



Sanitary mixflo multitube serie

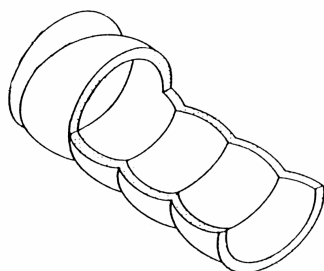
CORRUGATED TUBULAR HEAT EXCHANGERS

MULTITUBE SANITARY SERIE

MIXFLO



Sanitary mixflo multitube serie



THE CORRUGATION

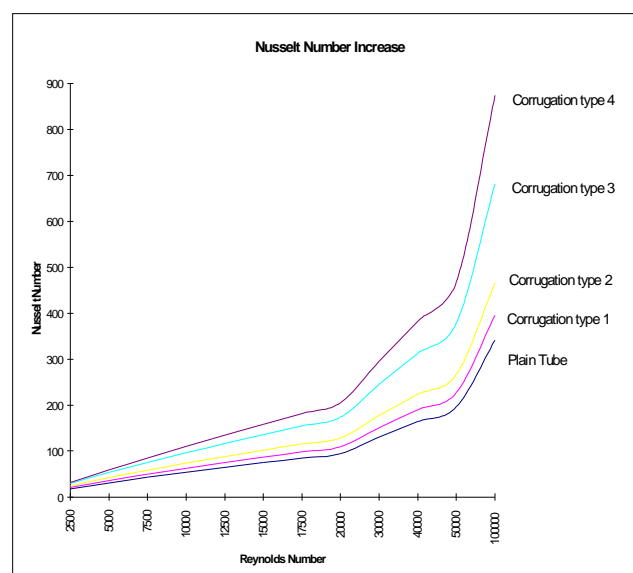
Corrugation is a particular processing applied on plain tubes to induce dynamic turbulence during the liquids flowing allowing thermal exchange optimization.

With corrugated tubes the thermal exchange efficiency can be enhanced by 40% up to 90% according to the following parameters:

- type of product
- selected profile
- type of application

ADVANTAGES

- reduced exchange surfaces
- reduced contact and standing product time inside the element
- reduced washing time thanks to a higher action produced by turbulence
- vertical or horizontal installation
- working possibilities with high pressures and temperatures
- gaskets-free design so lower maintenance costs
- easy to install and exchanger modularity



Sanitary mixflo multitube serie

The Multitube MIXFLO Heat Exchanger is manufactured by small diameter tubes fitted inside an external jacket and welded from one end to the other.

The product to be thermally processed flows inside the smaller tube while service fluid flows inside the (external) jacket.

Multitube MIXFLO Heat Exchanger is fully welded.

Application range

Particularly suited for thermal exchange process of products having a low or medium viscosity even with particulates.

Standard materials

Stainless steel AISI 304 / 316 L
(Other kind of materials are available on request)

Finishing

Product side Ra < 0.8 µm

Standard pressure project

10 bar
(Higher pressures are available depending on utilized connections)

Standard temperature project

184°C

Connections

DIN-CLAMP-SMS-BS-FLANGE

Options

Monotube Heat Exchanger can be supplied disassembled

Every exchanger is in accordance with 97/23/CE Directive (PED)



Sanitary mixflo multitube serie

Codification

MLW	76	7	18	1	3000	F	D	-	A	A
									Material	
									Product / Service	
									A - EN 1.4301 - AISI 304	
									B - EN 1.4404 - AISI 316 L	
									Gaskets Material	
									S - SILICONE	
									V - VITON	
									N - NBR	
									E - EPDM	
									T - TEFLON	
									- GASKET'S NOT INCLUDED	
									Element connections	
									Product	
									Service	
									F - FLANGE EN - ANSI	
									D - DIN 11851 - DIN 11864 - 1	
									C - CLAMP ISO 2852 - ASME BPE	
									- DIN 11864 - 2 - 3	
									- DIN 32676	
									S - SMS	
									B - BRITISH STANDARD MILK	
									A - WELDING CONNECTION	
									F - FLANGE EN - ANSI	
									G - GAS UNI 338 - RJT	
									Lenght [mm]	
									Expansion joint	
									0 - Excluded	
									1 - Included	
									Product diameter [mm]	
									Inner tubes number	
									Sheet diameter [mm]	
Multitube version										
MLW - Total welded version										
MLD - Disassembly version										



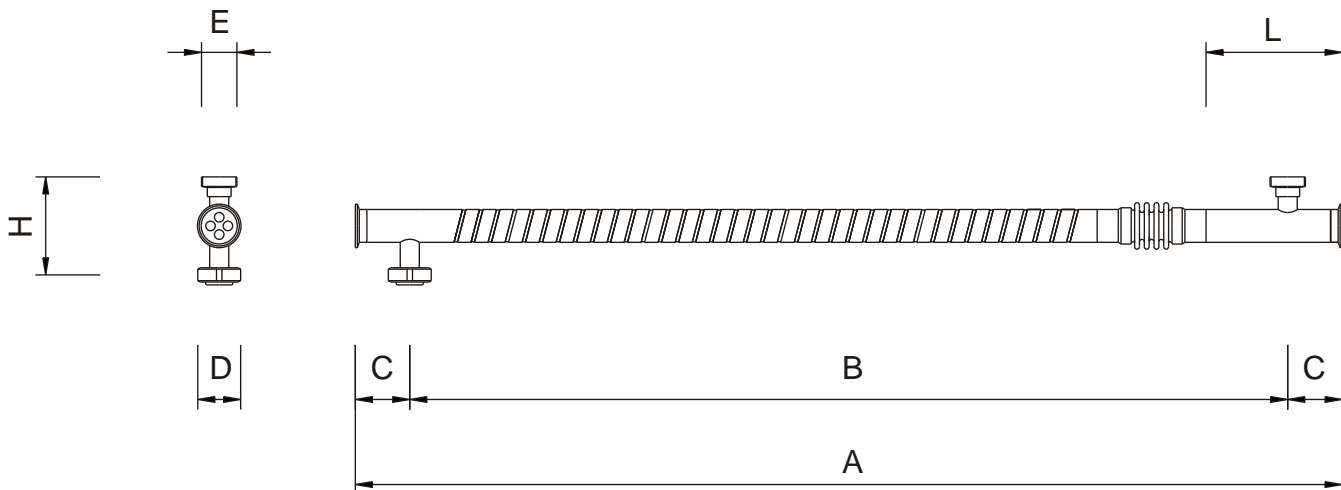
MODEL	SHELL VOLUME [litres]	TUBES VOLUME [litres]	EXCHANGE AREA [m ²]	SHELL SECTION [mm ²]	TUBES SECTION [mm ²]	WEIGHT [kg]
MLW 48 4 16 1 1000	0.78	0.56	0.18	807.46	615.75	4.2
MLW 48 4 16 1 1500	1.19	0.87	0.28	807.46	615.75	5.8
MLW 48 4 16 1 2000	1.59	1.18	0.38	807.46	615.75	7.4
MLW 48 4 16 1 3000	2.40	1.79	0.59	807.46	615.75	10.6
MLW 48 4 16 1 6000	4.82	3.64	1.19	807.46	615.75	20.2

Category calculation for second group's fluids - Gas, melted gas and liquids with a steam tension at maximum temperature > 0.5 bar

Article 3.3 1st Category 2nd Category

MODEL	VOLUME [litres]	PRESSURE [bar] *												
		1	2	3	4	5	6	7	8	9	10	11	12	
MLW 48 4 16 1 1000	Shell / Tubes													
MLW 48 4 16 1 1500	Shell / Tubes													
MLW 48 4 16 1 2000	Shell / Tubes													
MLW 48 4 16 1 3000	Shell / Tubes													
MLW 48 4 16 1 6000	Shell / Tubes										10.3			

* for higher pressure contact MBS



MODEL	DIMENSIONS [mm]						
	A	B	C	D	E	H	L
MLW 48 4 16 1 1000	950	790	80	DIN 11851 DN 50 F CLAMP 2" more connections on demand	DIN 11851 DN 25 M/F CLAMP 1" more connections on demand	144	200
MLW 48 4 16 1 1500	1450	1290					
MLW 48 4 16 1 2000	1950	1790					
MLW 48 4 16 1 3000	2950	2790					
MLW 48 4 16 1 6000	5950	5790					

Not binding technical datas; may be modified by the Manufactures without advise



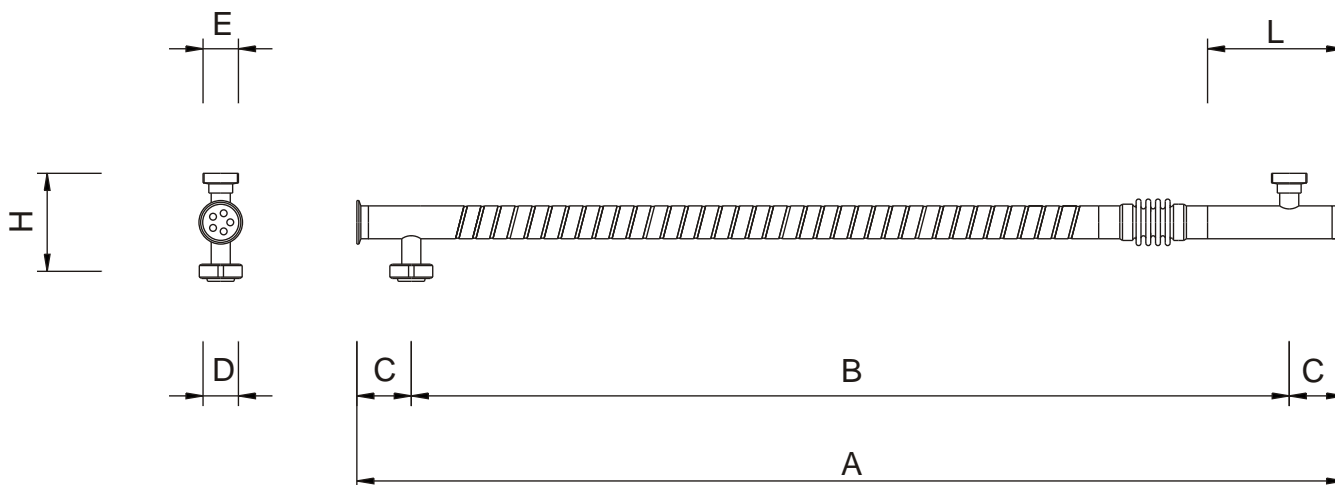
MODEL	SHELL VOLUME [litres]	TUBES VOLUME [litres]	EXCHANGE AREA [m ²]	SHELL SECTION [mm ²]	TUBES SECTION [mm ²]	WEIGHT [kg]
MLW 48 5 12 1 1000	1.00	0.36	0.17	1046.22	392.70	4.1
MLW 48 5 12 1 1500	1.52	0.55	0.27	1046.22	392.70	5.6
MLW 48 5 12 1 2000	2.05	0.75	0.36	1046.22	392.70	7.2
MLW 48 5 12 1 3000	3.09	1.14	0.55	1046.22	392.70	10.3
MLW 48 5 12 1 6000	6.23	2.32	1.11	1046.22	392.70	19.5

Category calculation for second group's fluids - Gas, melted gas and liquids with a steam tension at maximum temperature > 0.5 bar

Article 3.3 1st Category 2nd Category

MODEL	VOLUME [litres]	PRESSURE [bar] *											
		1	2	3	4	5	6	7	8	9	10	11	12
MLW 48 5 12 1 1000	Shell / Tubes												
MLW 48 5 12 1 1500	Shell / Tubes												
MLW 48 5 12 1 2000	Shell / Tubes												
MLW 48 5 12 1 3000	Shell / Tubes												
MLW 48 5 12 1 6000	Shell / Tubes							8.0					

* for higher pressure contact MBS



MODEL	DIMENSIONS [mm]						
	A	B	C	D	E	H	L
MLW 48 5 12 1 1000	950	790	80	DIN 11851 DN 50 F CLAMP 2"	DIN 11851 DN 25 M/F CLAMP 1"	144	200
MLW 48 5 12 1 1500	1450	1290					
MLW 48 5 12 1 2000	1950	1790					
MLW 48 5 12 1 3000	2950	2790					
MLW 48 5 12 1 6000	5950	5790					

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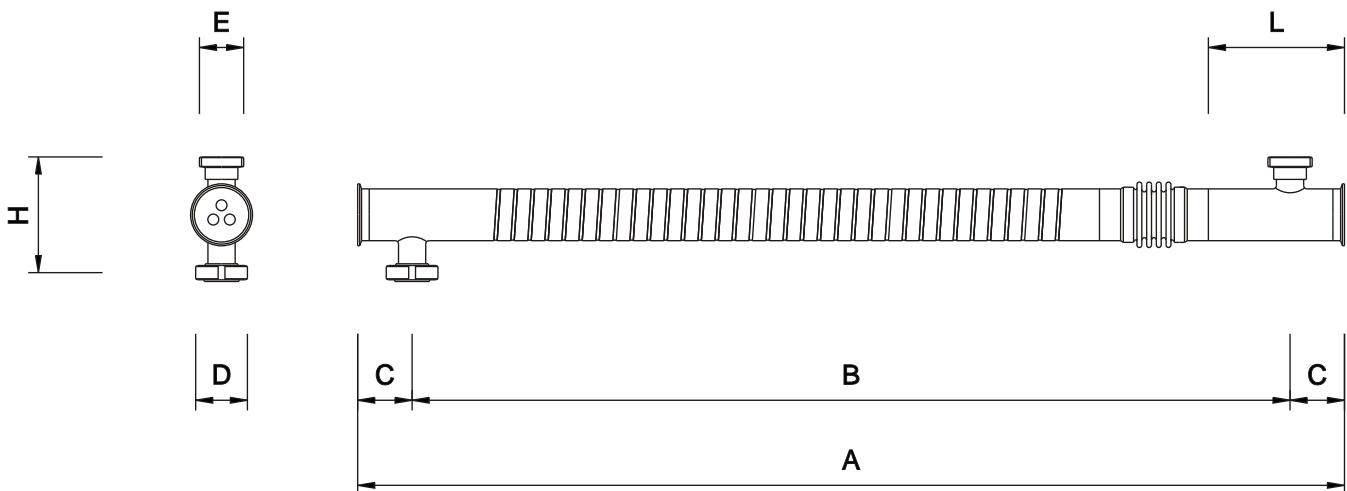
MODEL	SHELL VOLUME [litres]	TUBES VOLUME [litres]	EXCHANGE AREA [m ²]	SHELL SECTION [mm ²]	TUBES SECTION [mm ²]	WEIGHT [kg]
MLW 60 3 16 1 1000	1.89	0.42	0.14	1975.50	461.81	5.0
MLW 60 3 16 1 1500	2.88	0.65	0.21	1975.50	461.81	6.6
MLW 60 3 16 1 2000	3.86	0.88	0.29	1975.50	461.81	8.3
MLW 60 3 16 1 3000	5.84	1.34	0.44	1975.50	461.81	11.5
MLW 60 3 16 1 6000	11.77	2.73	0.89	1975.50	461.81	21.4

Category calculation for second group's fluids - Gas, melted gas and liquids with a steam tension at maximum temperature > 0.5 bar

Article 3.3 1st Category 2nd Category

MODEL	VOLUME [litres]	PRESSURE [bar] *												
		1	2	3	4	5	6	7	8	9	10	11	12	
MLW 60 3 16 1 1000	Shell / Tubes													
MLW 60 3 16 1 1500	Shell / Tubes													
MLW 60 3 16 1 2000	Shell / Tubes												12.9	
MLW 60 3 16 1 3000	Shell / Tubes								8.5					
MLW 60 3 16 1 6000	Shell / Tubes				4.2									

* for higher pressure contact MBS



MODEL	DIMENSIONS [mm]						
	A	B	C	D	E	H	L
MLW 60 3 16 1 1000	950	790	80	DIN 11851 DN 65 F CLAMP 2" ½ more connections on demand	DIN 11851 DN 40 M/F CLAMP 1" ½ more connections on demand	170	200
MLW 60 3 16 1 1500	1450	1290					
MLW 60 3 16 1 2000	1950	1790					
MLW 60 3 16 1 3000	2950	2790					
MLW 60 3 16 1 6000	5950	5790					

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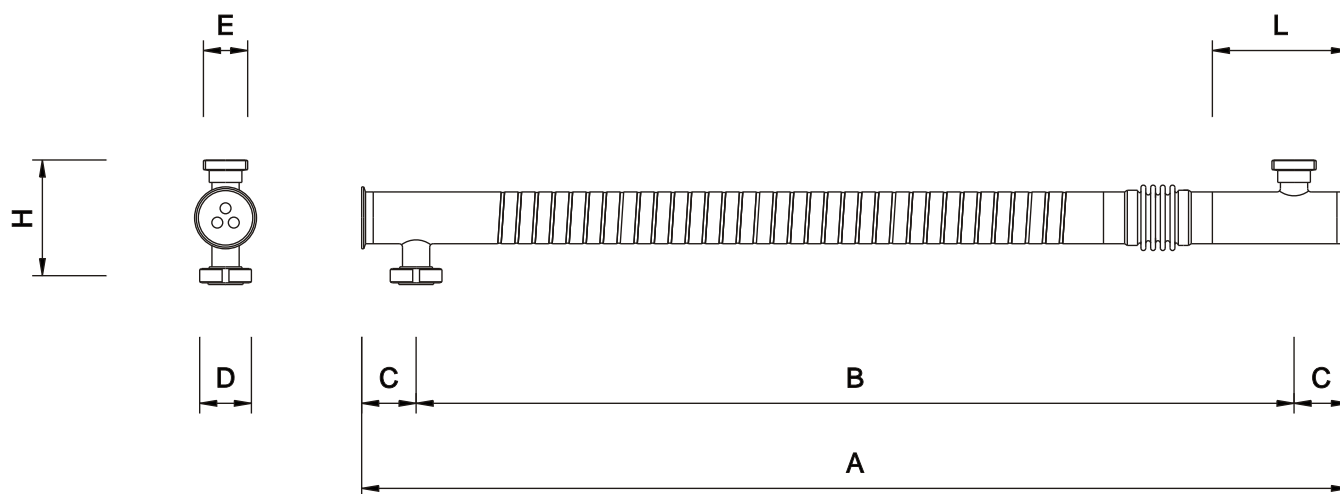
MODEL	SHELL VOLUME [litres]	TUBES VOLUME [litres]	EXCHANGE AREA [m ²]	SHELL SECTION [mm ²]	TUBES SECTION [mm ²]	WEIGHT [kg]
MLW 60 3 18 1 1000	1.77	0.55	0.15	1815.28	603.19	5.1
MLW 60 3 18 1 1500	2.68	0.85	0.24	1815.28	603.19	6.8
MLW 60 3 18 1 2000	3.59	1.15	0.32	1815.28	603.19	8.6
MLW 60 3 18 1 3000	5.40	1.76	0.49	1815.28	603.19	12.0
MLW 60 3 18 1 6000	10.85	3.56	1.00	1815.28	603.19	22.2

Category calculation for second group's fluids - Gas, melted gas and liquids with a steam tension at maximum temperature > 0.5 bar

Article 3.3 1st Category 2nd Category

MODEL	VOLUME [litres]	PRESSURE [bar] *														
		1	2	3	4	5	6	7	8	9	10	11	12			
MLW 60 3 18 1 1000	Shell / Tubes															
MLW 60 3 18 1 1500	Shell / Tubes															
MLW 60 3 18 1 2000	Shell / Tubes															
MLW 60 3 18 1 3000	Shell / Tubes									9.2						
MLW 60 3 18 1 6000	Shell / Tubes				4.6											

* for higher pressure contact MBS



MODEL	DIMENSIONS [mm]						
	A	B	C	D	E	H	L
MLW 60 3 18 1 1000	950	790	80	DIN 11851 DN 65 F CLAMP 2" ½ more connections on demand	DIN 11851 DN 40 M/F CLAMP 1" ½ more connections on demand	170	200
MLW 60 3 18 1 1500	1450	1290					
MLW 60 3 18 1 2000	1950	1790					
MLW 60 3 18 1 3000	2950	2790					
MLW 60 3 18 1 6000	5950	5790					

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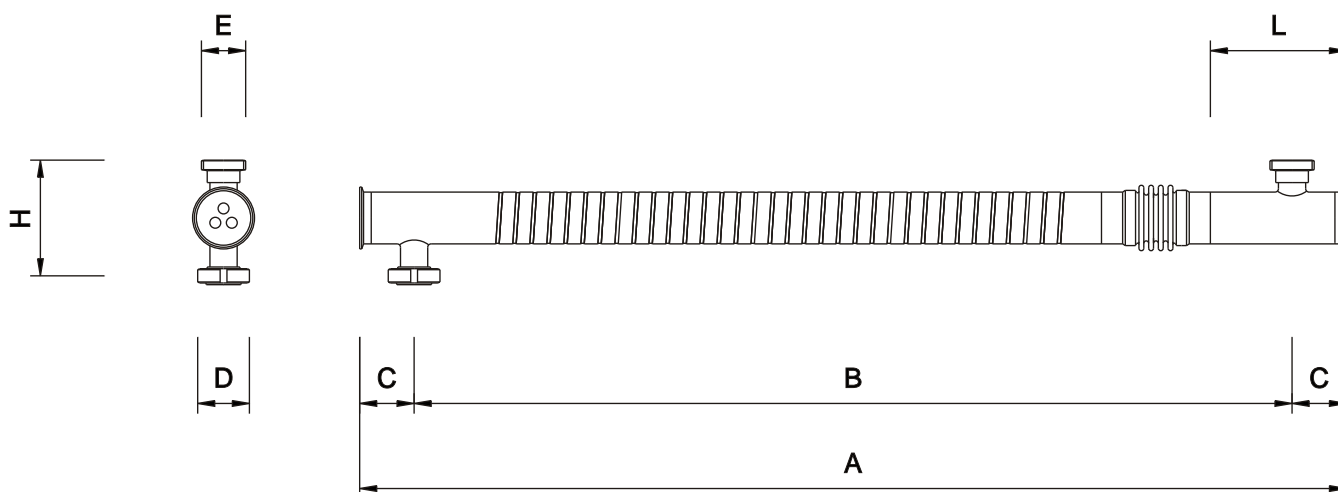
MODEL	SHELL VOLUME [litres]	TUBES VOLUME [litres]	EXCHANGE AREA [m ²]	SHELL SECTION [mm ²]	TUBES SECTION [mm ²]	WEIGHT [kg]
MLW 60 3 20 1 1000	1.61	0.69	0.17	1636.21	763.41	5.3
MLW 60 3 20 1 1500	2.43	1.08	0.27	1636.21	763.41	7.0
MLW 60 3 20 1 2000	3.24	1.46	0.36	1636.21	763.41	8.8
MLW 60 3 20 1 3000	4.88	2.22	0.55	1636.21	763.41	12.4
MLW 60 3 20 1 6000	9.79	4.51	1.11	1636.21	763.41	23.1

Category calculation for second group's fluids - Gas, melted gas and liquids with a steam tension at maximum temperature > 0.5 bar

Article 3.3 1st Category 2nd Category

MODEL	VOLUME [litres]	PRESSURE [bar] *														
		1	2	3	4	5	6	7	8	9	10	11	12			
MLW 60 3 20 1 1000	Shell / Tubes															
MLW 60 3 20 1 1500	Shell / Tubes															
MLW 60 3 20 1 2000	Shell / Tubes															
MLW 60 3 20 1 3000	Shell / Tubes										10.2					
MLW 60 3 20 1 6000	Shell / Tubes					5.1									11	

* for higher pressure contact MBS



MODEL	DIMENSIONS [mm]						
	A	B	C	D	E	H	L
MLW 60 3 20 1 1000	950	790	80	DIN 11851 DN 65 F CLAMP 2" ½ more connections on demand	DIN 11851 DN 40 M/F CLAMP 1" ½ more connections on demand	170	200
MLW 60 3 20 1 1500	1450	1290					
MLW 60 3 20 1 2000	1950	1790					
MLW 60 3 20 1 3000	2950	2790					
MLW 60 3 20 1 6000	5950	5790					

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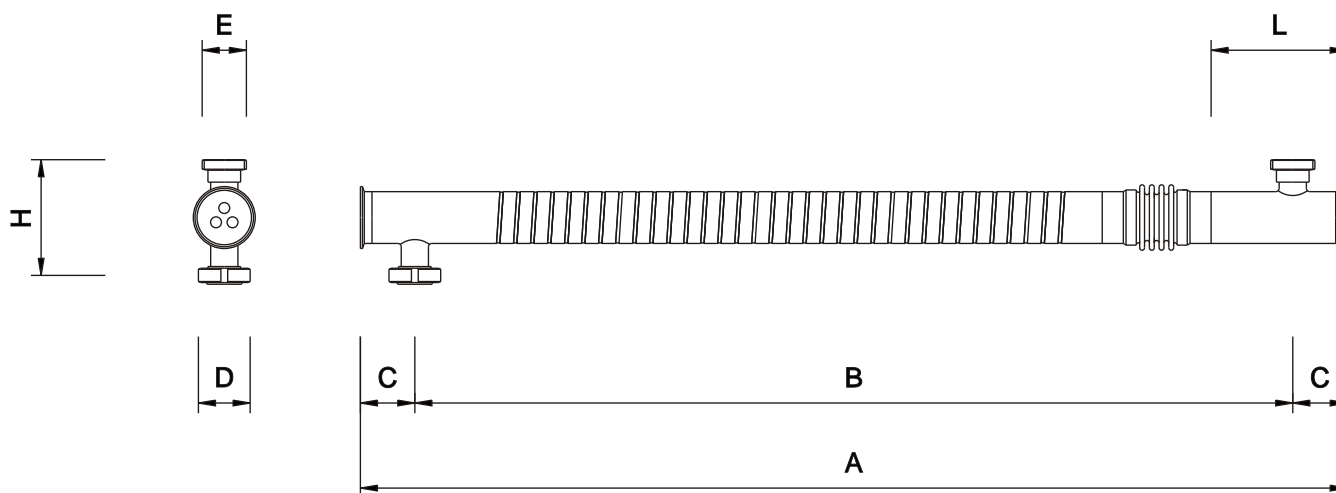
MODEL	SHELL VOLUME [litres]	TUBES VOLUME [litres]	EXCHANGE AREA [m ²]	SHELL SECTION [mm ²]	TUBES SECTION [mm ²]	WEIGHT [kg]
MLW 60 3 22 1 1000	1.43	0.86	0.19	1438.29	942.48	5.4
MLW 60 3 22 1 1500	2.15	1.33	0.29	1438.29	942.48	7.3
MLW 60 3 22 1 2000	2.87	1.80	0.40	1438.29	942.48	9.1
MLW 60 3 22 1 3000	4.30	2.74	0.60	1438.29	942.48	12.8
MLW 60 3 22 1 6000	8.62	5.57	1.23	1438.29	942.48	24.0

Category calculation for second group's fluids - Gas, melted gas and liquids with a steam tension at maximum temperature > 0.5 bar

Article 3.3 1st Category 2nd Category

MODEL	VOLUME [litres]	PRESSURE [bar] *												
		1	2	3	4	5	6	7	8	9	10	11	12	
MLW 60 3 22 1 1000	Shell / Tubes													
MLW 60 3 22 1 1500	Shell / Tubes													
MLW 60 3 22 1 2000	Shell / Tubes													
MLW 60 3 22 1 3000	Shell / Tubes											11.6		
MLW 60 3 22 1 6000	Shell / Tubes					5.8				8.9				

* for higher pressure contact MBS



MODEL	DIMENSIONS [mm]						
	A	B	C	D	E	H	L
MLW 60 3 22 1 1000	950	790	80	DIN 11851 DN 65 F CLAMP 2" ½ more connections on demand	DIN 11851 DN 40 M/F CLAMP 1" ½ more connections on demand	170	200
MLW 60 3 22 1 1500	1450	1290					
MLW 60 3 22 1 2000	1950	1790					
MLW 60 3 22 1 3000	2950	2790					
MLW 60 3 22 1 6000	5950	5790					

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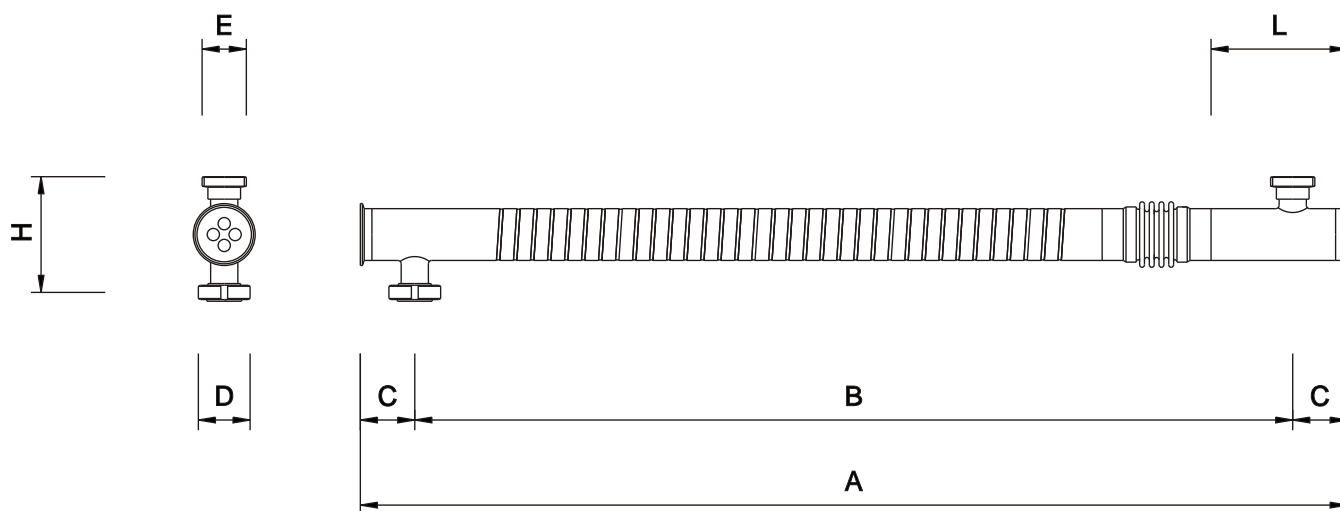
MODEL	SHELL VOLUME [litres]	TUBES VOLUME [litres]	EXCHANGE AREA [m ²]	SHELL SECTION [mm ²]	TUBES SECTION [mm ²]	WEIGHT [kg]
MLW 60 4 16 1 1000	1.73	0.56	0.18	1774.44	615.75	5.3
MLW 60 4 16 1 1500	2.62	0.87	0.28	1774.44	615.75	7.2
MLW 60 4 16 1 2000	3.51	1.18	0.38	1774.44	615.75	9.0
MLW 60 4 16 1 3000	5.28	1.79	0.59	1774.44	615.75	12.6
MLW 60 4 16 1 6000	10.60	3.64	1.19	1774.44	615.75	23.5

Category calculation for second group's fluids - Gas, melted gas and liquids with a steam tension at maximum temperature > 0.5 bar

Article 3.3 1st Category 2nd Category

MODEL	VOLUME [litres]	PRESSURE [bar] *														
		1	2	3	4	5	6	7	8	9	10	11	12			
MLW 60 4 16 1 1000	Shell / Tubes															
MLW 60 4 16 1 1500	Shell / Tubes															
MLW 60 4 16 1 2000	Shell / Tubes															
MLW 60 4 16 1 3000	Shell / Tubes									9.4						
MLW 60 4 16 1 6000	Shell / Tubes				4.7											

* for higher pressure contact MBS



MODEL	DIMENSIONS [mm]						
	A	B	C	D	E	H	L
MLW 60 4 16 1 1000	950	790	80	DIN 11851 DN 65 F CLAMP 2" ½ more connections on demand	DIN 11851 DN 40 M/F CLAMP 1" ½ more connections on demand	170	200
MLW 60 4 16 1 1500	1450	1290					
MLW 60 4 16 1 2000	1950	1790					
MLW 60 4 16 1 3000	2950	2790					
MLW 60 4 16 1 6000	5950	5790					

