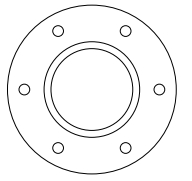
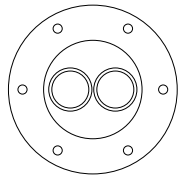
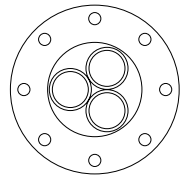
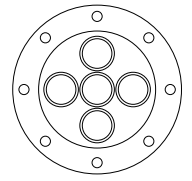
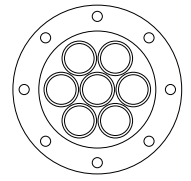


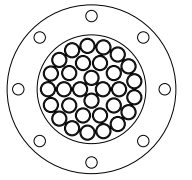
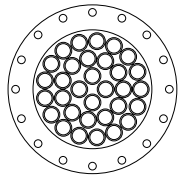
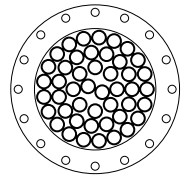
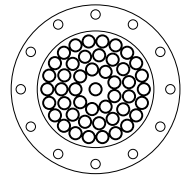
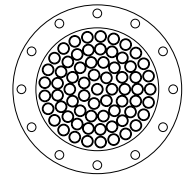
STAINLESS STEEL HOUSINGS WITH CERAMIC MEMBRANES



STAINLESS STEEL HOUSINGS WITH CERAMIC MEMBRANES

modules in industrial design

Membrane diameter	Membrane design	Membrane length (mm)	M1	M2	M3	M5	M7					
												
filter surface in m ² per module												
25.4 mm	1/16	1000	NW 25	0.05	NW 25	0.10	NW 50	0.25	NW 50	0.35		
		1200		0.06		0.12		0.30		0.42		
	7/6	1000		0.13		0.26		0.40		0.66	0.92	
		1200		0.16		0.32		0.48		0.79	1.11	
	19/3.3	1000		0.20		0.40		0.60		1.00	1.40	
		1200		0.24		0.48		0.72		1.20	1.68	
		1000		0.23		0.46		0.70		1.16	1.62	
		1200		0.28		0.56		0.84		1.39	1.95	
	41 mm	19/6		1200		0.43		-		1.29	-	3.01
				1500		0.54		-		1.62	-	3.76
		37/3.8		1200		0.53		-		1.59	-	3.71
				1500		0.67		-		2.01	-	4.69
61/2.5		1200	0.58	-	1.74	-	4.06					
		1500	0.72	-	2.16	-	5.04					
		52 mm	19/8	1200	0.57	-	1.71	-	-			
				1500	0.72	-	2.15	-	-			
85/3.3	1200		1.06	-	3.18	-	-					
	1500		1.32	-	3.97	-	-					

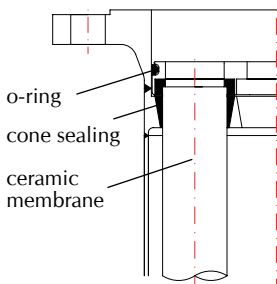
Membrane diameter	Membrane design	Membrane length (mm)	M31	M32	M46	M47	M68									
																
filter surface in m ² per module																
25.4 mm	1/16	1000	NW 200	1.55	-	-	NW 250	2.35	NW 300	3.40						
		1200		1.86				4.08								
	7/6	1000		4.09				-		6.20	7.44	8.98				
		1200		4.91				-		7.44	9.40	10.77				
	19/3.3	1000		6.20				-		-	11.28	13.60				
		1200		7.44				-		-	10.90	16.32				
		1000		7.19				-		-	13.08	15.78				
		1200		8.63				-		-	-	18.93				
	41 mm	19/6		1200				-		NW 350	13.76	NW 400	-	-	-	
				1500				-			17.28		24.84		-	
		37/3.8		1200				-			16.96		24.38		-	-
				1500				-			21.44		30.82		-	-
61/2.5		1200	-	18.56	26.68	-	-									
		1500	-	23.04	33.12	-	-									
52 mm	19/8	1200	-	-	-	-	-	-								
		1500	-	-	-	-	-	-								
	85/3.3	1200	-	-	-	-	-	-								
		1500	-	-	-	-	-	-								

STAINLESS STEEL HOUSINGS WITH CERAMIC MEMBRANES

modules in sanitary (according to 3-A Sanitary-Standards Inc.)

