Housings Core Range for the Food & Beverage, Helathcare and Fluid Process markets.

Series	Range	Standard Key Characteristics	Markets	Pictures
CH	03 CH, 04 CH 05 CH, 08 CH 12 CH, 19 CH 22 CH, 27 CH 30 CH 40 CH 55 CH 80 CH 116 CH	Max. operating pressure: 10 bar g	Pharmaceuticals, BioProcess & Biologicals: Solvent & Hazardous Utilities requiring non-sanitary design Fluid Process: Coatings, Chemicals, Industrial and Oil & Gas	
		Max. operating temperature: 90 °C		
		Material of construction: 304 or 316L Stainless Steel		
		Type of Closure: Bolted		
		Types of elements: DOE or SOE (3 to 464 EQSL)		
		PED 97/23/CE: Article 3.3. (Can be coded to PED Cat IV (Depending on application parameters) on request.		
		ATEX 94/9/CE: I-2-G/D-T5		
CT	CT 101 CT 102 CT 103	Max. operating pressure 12 bar g or 20 bar g	Food & Beverage: Small Utilities Pharmaceuticals, BioProcess & Biologicals: Small Utilities Fluid Process: Coatings, Chemicals, Industrial and Oil & Gas	
		Max. operating temperature: 90 °C		
		Material of construction: 316 Stainless Steel		
		Type of Closure: Ring Nut		
		Types of elements: DOE (1 to 3 EQSL)		
		PED 97/23/CE: Article 3.3. Group 1		
		ATEX 94/9/CE: 11/2/G/T5		
CT Brass	CT 101 CT 102	Max. operating pressure: 12 bar g or 20 bar g	Food & Beverage: Small Utilities Pharmaceuticals, BioProcess & Biologicals: Small Utilities Fluid Process: Coatings, Chemicals, Industrial and Oil & Gas	
		Max. operating temperature : 90 °C		
		Material of construction: Head Brass & Sump 304 Stainless Steel		
		Type of Closure: Ring Nut		
		Types of elements: DOE (1 to 2 EQSL)		
		PED 97/23/CE: Article 3.3. Group 2 Liquids (Group 1 Liquids at reduced pressure)		
		ATEX 94/9/CE: 11/2/G/T5		
DS	5 DS 12 DS	Max. operating pressure: 10 bar g	Food & Beverage: Particle removal from Water / Soft Drinks Pharmaceuticals: Non Hazardous Utilities BioProcess and Biologicals : Non Hazardous and Non Critical Utilities Fluid Process: Coatings, Chemicals, Industrial and Oil & Gas	
		Max. operating temperature: 100 °C or 120 °C		
		Material of construction: 304/316L Stainless Steel		
		Type of Closure: Clamped		
		Types of elements: DOE 222 (5 to 48 EQSL)		
		PED 97/23/CE: Article 3.3. Group 1		
		ATEX 94/9/CE: 11/2/G/T4 or 11/2/G/T5		

Our Core Range in Filter Housings

Series	Range	Standard Key Characteristics	Markets	Pictures	
H	1 H	Max. operating pressure: 100 bar g	Fluid Process: Chemicals, Industrial and Oil & Gas		
		Max. operating temperature: 110 °C			
		Material of construction: Carbon Steel/304 St. Steel			
		Type of Closure : Bolted			
		Types of elements: DOE (1 to 3 EQSL)			
		PED 97/23/CE: Article 3.3.			
HC	01 HC	Max. operating pressure: 10 bar g	Food & Beverage: Water, Sugar and Edible Oil		
	03 HC	Max. operating temperature: 90 °C			
	05 HC	Material of construction: 304/316 Stainless Steel	Pharmaceuticals: Water utilities		
	07 HC	Type of Closure : Bolted			
		Types of elements: High Capacity (1 to 7 EQSL)	Fluid Process: Coatings, Chemicals, Industrial, Oil & Gas and Electronics		
		PED 97/23/CE: Article 3.3. Category I & II or I to IV			
		ATEX 94/9/CE			
HF	01 HF	Max. operating pressure: 10 bar g	Food & Beverage: Water, Sugar and Edible Oil		
	03 HF	Max. operating temperature: 90 °C			
	05 HF	Material of construction: 304/316 Stainless Steel	Pharmaceuticals: Water utilities		
	07 HF	Type of Closure: Bolted			
		Types of elements: High Flow (1 to 7 EQSL)	Fluid Process: Chemicals, Industrial, Oil & Gas and Electronics		
		PED 97/23/CE: Article 3.3. Category I			
		ATEX 94/9/CE : II/2/T5			
ME Single	01 MEB	Max. operating pressure: 10 bar g	Fluid Process: Coatings, Chemicals, Industrial, Oil & Gas and Electronics		
	01 MEC	Max. operating temperature: 90 °C			
	01 MES	Material of construction: 304/316 Stainless Steel			
	01 MET	Type of Closure: Bolted			
		Types of elements: Duoflo & Bags (1 to 12 EQSL)			
		PED 97/23/CE: Article 3.3. (can be coded to PED Cat I or II on request)			
		ATEX 94/9/CE: I-2-G/D-T5 (only for 01 MEB)			
Multi Elements	03 MEB	Max. operating pressure: 10 bar g	Fluid Process: Coatings, Chemicals, Industrial, Oil & Gas and Electronics		
	04 MEB	Max. operating temperature: 90 °C			
	06 MEB	Material of construction: 304/316 Stainless Steel			
	08 MEB	Type of Closure: Bolted			
	12 MEB	Types of elements: Duoflo & Bags (1 to 12 EQSL)			
		PED 97/23/CE: Article 3.3. (can be coded to PED Cat IV on request depending on application parameters)			
		ATEX 94/9/CE: I-2-G/D-T5			