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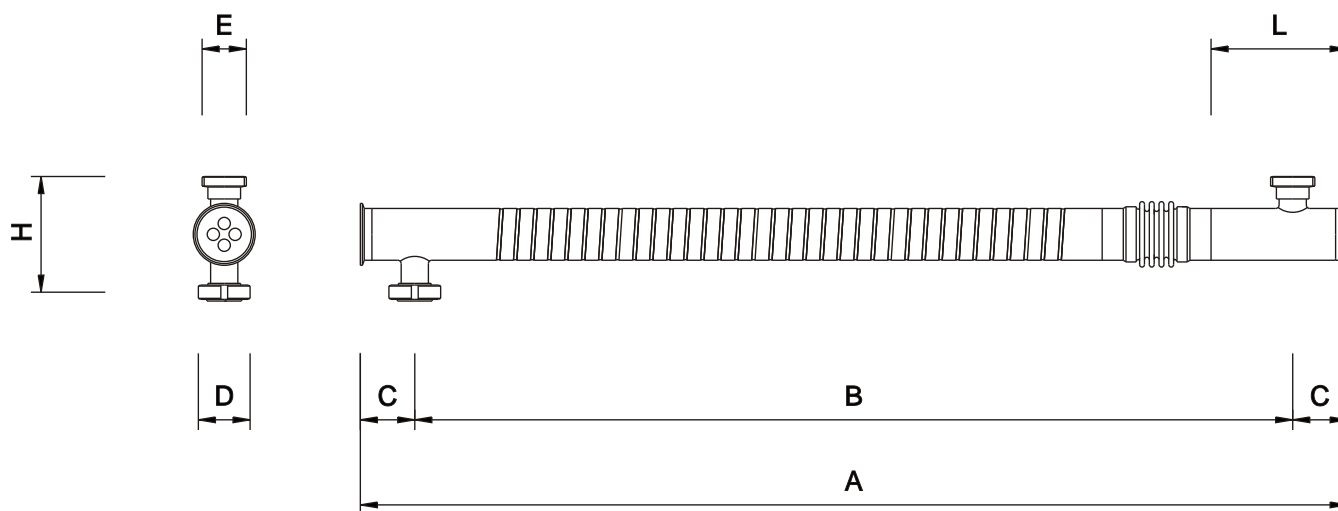
MODEL	SHELL VOLUME [litres]	TUBES VOLUME [litres]	EXCHANGE AREA [m ²]	SHELL SECTION [mm ²]	TUBES SECTION [mm ²]	WEIGHT [kg]
MLW 60 4 18 1 1000	1.54	0.73	0.21	1560.81	804.25	5.5
MLW 60 4 18 1 1500	2.32	1.13	0.32	1560.81	804.25	7.4
MLW 60 4 18 1 2000	3.10	1.54	0.43	1560.81	804.25	9.4
MLW 60 4 18 1 3000	4.66	2.34	0.66	1560.81	804.25	13.2
MLW 60 4 18 1 6000	9.34	4.75	1.34	1560.81	804.25	24.7

Category calculation for second group's fluids - Gas, melted gas and liquids with a steam tension at maximum temperature > 0.5 bar

Article 3.3 1st Category 2nd Category

MODEL	VOLUME [litres]	PRESSURE [bar] *															
		1	2	3	4	5	6	7	8	9	10	11	12				
MLW 60 4 18 1 1000	Shell / Tubes																
MLW 60 4 18 1 1500	Shell / Tubes																
MLW 60 4 18 1 2000	Shell / Tubes																
MLW 60 4 18 1 3000	Shell / Tubes												10.7				
MLW 60 4 18 1 6000	Shell / Tubes					5.3								10.5			

* for higher pressure contact MBS



MODEL	DIMENSIONS [mm]						
	A	B	C	D	E	H	L
MLW 60 4 18 1 1000	950	790	80	DIN 11851 DN 65 F CLAMP 2" ½ more connections on demand	DIN 11851 DN 40 M/F CLAMP 1" ½ more connections on demand	170	200
MLW 60 4 18 1 1500	1450	1290					
MLW 60 4 18 1 2000	1950	1790					
MLW 60 4 18 1 3000	2950	2790					
MLW 60 4 18 1 6000	5950	5790					

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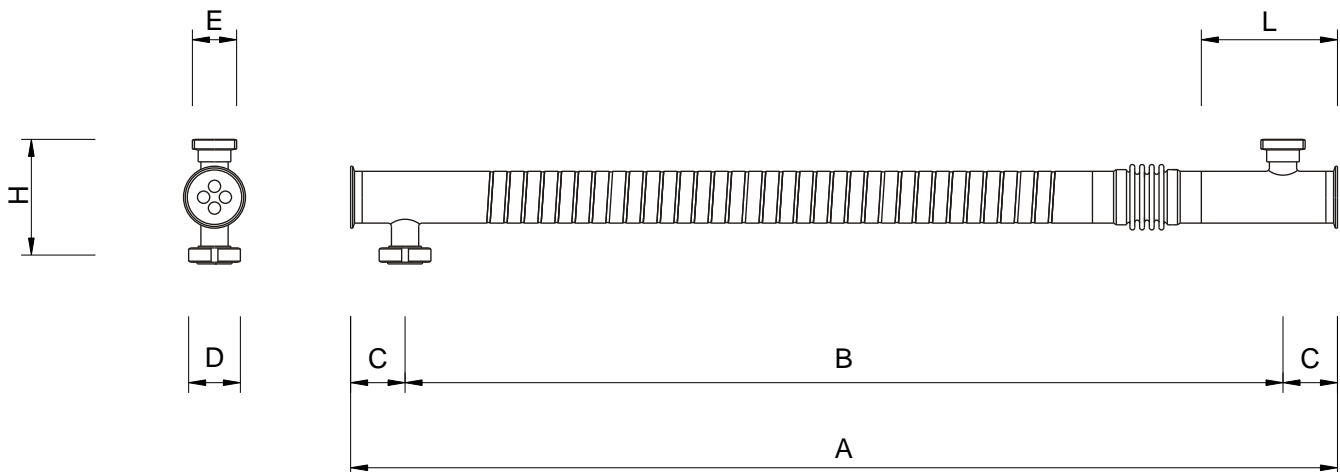
MODEL	SHELL VOLUME [litres]	TUBES VOLUME [litres]	EXCHANGE AREA [m ²]	SHELL SECTION [mm ²]	TUBES SECTION [mm ²]	WEIGHT [kg]
MLW 60 4 20 1 1000	1.32	0.93	0.23	1322.05	1017.88	5.7
MLW 60 4 20 1 1500	1.98	1.44	0.35	1322.05	1017.88	7.7
MLW 60 4 20 1 2000	2.64	1.94	0.48	1322.05	1017.88	9.7
MLW 60 4 20 1 3000	3.97	2.96	0.73	1322.05	1017.88	13.8
MLW 60 4 20 1 6000	7.93	6.02	1.49	1322.05	1017.88	25.9

Category calculation for second group's fluids - Gas, melted gas and liquids with a steam tension at maximum temperature > 0.5 bar

Article 3.3 1st Category 2nd Category

MODEL	VOLUME [litres]	PRESSURE [bar] *												
		1	2	3	4	5	6	7	8	9	10	11	12	
MLW 60 4 20 1 1000	Shell / Tubes													
MLW 60 4 20 1 1500	Shell / Tubes													
MLW 60 4 20 1 2000	Shell / Tubes													
MLW 60 4 20 1 3000	Shell / Tubes													12.5
MLW 60 4 20 1 6000	Shell / Tubes						6.3		8.3					

* for higher pressure contact MBS



MODEL	DIMENSIONS [mm]						
	A	B	C	D	E	H	L
MLW 60 4 20 1 1000	950	790	80	DIN 11851 DN 65 F CLAMP 2" ½ more connections on demand	DIN 11851 DN 40 M/F CLAMP 1" ½ more connections on demand	170	200
MLW 60 4 20 1 1500	1450	1290					
MLW 60 4 20 1 2000	1950	1790					
MLW 60 4 20 1 3000	2950	2790					
MLW 60 4 20 1 6000	5950	5790					

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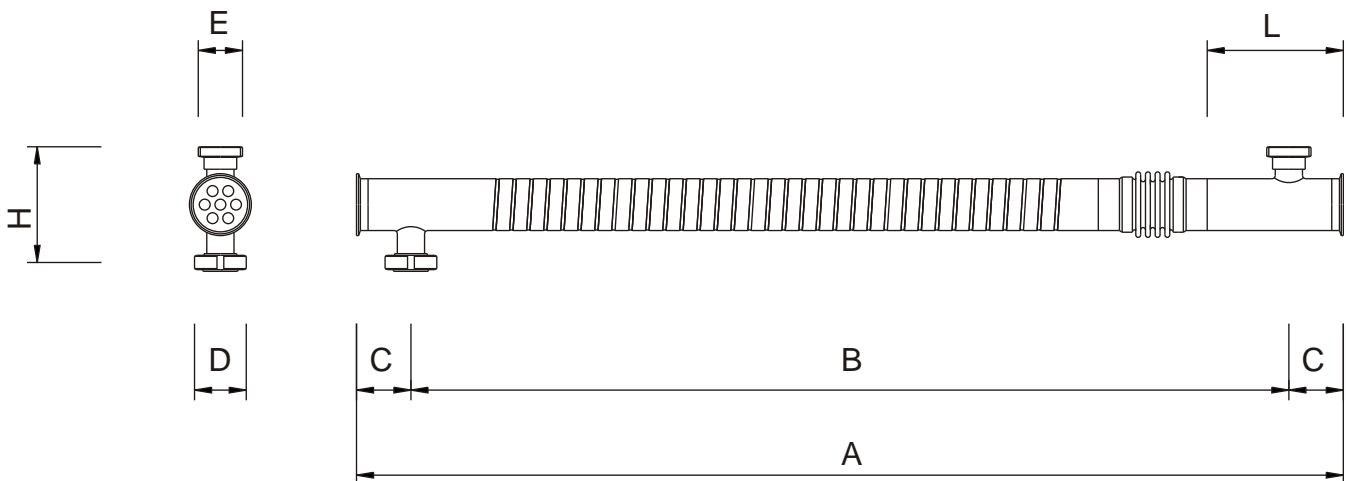
MODEL	SHELL VOLUME [litres]	TUBES VOLUME [litres]	EXCHANGE AREA [m ²]	SHELL SECTION [mm ²]	TUBES SECTION [mm ²]	WEIGHT [kg]
MLW 60 7 12 1 1000	1.74	0.50	0.24	1787.01	549.78	5.7
MLW 60 7 12 1 1500	2.64	0.78	0.37	1787.01	549.78	7.7
MLW 60 7 12 1 2000	3.53	1.05	0.50	1787.01	549.78	9.8
MLW 60 7 12 1 3000	5.32	1.60	0.77	1787.01	549.78	13.8
MLW 60 7 12 1 6000	10.68	3.25	1.56	1787.01	549.78	26.0

Category calculation for second group's fluids - Gas, melted gas and liquids with a steam tension at maximum temperature > 0.5 bar

Article 3.3 1st Category 2nd Category

MODEL	VOLUME [litres]	PRESSURE [bar] *															
		1	2	3	4	5	6	7	8	9	10	11	12				
MLW 60 7 12 1 1000	Shell / Tubes																
MLW 60 7 12 1 1500	Shell / Tubes																
MLW 60 7 12 1 2000	Shell / Tubes																
MLW 60 7 12 1 3000	Shell / Tubes									9.3							
MLW 60 7 12 1 6000	Shell / Tubes				4.6												

* for higher pressure contact MBS



MODEL	DIMENSIONS [mm]						
	A	B	C	D	E	H	L
MLW 60 7 12 1 1000	950	790	80	DIN 11851 DN 65 F CLAMP 2" ½ more connections on demand	DIN 11851 DN 40 M/F CLAMP 1" ½ more connections on demand	170	200
MLW 60 7 12 1 1500	1450	1290					
MLW 60 7 12 1 2000	1950	1790					
MLW 60 7 12 1 3000	2950	2790					
MLW 60 7 12 1 6000	5950	5790					

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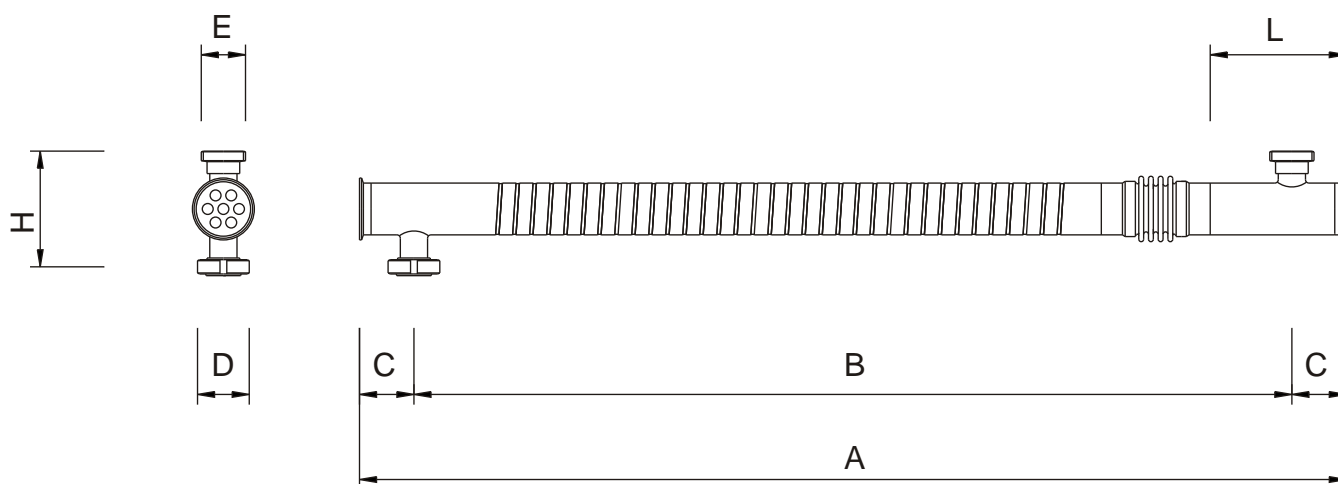
MODEL	SHELL VOLUME [litres]	TUBES VOLUME [litres]	EXCHANGE AREA [m ²]	SHELL SECTION [mm ²]	TUBES SECTION [mm ²]	WEIGHT [kg]
MLW 60 7 16 1 1000	1.18	0.98	0.32	1171.26	1077.57	6.3
MLW 60 7 16 1 1500	1.77	1.52	0.50	1171.26	1077.57	8.7
MLW 60 7 16 1 2000	2.36	2.06	0.67	1171.26	1077.57	11.1
MLW 60 7 16 1 3000	3.53	3.14	1.02	1171.26	1077.57	15.8
MLW 60 7 16 1 6000	7.04	6.37	2.08	1171.26	1077.57	30.1

Category calculation for second group's fluids - Gas, melted gas and liquids with a steam tension at maximum temperature > 0.5 bar

Article 3.3 1st Category 2nd Category

MODEL	VOLUME [litres]	PRESSURE [bar] *															
		1	2	3	4	5	6	7	8	9	10	11	12				
MLW 60 7 16 1 1000	Shell / Tubes																
MLW 60 7 16 1 1500	Shell / Tubes																
MLW 60 7 16 1 2000	Shell / Tubes																
MLW 60 7 16 1 3000	Shell / Tubes																
MLW 60 7 16 1 6000	Shell / Tubes							7.1	7.8								

* for higher pressure contact MBS



MODEL	DIMENSIONS [mm]						
	A	B	C	D	E	H	L
MLW 60 7 16 1 1000	950	790	80	DIN 11851 DN 65 F CLAMP 2" ½ more connections on demand	DIN 11851 DN 40 M/F CLAMP 1" ½ more connections on demand	170	200
MLW 60 7 16 1 1500	1450	1290					
MLW 60 7 16 1 2000	1950	1790					
MLW 60 7 16 1 3000	2950	2790					
MLW 60 7 16 1 6000	5950	5790					

Not binding technical datas; may be modified by the Manufactures without advise



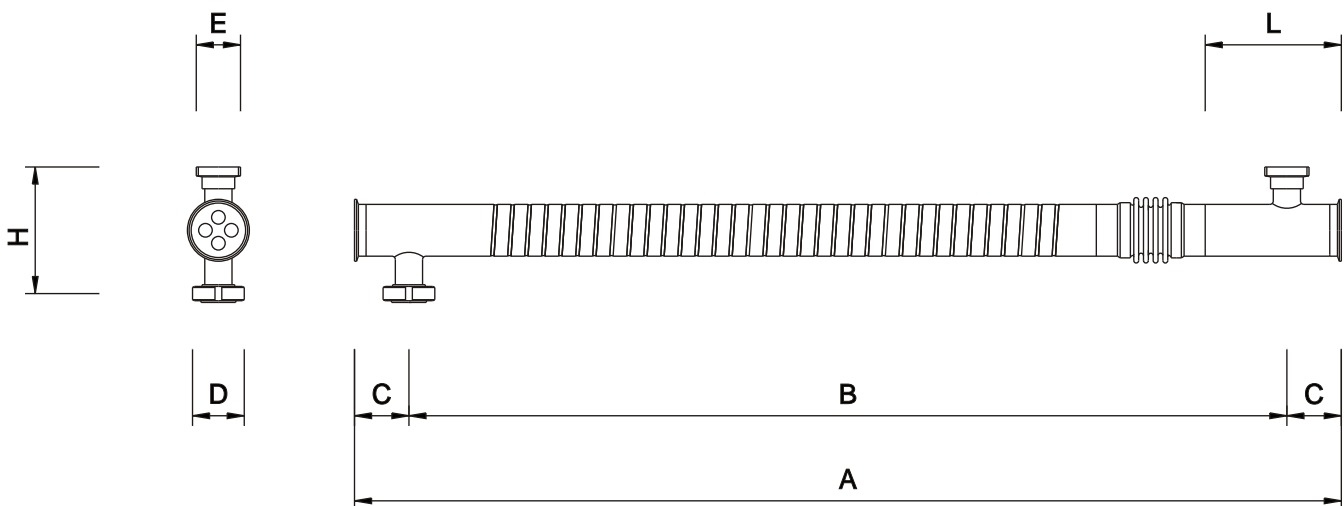
MODEL	SHELL VOLUME [litres]	TUBES VOLUME [litres]	EXCHANGE AREA [m ²]	SHELL SECTION [mm ²]	TUBES SECTION [mm ²]	WEIGHT [kg]
MLW 76 4 16 1 1000	3.29	0.56	0.18	3392.61	615.75	7.1
MLW 76 4 16 1 1500	4.99	0.87	0.28	3392.61	615.75	9.2
MLW 76 4 16 1 2000	6.69	1.18	0.38	3392.61	615.75	11.3
MLW 76 4 16 1 3000	10.08	1.79	0.59	3392.61	615.75	15.5
MLW 76 4 16 1 6000	20.26	3.64	1.19	3392.61	615.75	28.2

Category calculation for second group's fluids - Gas, melted gas and liquids with a steam tension at maximum temperature > 0.5 bar

Article 3.3 1st Category 2nd Category

MODEL	VOLUME [litres]	PRESSURE [bar] *															
		1	2	3	4	5	6	7	8	9	10	11	12				
MLW 76 4 16 1 1000	Shell / Tubes																
MLW 76 4 16 1 1500	Shell / Tubes										10.0						
MLW 76 4 16 1 2000	Shell / Tubes							7.4									
MLW 76 4 16 1 3000	Shell / Tubes				4.9												
MLW 76 4 16 1 6000	Shell / Tubes		2.4								9.8						

* for higher pressure contact MBS



MODEL	DIMENSIONS [mm]						
	A	B	C	D	E	H	L
MLW 76 4 16 1 1000	950	790	80	DIN 11851 DN 80 F CLAMP 3"	DIN 11851 DN 40-50 M/F CLAMP 2"	186	200
MLW 76 4 16 1 1500	1450	1290					
MLW 76 4 16 1 2000	1950	1790					
MLW 76 4 16 1 3000	2950	2790					
MLW 76 4 16 1 6000	5950	5790					

Not binding technical datas; may be modified by the Manufactures without advise



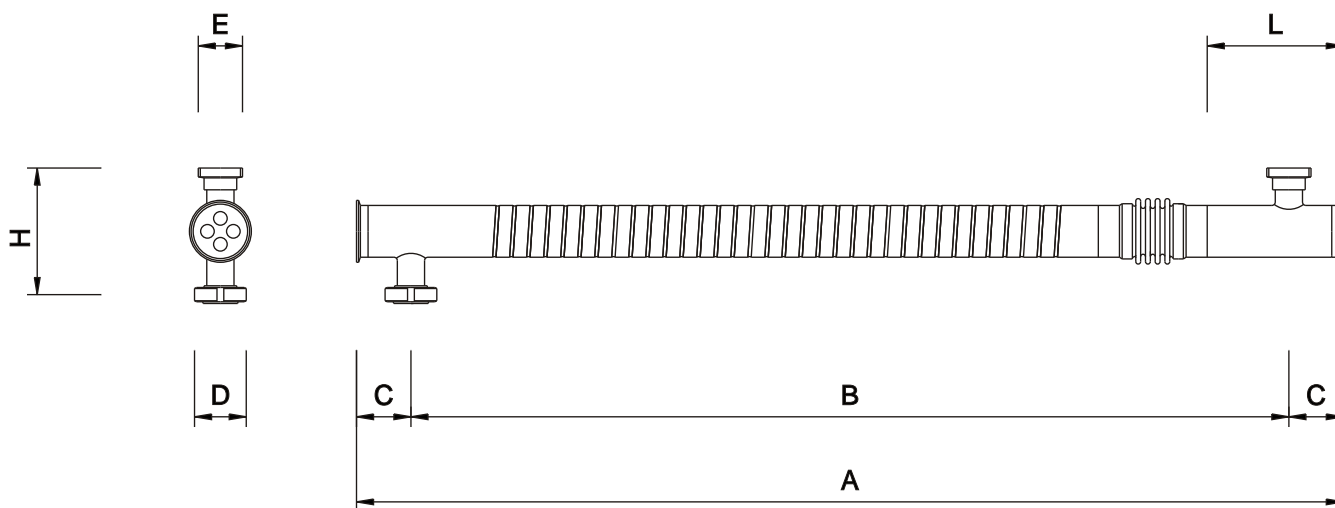
MODEL	SHELL VOLUME [litres]	TUBES VOLUME [litres]	EXCHANGE AREA [m ²]	SHELL SECTION [mm ²]	TUBES SECTION [mm ²]	WEIGHT [kg]
MLW 76 4 18 1 1000	3.10	0.73	0.21	3178.99	804.25	7.2
MLW 76 4 18 1 1500	4.69	1.13	0.32	3178.99	804.25	9.4
MLW 76 4 18 1 2000	6.28	1.54	0.43	3178.99	804.25	11.7
MLW 76 4 18 1 3000	9.46	2.34	0.66	3178.99	804.25	16.1
MLW 76 4 18 1 6000	19.00	4.75	1.34	3178.99	804.25	29.3

Category calculation for second group's fluids - Gas, melted gas and liquids with a steam tension at maximum temperature > 0.5 bar

Article 3.3 1st Category 2nd Category

MODEL	VOLUME [litres]	PRESSURE [bar] *														
		1	2	3	4	5	6	7	8	9	10	11	12			
MLW 76 4 18 1 1000	Shell / Tubes															
MLW 76 4 18 1 1500	Shell / Tubes										10.6					
MLW 76 4 18 1 2000	Shell / Tubes							7.9								
MLW 76 4 18 1 3000	Shell / Tubes					5.2										
MLW 76 4 18 1 6000	Shell / Tubes		2.6									10.5	10.5			

* for higher pressure contact MBS



MODEL	DIMENSIONS [mm]						
	A	B	C	D	E	H	L
MLW 76 4 18 1 1000	950	790	80	DIN 11851 DN 80 F CLAMP 3"	DIN 11851 DN 40-50 M/F CLAMP 2"	186	200
MLW 76 4 18 1 1500	1450	1290					
MLW 76 4 18 1 2000	1950	1790					
MLW 76 4 18 1 3000	2950	2790					
MLW 76 4 18 1 6000	5950	5790					

Not binding technical datas; may be modified by the Manufactures without advise



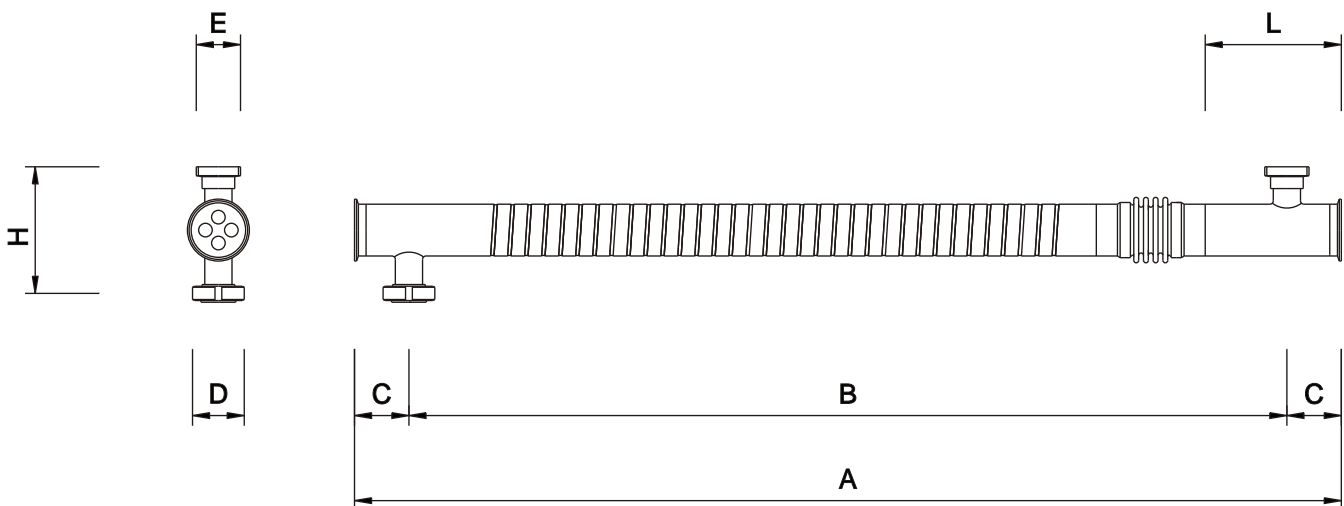
MODEL	SHELL VOLUME [litres]	TUBES VOLUME [litres]	EXCHANGE AREA [m ²]	SHELL SECTION [mm ²]	TUBES SECTION [mm ²]	WEIGHT [kg]
MLW 76 4 20 1 1000	2.88	0.93	0.23	2940.22	1017.88	7.4
MLW 76 4 20 1 1500	4.35	1.44	0.35	2940.22	1017.88	9.7
MLW 76 4 20 1 2000	5.82	1.94	0.48	2940.22	1017.88	12.0
MLW 76 4 20 1 3000	8.76	2.96	0.73	2940.22	1017.88	16.6
MLW 76 4 20 1 6000	17.58	6.02	1.49	2940.22	1017.88	30.5

Category calculation for second group's fluids - Gas, melted gas and liquids with a steam tension at maximum temperature > 0.5 bar

Article 3.3 1st Category 2nd Category

MODEL	VOLUME [litres]	PRESSURE [bar] *														
		1	2	3	4	5	6	7	8	9	10	11	12			
MLW 76 4 20 1 1000	Shell / Tubes															
MLW 76 4 20 1 1500	Shell / Tubes												11.4			
MLW 76 4 20 1 2000	Shell / Tubes								8.5							
MLW 76 4 20 1 3000	Shell / Tubes					5.7										
MLW 76 4 20 1 6000	Shell / Tubes		2.8							8.3				11.3		

* for higher pressure contact MBS



MODEL	DIMENSIONS [mm]						
	A	B	C	D	E	H	L
MLW 76 4 20 1 1000	950	790	80	DIN 11851 DN 80 F CLAMP 3"	DIN 11851 DN 40-50 M/F CLAMP 2"	186	200
MLW 76 4 20 1 1500	1450	1290					
MLW 76 4 20 1 2000	1950	1790					
MLW 76 4 20 1 3000	2950	2790					
MLW 76 4 20 1 6000	5950	5790					

Not binding technical datas; may be modified by the Manufactures without advise



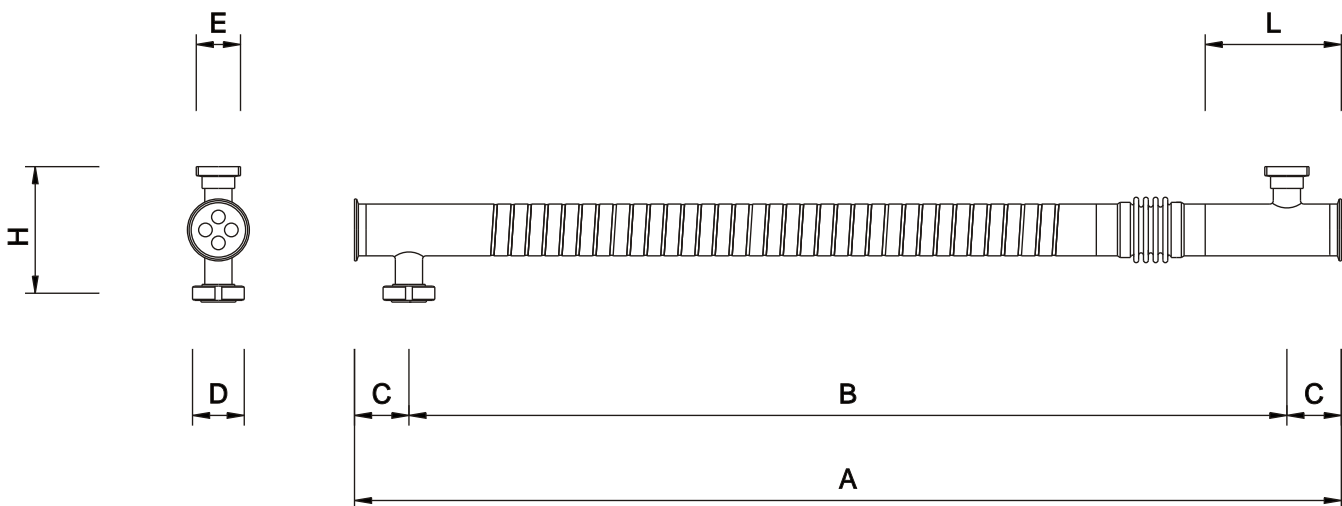
MODEL	SHELL VOLUME [litres]	TUBES VOLUME [litres]	EXCHANGE AREA [m ²]	SHELL SECTION [mm ²]	TUBES SECTION [mm ²]	WEIGHT [kg]
MLW 76 4 22 1 1000	2.64	1.14	0.25	2676.33	1256.64	7.6
MLW 76 4 22 1 1500	3.98	1.77	0.39	2676.33	1256.64	10.0
MLW 76 4 22 1 2000	5.32	2.40	0.53	2676.33	1256.64	12.4
MLW 76 4 22 1 3000	8.00	3.66	0.80	2676.33	1256.64	17.2
MLW 76 4 22 1 6000	16.02	7.43	1.63	2676.33	1256.64	31.7

Category calculation for second group's fluids - Gas, melted gas and liquids with a steam tension at maximum temperature > 0.5 bar

Article 3.3 1st Category 2nd Category

MODEL	VOLUME [litres]	PRESSURE [bar] *												
		1	2	3	4	5	6	7	8	9	10	11	12	
MLW 76 4 22 1 1000	Shell / Tubes													
MLW 76 4 22 1 1500	Shell / Tubes													12.5
MLW 76 4 22 1 2000	Shell / Tubes									9.3				
MLW 76 4 22 1 3000	Shell / Tubes						6.2							
MLW 76 4 22 1 6000	Shell / Tubes			3.1				6.7						12.4