Membrane diameter	Membrane design	Membrane length (mm)	M1 LM	M3 LM	M7 LM	M8 LM	M12 LM								
			filter surface in m ² per module												
25.4 mm	1/16	1000	NW 25	0.05	NW 100	0.15	NW 100	-	-						
		1200		0.06		0.18		-							
	7/6	1000		0.13		0.40		-							
		1200		0.16		0.48		-							
	19/3.3	1000		0.20		0.60		-							
		1200		0.24		0.72		-							
		1000		0.23		0.70		-							
		1200		0.28		0.84		-							
	41 mm	19/6		1200		NW 32		0.43		NW 125	3.01	NW 150	-	NW 200	
				1500				0.54			1.29		-		5.16
		37/3.8		1200				0.53			1.62		-		6.45
				1500				0.67			1.59		-		6.36
61/2.5		1200	0.58	2.01	-		8.04								
		1500	0.72	1.74	-		6.96								
		1200	2.16	4.06	-		8.64								
		1500	5.04	4.06	-		8.64								
52 mm	19/8	1200	NW 40	0.57	NW 150	-	NW 200	4.56	NW 250						
		1500		0.72		1.71		-		6.84					
	85/3.3	1200		1.06		2.15		-		8.70					
		1500		1.32		3.18		-		12.72					
				3.97		-		10.57	15.86						

SEALING



sanitary design
atech LM-modules designed to 3-A-Sanitary- Standard cover all sanitary aspects for their application in micro- and ultrafiltration processes in Milk and Dairy Industry, Pharmaceutical, Chemical and Food Industry.

- > Further membrane length (up to 1.5 m),
- > other types of modules and technical drawings on request
- > drawings of housings are not to scale and are for informational purposes only

☐ this module types are not available by standard

GENERAL INFORMATION

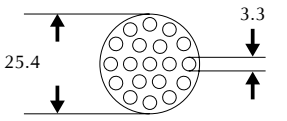

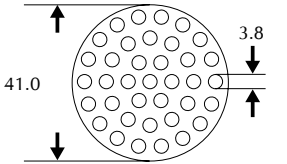
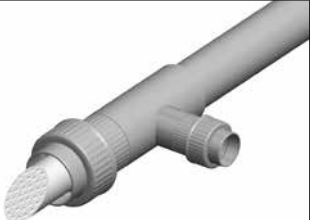
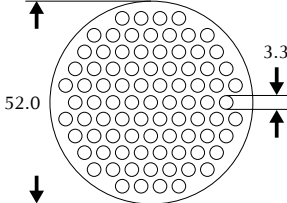
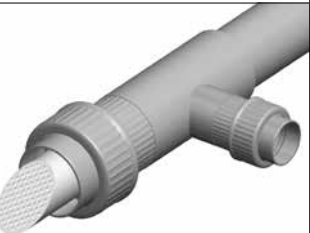
atech tubular ceramic membranes meet regulatory requirements for food contact according European Regulation no. 1935/2004 and FDA requirements 21 CFR, 170-199. atech crossflow membranes modules are authorized to bear the 3-A symbol for complying fully with the 3-A Sanitary Standard (certificate no. 1680)



M19 LM		M26 LM		M29 LM		M42 LM	
filter surface in m ² per module							
NW 200	0.95	-	-	-	-	-	-
	1.14	-	-	-	-	-	-
	2.51	-	-	-	-	-	-
	3.01	-	-	-	-	-	-
	3.80	-	-	-	-	-	-
	4.56	-	-	-	-	-	-
	4.41	-	-	-	-	-	-
5.29	-	-	-	-	-	-	-
NW 250	8.17	11.18	-	-	18.06	-	-
	10.21	14.04	-	-	22.68	-	-
	10.07	13.78	-	-	22.26	-	-
	12.73	17.42	-	-	28.14	-	-
	11.02	15.08	-	-	24.36	-	-
	13.68	18.72	-	-	30.24	-	-
NW 300	10.83	-	16.53	-	-	-	-
	13.68	-	20.88	-	-	-	-
	20.14	-	30.74	-	-	-	-
	25.08	-	38.28	-	-	-	-