Our Core Range in Filter Housings

Series	Range	Standard Key Characteristics	Markets	Pictures
IP 8 inch	8 IP	Max. operating pressure: Up to 8 bar g depending on operating temperature & classification of process fluid	Food & Beverage: Water, Wine and Beer Zeta Plus Pharmaceuticals: API, ZetaCarbon, Zeta Plus Bioprocess: Cell Harvest, ZetaCarbon, Zeta Plus Biological: Blood Frac, ZetaCarbon, Zeta Plus Fluid Process: Chemicals and Electronics	
		Max. operating temperature: Up to 150 °C depending on operating pressure & classification of process Fluid		
		Material of construction: 316L Stainless Steel		
		Type of Closure: Clamped		
		Types of elements: Lenticular (1 to 4 EQSL)		
		PED 97/23/CE: Article 3.3. Group 1 & 2		
		ATEX 94/9/CE: II-2-G/D-T5		
IP	12 IP 16 IP	Max. operating pressure: 8 bar g	Food & Beverage: Water, Wine and Beer Zeta Plus Pharmaceuticals: API, ZetaCarbon, Zeta Plus Bioprocess: Cell Harvest, ZetaCarbon, Zeta Plus Biological: Blood Frac, ZetaCarbon, Zeta Plus Fluid Process: Chemicals and Electronics	
		Max. operating temperature: 150 °C		
		Material of construction: 316L Stainless Steel		
		Type of Closure: Bolted		
		Types of elements: Lenticular (1 to 4 EQSL)		
		PED 97/23/CE: Article 3.3. Group 1 & 2		
		ATEX 94/9/CE: II-2-G/D-T5		
IW	01 IW 03 IW 05 IW 08 IW 12 IW 18 IW 24 IW	Max. operating pressure: 8, 9 or 10 bar g depending on housing type	Food & Beverage: Critical Final Filtration requiring Sanitary Design Pharmaceuticals and Bioprocess: Trap & Sterile Filtration requiring Sanitary Design Fluid Process: Chemicals and Electronics	
		Max. operating temperature: 150 °C		
		Material of construction: 316L Stainless Steel		
		Type of Closure: Clamped or Bolted		
		Types of elements: Cartridge 226 (1 to 96 EQSL)		
		PED 97/23/CE: Article 3.3. Group 1 & 2		
		ATEX 94/9/CE: II-2-G/D-T5		
WTC	01 WTC	Max. operating pressure: 10 bar g	Fluid Process: Coatings, Chemicals, Industrial, Oil & Gas and Electronics	
		Max. operating temperature: 70 °C		
		Material of construction: 304 Stainless Steel		
		Type of Closure: Clamped		
		Types of elements: CTG (1 to 2 EQSL)		
		PED 97/23/CE: Article 3.3.		
WTB	03 WTB 07 WTB	Max. operating pressure: 10 bar g	Fluid Process: Coatings, Chemicals, Industrial, Oil & Gas and Electronics	
		Max. operating temperature: 70 °C		
		Material of construction: 304 Stainless Steel		
		Type of Closure: Bolted		
		Types of elements: CTG (3 to 21 EQSL)		
		PED 97/23/CE: Article 3.3.		

For more information, contact your local 3M Purification representative or a distributor.



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