* for higher pressure contact MBS



MODEL	DIMENSIONS [mm]						
	A	B	C	D	E	H	L
MLW 76 4 22 1 1000	950	790	80	DIN 11851 DN 80 F CLAMP 3" more connections on demand	DIN 11851 DN 40-50 M/F CLAMP 2" more connections on demand	186	200
MLW 76 4 22 1 1500	1450	1290					
MLW 76 4 22 1 2000	1950	1790					
MLW 76 4 22 1 3000	2950	2790					
MLW 76 4 22 1 6000	5950	5790					

Not binding technical datas; may be modified by the Manufactures without advise



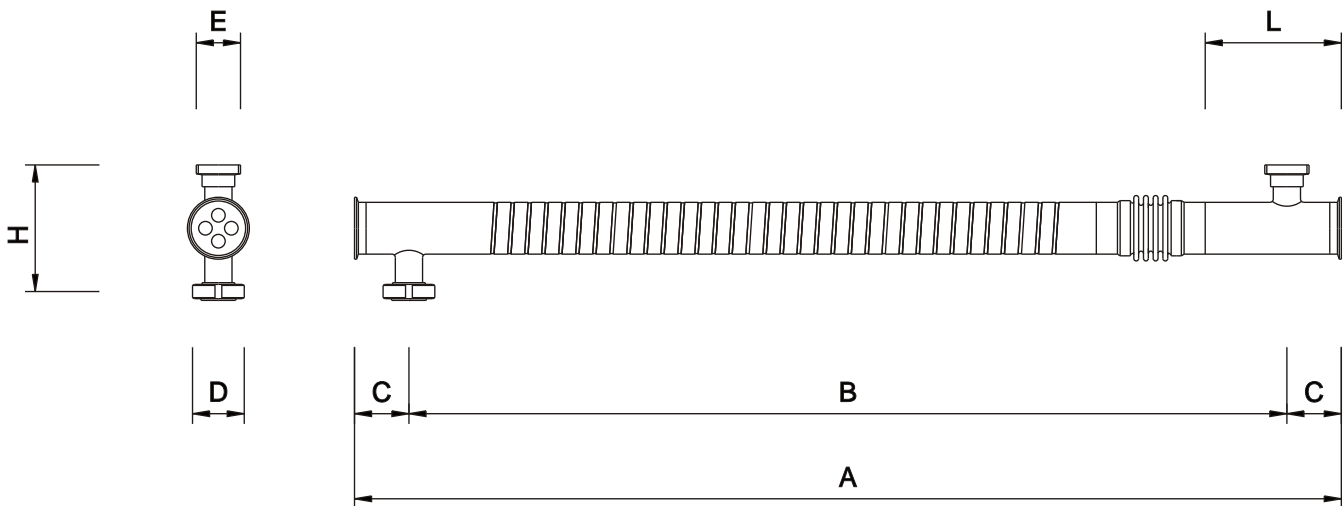
MODEL	SHELL VOLUME [litres]	TUBES VOLUME [litres]	EXCHANGE AREA [m ²]	SHELL SECTION [mm ²]	TUBES SECTION [mm ²]	WEIGHT [kg]
MLW 76 4 25 1 1000	2.18	1.43	0.29	2170.03	1576.33	8.9
MLW 76 4 25 1 1500	3.27	2.22	0.45	2170.03	1576.33	12.1
MLW 76 4 25 1 2000	4.35	3.01	0.61	2170.03	1576.33	15.2
MLW 76 4 25 1 3000	6.52	4.59	0.93	2170.03	1576.33	21.5
MLW 76 4 25 1 6000	13.03	9.32	1.89	2170.03	1576.33	40.3

Category calculation for second group's fluids - Gas, melted gas and liquids with a steam tension at maximum temperature > 0.5 bar

Article 3.3 1st Category 2nd Category

MODEL	VOLUME [litres]	PRESSURE [bar] *												
		1	2	3	4	5	6	7	8	9	10	11	12	
MLW 76 4 25 1 1000	Shell / Tubes													
MLW 76 4 25 1 1500	Shell / Tubes													
MLW 76 4 25 1 2000	Shell / Tubes											11.4		
MLW 76 4 25 1 3000	Shell / Tubes							7.6			10.8			
MLW 76 4 25 1 6000	Shell / Tubes			3.8			5.3							

* for higher pressure contact MBS



MODEL	DIMENSIONS [mm]						
	A	B	C	D	E	H	L
MLW 76 4 25 1 1000	950	790	80	DIN 11851 DN 80 F CLAMP 3"	DIN 11851 DN 40-50 M/F CLAMP 2"	186	200
MLW 76 4 25 1 1500	1450	1290					
MLW 76 4 25 1 2000	1950	1790					
MLW 76 4 25 1 3000	2950	2790					
MLW 76 4 25 1 6000	5950	5790					

Not binding technical datas; may be modified by the Manufactures without advise



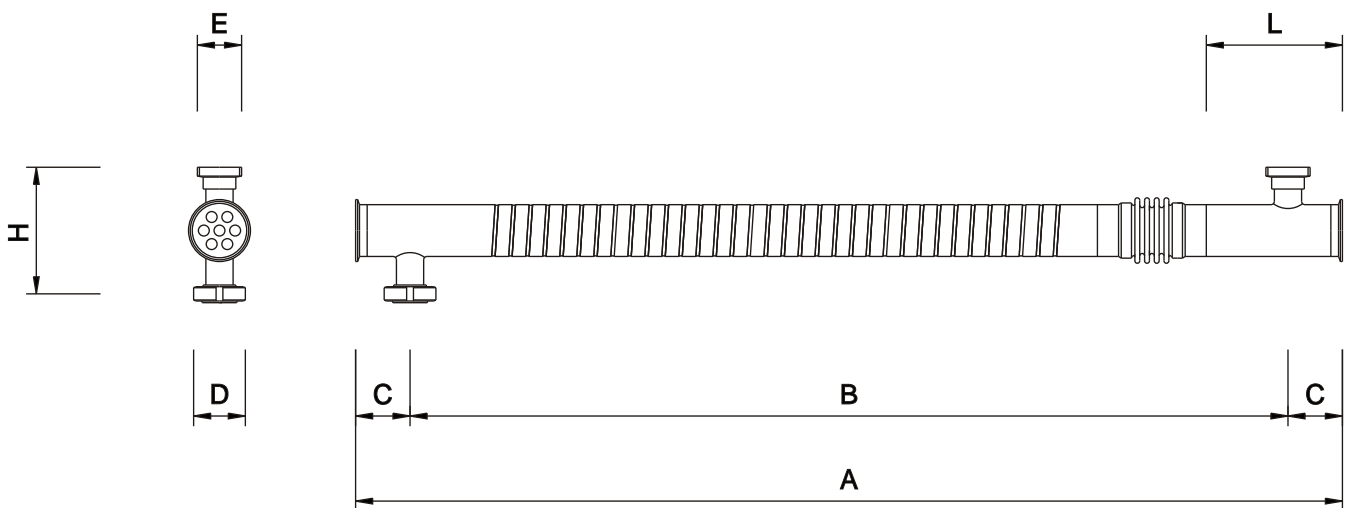
MODEL	SHELL VOLUME [litres]	TUBES VOLUME [litres]	EXCHANGE AREA [m ²]	SHELL SECTION [mm ²]	TUBES SECTION [mm ²]	WEIGHT [kg]
MLW 76 7 16 1 1000	2.57	0.98	0.32	2789.43	1077.57	8.1
MLW 76 7 16 1 1500	4.14	1.52	0.50	2789.43	1077.57	10.7
MLW 76 7 16 1 2000	5.54	2.06	0.67	2789.43	1077.57	13.4
MLW 76 7 16 1 3000	8.32	3.14	1.02	2789.43	1077.57	18.7
MLW 76 7 16 1 6000	16.69	6.37	2.08	2789.43	1077.57	34.7

Category calculation for second group's fluids - Gas, melted gas and liquids with a steam tension at maximum temperature > 0.5 bar

Article 3.3 1st Category 2nd Category

MODEL	VOLUME [litres]	PRESSURE [bar] *												
		1	2	3	4	5	6	7	8	9	10	11	12	
MLW 76 7 16 1 1000	Shell / Tubes													
MLW 76 7 16 1 1500	Shell / Tubes													12.0
MLW 76 7 16 1 2000	Shell / Tubes									9.0				
MLW 76 7 16 1 3000	Shell / Tubes						6.0							
MLW 76 7 16 1 6000	Shell / Tubes		2.9						7.8				11.9	

* for higher pressure contact MBS



MODEL	DIMENSIONS [mm]						
	A	B	C	D	E	H	L
MLW 76 7 16 1 1000	950	790	80	DIN 11851 DN 80 F CLAMP 3"	DIN 11851 DN 40-50 M/F CLAMP 2"	186	200
MLW 76 7 16 1 1500	1450	1290					
MLW 76 7 16 1 2000	1950	1790					
MLW 76 7 16 1 3000	2950	2790					
MLW 76 7 16 1 6000	5950	5790					

Not binding technical datas; may be modified by the Manufactures without advise



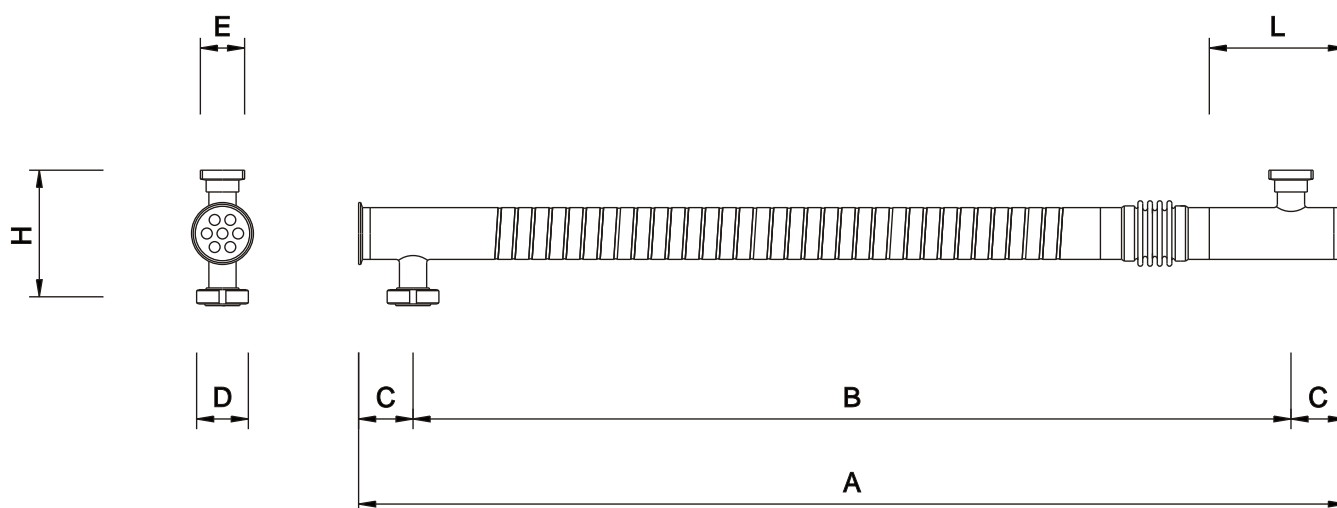
MODEL	SHELL VOLUME [litres]	TUBES VOLUME [litres]	EXCHANGE AREA [m ²]	SHELL SECTION [mm ²]	TUBES SECTION [mm ²]	WEIGHT [kg]
MLW 76 7 18 1 1000	2.41	1.28	0.36	2415.58	1407.43	8.4
MLW 76 7 18 1 1500	3.61	1.98	0.56	2415.58	1407.43	11.2
MLW 76 7 18 1 2000	4.82	2.69	0.76	2415.58	1407.43	14.1
MLW 76 7 18 1 3000	7.24	4.10	1.15	2415.58	1407.43	19.7
MLW 76 7 18 1 6000	14.48	8.32	2.34	2415.58	1407.43	36.8

Category calculation for second group's fluids - Gas, melted gas and liquids with a steam tension at maximum temperature > 0.5 bar

Article 3.3 1st Category 2nd Category

MODEL	VOLUME [litres]	PRESSURE [bar] *												
		1	2	3	4	5	6	7	8	9	10	11	12	
MLW 76 7 18 1 1000	Shell / Tubes													
MLW 76 7 18 1 1500	Shell / Tubes													
MLW 76 7 18 1 2000	Shell / Tubes									10.3				
MLW 76 7 18 1 3000	Shell / Tubes						6.9							12.1
MLW 76 7 18 1 6000	Shell / Tubes			3.4				6.0						

* for higher pressure contact MBS



MODEL	DIMENSIONS [mm]						
	A	B	C	D	E	H	L
MLW 76 7 18 1 1000	950	790	80	DIN 11851 DN 80 F CLAMP 3" more connections on demand	DIN 11851 DN 40-50 M/F CLAMP 2" more connections on demand	186	200
MLW 76 7 18 1 1500	1450	1290					
MLW 76 7 18 1 2000	1950	1790					
MLW 76 7 18 1 3000	2950	2790					
MLW 76 7 18 1 6000	5950	5790					

Not binding technical datas; may be modified by the Manufactures without advise



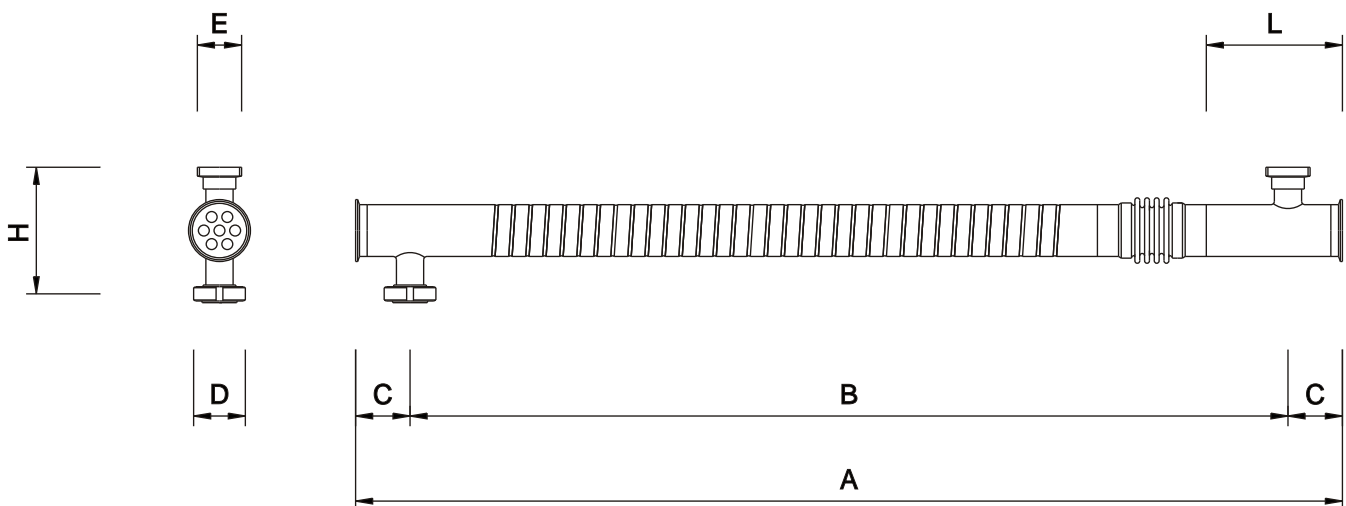
MODEL	SHELL VOLUME [litres]	TUBES VOLUME [litres]	EXCHANGE AREA [m ²]	SHELL SECTION [mm ²]	TUBES SECTION [mm ²]	WEIGHT [kg]
MLW 76 7 20 1 1000	2.03	1.62	0.40	1997.75	1781.28	8.7
MLW 76 7 20 1 1500	3.02	2.51	0.62	1997.75	1781.28	11.7
MLW 76 7 20 1 2000	4.02	3.40	0.84	1997.75	1781.28	14.7
MLW 76 7 20 1 3000	6.02	5.18	1.28	1997.75	1781.28	20.7
MLW 76 7 20 1 6000	12.01	10.53	2.60	1997.75	1781.28	38.8

Category calculation for second group's fluids - Gas, melted gas and liquids with a steam tension at maximum temperature > 0.5 bar

Article 3.3 1st Category 2nd Category

MODEL	VOLUME [litres]	PRESSURE [bar] *												
		1	2	3	4	5	6	7	8	9	10	11	12	
MLW 76 7 20 1 1000	Shell / Tubes													
MLW 76 7 20 1 1500	Shell / Tubes													
MLW 76 7 20 1 2000	Shell / Tubes												12.4	
MLW 76 7 20 1 3000	Shell / Tubes								8.3		9.6			
MLW 76 7 20 1 6000	Shell / Tubes				4.1	4.7								

* for higher pressure contact MBS



MODEL	DIMENSIONS [mm]						
	A	B	C	D	E	H	L
MLW 76 7 20 1 1000	950	790	80	DIN 11851 DN 80 F CLAMP 3"	DIN 11851 DN 40-50 M/F CLAMP 2"	186	200
MLW 76 7 20 1 1500	1450	1290					
MLW 76 7 20 1 2000	1950	1790					
MLW 76 7 20 1 3000	2950	2790					
MLW 76 7 20 1 6000	5950	5790					

Not binding technical datas; may be modified by the Manufactures without advise



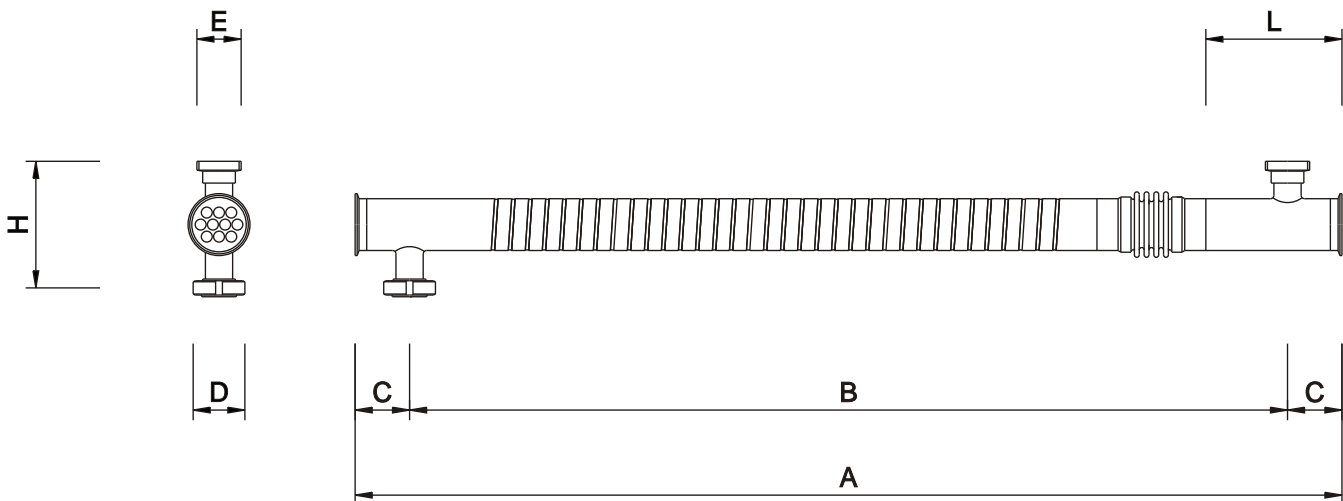
MODEL	SHELL VOLUME [litres]	TUBES VOLUME [litres]	EXCHANGE AREA [m ²]	SHELL SECTION [mm ²]	TUBES SECTION [mm ²]	WEIGHT [kg]
MLW 76 10 12 1 1000	3.00	0.71	0.34	3065.89	785.40	9.1
MLW 76 10 12 1 1500	4.53	1.11	0.53	3065.89	785.40	12.3
MLW 76 10 12 1 2000	6.06	1.50	0.72	3065.89	785.40	15.5
MLW 76 10 12 1 3000	9.13	2.29	1.10	3065.89	785.40	22.0
MLW 76 10 12 1 6000	18.33	4.64	2.23	3065.89	785.40	41.3

Category calculation for second group's fluids - Gas, melted gas and liquids with a steam tension at maximum temperature > 0.5 bar

Article 3.3 1st Category 2nd Category

MODEL	VOLUME [litres]	PRESSURE [bar] *														
		1	2	3	4	5	6	7	8	9	10	11	12			
MLW 76 10 12 1 1000	Shell / Tubes															
MLW 76 10 12 1 1500	Shell / Tubes												11.0			
MLW 76 10 12 1 2000	Shell / Tubes								8.2							
MLW 76 10 12 1 3000	Shell / Tubes					5.4										
MLW 76 10 12 1 6000	Shell / Tubes		2.7									10.9	10.7			

* for higher pressure contact MBS



MODEL	DIMENSIONS [mm]						
	A	B	C	D	E	H	L
MLW 76 10 12 1 1000	950	790	80	DIN 11851 DN 80 F CLAMP 3"	DIN 11851 DN 40-50 M/F CLAMP 3"	186	200
MLW 76 10 12 1 1500	1450	1290					
MLW 76 10 12 1 2000	1950	1790					
MLW 76 10 12 1 3000	2950	2790					
MLW 76 10 12 1 6000	5950	5790					

Not binding technical datas; may be modified by the Manufactures without advise



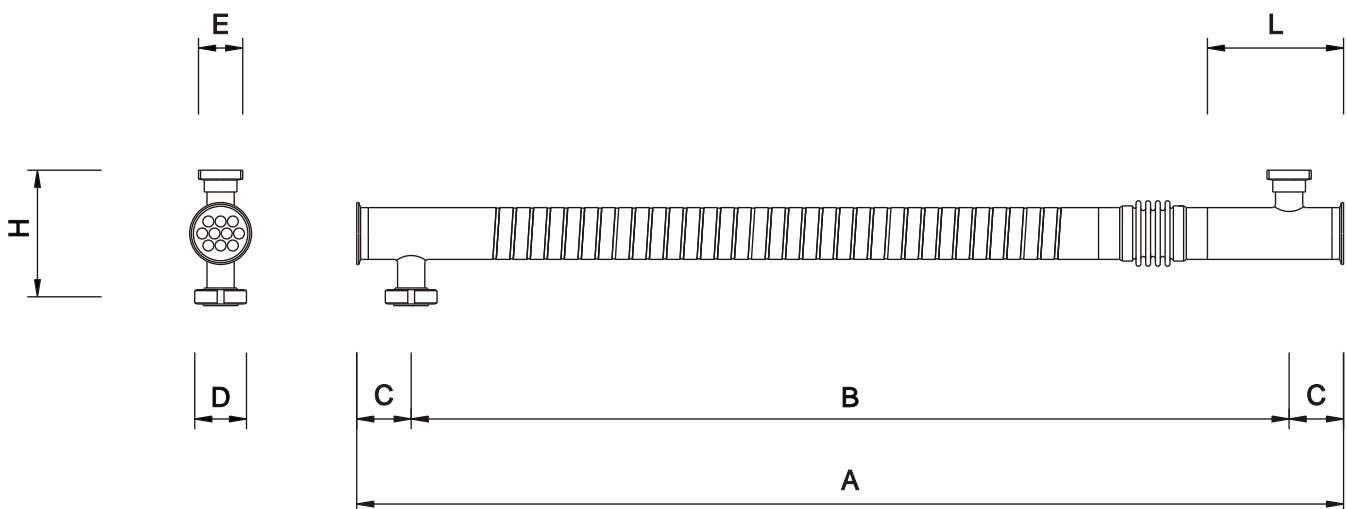
MODEL	SHELL VOLUME [litres]	TUBES VOLUME [litres]	EXCHANGE AREA [m ²]	SHELL SECTION [mm ²]	TUBES SECTION [mm ²]	WEIGHT [kg]
MLW 76 10 16 1 1000	2.20	1.40	0.46	2186.24	1539.38	9.1
MLW 76 10 16 1 1500	3.29	2.17	0.71	2186.24	1539.38	12.3
MLW 76 10 16 1 2000	4.38	2.94	0.96	2186.24	1539.38	15.5
MLW 76 10 16 1 3000	6.57	4.48	1.46	2186.24	1539.38	22.0
MLW 76 10 16 1 6000	13.13	9.10	2.97	2186.24	1539.38	41.3

Category calculation for second group's fluids - Gas, melted gas and liquids with a steam tension at maximum temperature > 0.5 bar

Article 3.3 1st Category 2nd Category

MODEL	VOLUME [litres]	PRESSURE [bar] *												
		1	2	3	4	5	6	7	8	9	10	11	12	
MLW 76 10 16 1 1000	Shell / Tubes													
MLW 76 10 16 1 1500	Shell / Tubes													
MLW 76 10 16 1 2000	Shell / Tubes											11.4		
MLW 76 10 16 1 3000	Shell / Tubes							7.6					11.1	
MLW 76 10 16 1 6000	Shell / Tubes			3.8			5.4							

* for higher pressure contact MBS



MODEL	DIMENSIONS [mm]						
	A	B	C	D	E	H	L
MLW 76 10 16 1 1000	950	790	80	DIN 11851 DN 80 F CLAMP 3"	DIN 11851 DN 40-50 M/F CLAMP 2"	186	200
MLW 76 10 16 1 1500	1450	1290					
MLW 76 10 16 1 2000	1950	1790					
MLW 76 10 16 1 3000	2950	2790					
MLW 76 10 16 1 6000	5950	5790					

Not binding technical datas; may be modified by the Manufactures without advise



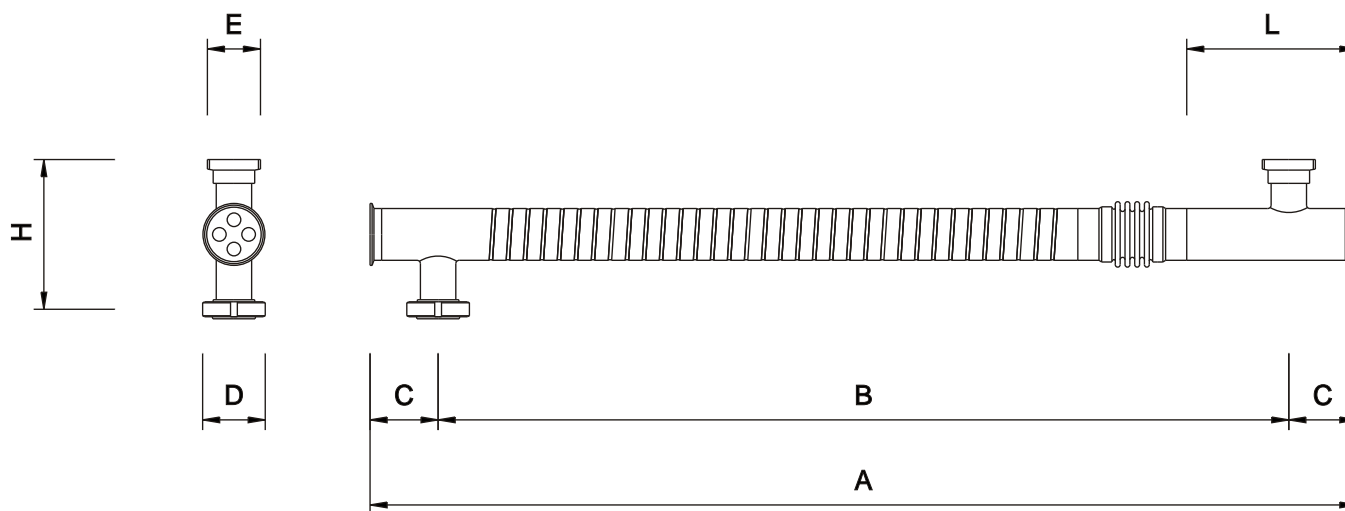
MODEL	SHELL VOLUME [litres]	TUBES VOLUME [litres]	EXCHANGE AREA [m ²]	SHELL SECTION [mm ²]	TUBES SECTION [mm ²]	WEIGHT [kg]
MLW 88 4 16 1 1000	4.87	0.56	0.18	4856.91	615.75	9.6
MLW 88 4 16 1 1500	7.30	0.87	0.28	4856.91	615.75	12.5
MLW 88 4 16 1 2000	9.73	1.18	0.38	4856.91	615.75	15.3
MLW 88 4 16 1 3000	14.58	1.79	0.59	4856.91	615.75	21.1
MLW 88 4 16 1 6000	29.15	3.64	1.19	4856.91	615.75	38.3

Category calculation for second group's fluids - Gas, melted gas and liquids with a steam tension at maximum temperature > 0.5 bar

Article 3.3 1st Category 2nd Category

MODEL	VOLUME [litres]	PRESSURE [bar] *												
		1	2	3	4	5	6	7	8	9	10	11	12	
MLW 88 4 16 1 1000	Shell / Tubes											10.2		
MLW 88 4 16 1 1500	Shell / Tubes						6.8							
MLW 88 4 16 1 2000	Shell / Tubes					5.1								
MLW 88 4 16 1 3000	Shell / Tubes			3.4										
MLW 88 4 16 1 6000	Shell / Tubes	1.7					6.8							

* for higher pressure contact MBS



MODEL	DIMENSIONS [mm]						
	A	B	C	D	E	H	L
MLW 88 4 16 1 1000	950	750	100	DIN 11851 DN 100 F CLAMP 4"	DIN 11851 DN 50-65 M/F CLAMP 3"	220	250
MLW 88 4 16 1 1500	1450	1250					
MLW 88 4 16 1 2000	1950	1750					
MLW 88 4 16 1 3000	2950	2750					
MLW 88 4 16 1 6000	5950	5750					

Not binding technical datas; may be modified by the Manufactures without advise



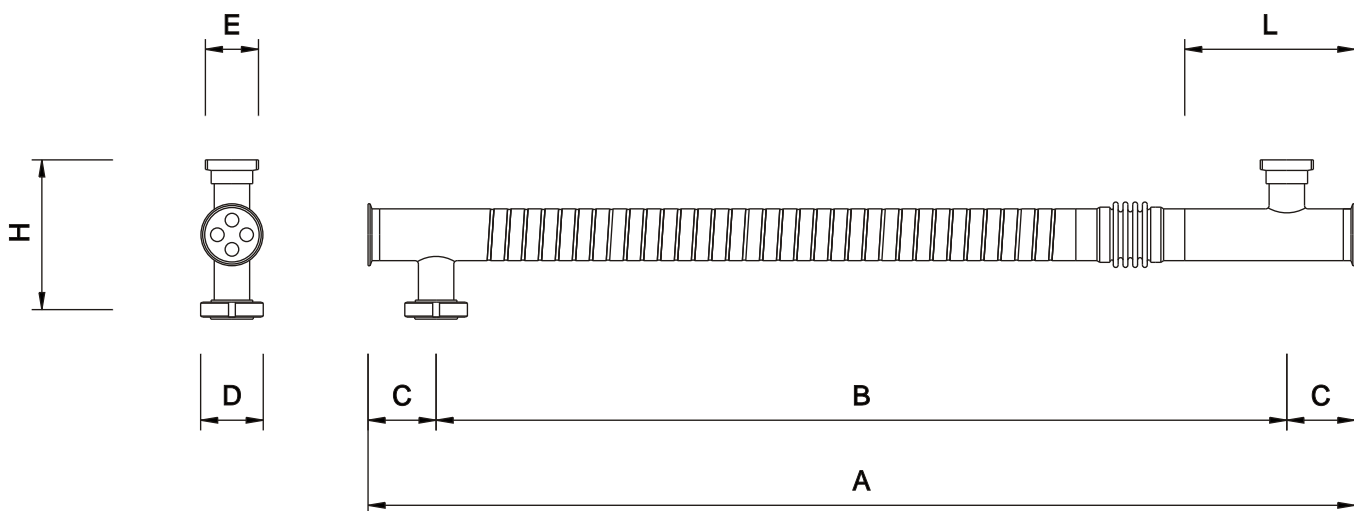
MODEL	SHELL VOLUME [litres]	TUBES VOLUME [litres]	EXCHANGE AREA [m ²]	SHELL SECTION [mm ²]	TUBES SECTION [mm ²]	WEIGHT [kg]
MLW 88 4 18 1 1000	4.67	0.73	0.21	4643.28	804.25	9.8
MLW 88 4 18 1 1500	7.00	1.13	0.32	4643.28	804.25	12.8
MLW 88 4 18 1 2000	9.32	1.54	0.43	4643.28	804.25	15.7
MLW 88 4 18 1 3000	13.96	2.34	0.66	4643.28	804.25	21.7
MLW 88 4 18 1 6000	27.89	4.75	1.34	4643.28	804.25	39.5