■ PLASTIC HOUSINGS WITH CERAMIC MEMBRANES

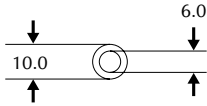

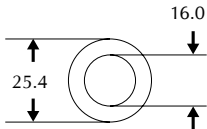

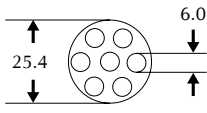

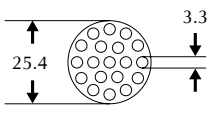

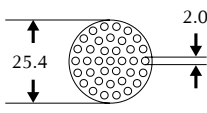

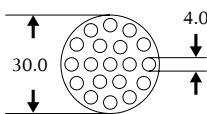

technical data

Type of Module	Technical Data	Membrane Design	Available Membranes	Illustration
M1-PVC-C 19/3.3-1200	Material: PVC-C Max. Pressure: PN 10 Max. Temperature: 80°C		1/16 (0.06) 7/6 (0.16) 19/3.3 (0.24) 37/2 (0.28)	
M1-PVC-C 37/3.8-1200	Material: PVC-C Max. Pressure: PN 10 Max. Temperature: 80°C		19/6 (0.43) 37/3.8 (0.53) 61/2.5 (0.58)	
M1-PVC-C 85/3.3-1200	Material: PVC-C Max. Pressure: PN 10 Max. Temperature: 80°C		19/8 (0.58) 85/3.3 (1.06)	

SURVEY

Technical data of atech Al₂O₃- membranes

Support material	α-Al ₂ O ₃	
Membrane material	MF: α-Al ₂ O ₃ ; ZrO ₂ ; TiO ₂	UF: TiO ₂ ; ZrO ₂ ; Al ₂ O ₃
Pore diameter / Molecular Weight Cut Off	1.2; 0.8; 0.4; 0.2; 0.1 μm	0.05 μm; 150kD; 100kD; 20kD; 10kD; 5kD; 1kD
Overall length	up to 1500 mm	
pH- stability	0 to 14	
All membrane designs are suitable for steam sterilisation ≥ 121°C / 249.8° F.		

Type	Design (mm)	Amount of channels	Length (mm)	Filter surface per element (m ²)	Illustration
1/6		1	1000	approx. 0.019	
			1200	approx. 0.023	
1/16		1	1000	approx. 0.05	
			1200	approx. 0.06	
7/6		7	1000	approx. 0.13	
			1200	approx. 0.16	
19/3.3		19	1000	approx. 0.20	
			1200	approx. 0.24	
37/2		37	1000	approx. 0.23	
			1200	approx. 0.28	
19/4		19	1000	approx. 0.24	
			1200	approx. 0.29	



GENERAL INFORMATION

atech tubular ceramic membranes meet regulatory requirements for food contact according European Regulation no. 1935/2004 and FDA requirements 21 CFR, 170-199. atech crossflow membranes modules are authorized to bear the 3-A symbol for complying fully with the 3-A Sanitary Standard (certificate no. 1680)



Type	Design (mm)	Amount of channels	Standard length (mm)*	Filter surface per element (m ²)	Illustration
19/6		19	1200	approx. 0.43	
			1500	approx. 0.54	
37/3.8		37	1200	approx. 0.53	
			1500	approx. 0.67	
61/2.5		61	1200	approx. 0.58	
			1500	approx. 0.72	
19/8		19	1200	approx. 0.57	
			1500	approx. 0.72	
85/3.3		85	1200	approx. 1.06	
			1500	approx. 1.32	
211/2		211	1200	approx. 1.59	
			1500	approx. 1.99	

* other lengths on request



■ **OVERALL VIEW**

Technical data of atech standard pressure vessels

Material	Stainless steel of diverse ranges, 316 Ti/AISI (1.4571) and 316 L/AISI (1.4404)
Filter surfaces	From 0.05 m ² to approx. 40 m ² per vessel
Pressure rating	PN 10
Max. Temperature	110°C
Overall length	up to 1500 mm
Fittings	dairy couplings/threaded fittings
Sealings	sanitary design (o-ring with cone sealing) , industrial design (o-ring)
We will also manufacture customized vessels for your particular needs (like high pressure design).	

■ **ENGINEERING**

The scope of our activities includes planning, design, calculation and manufacturing according to different regulations and directives, such as:

AD 2000-HP 0

German regulations concerning the principles for design, manufacture and the related inspections of pressure vessels.

97/23/EG

European Pressure Equipment Directive concerning the principles for design, manufacture and the related inspections of pressure vessels.

ASME BPVC, Section VIII

Boiler and Pressure Vessel Code according the American Society of Mechanical Engineers concerning the principles for design, manufacture and the related inspections of pressure vessels.

DIN EN ISO 3834-3

German quality requirements for fusion welding for metallic material

■ **RETROFIT**

Upgrading existing membranes for more competitiveness

If your prime goal is to upgrade an existing membrane, to extend its service life significantly or to optimize its filtration quality substantially, we are the specialists you are looking for.

Our range of products includes different adapters and equipment which enable us to fit out and retrofit membranes from other manufacturers without problems. We ensure that our membranes again deliver best possible filtration results.

■ **SERVICE**

please contact us for further information

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