Category calculation for second group's fluids - Gas, melted gas and liquids with a steam tension at maximum temperature > 0.5 bar

Article 3.3 1st Category 2nd Category

MODEL	VOLUME [litres]	PRESSURE [bar] *											
		1	2	3	4	5	6	7	8	9	10	11	12
MLW 88 4 18 1 1000	Shell / Tubes										10.7		
MLW 88 4 18 1 1500	Shell / Tubes							7.1					
MLW 88 4 18 1 2000	Shell / Tubes					5.3							
MLW 88 4 18 1 3000	Shell / Tubes			3.5									
MLW 88 4 18 1 6000	Shell / Tubes	1.7						7.1			10.5		

* for higher pressure contact MBS



MODEL	DIMENSIONS [mm]						
	A	B	C	D	E	H	L
MLW 88 4 18 1 1000	950	750	100	DIN 11851 DN 100 F CLAMP 4"	DIN 11851 DN 50-65 M/F CLAMP 3"	220	250
MLW 88 4 18 1 1500	1450	1250					
MLW 88 4 18 1 2000	1950	1750					
MLW 88 4 18 1 3000	2950	2750					
MLW 88 4 18 1 6000	5950	5750					

Not binding technical datas; may be modified by the Manufactures without advise



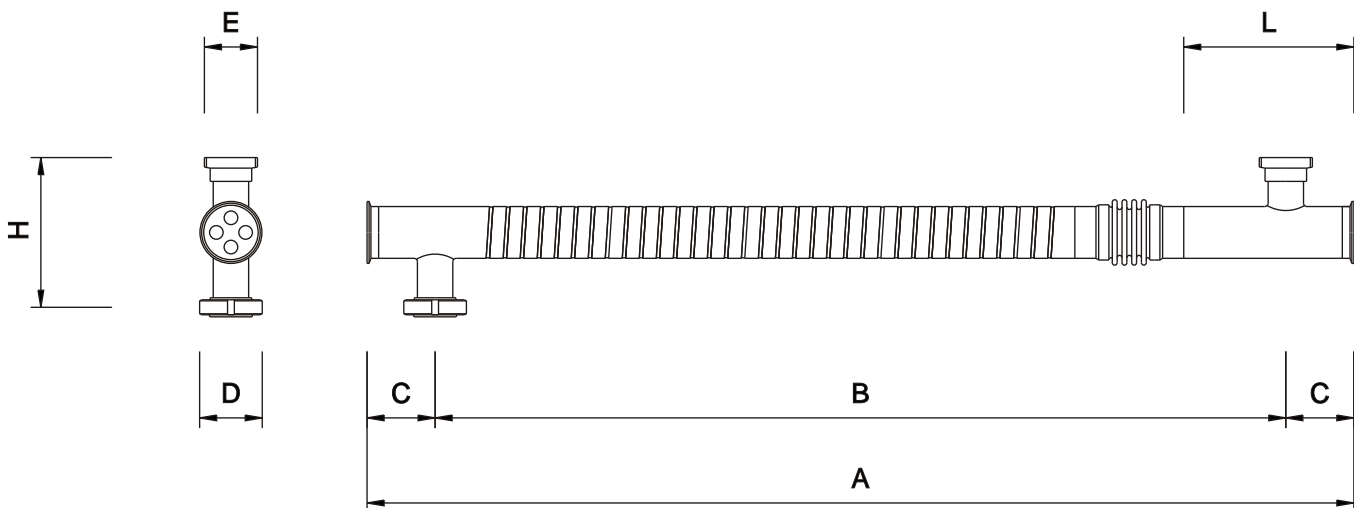
MODEL	SHELL VOLUME [litres]	TUBES VOLUME [litres]	EXCHANGE AREA [m ²]	SHELL SECTION [mm ²]	TUBES SECTION [mm ²]	WEIGHT [kg]
MLW 88 4 20 1 1000	4.46	0.93	0.23	4404.52	1017.88	10.0
MLW 88 4 20 1 1500	6.66	1.44	0.35	4404.52	1017.88	13.0
MLW 88 4 20 1 2000	8.86	1.94	0.48	4404.52	1017.88	16.1
MLW 88 4 20 1 3000	13.27	2.96	0.73	4404.52	1017.88	22.2
MLW 88 4 20 1 6000	26.48	6.02	1.49	4404.52	1017.88	40.6

Category calculation for second group's fluids - Gas, melted gas and liquids with a steam tension at maximum temperature > 0.5 bar

Article 3.3 1st Category 2nd Category

MODEL	VOLUME [litres]	PRESSURE [bar] *												
		1	2	3	4	5	6	7	8	9	10	11	12	
MLW 88 4 20 1 1000	Shell / Tubes												11.2	
MLW 88 4 20 1 1500	Shell / Tubes							7.5						
MLW 88 4 20 1 2000	Shell / Tubes					5.6								
MLW 88 4 20 1 3000	Shell / Tubes			3.7										
MLW 88 4 20 1 6000	Shell / Tubes	1.8						7.5		8.3				

* for higher pressure contact MBS



MODEL	DIMENSIONS [mm]						
	A	B	C	D	E	H	L
MLW 88 4 20 1 1000	950	750	100	DIN 11851 DN 100 F CLAMP 4"	DIN 11851 DN 50-65 M/F CLAMP 3"	220	250
MLW 88 4 20 1 1500	1450	1250					
MLW 88 4 20 1 2000	1950	1750					
MLW 88 4 20 1 3000	2950	2750					
MLW 88 4 20 1 6000	5950	5750					

Not binding technical datas; may be modified by the Manufactures without advise



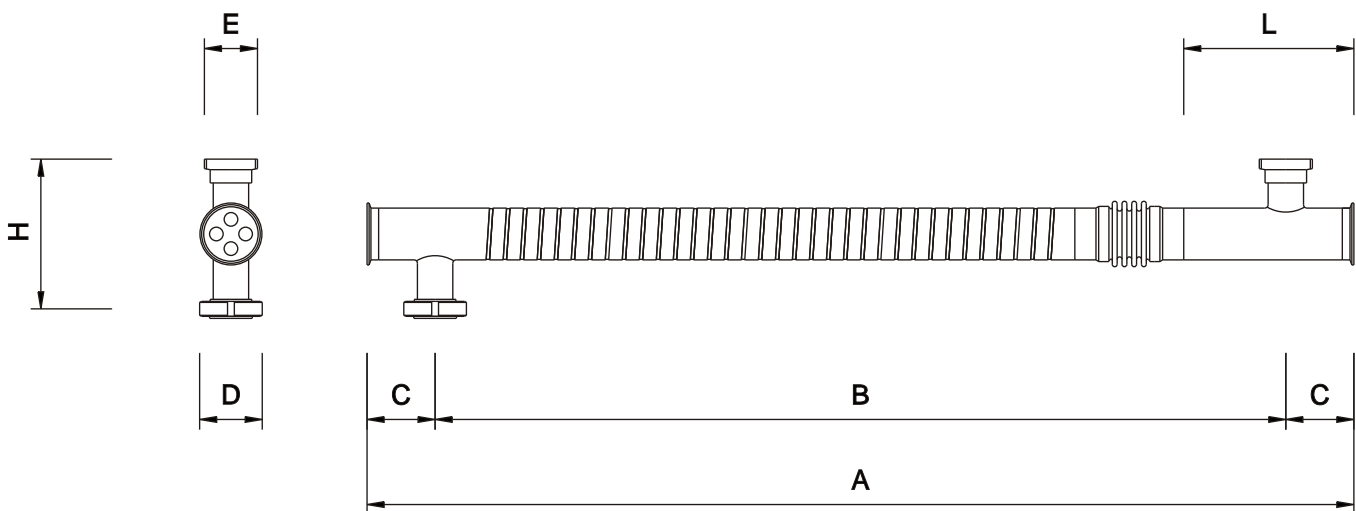
MODEL	SHELL VOLUME [litres]	TUBES VOLUME [litres]	EXCHANGE AREA [m ²]	SHELL SECTION [mm ²]	TUBES SECTION [mm ²]	WEIGHT [kg]
MLW 88 4 22 1 1000	4.22	1.14	0.25	4140.63	1256.64	10.1
MLW 88 4 22 1 1500	6.29	1.77	0.39	4140.63	1256.64	13.3
MLW 88 4 22 1 2000	8.36	2.40	0.53	4140.63	1256.64	16.5
MLW 88 4 22 1 3000	12.50	3.66	0.80	4140.63	1256.64	22.8
MLW 88 4 22 1 6000	24.92	7.43	1.63	4140.63	1256.64	41.8

Category calculation for second group's fluids - Gas, melted gas and liquids with a steam tension at maximum temperature > 0.5 bar

Article 3.3 1st Category 2nd Category

MODEL	VOLUME [litres]	PRESSURE [bar] *												
		1	2	3	4	5	6	7	8	9	10	11	12	
MLW 88 4 22 1 1000	Shell / Tubes												11.8	
MLW 88 4 22 1 1500	Shell / Tubes							7.9						
MLW 88 4 22 1 2000	Shell / Tubes					5.9								
MLW 88 4 22 1 3000	Shell / Tubes				4.0									
MLW 88 4 22 1 6000	Shell / Tubes		2.0					6.7		8.0				

* for higher pressure contact MBS



MODEL	DIMENSIONS [mm]						
	A	B	C	D	E	H	L
MLW 88 4 22 1 1000	950	750	100	DIN 11851 DN 100 F CLAMP 4"	DIN 11851 DN 50-65 M/F CLAMP 3"	220	250
MLW 88 4 22 1 1500	1450	1250					
MLW 88 4 22 1 2000	1950	1750					
MLW 88 4 22 1 3000	2950	2750					
MLW 88 4 22 1 6000	5950	5750					

Not binding technical datas; may be modified by the Manufactures without advise



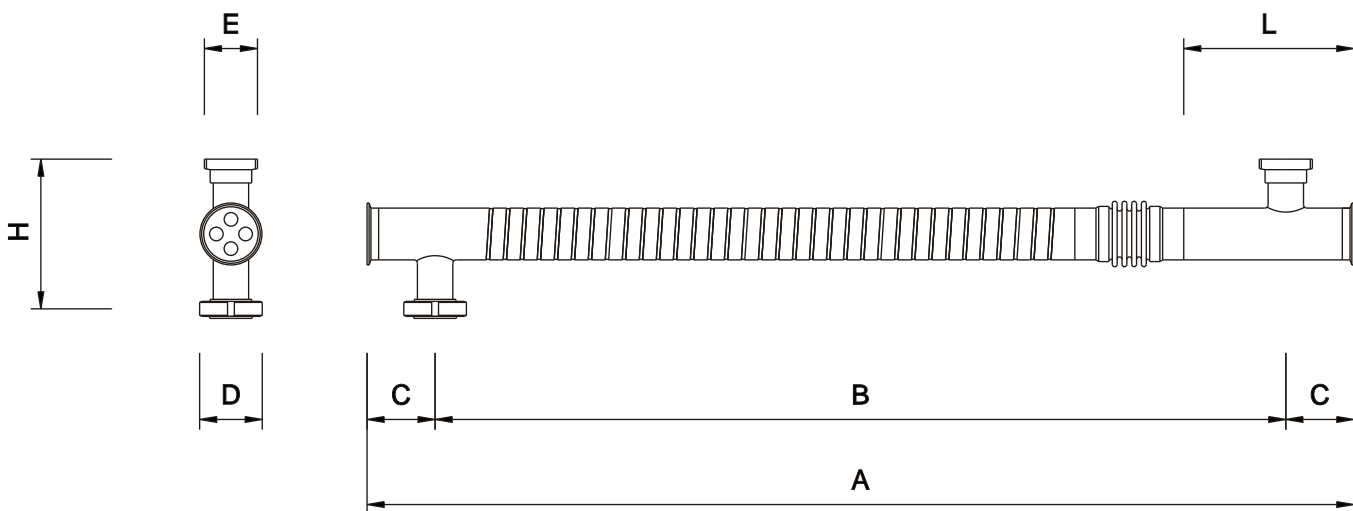
MODEL	SHELL VOLUME [litres]	TUBES VOLUME [litres]	EXCHANGE AREA [m ²]	SHELL SECTION [mm ²]	TUBES SECTION [mm ²]	WEIGHT [kg]
MLW 88 4 25 1 1000	3.76	1.43	0.29	3634.33	1576.33	11.51
MLW 88 4 25 1 1500	5.57	2.22	0.45	3634.33	1576.33	15.4
MLW 88 4 25 1 2000	7.39	3.01	0.61	3634.33	1576.33	19.3
MLW 88 4 25 1 3000	11.02	4.59	0.93	3634.33	1576.33	27.1
MLW 88 4 25 1 6000	21.93	9.32	1.89	3634.33	1576.33	50.5

Category calculation for second group's fluids - Gas, melted gas and liquids with a steam tension at maximum temperature > 0.5 bar

Article 3.3 1st Category 2nd Category

MODEL	VOLUME [litres]	PRESSURE [bar] *												
		1	2	3	4	5	6	7	8	9	10	11	12	
MLW 88 4 25 1 1000	Shell / Tubes													
MLW 88 4 25 1 1500	Shell / Tubes								8.9					
MLW 88 4 25 1 2000	Shell / Tubes						6.7							
MLW 88 4 25 1 3000	Shell / Tubes				4.5							10.8		
MLW 88 4 25 1 6000	Shell / Tubes		2.2				5.3				9.1			

* for higher pressure contact MBS



MODEL	DIMENSIONS [mm]						
	A	B	C	D	E	H	L
MLW 88 4 25 1 1000	950	750	100	DIN 11851 DN 100 F CLAMP 4"	DIN 11851 DN 50-65 M/F CLAMP 3"	220	250
MLW 88 4 25 1 1500	1450	1250					
MLW 88 4 25 1 2000	1950	1750					
MLW 88 4 25 1 3000	2950	2750					
MLW 88 4 25 1 6000	5950	5750					

Not binding technical datas; may be modified by the Manufactures without advise



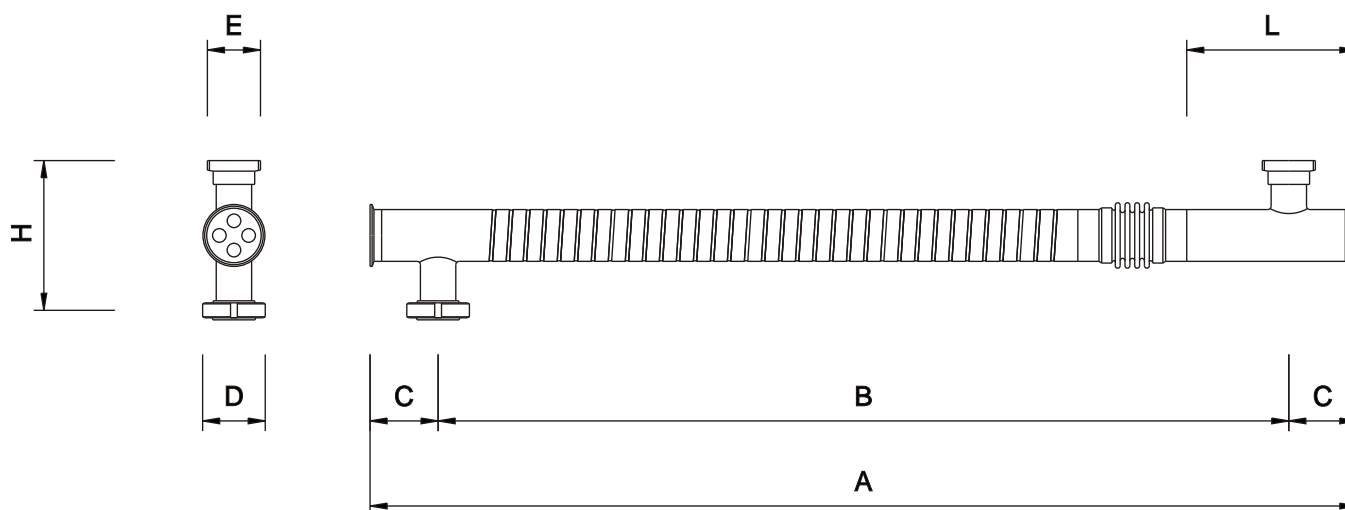
MODEL	SHELL VOLUME [litres]	TUBES VOLUME [litres]	EXCHANGE AREA [m ²]	SHELL SECTION [mm ²]	TUBES SECTION [mm ²]	WEIGHT [kg]
MLW 88 4 28 1 1000	3.36	1.79	0.32	3198.15	1963.50	11.8
MLW 88 4 28 1 1500	4.96	2.77	0.50	3198.15	1963.50	15.9
MLW 88 4 28 1 2000	6.56	3.75	0.67	3198.15	1963.50	20.0
MLW 88 4 28 1 3000	9.76	5.71	1.02	3198.15	1963.50	28.2
MLW 88 4 28 1 6000	19.35	11.60	2.08	3198.15	1963.50	52.7

Category calculation for second group's fluids - Gas, melted gas and liquids with a steam tension at maximum temperature > 0.5 bar

Article 3.3 1st Category 2nd Category

MODEL	VOLUME [litres]	PRESSURE [bar] *												
		1	2	3	4	5	6	7	8	9	10	11	12	
MLW 88 4 28 1 1000	Shell / Tubes													
MLW 88 4 28 1 1500	Shell / Tubes										10.0			
MLW 88 4 28 1 2000	Shell / Tubes							7.6						
MLW 88 4 28 1 3000	Shell / Tubes					5.1				8.7				
MLW 88 4 28 1 6000	Shell / Tubes		2.5			4.3						10.3		

* for higher pressure contact MBS



MODEL	DIMENSIONS [mm]						
	A	B	C	D	E	H	L
MLW 88 4 28 1 1000	950	750	100	DIN 11851 DN 100 F CLAMP 4"	DIN 11851 DN 50-65 M/F CLAMP 3"	220	250
MLW 88 4 28 1 1500	1450	1250					
MLW 88 4 28 1 2000	1950	1750					
MLW 88 4 28 1 3000	2950	2750					
MLW 88 4 28 1 6000	5950	5750					

Not binding technical datas; may be modified by the Manufacturers without advise



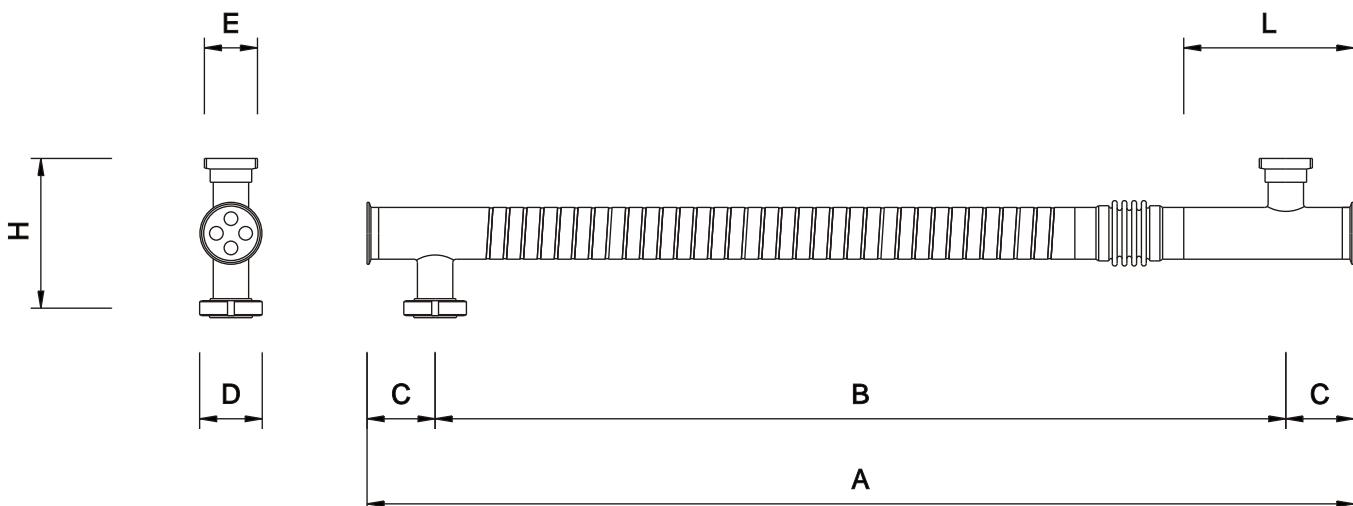
MODEL	SHELL VOLUME [litres]	TUBES VOLUME [litres]	EXCHANGE AREA [m ²]	SHELL SECTION [mm ²]	TUBES SECTION [mm ²]	WEIGHT [kg]
MLW 88 7 16 1 1000	4.32	0.98	0.32	4253.72	1077.57	10.6
MLW 88 7 16 1 1500	6.45	1.52	0.50	4253.72	1077.57	14.0
MLW 88 7 16 1 2000	8.57	2.06	0.67	4253.72	1077.57	17.5
MLW 88 7 16 1 3000	12.83	3.14	1.02	4253.72	1077.57	24.3
MLW 88 7 16 1 6000	25.59	6.37	2.08	4253.72	1077.57	44.9

Category calculation for second group's fluids - Gas, melted gas and liquids with a steam tension at maximum temperature > 0.5 bar

Article 3.3 1st Category 2nd Category

MODEL	VOLUME [litres]	PRESSURE [bar] *												
		1	2	3	4	5	6	7	8	9	10	11	12	
MLW 88 7 16 1 1000	Shell / Tubes												11.5	
MLW 88 7 16 1 1500	Shell / Tubes							7.7						
MLW 88 7 16 1 2000	Shell / Tubes					5.8								
MLW 88 7 16 1 3000	Shell / Tubes			3.8										
MLW 88 7 16 1 6000	Shell / Tubes	1.9							7.8	7.8				

* for higher pressure contact MBS



MODEL	DIMENSIONS [mm]						
	A	B	C	D	E	H	L
MLW 88 7 16 1 1000	950	750	100	DIN 11851 DN 100 F CLAMP 4"	DIN 11851 DN 50-65 M/F CLAMP 3"	220	250
MLW 88 7 16 1 1500	1450	1250					
MLW 88 7 16 1 2000	1950	1750					
MLW 88 7 16 1 3000	2950	2750					
MLW 88 7 16 1 6000	5950	5750					

Not binding technical datas; may be modified by the Manufactures without advise



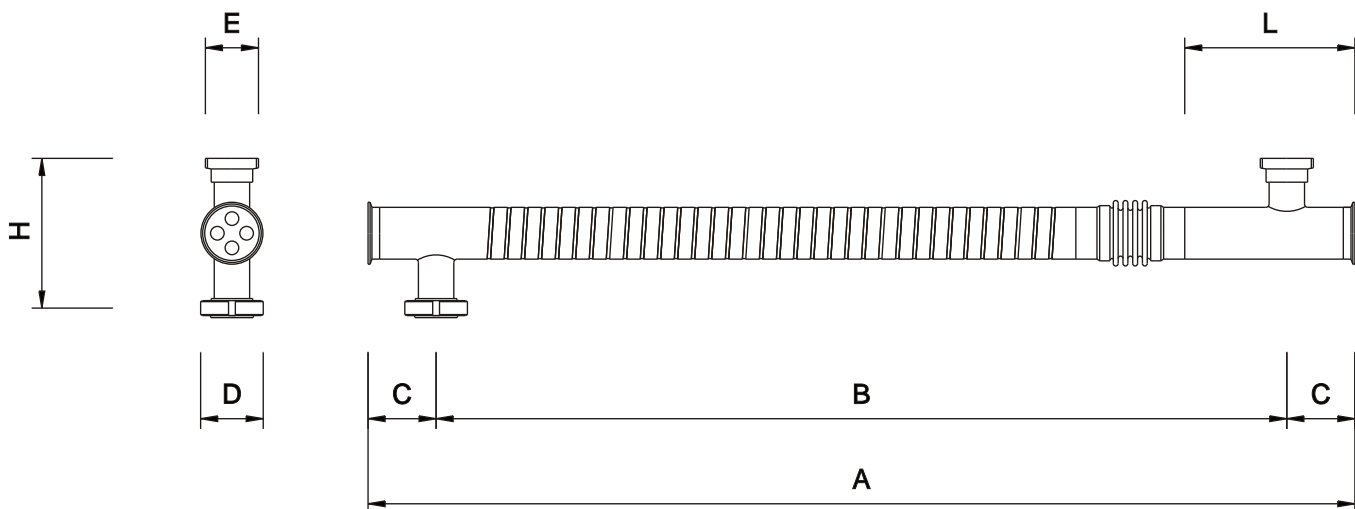
MODEL	SHELL VOLUME [litres]	TUBES VOLUME [litres]	EXCHANGE AREA [m ²]	SHELL SECTION [mm ²]	TUBES SECTION [mm ²]	WEIGHT [kg]
MLW 88 7 18 1 1000	3.98	1.28	0.36	3879.87	1407.43	10.9
MLW 88 7 18 1 1500	5.92	1.98	0.56	3879.87	1407.43	14.5
MLW 88 7 18 1 2000	7.86	2.69	0.76	3879.87	1407.43	18.1
MLW 88 7 18 1 3000	11.74	4.10	1.15	3879.87	1407.43	25.3
MLW 88 7 18 1 6000	23.38	8.32	2.34	3879.87	1407.43	46.9

Category calculation for second group's fluids - Gas, melted gas and liquids with a steam tension at maximum temperature > 0.5 bar

Article 3.3 1st Category 2nd Category

MODEL	VOLUME [litres]	PRESSURE [bar] *												
		1	2	3	4	5	6	7	8	9	10	11	12	
MLW 88 7 18 1 1000	Shell / Tubes													12.5
MLW 88 7 18 1 1500	Shell / Tubes								8.4					
MLW 88 7 18 1 2000	Shell / Tubes						6.3							
MLW 88 7 18 1 3000	Shell / Tubes				4.2									12.1
MLW 88 7 18 1 6000	Shell / Tubes		2.1					6.0		8.5				

* for higher pressure contact MBS



MODEL	DIMENSIONS [mm]						
	A	B	C	D	E	H	L
MLW 88 7 18 1 1000	950	750	100	DIN 11851 DN 100 F CLAMP 4"	DIN 11851 DN 50-65 M/F CLAMP 3"	220	250
MLW 88 7 18 1 1500	1450	1250					
MLW 88 7 18 1 2000	1950	1750					
MLW 88 7 18 1 3000	2950	2750					
MLW 88 7 18 1 6000	5950	5750					

Not binding technical datas; may be modified by the Manufactures without advise



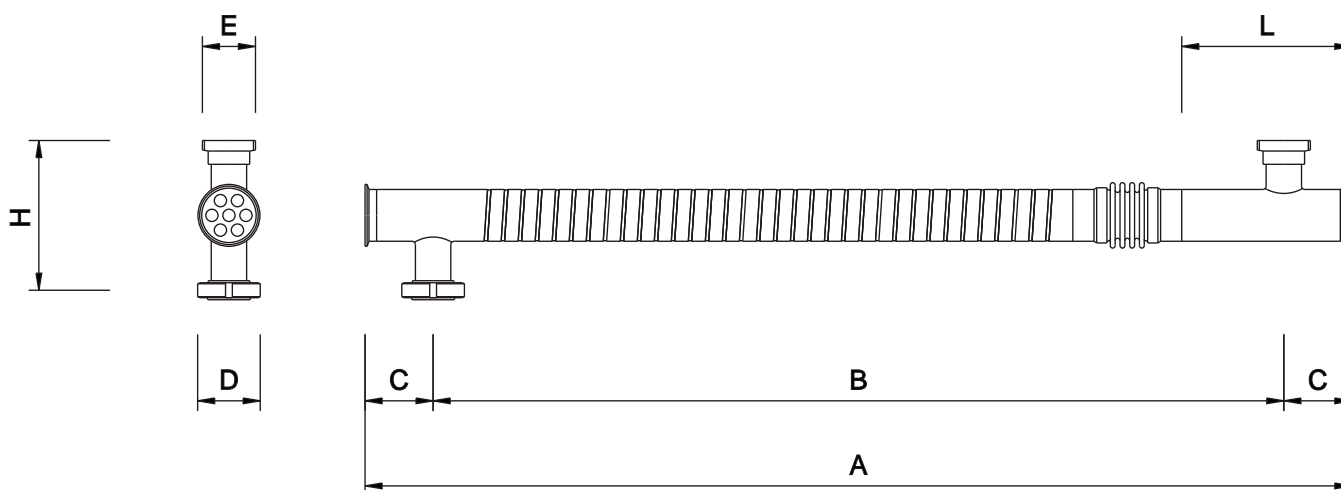
MODEL	SHELL VOLUME [litres]	TUBES VOLUME [litres]	EXCHANGE AREA [m ²]	SHELL SECTION [mm ²]	TUBES SECTION [mm ²]	WEIGHT [kg]
MLW 88 7 20 1 1000	3.60	1.62	0.40	3462.04	1781.28	11.2
MLW 88 7 20 1 1500	5.33	2.51	0.62	3462.04	1781.28	15.0
MLW 88 7 20 1 2000	7.06	3.40	0.84	3462.04	1781.28	18.8
MLW 88 7 20 1 3000	10.52	5.18	1.28	3462.04	1781.28	26.3
MLW 88 7 20 1 6000	20.91	10.53	2.60	3462.04	1781.28	49.0

Category calculation for second group's fluids - Gas, melted gas and liquids with a steam tension at maximum temperature > 0.5 bar

Article 3.3 1st Category 2nd Category

MODEL	VOLUME [litres]	PRESSURE [bar] *												
		1	2	3	4	5	6	7	8	9	10	11	12	
MLW 88 7 20 1 1000	Shell / Tubes													
MLW 88 7 20 1 1500	Shell / Tubes									9.3				
MLW 88 7 20 1 2000	Shell / Tubes							7.0						
MLW 88 7 20 1 3000	Shell / Tubes				4.7						9.6			
MLW 88 7 20 1 6000	Shell / Tubes		2.3			4.7					9.5			

* for higher pressure contact MBS



MODEL	DIMENSIONS [mm]						
	A	B	C	D	E	H	L
MLW 88 7 20 1 1000	950	750	100	DIN 11851 DN 100 F CLAMP 4"	DIN 11851 DN 50-65 M/F CLAMP 3"	220	250
MLW 88 7 20 1 1500	1450	1250					
MLW 88 7 20 1 2000	1950	1750					
MLW 88 7 20 1 3000	2950	2750					
MLW 88 7 20 1 6000	5950	5750					

Not binding technical datas; may be modified by the Manufactures without advise



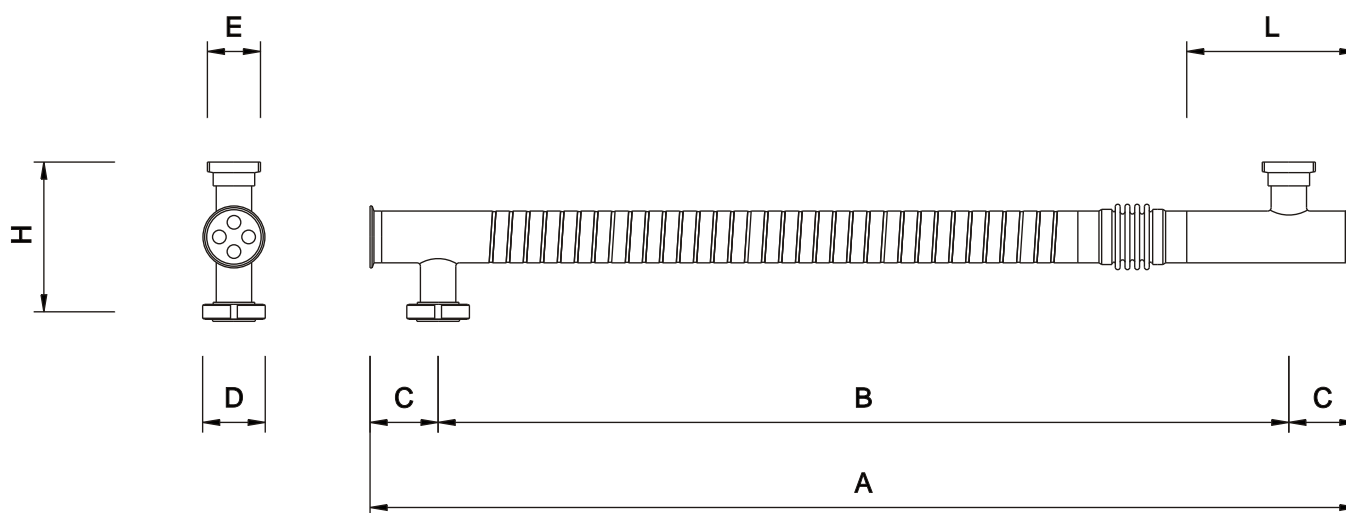
MODEL	SHELL VOLUME [litres]	TUBES VOLUME [litres]	EXCHANGE AREA [m ²]	SHELL SECTION [mm ²]	TUBES SECTION [mm ²]	WEIGHT [kg]
MLW 88 7 22 1 1000	3.18	2.00	0.44	3000.23	2199.11	11.6
MLW 88 7 22 1 1500	4.68	3.10	0.68	3000.23	2199.11	15.5
MLW 88 7 22 1 2000	6.18	4.20	0.92	3000.23	2199.11	19.4
MLW 88 7 22 1 3000	9.18	6.40	1.41	3000.23	2199.11	27.3
MLW 88 7 22 1 6000	18.18	13.00	2.86	3000.23	2199.11	51.0

Category calculation for second group's fluids - Gas, melted gas and liquids with a steam tension at maximum temperature > 0.5 bar

Article 3.3 1st Category 2nd Category

MODEL	VOLUME [litres]	PRESSURE [bar] *															
		1	2	3	4	5	6	7	8	9	10	11	12				
MLW 88 7 22 1 1000	Shell / Tubes																
MLW 88 7 22 1 1500	Shell / Tubes										10.6						
MLW 88 7 22 1 2000	Shell / Tubes								8.0				11.9				
MLW 88 7 22 1 3000	Shell / Tubes					5.4			7.8								
MLW 88 7 22 1 6000	Shell / Tubes		2.7		3.8									11.0			

* for higher pressure contact MBS



MODEL	DIMENSIONS [mm]						
	A	B	C	D	E	H	L
MLW 88 7 22 1 1000	950	750	100	DIN 11851 DN 100 F CLAMP 4" more connections on demand	DIN 11851 DN 50-65 M/F CLAMP 3" more connections on demand	220	250
MLW 88 7 22 1 1500	1450	1250					
MLW 88 7 22 1 2000	1950	1750					
MLW 88 7 22 1 3000	2950	2750					
MLW 88 7 22 1 6000	5950	5750					

Not binding technical datas; may be modified by the Manufactures without advise



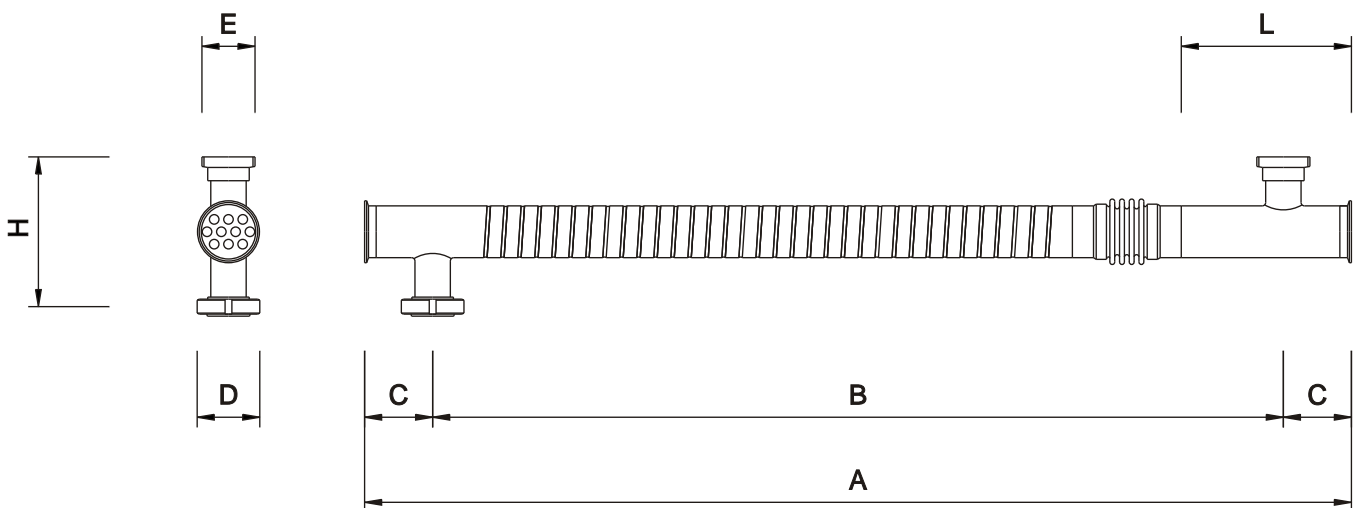
MODEL	SHELL VOLUME [litres]	TUBES VOLUME [litres]	EXCHANGE AREA [m ²]	SHELL SECTION [mm ²]	TUBES SECTION [mm ²]	WEIGHT [kg]
MLW 88 10 16 1 1000	3.77	1.40	0.46	3650.54	1539.38	11.6
MLW 88 10 16 1 1500	5.60	2.17	0.71	3650.54	1539.38	15.6
MLW 88 10 16 1 2000	7.42	2.94	0.96	3650.54	1539.38	19.6
MLW 88 10 16 1 3000	11.07	4.48	1.46	3650.54	1539.38	27.5
MLW 88 10 16 1 6000	22.02	9.10	2.97	3650.54	1539.38	51.4

Category calculation for second group's fluids - Gas, melted gas and liquids with a steam tension at maximum temperature > 0.5 bar

Article 3.3 1st Category 2nd Category

MODEL	VOLUME [litres]	PRESSURE [bar] *												
		1	2	3	4	5	6	7	8	9	10	11	12	
MLW 88 10 16 1 1000	Shell / Tubes													
MLW 88 10 16 1 1500	Shell / Tubes								8.9					
MLW 88 10 16 1 2000	Shell / Tubes						6.7							
MLW 88 10 16 1 3000	Shell / Tubes				4.5								11.1	
MLW 88 10 16 1 6000	Shell / Tubes		2.2				5.4				9			

* for higher pressure contact MBS



MODEL	DIMENSIONS [mm]						
	A	B	C	D	E	H	L
MLW 88 10 16 1 1000	950	750	100	DIN 11851 DN 100 F CLAMP 4"	DIN 11851 DN 50-65 M/F CLAMP 3"	220	250
MLW 88 10 16 1 1500	1450	1250					
MLW 88 10 16 1 2000	1950	1750					
MLW 88 10 16 1 3000	2950	2750					
MLW 88 10 16 1 6000	5950	5750					

Not binding technical datas; may be modified by the Manufacturers without advise



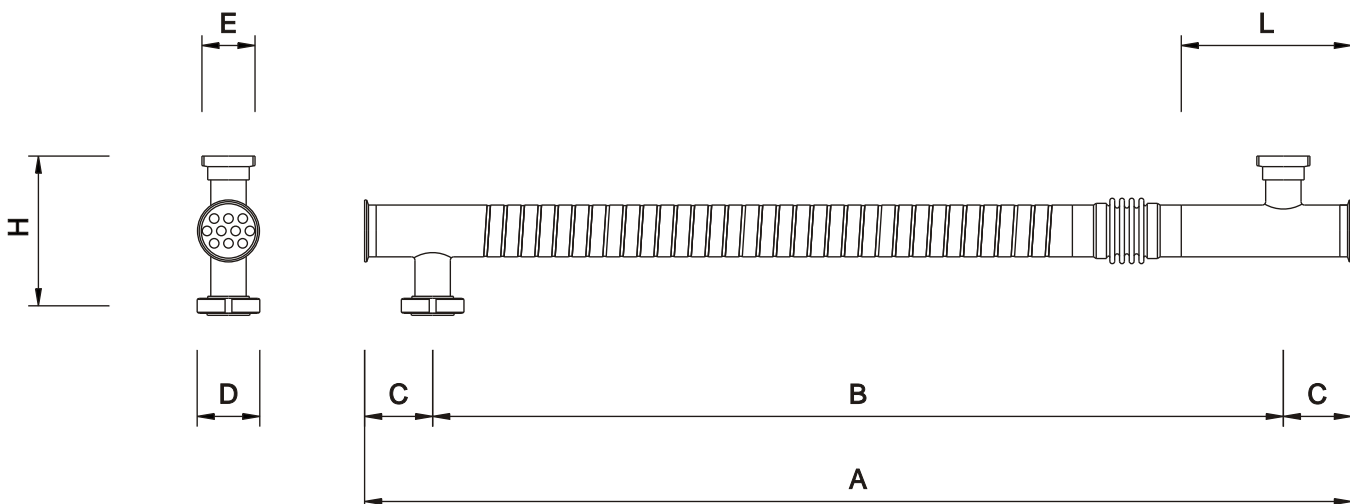
MODEL	SHELL VOLUME [litres]	TUBES VOLUME [litres]	EXCHANGE AREA [m ²]	SHELL SECTION [mm ²]	TUBES SECTION [mm ²]	WEIGHT [kg]
MLW 88 10 18 1 1000	3.28	1.83	0.51	3116.47	2010.62	12.1
MLW 88 10 18 1 1500	4.84	2.83	0.80	3116.47	2010.62	16.3
MLW 88 10 18 1 2000	6.40	3.84	1.08	3116.47	2010.62	20.5
MLW 88 10 18 1 3000	9.52	5.85	1.65	3116.47	2010.62	29.0
MLW 88 10 18 1 6000	18.87	11.88	3.34	3116.47	2010.62	54.3

Category calculation for second group's fluids - Gas, melted gas and liquids with a steam tension at maximum temperature > 0.5 bar

Article 3.3 1st Category 2nd Category

MODEL	VOLUME [litres]	PRESSURE [bar] *															
		1	2	3	4	5	6	7	8	9	10	11	12				
MLW 88 10 18 1 1000	Shell / Tubes																
MLW 88 10 18 1 1500	Shell / Tubes										10.3						
MLW 88 10 18 1 2000	Shell / Tubes							7.8									
MLW 88 10 18 1 3000	Shell / Tubes					5.2				8.5							
MLW 88 10 18 1 6000	Shell / Tubes		2.6			4.2						10.5					

* for higher pressure contact MBS



MODEL	DIMENSIONS [mm]						
	A	B	C	D	E	H	L
MLW 88 10 18 1 1000	950	750	100	DIN 11851 DN 100 F CLAMP 4"	DIN 11851 DN 50-65 M/F CLAMP 3"	220	250
MLW 88 10 18 1 1500	1450	1250					
MLW 88 10 18 1 2000	1950	1750					
MLW 88 10 18 1 3000	2950	2750					
MLW 88 10 18 1 6000	5950	5750					

Not binding technical datas; may be modified by the Manufactures without advise



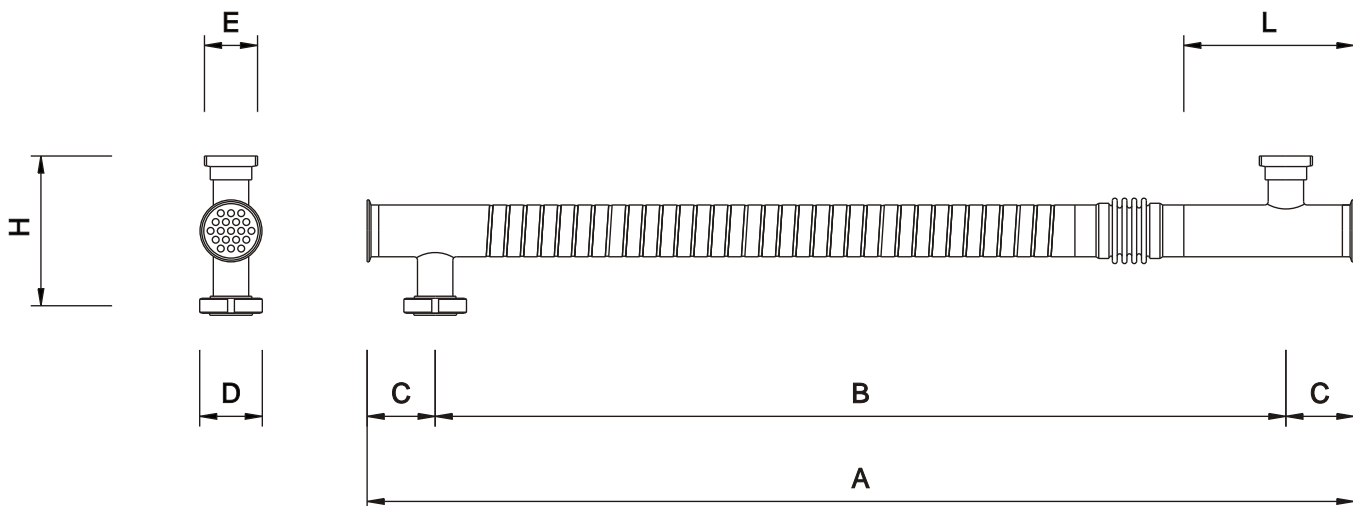
MODEL	SHELL VOLUME [litres]	TUBES VOLUME [litres]	EXCHANGE AREA [m ²]	SHELL SECTION [mm ²]	TUBES SECTION [mm ²]	WEIGHT [kg]
MLW 88 19 12 1 1000	3.64	1.36	0.65	3512.31	1492.26	13.0
MLW 88 19 12 1 1500	5.40	2.10	1.01	3512.31	1492.26	17.7
MLW 88 19 12 1 2000	7.16	2.85	1.37	3512.31	1492.26	22.4
MLW 88 19 12 1 3000	10.67	4.34	2.08	3512.31	1492.26	31.8
MLW 88 19 12 1 6000	21.21	8.82	4.23	3512.31	1492.26	60.0

Category calculation for second group's fluids - Gas, melted gas and liquids with a steam tension at maximum temperature > 0.5 bar

Article 3.3 1st Category 2nd Category

MODEL	VOLUME [litres]	PRESSURE [bar] *															
		1	2	3	4	5	6	7	8	9	10	11	12				
MLW 88 19 12 1 1000	Shell / Tubes																
MLW 88 19 12 1 1500	Shell / Tubes									9.2							
MLW 88 19 12 1 2000	Shell / Tubes						6.9										
MLW 88 19 12 1 3000	Shell / Tubes				4.6										11.5		
MLW 88 19 12 1 6000	Shell / Tubes		2.3				5.6					9.4					

* for higher pressure contact MBS



MODEL	DIMENSIONS [mm]						
	A	B	C	D	E	H	L
MLW 88 19 12 1 1000	950	750	100	DIN 11851 DN 100 F CLAMP 4"	DIN 11851 DN 50-65 M/F CLAMP 3"	220	250
MLW 88 19 12 1 1500	1450	1250					
MLW 88 19 12 1 2000	1950	1750					
MLW 88 19 12 1 3000	2950	2750					
MLW 88 19 12 1 6000	5950	5750					

Not binding technical datas; may be modified by the Manufactures without advise



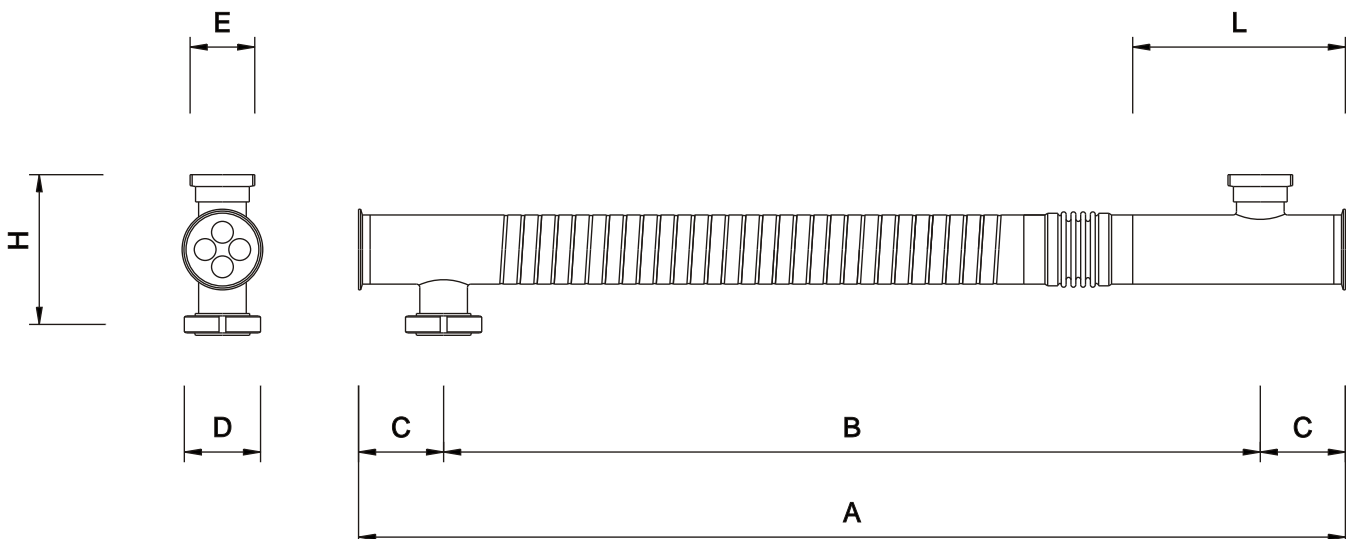
MODEL	SHELL VOLUME [litres]	TUBES VOLUME [litres]	EXCHANGE AREA [m ²]	SHELL SECTION [mm ²]	TUBES SECTION [mm ²]	WEIGHT [kg]
MLW 100 4 25 1 1000	5.57	1.43	0.29	5454.68	1576.33	13.4
MLW 100 4 25 1 1500	8.30	2.22	0.45	5454.68	1576.33	17.6
MLW 100 4 25 1 2000	11.03	3.01	0.61	5454.68	1576.33	21.8
MLW 100 4 25 1 3000	16.48	4.59	0.93	5454.68	1576.33	30.2
MLW 100 4 25 1 6000	32.85	9.32	1.89	5454.68	1576.33	55.5

Category calculation for second group's fluids - Gas, melted gas and liquids with a steam tension at maximum temperature > 0.5 bar

Article 3.3 1st Category 2nd Category

MODEL	VOLUME [litres]	PRESSURE [bar] *												
		1	2	3	4	5	6	7	8	9	10	11	12	
MLW 100 4 25 1 1000	Shell / Tubes								8.9					
MLW 100 4 25 1 1500	Shell / Tubes						6.0							
MLW 100 4 25 1 2000	Shell / Tubes					4.5								
MLW 100 4 25 1 3000	Shell / Tubes			3.0								10.8		12.1
MLW 100 4 25 1 6000	Shell / Tubes	1.5					5.3	6.0						

* for higher pressure contact MBS



MODEL	DIMENSIONS [mm]						
	A	B	C	D	E	H	L
MLW 100 4 25 1 1000	950	700	125	DIN 11851 DN 100 F CLAMP 4"	DIN 11851 DN 50-65 M/F CLAMP 3"	220	312.5
MLW 100 4 25 1 1500	1450	1200					
MLW 100 4 25 1 2000	1950	1700					
MLW 100 4 25 1 3000	2950	2700					
MLW 100 4 25 1 6000	5950	5700					

Not binding technical datas; may be modified by the Manufactures without advise



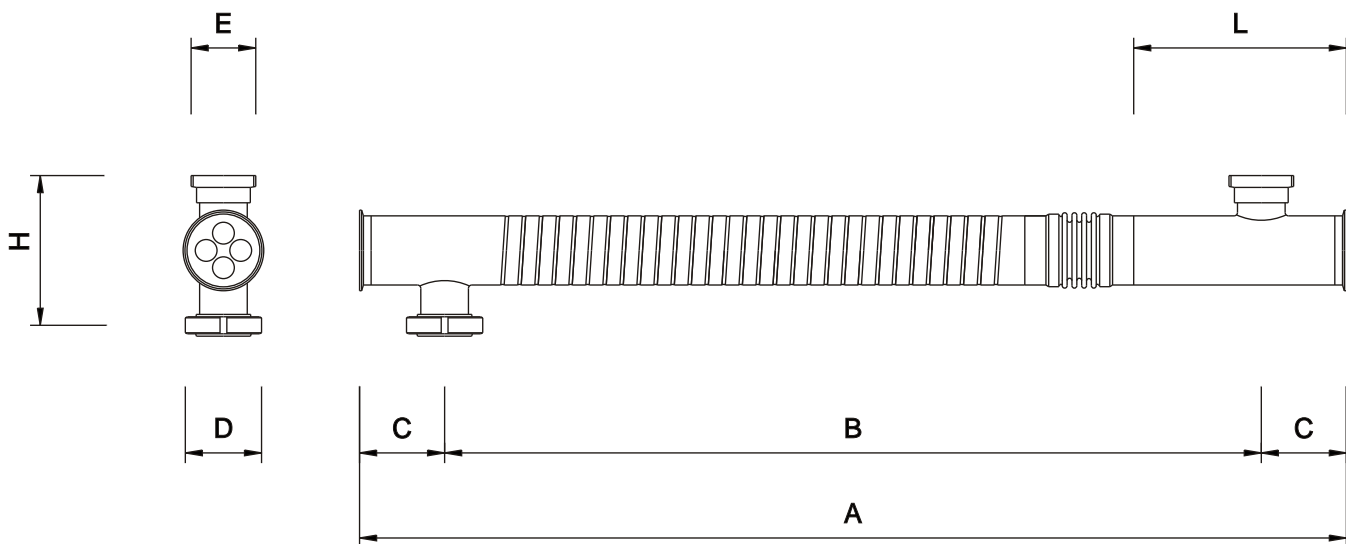
MODEL	SHELL VOLUME [litres]	TUBES VOLUME [litres]	EXCHANGE AREA [m ²]	SHELL SECTION [mm ²]	TUBES SECTION [mm ²]	WEIGHT [kg]
MLW 100 4 28 1 1000	5.18	1.79	0.32	5018.51	1963.50	13.7
MLW 100 4 28 1 1500	7.69	2.77	0.50	5018.51	1963.50	18.1
MLW 100 4 28 1 2000	10.20	3.75	0.67	5018.51	1963.50	22.5
MLW 100 4 28 1 3000	15.21	5.71	1.02	5018.51	1963.50	31.3
MLW 100 4 28 1 6000	30.27	11.60	2.08	5018.51	1963.50	57.7

Category calculation for second group's fluids - Gas, melted gas and liquids with a steam tension at maximum temperature > 0.5 bar

Article 3.3 1st Category 2nd Category

MODEL	VOLUME [litres]	PRESSURE [bar] *											
		1	2	3	4	5	6	7	8	9	10	11	12
MLW 100 4 28 1 1000	Shell / Tubes									9.6			
MLW 100 4 28 1 1500	Shell / Tubes					6.5							
MLW 100 4 28 1 2000	Shell / Tubes				4.9								
MLW 100 4 28 1 3000	Shell / Tubes			3.2						8.7			
MLW 100 4 28 1 6000	Shell / Tubes	1.6				4.3		6.6					

* for higher pressure contact MBS



MODEL	DIMENSIONS [mm]						
	A	B	C	D	E	H	L
MLW 100 4 28 1 1000	950	700	125	DIN 11851 DN 100 F CLAMP 4"	DIN 11851 DN 50-65 M/F CLAMP 3"	220	312.5
MLW 100 4 28 1 1500	1450	1200					
MLW 100 4 28 1 2000	1950	1700					
MLW 100 4 28 1 3000	2950	2700					
MLW 100 4 28 1 6000	5950	5700					

Not binding technical datas; may be modified by the Manufactures without advise



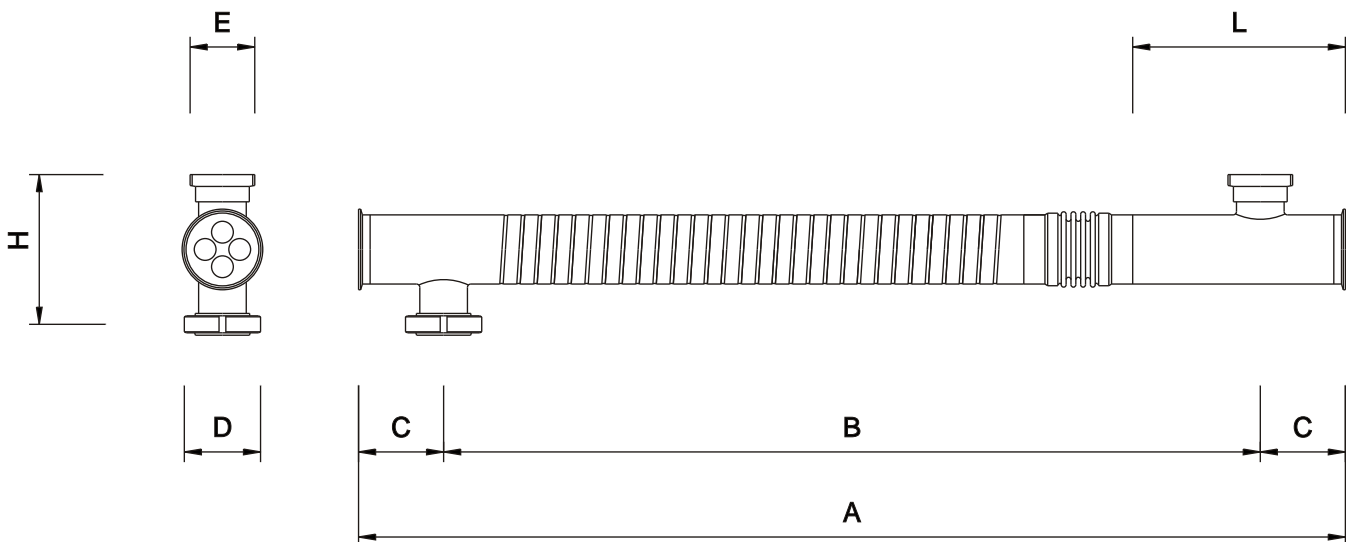
MODEL	SHELL VOLUME [litres]	TUBES VOLUME [litres]	EXCHANGE AREA [m ²]	SHELL SECTION [mm ²]	TUBES SECTION [mm ²]	WEIGHT [kg]
MLW 100 4 34 1 1000	4.11	2.75	0.39	3849.83	3019.07	14.5
MLW 100 4 34 1 1500	6.04	4.26	0.60	3849.83	3019.07	19.4
MLW 100 4 34 1 2000	7.96	5.77	0.82	3849.83	3019.07	24.2
MLW 100 4 34 1 3000	11.81	8.79	1.24	3849.83	3019.07	33.9
MLW 100 4 34 1 6000	23.36	17.84	2.53	3849.83	3019.07	63.0

Category calculation for second group's fluids - Gas, melted gas and liquids with a steam tension at maximum temperature > 0.5 bar

Article 3.3 1st Category 2nd Category

MODEL	VOLUME [litres]	PRESSURE [bar] *												
		1	2	3	4	5	6	7	8	9	10	11	12	
MLW 100 4 34 1 1000	Shell / Tubes													12.1
MLW 100 4 34 1 1500	Shell / Tubes								8.2				11.7	
MLW 100 4 34 1 2000	Shell / Tubes						6.2		8.6					
MLW 100 4 34 1 3000	Shell / Tubes				4.2		5.6							
MLW 100 4 34 1 6000	Shell / Tubes		2.1	2.8						8.5			11.2	

* for higher pressure contact MBS



MODEL	DIMENSIONS [mm]						
	A	B	C	D	E	H	L
MLW 100 4 34 1 1000	950	700	125	DIN 11851 DN 100 F CLAMP 4"	DIN 11851 DN 50-65 M/F CLAMP 3"	220	312.5
MLW 100 4 34 1 1500	1450	1200					
MLW 100 4 34 1 2000	1950	1700					
MLW 100 4 34 1 3000	2950	2700					
MLW 100 4 34 1 6000	5950	5700					

Not binding technical datas; may be modified by the Manufactures without advise



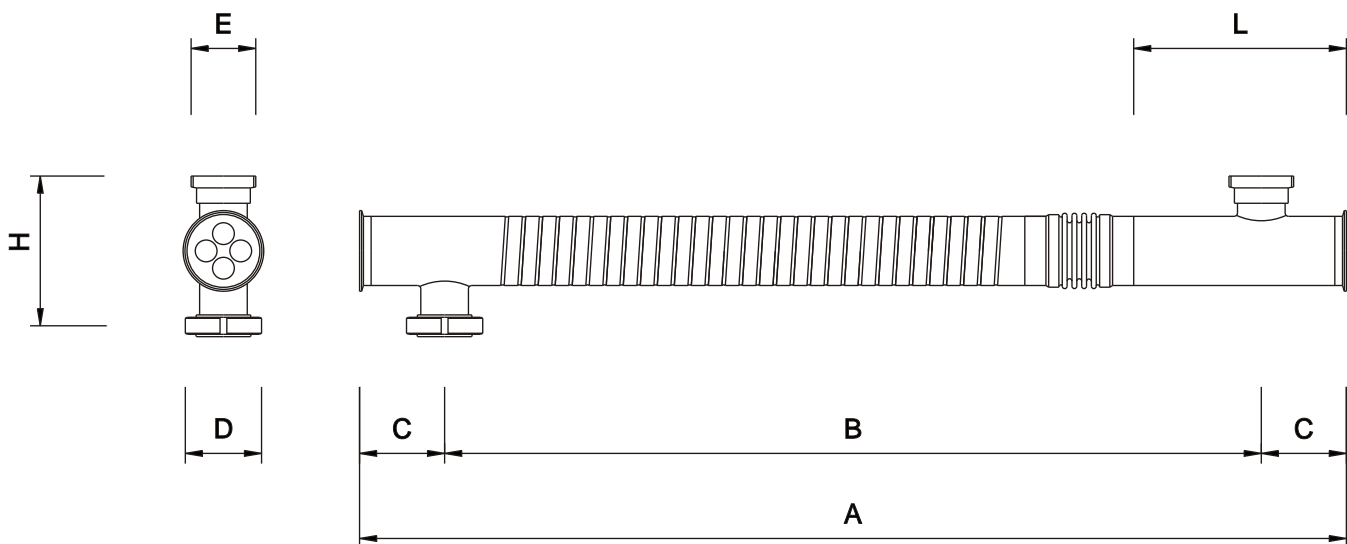
MODEL	SHELL VOLUME [litres]	TUBES VOLUME [litres]	EXCHANGE AREA [m ²]	SHELL SECTION [mm ²]	TUBES SECTION [mm ²]	WEIGHT [kg]
MLW 100 7 22 1 1000	5.00	1.81	0.44	4820.59	1984.70	15.0
MLW 100 7 22 1 1500	7.41	2.80	0.68	4820.59	1984.70	20.1
MLW 100 7 22 1 2000	9.82	3.79	0.92	4820.59	1984.70	25.2
MLW 100 7 22 1 3000	14.64	5.78	1.41	4820.59	1984.70	35.4
MLW 100 7 22 1 6000	29.10	11.73	2.86	4820.59	1984.70	65.9

Category calculation for second group's fluids - Gas, melted gas and liquids with a steam tension at maximum temperature > 0.5 bar

Article 3.3 1st Category 2nd Category

MODEL	VOLUME [litres]	PRESSURE [bar] *											
		1	2	3	4	5	6	7	8	9	10	11	12
MLW 100 7 22 1 1000	Shell / Tubes										10.0		
MLW 100 7 22 1 1500	Shell / Tubes						6.7						
MLW 100 7 22 1 2000	Shell / Tubes					5.0							
MLW 100 7 22 1 3000	Shell / Tubes			3.4						8.6			
MLW 100 7 22 1 6000	Shell / Tubes	1.7				4.2		6.8					

* for higher pressure contact MBS



MODEL	DIMENSIONS [mm]						
	A	B	C	D	E	H	L
MLW 100 7 22 1 1000	950	700	125	DIN 11851 DN 100 F CLAMP 4"	DIN 11851 DN 50-65 M/F CLAMP 3"	220	312.5
MLW 100 7 22 1 1500	1450	1200					
MLW 100 7 22 1 2000	1950	1700					
MLW 100 7 22 1 3000	2950	2700					
MLW 100 7 22 1 6000	5950	5700					

Not binding technical datas; may be modified by the Manufactures without advise



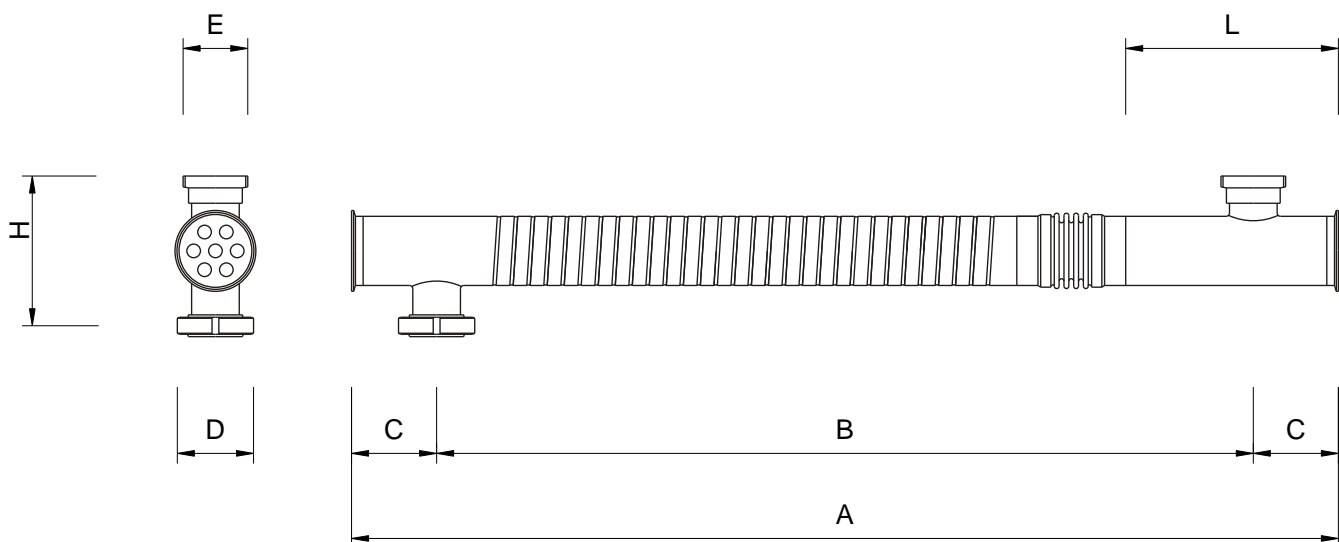
MODEL	SHELL VOLUME [litres]	TUBES VOLUME [litres]	EXCHANGE AREA [m ²]	SHELL SECTION [mm ²]	TUBES SECTION [mm ²]	WEIGHT [kg]
MLW 100 7 25 1 1000	4.19	2.51	0.51	3934.56	2758.57	15.8
MLW 100 7 25 1 1500	6.16	3.89	0.79	3934.56	2758.57	21.3
MLW 100 7 25 1 2000	8.13	5.27	1.07	3934.56	2758.57	26.9
MLW 100 7 25 1 3000	12.06	8.03	1.63	3934.56	2758.57	37.9
MLW 100 7 25 1 6000	23.86	16.30	3.30	3934.56	2758.57	71.1

Category calculation for second group's fluids - Gas, melted gas and liquids with a steam tension at maximum temperature > 0.5 bar

Article 3.3 1st Category 2nd Category

MODEL	VOLUME [litres]	PRESSURE [bar] *												
		1	2	3	4	5	6	7	8	9	10	11	12	
MLW 100 7 25 1 1000	Shell / Tubes									11.9				
MLW 100 7 25 1 1500	Shell / Tubes								8.1					12.8
MLW 100 7 25 1 2000	Shell / Tubes						6.1				9.4			
MLW 100 7 25 1 3000	Shell / Tubes				4.1			6.2						
MLW 100 7 25 1 6000	Shell / Tubes		2.0		3.0					8.3				12.2

* for higher pressure contact MBS



MODEL	DIMENSIONS [mm]						
	A	B	C	D	E	H	L
MLW 100 7 25 1 1000	950	700	125	DIN 11851 DN 100 F CLAMP 4"	DIN 11851 DN 50-65 M/F CLAMP 3"	220	312.5
MLW 100 7 25 1 1500	1450	1200					
MLW 100 7 25 1 2000	1950	1700					
MLW 100 7 25 1 3000	2950	2700					
MLW 100 7 25 1 6000	5950	5700					

Not binding technical datas; may be modified by the Manufactures without advise



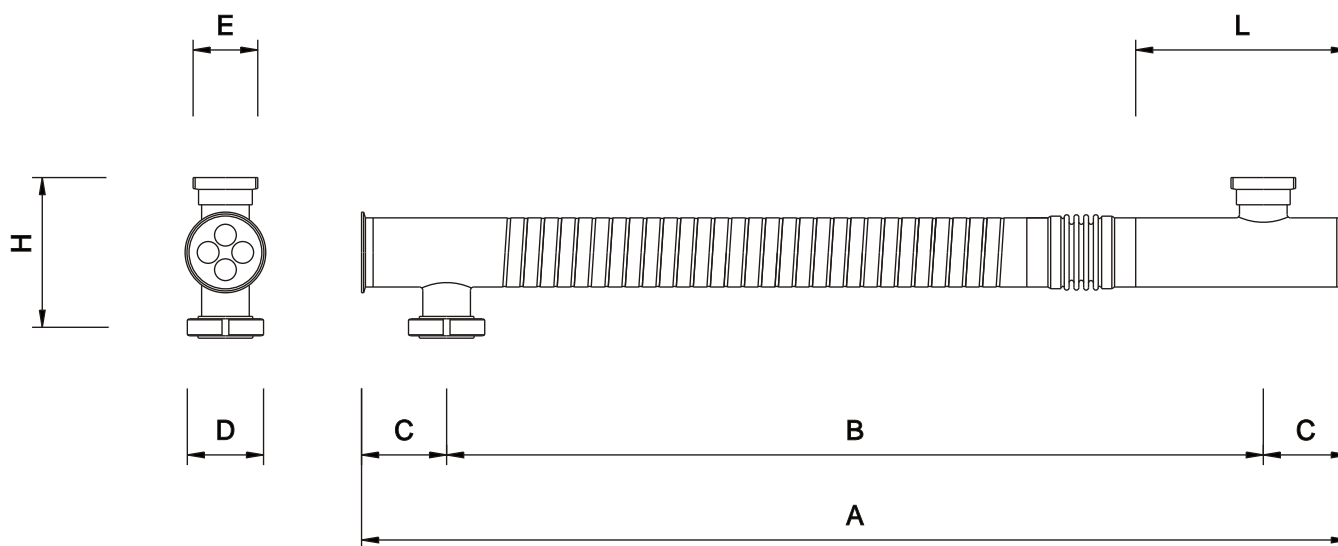
MODEL	SHELL VOLUME [litres]	TUBES VOLUME [litres]	EXCHANGE AREA [m ²]	SHELL SECTION [mm ²]	TUBES SECTION [mm ²]	WEIGHT [kg]
MLW 100 7 28 1 1000	3.50	3.13	0.56	3171.25	3436.12	16.4
MLW 100 7 28 1 1500	5.08	4.84	0.87	3171.25	3436.12	22.3
MLW 100 7 28 1 2000	6.67	6.56	1.18	3171.25	3436.12	28.2
MLW 100 7 28 1 3000	9.84	10.00	1.79	3171.25	3436.12	39.9
MLW 100 7 28 1 6000	19.35	20.31	3.64	3171.25	3436.12	75.1

Category calculation for second group's fluids - Gas, melted gas and liquids with a steam tension at maximum temperature > 0.5 bar

Article 3.3 1st Category 2nd Category

MODEL	VOLUME [litres]	PRESSURE [bar] *												
		1	2	3	4	5	6	7	8	9	10	11	12	
MLW 100 7 28 1 1000	Shell / Tubes													
MLW 100 7 28 1 1500	Shell / Tubes									9.8	10.3			
MLW 100 7 28 1 2000	Shell / Tubes							7.4	7.6					
MLW 100 7 28 1 3000	Shell / Tubes					5.0	5.0							
MLW 100 7 28 1 6000	Shell / Tubes		2.5	2.4							9.8	10.3		

* for higher pressure contact MBS



MODEL	DIMENSIONS [mm]						
	A	B	C	D	E	H	L
MLW 100 7 28 1 1000	950	700	125	DIN 11851 DN 100 F CLAMP 4"	DIN 11851 DN 50-65 M/F CLAMP 3"	220	312.5
MLW 100 7 28 1 1500	1450	1200					
MLW 100 7 28 1 2000	1950	1700					
MLW 100 7 28 1 3000	2950	2700					
MLW 100 7 28 1 6000	5950	5700					

Not binding technical datas; may be modified by the Manufactures without advise



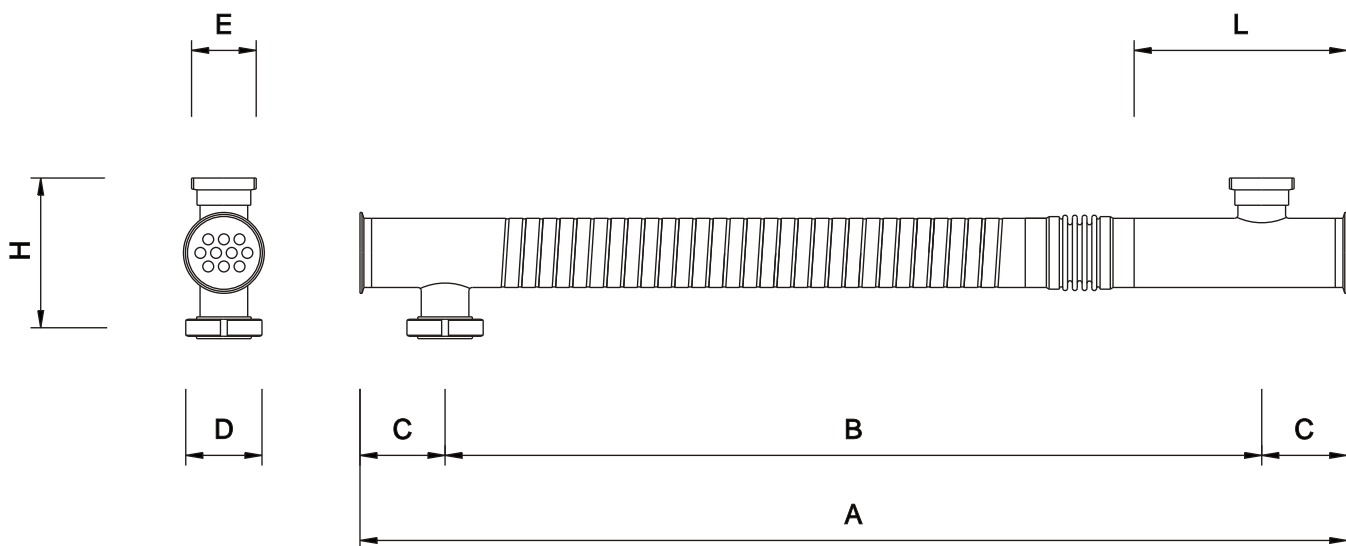
MODEL	SHELL VOLUME [litres]	TUBES VOLUME [litres]	EXCHANGE AREA [m ²]	SHELL SECTION [mm ²]	TUBES SECTION [mm ²]	WEIGHT [kg]
MLW 100 10 16 1 1000	5.59	1.40	0.46	5470.90	1539.38	13.5
MLW 100 10 16 1 1500	8.32	2.17	0.71	5470.90	1539.38	17.8
MLW 100 10 16 1 2000	11.06	2.94	0.96	5470.90	1539.38	22.1
MLW 100 10 16 1 3000	16.53	4.48	1.46	5470.90	1539.38	30.7
MLW 100 10 16 1 6000	32.94	9.10	2.97	5470.90	1539.38	56.4

Category calculation for second group's fluids - Gas, melted gas and liquids with a steam tension at maximum temperature > 0.5 bar

Article 3.3 1st Category 2nd Category

MODEL	VOLUME [litres]	PRESSURE [bar] *												
		1	2	3	4	5	6	7	8	9	10	11	12	
MLW 100 10 16 1 1000	Shell / Tubes								8.9					
MLW 100 10 16 1 1500	Shell / Tubes						6.0							
MLW 100 10 16 1 2000	Shell / Tubes					4.5								
MLW 100 10 16 1 3000	Shell / Tubes			3.0									11.1	12.0
MLW 100 10 16 1 6000	Shell / Tubes	1.5					5.4	6.0						

* for higher pressure contact MBS



MODEL	DIMENSIONS [mm]						
	A	B	C	D	E	H	L
MLW 100 10 16 1 1000	950	700	125	DIN 11851 DN 100 F CLAMP 4"	DIN 11851 DN 50-65 M/F CLAMP 3"	220	312.5
MLW 100 10 16 1 1500	1450	1200					
MLW 100 10 16 1 2000	1950	1700					
MLW 100 10 16 1 3000	2950	2700					
MLW 100 10 16 1 6000	5950	5700					

Not binding technical datas; may be modified by the Manufactures without advise



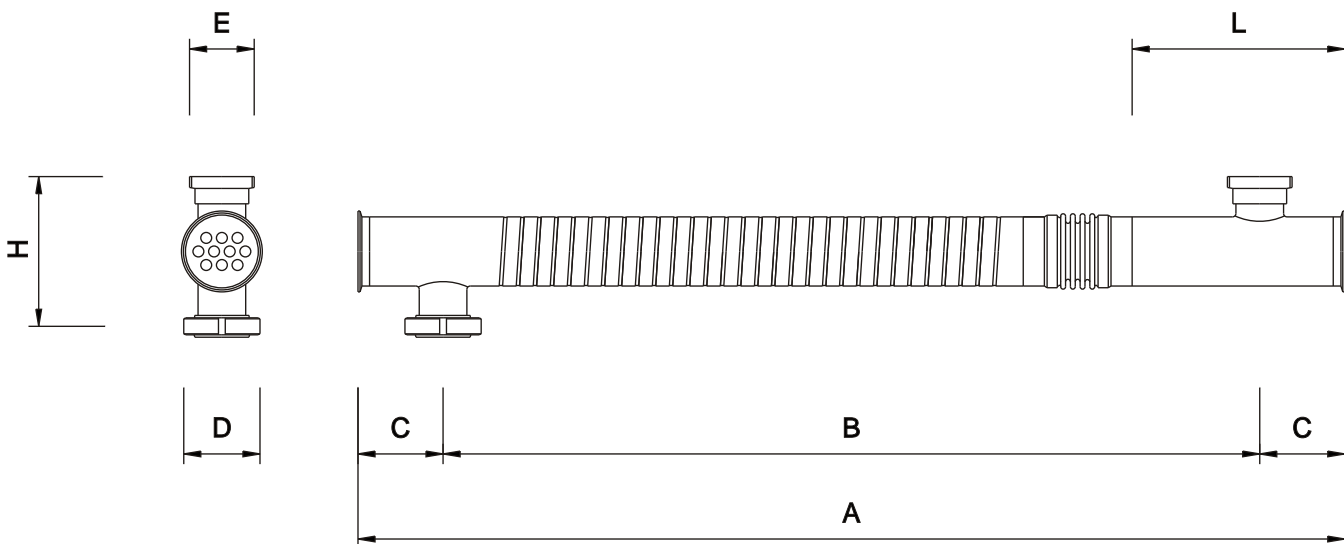
MODEL	SHELL VOLUME [litres]	TUBES VOLUME [litres]	EXCHANGE AREA [m ²]	SHELL SECTION [mm ²]	TUBES SECTION [mm ²]	WEIGHT [kg]
MLW 100 10 18 1 1000	5.10	1.83	0.51	4936.82	2010.62	14.0
MLW 100 10 18 1 1500	7.57	2.83	0.80	4936.82	2010.62	18.5
MLW 100 10 18 1 2000	10.04	3.84	1.08	4936.82	2010.62	23.1
MLW 100 10 18 1 3000	14.98	5.85	1.65	4936.82	2010.62	32.1
MLW 100 10 18 1 6000	29.79	11.88	3.34	4936.82	2010.62	59.3

Category calculation for second group's fluids - Gas, melted gas and liquids with a steam tension at maximum temperature > 0.5 bar

Article 3.3 1st Category 2nd Category

MODEL	VOLUME [litres]	PRESSURE [bar] *											
		1	2	3	4	5	6	7	8	9	10	11	12
MLW 100 10 18 1 1000	Shell / Tubes									9.8			
MLW 100 10 18 1 1500	Shell / Tubes						6.6						
MLW 100 10 18 1 2000	Shell / Tubes				4.9								
MLW 100 10 18 1 3000	Shell / Tubes			3.3						8.5			
MLW 100 10 18 1 6000	Shell / Tubes	1.6				4.2		6.7					

* for higher pressure contact MBS



MODEL	DIMENSIONS [mm]						
	A	B	C	D	E	H	L
MLW 100 10 18 1 1000	950	700	125	DIN 11851 DN 100 F CLAMP 4" more connections on demand	DIN 11851 DN 50-65 M/F CLAMP 3" more connections on demand	220	312.5
MLW 100 10 18 1 1500	1450	1200					
MLW 100 10 18 1 2000	1950	1700					
MLW 100 10 18 1 3000	2950	2700					
MLW 100 10 18 1 6000	5950	5700					

Not binding technical datas; may be modified by the Manufactures without advise



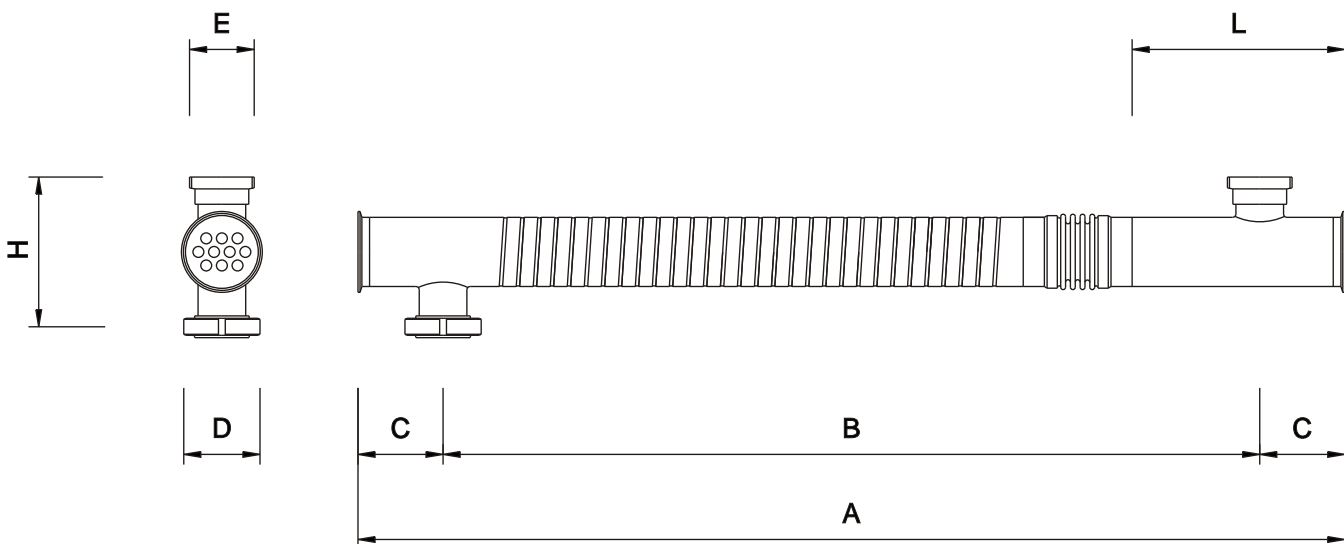
MODEL	SHELL VOLUME [litres]	TUBES VOLUME [litres]	EXCHANGE AREA [m ²]	SHELL SECTION [mm ²]	TUBES SECTION [mm ²]	WEIGHT [kg]
MLW 100 10 20 1 1000	4.56	2.32	0.57	4339.92	2544.69	14.4
MLW 100 10 20 1 1500	6.73	3.59	0.89	4339.92	2544.69	19.2
MLW 100 10 20 1 2000	8.90	4.86	1.20	4339.92	2544.69	24.0
MLW 100 10 20 1 3000	13.24	7.41	1.83	4339.92	2544.69	33.6
MLW 100 10 20 1 6000	26.26	15.04	3.71	4339.92	2544.69	62.3

Category calculation for second group's fluids - Gas, melted gas and liquids with a steam tension at maximum temperature > 0.5 bar

Article 3.3 1st Category 2nd Category

MODEL	VOLUME [litres]	PRESSURE [bar] *															
		1	2	3	4	5	6	7	8	9	10	11	12				
MLW 100 10 20 1 1000	Shell / Tubes												10.9				
MLW 100 10 20 1 1500	Shell / Tubes								7.4								
MLW 100 10 20 1 2000	Shell / Tubes					5.6							10.2				
MLW 100 10 20 1 3000	Shell / Tubes			3.7				6.7									
MLW 100 10 20 1 6000	Shell / Tubes	1.9			3.3				7.6								

* for higher pressure contact MBS



MODEL	DIMENSIONS [mm]						
	A	B	C	D	E	H	L
MLW 100 10 20 1 1000	950	700	125	DIN 11851 DN 100 F CLAMP 4"	DIN 11851 DN 50-65 M/F CLAMP 3"	220	312.5
MLW 100 10 20 1 1500	1450	1200					
MLW 100 10 20 1 2000	1950	1700					
MLW 100 10 20 1 3000	2950	2700					
MLW 100 10 20 1 6000	5950	5700					

Not binding technical datas; may be modified by the Manufactures without advise



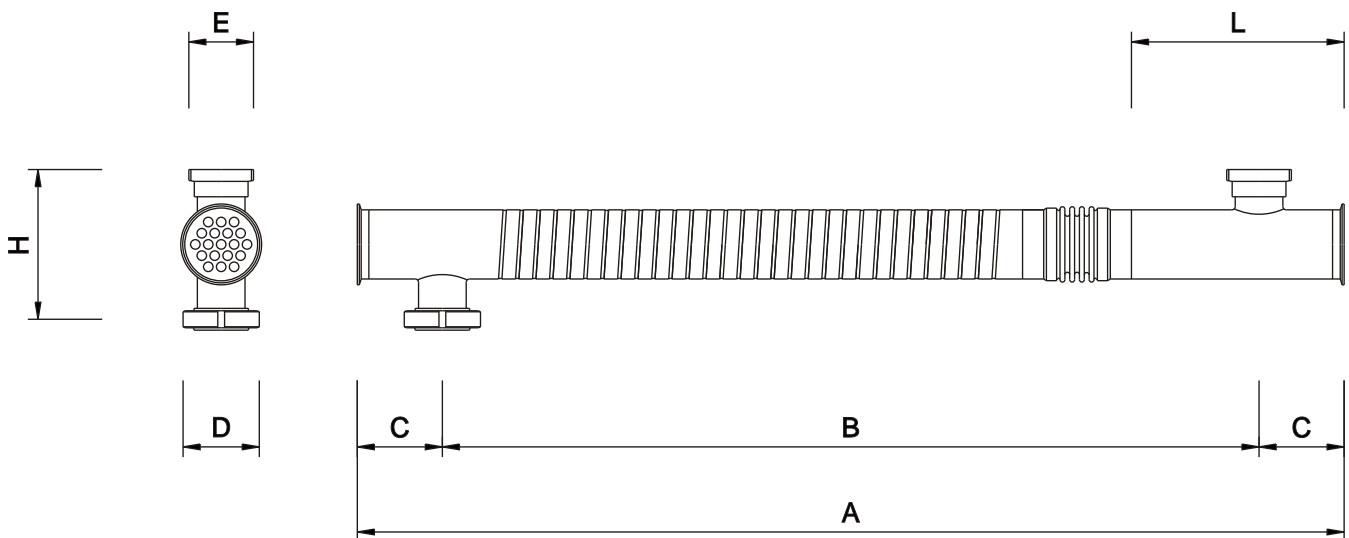
MODEL	SHELL VOLUME [litres]	TUBES VOLUME [litres]	EXCHANGE AREA [m ²]	SHELL SECTION [mm ²]	TUBES SECTION [mm ²]	WEIGHT [kg]
MLW 100 19 16 1 1000	3.94	2.66	0.87	3661.34	2924.82	16.6
MLW 100 19 16 1 1500	5.77	4.12	1.35	3661.34	2924.82	22.5
MLW 100 19 16 1 2000	7.60	5.59	1.82	3661.34	2924.82	28.5
MLW 100 19 16 1 3000	11.26	8.51	2.78	3661.34	2924.82	40.4
MLW 100 19 16 1 6000	22.25	17.29	5.64	3661.34	2924.82	76.1

Category calculation for second group's fluids - Gas, melted gas and liquids with a steam tension at maximum temperature > 0.5 bar

Article 3.3 1st Category 2nd Category

MODEL	VOLUME [litres]	PRESSURE [bar] *												
		1	2	3	4	5	6	7	8	9	10	11	12	
MLW 100 19 16 1 1000	Shell / Tubes													12.6
MLW 100 19 16 1 1500	Shell / Tubes								8.6					12.1
MLW 100 19 16 1 2000	Shell / Tubes						6.5		8.9					
MLW 100 19 16 1 3000	Shell / Tubes				4.4		5.8							
MLW 100 19 16 1 6000	Shell / Tubes		2.2	2.8					8.9				11.5	

* for higher pressure contact MBS



MODEL	DIMENSIONS [mm]						
	A	B	C	D	E	H	L
MLW 100 19 16 1 1000	950	700	125	DIN 11851 DN 100 F CLAMP 4"	DIN 11851 DN 50-65 M/F CLAMP 3"	220	312.5
MLW 100 19 16 1 1500	1450	1200					
MLW 100 19 16 1 2000	1950	1700					
MLW 100 19 16 1 3000	2950	2700					
MLW 100 19 16 1 6000	5950	5700					

Not binding technical datas; may be modified by the Manufactures without advise



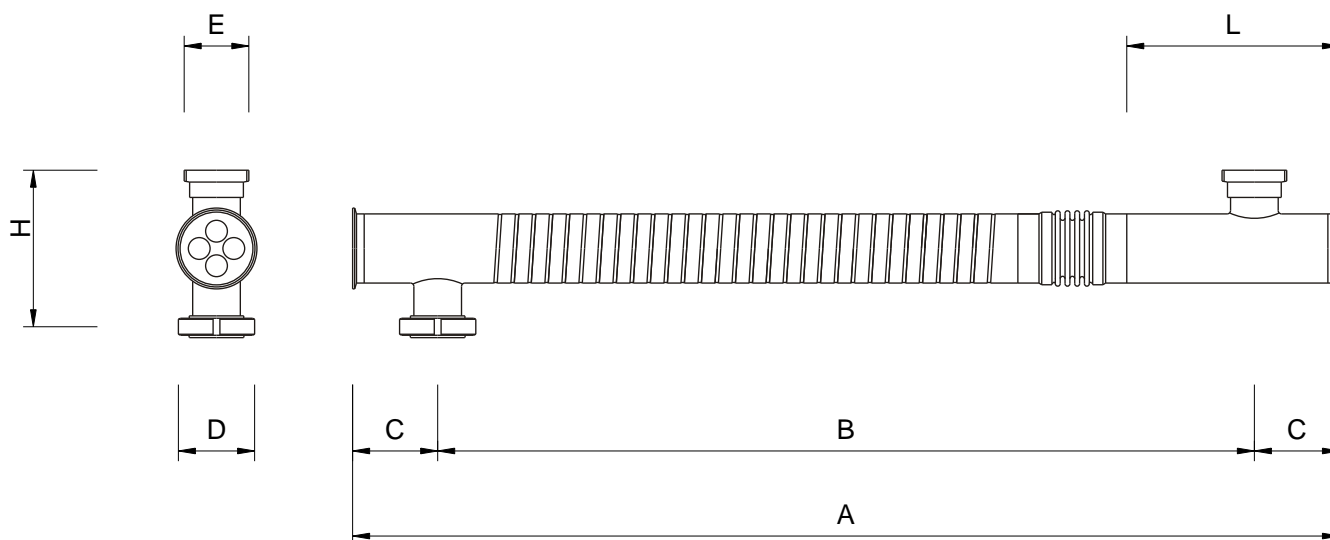
MODEL	SHELL VOLUME [litres]	TUBES VOLUME [litres]	EXCHANGE AREA [m ²]	SHELL SECTION [mm ²]	TUBES SECTION [mm ²]	WEIGHT [kg]
MLW 114 4 28 1 1000	7.05	1.79	0.32	7092.22	1963.50	15.8
MLW 114 4 28 1 1500	10.60	2.77	0.50	7092.22	1963.50	20.5
MLW 114 4 28 1 2000	14.14	3.75	0.67	7092.22	1963.50	25.2
MLW 114 4 28 1 3000	21.23	5.71	1.02	7092.22	1963.50	34.7
MLW 114 4 28 1 6000	42.51	11.60	2.08	7092.22	1963.50	62.9

Category calculation for second group's fluids - Gas, melted gas and liquids with a steam tension at maximum temperature > 0.5 bar

Article 3.3 1st Category 2nd Category

MODEL	VOLUME [litres]	PRESSURE [bar] *												
		1	2	3	4	5	6	7	8	9	10	11	12	
MLW 114 4 28 1 1000	Shell / Tubes							7.0						
MLW 114 4 28 1 1500	Shell / Tubes				4.7									
MLW 114 4 28 1 2000	Shell / Tubes			3.5										
MLW 114 4 28 1 3000	Shell / Tubes		2.3							8.7	9.4			
MLW 114 4 28 1 6000	Shell / Tubes	1.1			4.7	4.3								

* for higher pressure contact MBS



MODEL	DIMENSIONS [mm]						
	A	B	C	D	E	H	L
MLW 114 4 28 1 1000	950	700	125	DIN 11851 DN 125 F CLAMP 4"	DIN 11851 DN 65-80 M/F CLAMP 3"	230	312.5
MLW 114 4 28 1 1500	1450	1200					
MLW 114 4 28 1 2000	1950	1700					
MLW 114 4 28 1 3000	2950	2700					
MLW 114 4 28 1 6000	5950	5700					

Not binding technical datas; may be modified by the Manufactures without advise



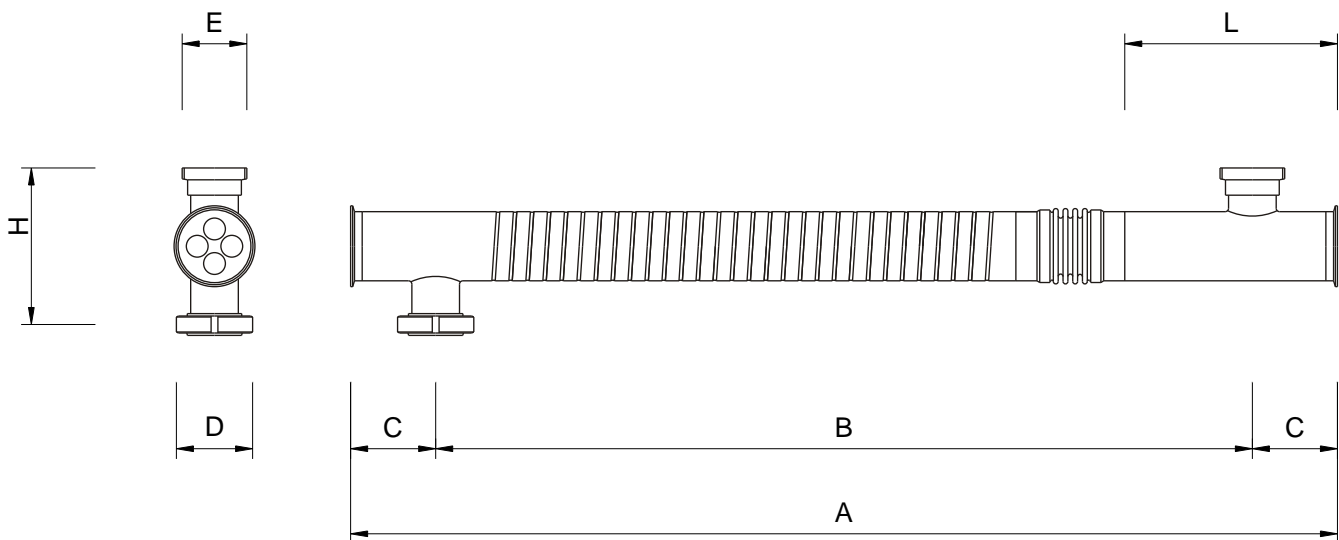
MODEL	SHELL VOLUME [litres]	TUBES VOLUME [litres]	EXCHANGE AREA [m ²]	SHELL SECTION [mm ²]	TUBES SECTION [mm ²]	WEIGHT [kg]
MLW 114 4 34 1 1000	5.99	2.75	0.39	5923.54	3019.07	16.6
MLW 114 4 34 1 1500	8.95	4.26	0.60	5923.54	3019.07	21.8
MLW 114 4 34 1 2000	11.91	5.77	0.82	5923.54	3019.07	26.9
MLW 114 4 34 1 3000	17.83	8.79	1.24	5923.54	3019.07	37.2
MLW 114 4 34 1 6000	35.60	17.84	2.53	5923.54	3019.07	68.2

Category calculation for second group's fluids - Gas, melted gas and liquids with a steam tension at maximum temperature > 0.5 bar

Article 3.3 1st Category 2nd Category

MODEL	VOLUME [litres]	PRESSURE [bar] *															
		1	2	3	4	5	6	7	8	9	10	11	12				
MLW 114 4 34 1 1000	Shell / Tubes								8.3								
MLW 114 4 34 1 1500	Shell / Tubes					5.5									11.7		
MLW 114 4 34 1 2000	Shell / Tubes				4.1					8.6							
MLW 114 4 34 1 3000	Shell / Tubes		2.8				5.6								11.2		
MLW 114 4 34 1 6000	Shell / Tubes	1.4		2.8			5.6								11.2		

* for higher pressure contact MBS



MODEL	DIMENSIONS [mm]						
	A	B	C	D	E	H	L
MLW 114 4 34 1 1000	950	700	125	DIN 11851 DN 125 F CLAMP 4"	DIN 11851 DN 65-80 M/F CLAMP 3"	230	312.5
MLW 114 4 34 1 1500	1450	1200					
MLW 114 4 34 1 2000	1950	1700					
MLW 114 4 34 1 3000	2950	2700					
MLW 114 4 34 1 6000	5950	5700					

Not binding technical datas; may be modified by the Manufactures without advise



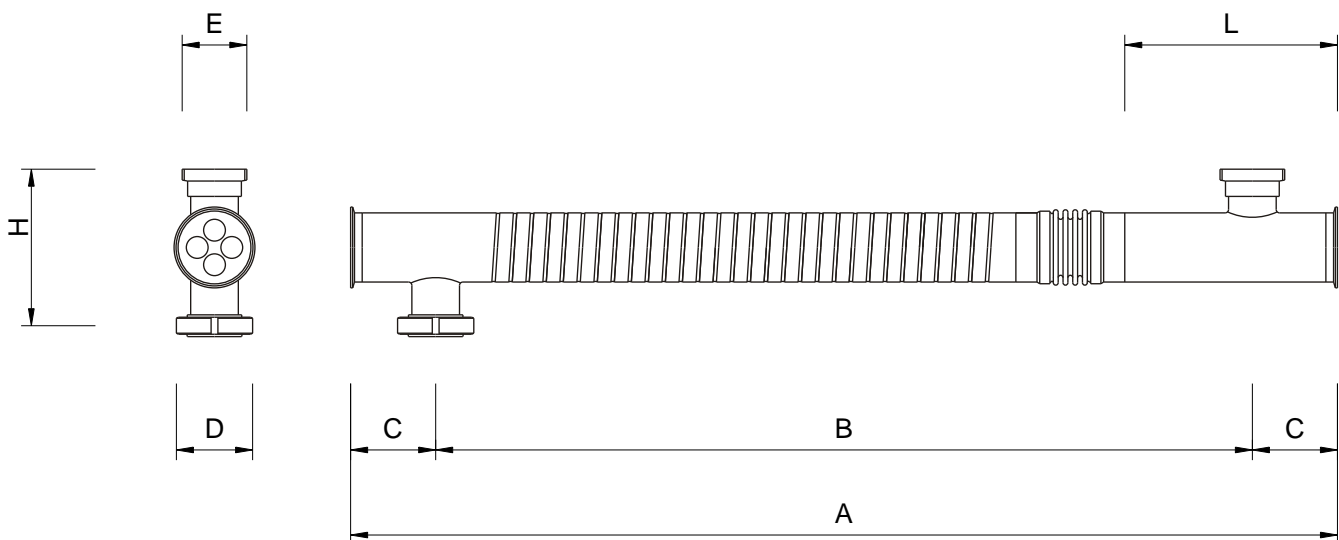
MODEL	SHELL VOLUME [litres]	TUBES VOLUME [litres]	EXCHANGE AREA [m ²]	SHELL SECTION [mm ²]	TUBES SECTION [mm ²]	WEIGHT [kg]
MLW 114 4 40 1 1000	4.72	3.91	0.46	4528.68	4300.84	17.4
MLW 114 4 40 1 1500	6.98	6.06	0.71	4528.68	4300.84	23.0
MLW 114 4 40 1 2000	9.25	8.21	0.96	4528.68	4300.84	28.6
MLW 114 4 40 1 3000	13.77	12.52	1.46	4528.68	4300.84	39.8
MLW 114 4 40 1 6000	27.36	25.42	2.97	4528.68	4300.84	73.4

Category calculation for second group's fluids - Gas, melted gas and liquids with a steam tension at maximum temperature > 0.5 bar

Article 3.3 1st Category 2nd Category

MODEL	VOLUME [litres]	PRESSURE [bar] *												
		1	2	3	4	5	6	7	8	9	10	11	12	
MLW 114 4 40 1 1000	Shell / Tubes											10,5		12,7
MLW 114 4 40 1 1500	Shell / Tubes							7,1		8,2				
MLW 114 4 40 1 2000	Shell / Tubes					5,4		6,0						
MLW 114 4 40 1 3000	Shell / Tubes			3,6	3,9									
MLW 114 4 40 1 6000	Shell / Tubes	1,8	1,9						7,3	7,8				

* for higher pressure contact MBS



MODEL	DIMENSIONS [mm]						
	A	B	C	D	E	H	L
MLW 114 4 40 1 1000	950	700	125	DIN 11851 DN 125 F CLAMP 4"	DIN 11851 DN 65-80 M/F CLAMP 3"	230	312.5
MLW 114 4 40 1 1500	1450	1200					
MLW 114 4 40 1 2000	1950	1700					
MLW 114 4 40 1 3000	2950	2700					
MLW 114 4 40 1 6000	5950	5700					

Not binding technical datas; may be modified by the Manufactures without advise



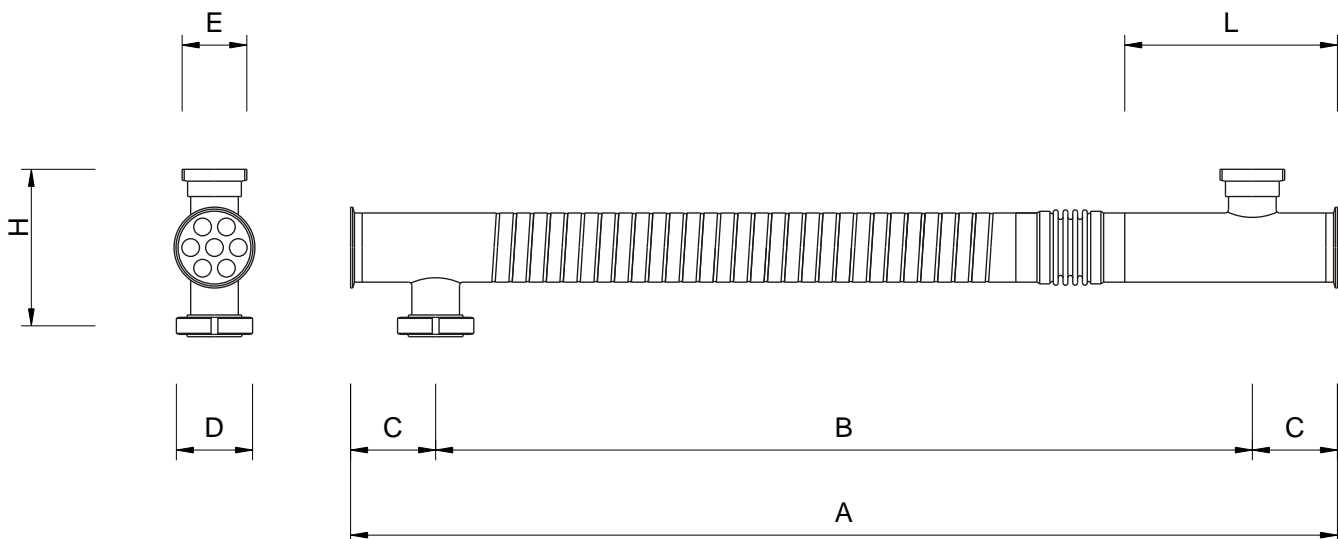
MODEL	SHELL VOLUME [litres]	TUBES VOLUME [litres]	EXCHANGE AREA [m ²]	SHELL SECTION [mm ²]	TUBES SECTION [mm ²]	WEIGHT [kg]
MLW 114 7 25 1 1000	6.06	2.51	0.51	6008.27	2758.57	17.9
MLW 114 7 25 1 1500	9.07	3.89	0.79	6008.27	2758.57	23.7
MLW 114 7 25 1 2000	12.07	5.27	1.07	6008.27	2758.57	29.6
MLW 114 7 25 1 3000	18.08	8.03	1.63	6008.27	2758.57	41.3
MLW 114 7 25 1 6000	36.11	16.30	3.30	6008.27	2758.57	76.3

Category calculation for second group's fluids - Gas, melted gas and liquids with a steam tension at maximum temperature > 0.5 bar

Article 3.3 1st Category 2nd Category

MODEL	VOLUME [litres]	PRESSURE [bar] *												
		1	2	3	4	5	6	7	8	9	10	11	12	
MLW 114 7 25 1 1000	Shell / Tubes								8.2					
MLW 114 7 25 1 1500	Shell / Tubes					5.5								12.8
MLW 114 7 25 1 2000	Shell / Tubes				4.1						9.4			
MLW 114 7 25 1 3000	Shell / Tubes		2.7					6.2					11.0	
MLW 114 7 25 1 6000	Shell / Tubes	1.3			3.0		5.5							12.2

* for higher pressure contact MBS



MODEL	DIMENSIONS [mm]						
	A	B	C	D	E	H	L
MLW 114 7 25 1 1000	950	700	125	DIN 11851 DN 125 F CLAMP 4"	DIN 11851 DN 65-80 M/F CLAMP 3"	230	312.5
MLW 114 7 25 1 1500	1450	1200					
MLW 114 7 25 1 2000	1950	1700					
MLW 114 7 25 1 3000	2950	2700					
MLW 114 7 25 1 6000	5950	5700					

Not binding technical datas; may be modified by the Manufactures without advise



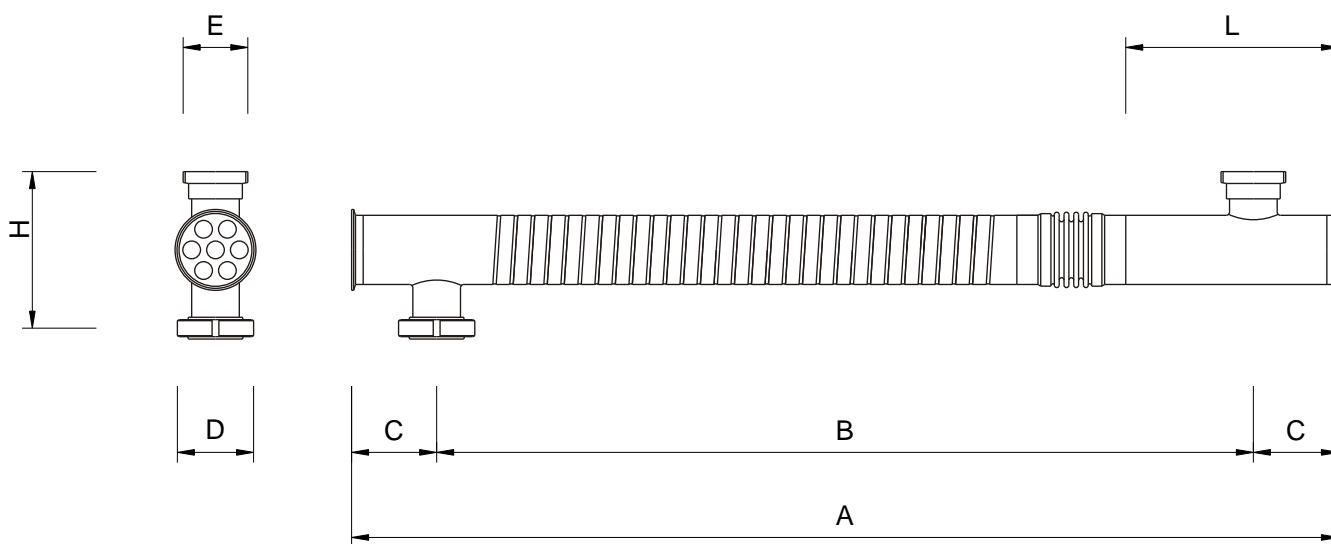
MODEL	SHELL VOLUME [litres]	TUBES VOLUME [litres]	EXCHANGE AREA [m ²]	SHELL SECTION [mm ²]	TUBES SECTION [mm ²]	WEIGHT [kg]
MLW 114 7 28 1 1000	5.37	3.13	0.56	5244.96	3436.12	18.5
MLW 114 7 28 1 1500	7.99	4.84	0.87	5244.96	3436.12	24.7
MLW 114 7 28 1 2000	10.61	6.56	1.18	5244.96	3436.12	30.9
MLW 114 7 28 1 3000	15.86	10.00	1.79	5244.96	3436.12	43.2
MLW 114 7 28 1 6000	31.59	20.31	3.64	5244.96	3436.12	80.3

Category calculation for second group's fluids - Gas, melted gas and liquids with a steam tension at maximum temperature > 0.5 bar

Article 3.3 1st Category 2nd Category

MODEL	VOLUME [litres]	PRESSURE [bar] *												
		1	2	3	4	5	6	7	8	9	10	11	12	
MLW 114 7 28 1 1000	Shell / Tubes									9.3				
MLW 114 7 28 1 1500	Shell / Tubes						6.2					10.3		
MLW 114 7 28 1 2000	Shell / Tubes				4.7				7.6					
MLW 114 7 28 1 3000	Shell / Tubes			3.1			5.0							12.6
MLW 114 7 28 1 6000	Shell / Tubes	1.5	2.4					6.3				9.8		

* for higher pressure contact MBS



MODEL	DIMENSIONS [mm]						
	A	B	C	D	E	H	L
MLW 114 7 28 1 1000	950	700	125	DIN 11851 DN 125 F CLAMP 4"	DIN 11851 DN 65-80 M/F CLAMP 3"	230	312.5
MLW 114 7 28 1 1500	1450	1200					
MLW 114 7 28 1 2000	1950	1700					
MLW 114 7 28 1 3000	2950	2700					
MLW 114 7 28 1 6000	5950	5700					

Not binding technical datas; may be modified by the Manufactures without advise



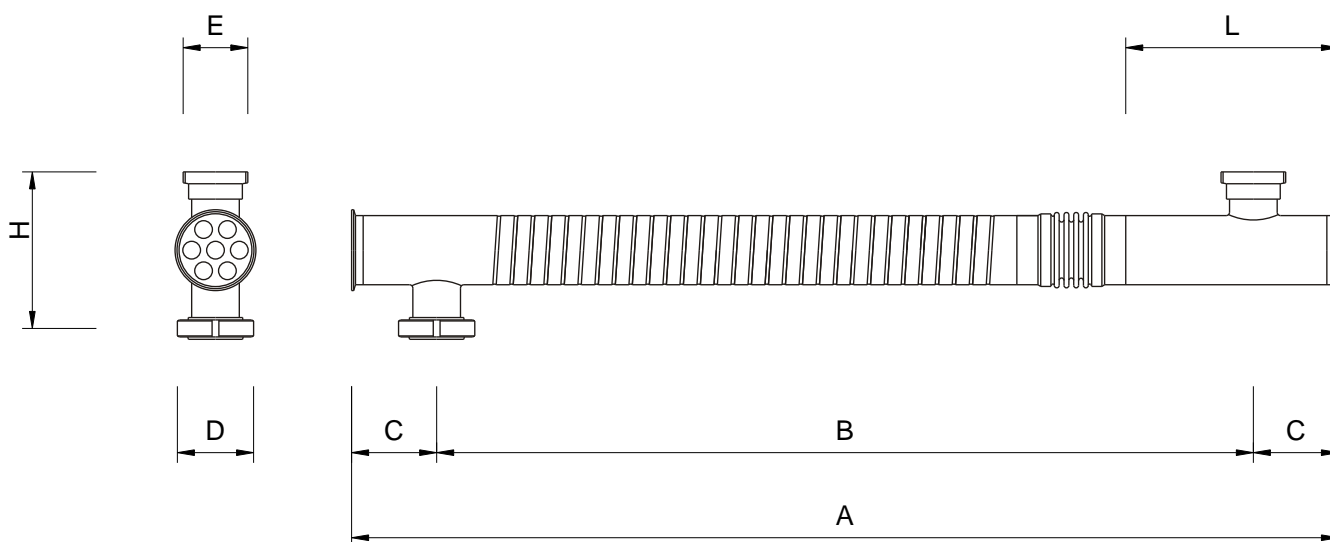
MODEL	SHELL VOLUME [litres]	TUBES VOLUME [litres]	EXCHANGE AREA [m ²]	SHELL SECTION [mm ²]	TUBES SECTION [mm ²]	WEIGHT [kg]
MLW 114 7 32 1 1000	4.17	4.21	0.64	3925.49	4623.64	19.4
MLW 114 7 32 1 1500	6.13	6.52	0.99	3925.49	4623.64	26.1
MLW 114 7 32 1 2000	8.09	8.83	1.34	3925.49	4623.64	32.8
MLW 114 7 32 1 3000	12.02	13.45	2.05	3925.49	4623.64	46.2
MLW 114 7 32 1 6000	23.80	27.33	4.16	3925.49	4623.64	86.4

Category calculation for second group's fluids - Gas, melted gas and liquids with a steam tension at maximum temperature > 0.5 bar

Article 3.3 1st Category 2nd Category

MODEL	VOLUME [litres]	PRESSURE [bar] *														
		1	2	3	4	5	6	7	8	9	10	11	12			
MLW 114 7 32 1 1000	Shell / Tubes												11.9	11.8		
MLW 114 7 32 1 1500	Shell / Tubes								7.6	8.1						
MLW 114 7 32 1 2000	Shell / Tubes						5.6	6.1								
MLW 114 7 32 1 3000	Shell / Tubes				3.7	4.1										
MLW 114 7 32 1 6000	Shell / Tubes	1.8	2.1							7.3	8.4					

* for higher pressure contact MBS



MODEL	DIMENSIONS [mm]						
	A	B	C	D	E	H	L
MLW 114 7 32 1 1000	950	700	125	DIN 11851 DN 125 F CLAMP 4"	DIN 11851 DN 65-80 M/F CLAMP 3"	230	312.5
MLW 114 7 32 1 1500	1450	1200					
MLW 114 7 32 1 2000	1950	1700					
MLW 114 7 32 1 3000	2950	2700					
MLW 114 7 32 1 6000	5950	5700					

Not binding technical datas; may be modified by the Manufactures without advise



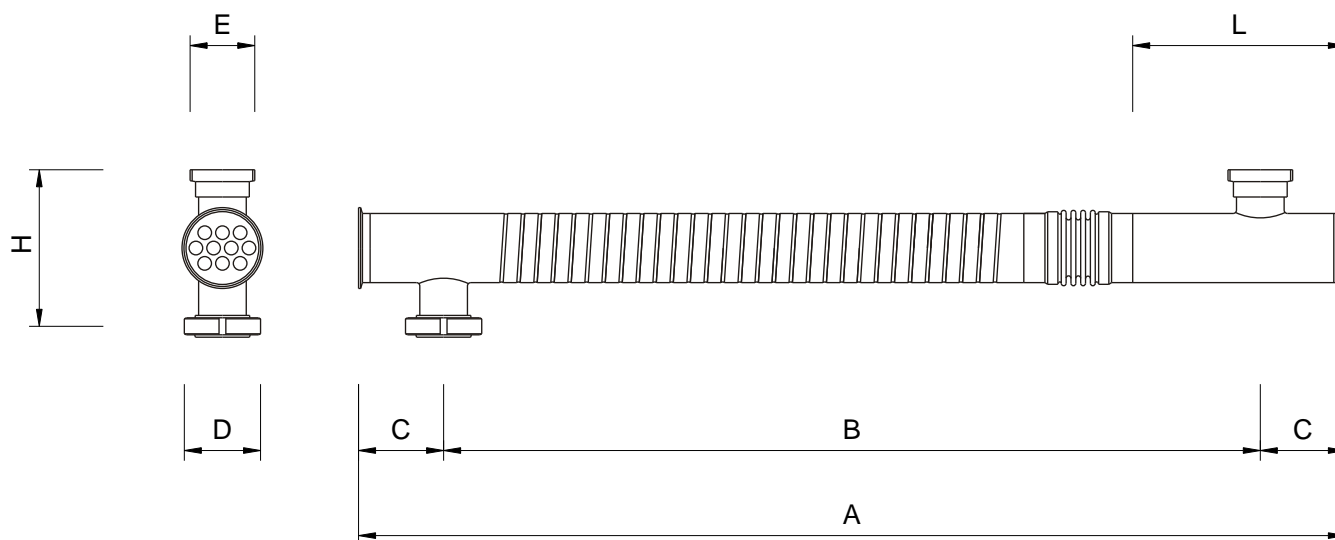
MODEL	SHELL VOLUME [litres]	TUBES VOLUME [litres]	EXCHANGE AREA [m ²]	SHELL SECTION [mm ²]	TUBES SECTION [mm ²]	WEIGHT [kg]
MLW 114 10 18 1 1000	6.98	1.83	0.51	7010.53	2010.62	16.1
MLW 114 10 18 1 1500	10.48	2.83	0.80	7010.53	2010.62	20.9
MLW 114 10 18 1 2000	13.99	3.84	1.08	7010.53	2010.62	25.8
MLW 114 10 18 1 3000	21.00	5.85	1.65	7010.53	2010.62	35.4
MLW 114 10 18 1 6000	42.03	11.88	3.34	7010.53	2010.62	64.5

Category calculation for second group's fluids - Gas, melted gas and liquids with a steam tension at maximum temperature > 0.5 bar

Article 3.3 1st Category 2nd Category

MODEL	VOLUME [litres]	PRESSURE [bar] *												
		1	2	3	4	5	6	7	8	9	10	11	12	
MLW 114 10 18 1 1000	Shell / Tubes							7.1						
MLW 114 10 18 1 1500	Shell / Tubes				4.7									
MLW 114 10 18 1 2000	Shell / Tubes			3.5										
MLW 114 10 18 1 3000	Shell / Tubes		2.3							8.5	9.5			
MLW 114 10 18 1 6000	Shell / Tubes	1.1			4.7	4.2								

* for higher pressure contact MBS



MODEL	DIMENSIONS [mm]						
	A	B	C	D	E	H	L
MLW 114 10 18 1 1000	950	700	125	DIN 11851 DN 125 F CLAMP 4"	DIN 11851 DN 65-80 M/F CLAMP 3"	230	312.5
MLW 114 10 18 1 1500	1450	1200					
MLW 114 10 18 1 2000	1950	1700					
MLW 114 10 18 1 3000	2950	2700					
MLW 114 10 18 1 6000	5950	5700					

Not binding technical datas; may be modified by the Manufactures without advise



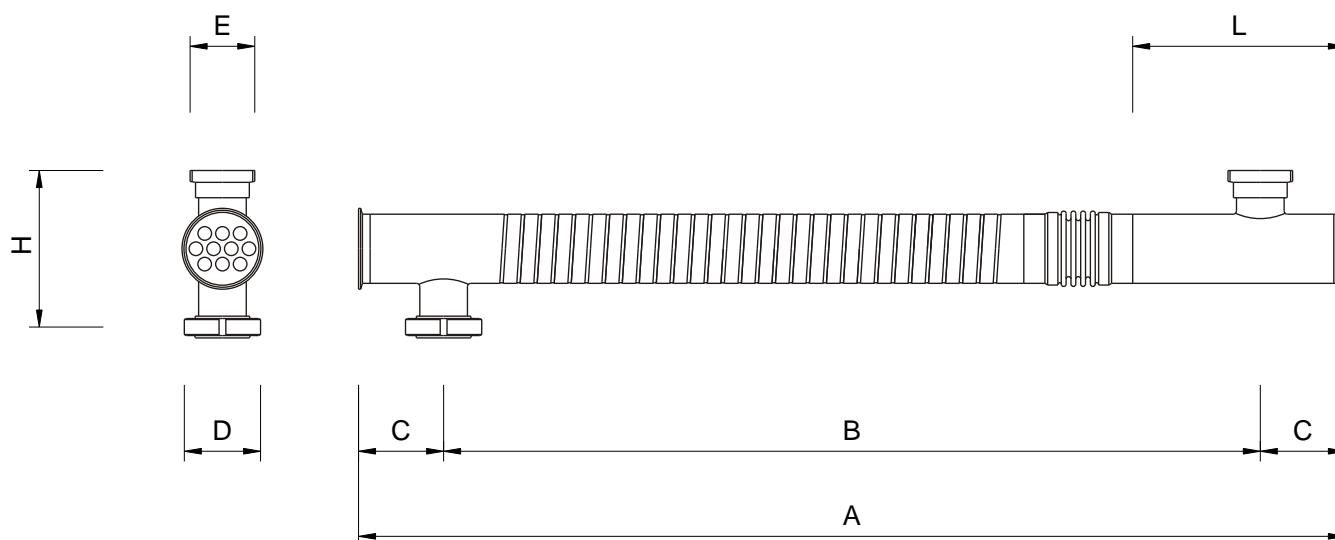
MODEL	SHELL VOLUME [litres]	TUBES VOLUME [litres]	EXCHANGE AREA [m ²]	SHELL SECTION [mm ²]	TUBES SECTION [mm ²]	WEIGHT [kg]
MLW 114 10 20 1 1000	6.43	2.32	0.57	6413.63	2544.69	16.5
MLW 114 10 20 1 1500	9.64	3.59	0.89	6413.63	2544.69	21.6
MLW 114 10 20 1 2000	12.85	4.86	1.20	6413.63	2544.69	26.7
MLW 114 10 20 1 3000	19.26	7.41	1.83	6413.63	2544.69	36.9
MLW 114 10 20 1 6000	38.50	15.04	3.71	6413.63	2544.69	67.4

Category calculation for second group's fluids - Gas, melted gas and liquids with a steam tension at maximum temperature > 0.5 bar

Article 3.3 1st Category 2nd Category

MODEL	VOLUME [litres]	PRESSURE [bar] *												
		1	2	3	4	5	6	7	8	9	10	11	12	
MLW 114 10 20 1 1000	Shell / Tubes							7.7						
MLW 114 10 20 1 1500	Shell / Tubes					5.1								
MLW 114 10 20 1 2000	Shell / Tubes			3.8								10.2		
MLW 114 10 20 1 3000	Shell / Tubes		2.5					6.7				10.3		
MLW 114 10 20 1 6000	Shell / Tubes	1.2			3.3		5.1							

* for higher pressure contact MBS



MODEL	DIMENSIONS [mm]						
	A	B	C	D	E	H	L
MLW 114 10 20 1 1000	950	700	125	DIN 11851 DN 125 F CLAMP 4"	DIN 11851 DN 65-80 M/F CLAMP 3"	230	312.5
MLW 114 10 20 1 1500	1450	1200					
MLW 114 10 20 1 2000	1950	1700					
MLW 114 10 20 1 3000	2950	2700					
MLW 114 10 20 1 6000	5950	5700					

Not binding technical datas; may be modified by the Manufactures without advise



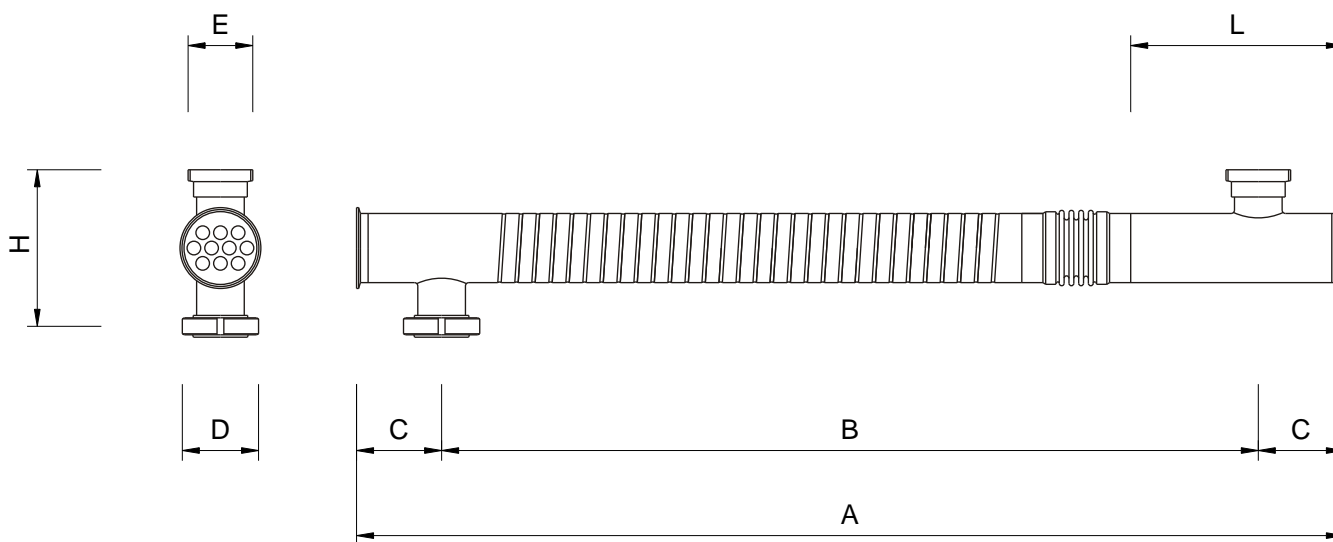
MODEL	SHELL VOLUME [litres]	TUBES VOLUME [litres]	EXCHANGE AREA [m ²]	SHELL SECTION [mm ²]	TUBES SECTION [mm ²]	WEIGHT [kg]
MLW 114 10 22 1 1000	5.83	2.86	0.63	5753.90	3141.59	17.0
MLW 114 10 22 1 1500	8.71	4.43	0.97	5753.90	3141.59	22.3
MLW 114 10 22 1 2000	11.59	6.00	1.32	5753.90	3141.59	27.6
MLW 114 10 22 1 3000	17.34	9.14	2.01	5753.90	3141.59	38.3
MLW 114 10 22 1 6000	34.60	18.57	4.08	5753.90	3141.59	70.3

Category calculation for second group's fluids - Gas, melted gas and liquids with a steam tension at maximum temperature > 0.5 bar

Article 3.3 1st Category 2nd Category

MODEL	VOLUME [litres]	PRESSURE [bar] *												
		1	2	3	4	5	6	7	8	9	10	11	12	
MLW 114 10 22 1 1000	Shell / Tubes								8.5					
MLW 114 10 22 1 1500	Shell / Tubes					5.7							11.2	
MLW 114 10 22 1 2000	Shell / Tubes				4.3					8.3				
MLW 114 10 22 1 3000	Shell / Tubes		2.8				5.4						11.5	
MLW 114 10 22 1 6000	Shell / Tubes	1.4		2.6			5.7						10.7	

* for higher pressure contact MBS



MODEL	DIMENSIONS [mm]						
	A	B	C	D	E	H	L
MLW 114 10 22 1 1000	950	700	125	DIN 11851 DN 125 F CLAMP 4"	DIN 11851 DN 65-80 M/F CLAMP 3"	230	312.5
MLW 114 10 22 1 1500	1450	1200					
MLW 114 10 22 1 2000	1950	1700					
MLW 114 10 22 1 3000	2950	2700					
MLW 114 10 22 1 6000	5950	5700					

Not binding technical datas; may be modified by the Manufactures without advise



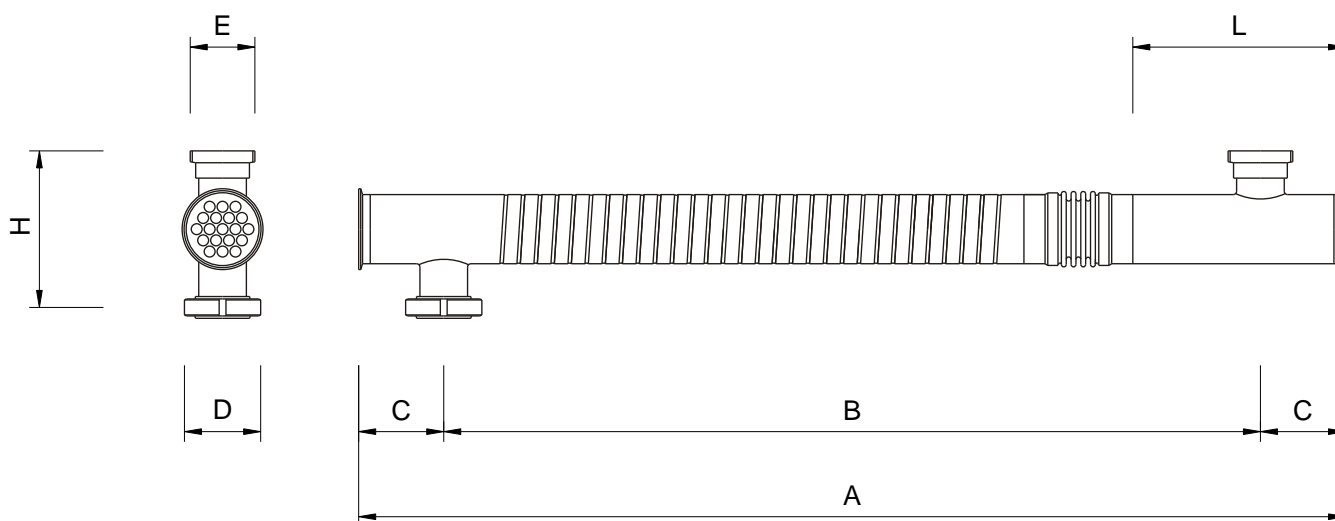
MODEL	SHELL VOLUME [litres]	TUBES VOLUME [litres]	EXCHANGE AREA [m ²]	SHELL SECTION [mm ²]	TUBES SECTION [mm ²]	WEIGHT [kg]
MLW 114 19 16 1 1000	5.82	2.66	0.87	5735.05	2924.82	18.6
MLW 114 19 16 1 1500	8.68	4.12	1.35	5735.05	2924.82	24.9
MLW 114 19 16 1 2000	11.55	5.59	1.82	5735.05	2924.82	31.2
MLW 114 19 16 1 3000	17.29	8.51	2.78	5735.05	2924.82	43.7
MLW 114 19 16 1 6000	34.49	17.29	5.64	5735.05	2924.82	81.3

Category calculation for second group's fluids - Gas, melted gas and liquids with a steam tension at maximum temperature > 0.5 bar

Article 3.3 1st Category 2nd Category

MODEL	VOLUME [litres]	PRESSURE [bar] *															
		1	2	3	4	5	6	7	8	9	10	11	12				
MLW 114 19 16 1 1000	Shell / Tubes									8.5							
MLW 114 19 16 1 1500	Shell / Tubes					5.7											12.1
MLW 114 19 16 1 2000	Shell / Tubes				4.3						8.9						
MLW 114 19 16 1 3000	Shell / Tubes		2.8					5.8								11.5	
MLW 114 19 16 1 6000	Shell / Tubes	1.4		2.8				5.7								11.5	

* for higher pressure contact MBS



MODEL	DIMENSIONS [mm]						
	A	B	C	D	E	H	L
MLW 114 19 16 1 1000	950	700	125	DIN 11851 DN 125 F CLAMP 4"	DIN 11851 DN 65-80 M/F CLAMP 3"	230	312.5
MLW 114 19 16 1 1500	1450	1200					
MLW 114 19 16 1 2000	1950	1700					
MLW 114 19 16 1 3000	2950	2700					
MLW 114 19 16 1 6000	5950	5700					

Not binding technical datas; may be modified by the Manufactures without advise



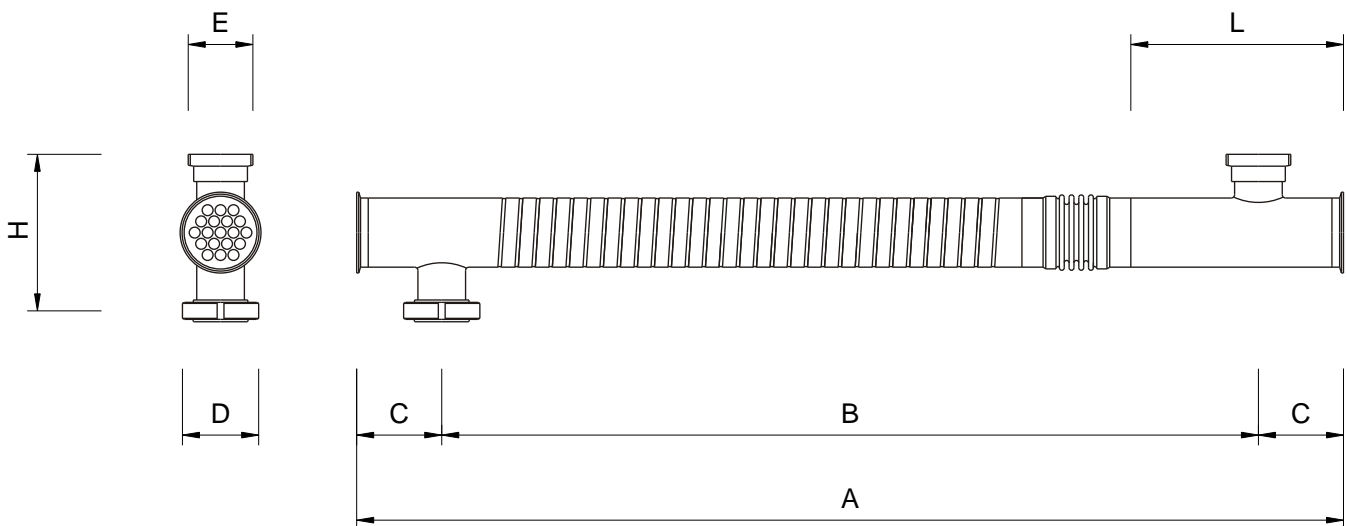
MODEL	SHELL VOLUME [litres]	TUBES VOLUME [litres]	EXCHANGE AREA [m ²]	SHELL SECTION [mm ²]	TUBES SECTION [mm ²]	WEIGHT [kg]
MLW 114 19 18 1 1000	4.89	3.48	0.98	4720.31	3820.18	18.6
MLW 114 19 18 1 1500	7.25	5.39	1.51	4720.31	3820.18	24.9
MLW 114 19 18 1 2000	9.61	7.30	2.05	4720.31	3820.18	31.2
MLW 114 19 18 1 3000	14.33	11.12	3.13	4720.31	3820.18	43.7
MLW 114 19 18 1 6000	28.49	22.58	6.35	4720.31	3820.18	81.3

Category calculation for second group's fluids - Gas, melted gas and liquids with a steam tension at maximum temperature > 0.5 bar

Article 3.3 1st Category 2nd Category

MODEL	VOLUME [litres]	PRESSURE [bar] *												
		1	2	3	4	5	6	7	8	9	10	11	12	
MLW 114 19 18 1 1000	Shell / Tubes											10.2		
MLW 114 19 18 1 1500	Shell / Tubes						6.8				9.2			
MLW 114 19 18 1 2000	Shell / Tubes					5.2	6.8							
MLW 114 19 18 1 3000	Shell / Tubes			3.4	4.4									
MLW 114 19 18 1 6000	Shell / Tubes	1.7	2.2					7.0	8.8					

* for higher pressure contact MBS



MODEL	DIMENSIONS [mm]						
	A	B	C	D	E	H	L
MLW 114 19 18 1 1000	950	700	125	DIN 11851 DN 125 F CLAMP 4"	DIN 11851 DN 65-80 M/F CLAMP 3"	230	312.5
MLW 114 19 18 1 1500	1450	1200					
MLW 114 19 18 1 2000	1950	1700					
MLW 114 19 18 1 3000	2950	2700					
MLW 114 19 18 1 6000	5950	5700					

Not binding technical datas; may be modified by the Manufactures without advise



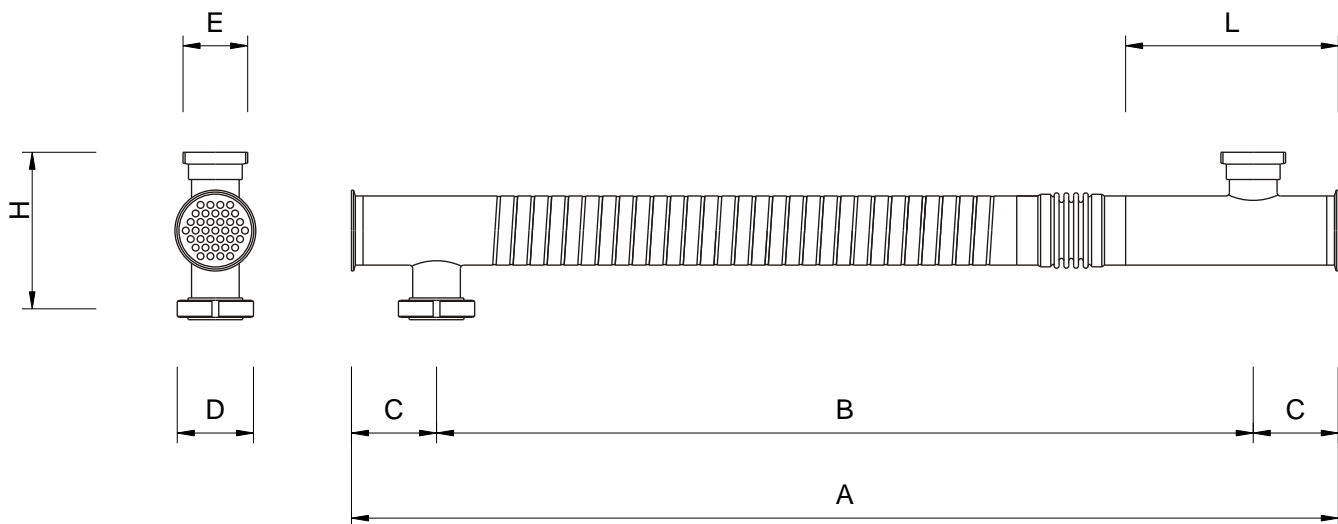
MODEL	SHELL VOLUME [litres]	TUBES VOLUME [litres]	EXCHANGE AREA [m ²]	SHELL SECTION [mm ²]	TUBES SECTION [mm ²]	WEIGHT [kg]
MLW 114 37 12 1 1000	5.48	2.64	1.27	5370.62	2905.97	21.4
MLW 114 37 12 1 1500	8.17	4.10	1.97	5370.62	2905.97	29.2
MLW 114 37 12 1 2000	10.85	5.55	2.66	5370.62	2905.97	36.9
MLW 114 37 12 1 3000	16.22	8.46	4.06	5370.62	2905.97	52.5
MLW 114 37 12 1 6000	32.34	17.17	8.24	5370.62	2905.97	99.1

Category calculation for second group's fluids - Gas, melted gas and liquids with a steam tension at maximum temperature > 0.5 bar

Article 3.3 1st Category 2nd Category

MODEL	VOLUME [litres]	PRESSURE [bar] *											
		1	2	3	4	5	6	7	8	9	10	11	12
MLW 114 37 12 1 1000	Shell / Tubes									9.1			
MLW 114 37 12 1 1500	Shell / Tubes						6.1						12.1
MLW 114 37 12 1 2000	Shell / Tubes				4.6					9.0			
MLW 114 37 12 1 3000	Shell / Tubes			3.0			5.9						12.3
MLW 114 37 12 1 6000	Shell / Tubes	1.5		2.9				6.1					11.6

* for higher pressure contact MBS



MODEL	DIMENSIONS [mm]						
	A	B	C	D	E	H	L
MLW 114 37 12 1 1000	950	700	125	DIN 11851 DN 125 F CLAMP 4"	DIN 11851 DN 65-80 M/F CLAMP 3"	230	312.5
MLW 114 37 12 1 1500	1450	1200					
MLW 114 37 12 1 2000	1950	1700					
MLW 114 37 12 1 3000	2950	2700					
MLW 114 37 12 1 6000	5950	5700					

Not binding technical datas; may be modified by the Manufactures without advise



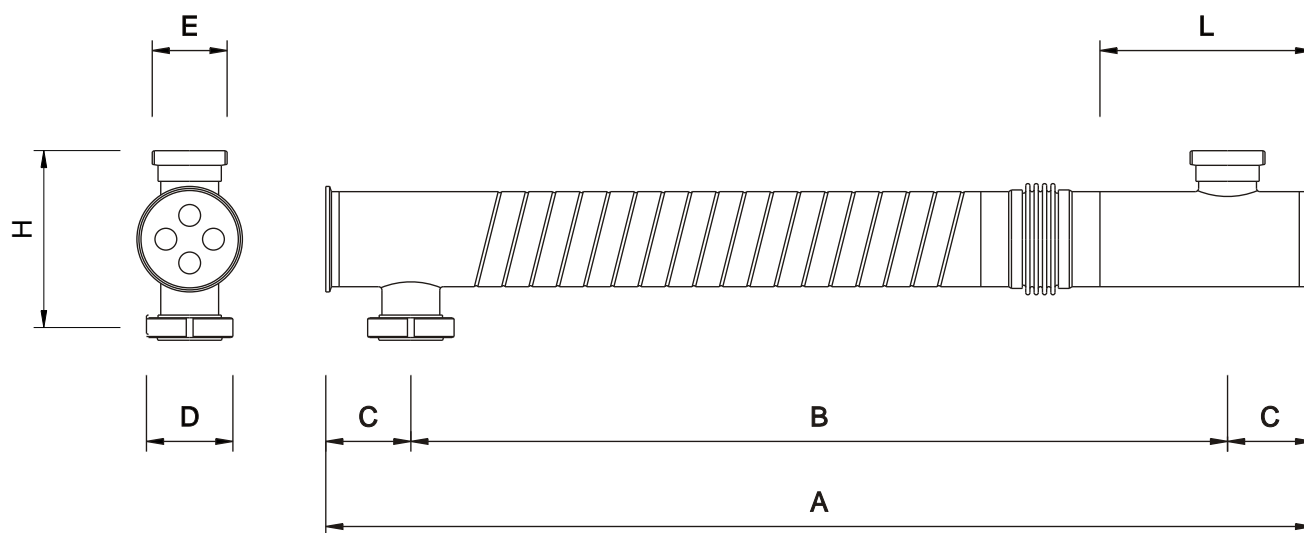
MODEL	SHELL VOLUME [litres]	TUBES VOLUME [litres]	EXCHANGE AREA [m ²]	SHELL SECTION [mm ²]	TUBES SECTION [mm ²]	WEIGHT [kg]
MLW 139 4 40 1 1000	9.53	3.91	0.46	9436.16	4300.84	22.1
MLW 139 4 40 1 1500	14.25	6.06	0.71	9436.16	4300.84	28.3
MLW 139 4 40 1 2000	18.97	8.21	0.96	9436.16	4300.84	34.6
MLW 139 4 40 1 3000	28.40	12.52	1.46	9436.16	4300.84	47.0
MLW 139 4 40 1 6000	56.71	25.42	2.97	9436.16	4300.84	84.3

Category calculation for second group's fluids - Gas, melted gas and liquids with a steam tension at maximum temperature > 0.5 bar

Article 3.3 1st Category 2nd Category

MODEL	VOLUME [litres]	PRESSURE [bar] *												
		1	2	3	4	5	6	7	8	9	10	11	12	
MLW 139 4 40 1 1000	Shell / Tubes					5.2								12.7
MLW 139 4 40 1 1500	Shell / Tubes			3.5							8.2			
MLW 139 4 40 1 2000	Shell / Tubes		2.6					6.0				10.5		
MLW 139 4 40 1 3000	Shell / Tubes	1.7			3.9				7.0					
MLW 139 4 40 1 6000	Shell / Tubes		1.9		3.5					7.8				

* for higher pressure contact MBS



MODEL	DIMENSIONS [mm]						
	A	B	C	D	E	H	L
MLW 139 4 40 1 1000	950	700	125	DIN 11851 DN 150 F Flangia	DIN 11851 DN 80-100 M/F CLAMP 3" o 4"	260	312.5
MLW 139 4 40 1 1500	1450	1200					
MLW 139 4 40 1 2000	1950	1700					
MLW 139 4 40 1 3000	2950	2700					
MLW 139 4 40 1 6000	5950	5700					

Not binding technical datas; may be modified by the Manufactures without advise



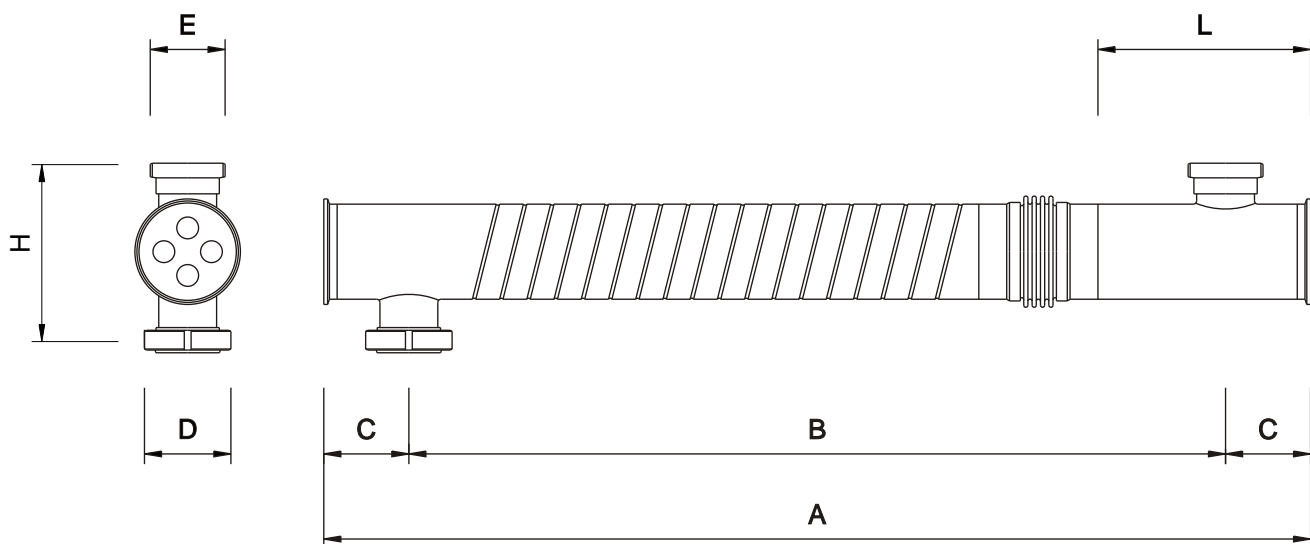
MODEL	SHELL VOLUME [litres]	TUBES VOLUME [litres]	EXCHANGE AREA [m ²]	SHELL SECTION [mm ²]	TUBES SECTION [mm ²]	WEIGHT [kg]
MLW 139 4 48 1 1000	7.44	5.87	0.55	7133.72	6446.83	23.3
MLW 139 4 48 1 1500	11.00	9.09	0.86	7133.72	6446.83	30.1
MLW 139 4 48 1 2000	14.57	12.31	1.16	7133.72	6446.83	36.9
MLW 139 4 48 1 3000	21.70	18.76	1.77	7133.72	6446.83	50.6
MLW 139 4 48 1 6000	43.11	38.10	3.59	7133.72	6446.83	91.5

Category calculation for second group's fluids - Gas, melted gas and liquids with a steam tension at maximum temperature > 0.5 bar

Article 3.3 1st Category 2nd Category

MODEL	VOLUME [litres]	PRESSURE [bar] *											
		1	2	3	4	5	6	7	8	9	10	11	12
MLW 139 4 48 1 1000	Shell / Tubes						6.7		8.5				
MLW 139 4 48 1 1500	Shell / Tubes				4.5	5.5							
MLW 139 4 48 1 2000	Shell / Tubes			3.4	4.0								
MLW 139 4 48 1 3000	Shell / Tubes		2.3	2.6						9.2	10.6		
MLW 139 4 48 1 6000	Shell / Tubes	1.1	1.3		4.6	5.2							

* for higher pressure contact MBS



MODEL	DIMENSIONS [mm]						
	A	B	C	D	E	H	L
MLW 139 4 48 1 1000	950	700	125	DIN 11851 DN 150 F Flangia more connections on demand	DIN 11851 DN 80-100 M/F CLAMP 3" o 4" more connections on demand	260	312.5
MLW 139 4 48 1 1500	1450	1200					
MLW 139 4 48 1 2000	1950	1700					
MLW 139 4 48 1 3000	2950	2700					
MLW 139 4 48 1 6000	5950	5700					

Not binding technical datas; may be modified by the Manufactures without advise



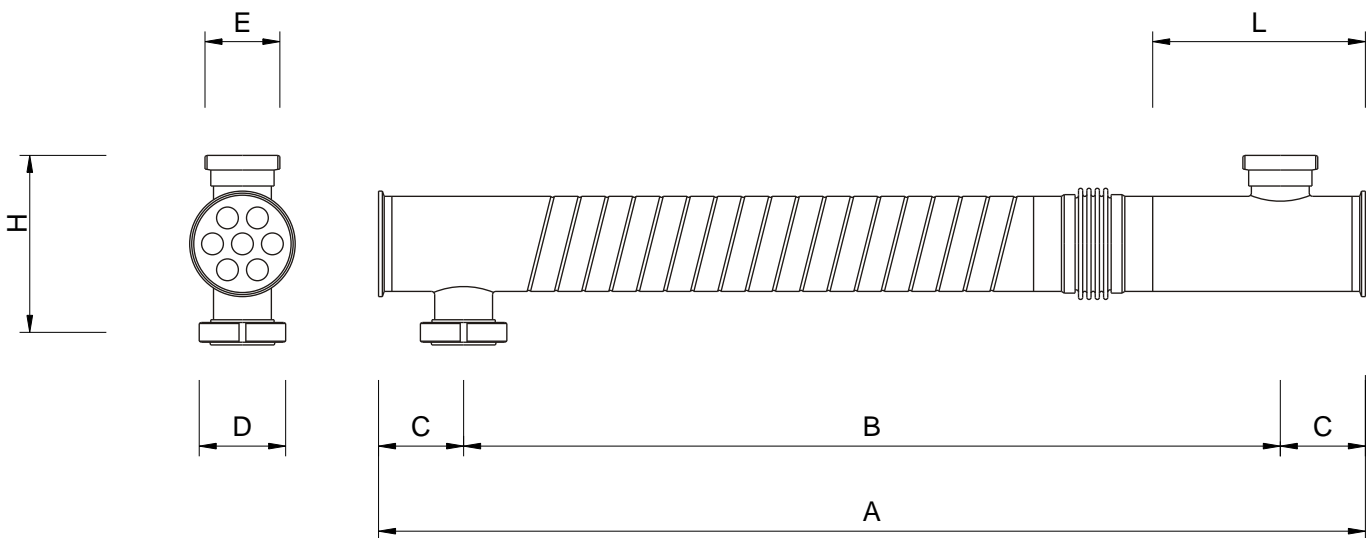
MODEL	SHELL VOLUME [litres]	TUBES VOLUME [litres]	EXCHANGE AREA [m ²]	SHELL SECTION [mm ²]	TUBES SECTION [mm ²]	WEIGHT [kg]
MLW 139 7 28 1 1000	10.18	3.13	0.56	10152.44	3436.12	23.2
MLW 139 7 28 1 1500	15.26	4.84	0.87	10152.44	3436.12	30.0
MLW 139 7 28 1 2000	20.34	6.56	1.18	10152.44	3436.12	36.8
MLW 139 7 28 1 3000	30.49	10.00	1.79	10152.44	3436.12	50.4
MLW 139 7 28 1 6000	60.95	20.31	3.64	10152.44	3436.12	91.2

Category calculation for second group's fluids - Gas, melted gas and liquids with a steam tension at maximum temperature > 0.5 bar

Article 3.3 1st Category 2nd Category

MODEL	VOLUME [litres]	PRESSURE [bar] *															
		1	2	3	4	5	6	7	8	9	10	11	12				
MLW 139 7 28 1 1000	Shell / Tubes				4.9												
MLW 139 7 28 1 1500	Shell / Tubes			3.2									10.3				
MLW 139 7 28 1 2000	Shell / Tubes		2.4						7.6		9.8						
MLW 139 7 28 1 3000	Shell / Tubes	1.6						5.0	6.5								
MLW 139 7 28 1 6000	Shell / Tubes		2.4	3.2									9.8				

* for higher pressure contact MBS



MODEL	DIMENSIONS [mm]						
	A	B	C	D	E	H	L
MLW 139 7 28 1 1000	950	700	125	DIN 11851 DN 150 F Flangia	DIN 11851 DN 80-100 M/F CLAMP 3" o 4"	260	312.5
MLW 139 7 28 1 1500	1450	1200					
MLW 139 7 28 1 2000	1950	1700					
MLW 139 7 28 1 3000	2950	2700					
MLW 139 7 28 1 6000	5950	5700					

Not binding technical datas; may be modified by the Manufactures without advise



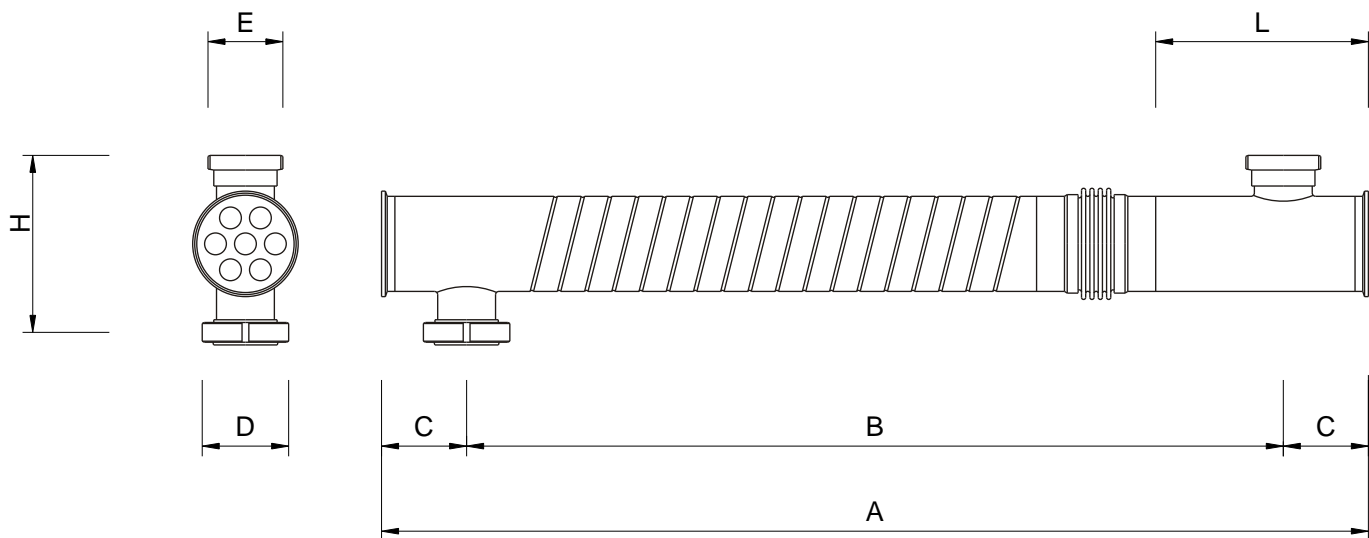
MODEL	SHELL VOLUME [litres]	TUBES VOLUME [litres]	EXCHANGE AREA [m ²]	SHELL SECTION [mm ²]	TUBES SECTION [mm ²]	WEIGHT [kg]
MLW 139 7 34 1 1000	8.32	4.81	0.68	8107.26	5283.37	24.6
MLW 139 7 34 1 1500	12.38	7.45	1.05	8107.26	5283.37	32.2
MLW 139 7 34 1 2000	16.43	10.09	1.43	8107.26	5283.37	39.8
MLW 139 7 34 1 3000	24.54	15.37	2.18	8107.26	5283.37	54.9
MLW 139 7 34 1 6000	48.86	31.22	4.42	8107.26	5283.37	100.3

Category calculation for second group's fluids - Gas, melted gas and liquids with a steam tension at maximum temperature > 0.5 bar

Article 3.3 1st Category 2nd Category

MODEL	VOLUME [litres]	PRESSURE [bar] *												
		1	2	3	4	5	6	7	8	9	10	11	12	
MLW 139 7 34 1 1000	Shell / Tubes						6.0					10.3		
MLW 139 7 34 1 1500	Shell / Tubes				4.0		6.7							
MLW 139 7 34 1 2000	Shell / Tubes			3.0	4.9									12.1
MLW 139 7 34 1 3000	Shell / Tubes		2.0		3.2					8.1				
MLW 139 7 34 1 6000	Shell / Tubes	1.0	1.6			4.0			6.4					

* for higher pressure contact MBS



MODEL	DIMENSIONS [mm]						
	A	B	C	D	E	H	L
MLW 139 7 34 1 1000	950	700	125	DIN 11851 DN 150 F Flangia more connections on demand	DIN 11851 DN 80-100 M/F CLAMP 3" o 4" more connections on demand	260	312.5
MLW 139 7 34 1 1500	1450	1200					
MLW 139 7 34 1 2000	1950	1700					
MLW 139 7 34 1 3000	2950	2700					
MLW 139 7 34 1 6000	5950	5700					

Not binding technical datas; may be modified by the Manufactures without advise



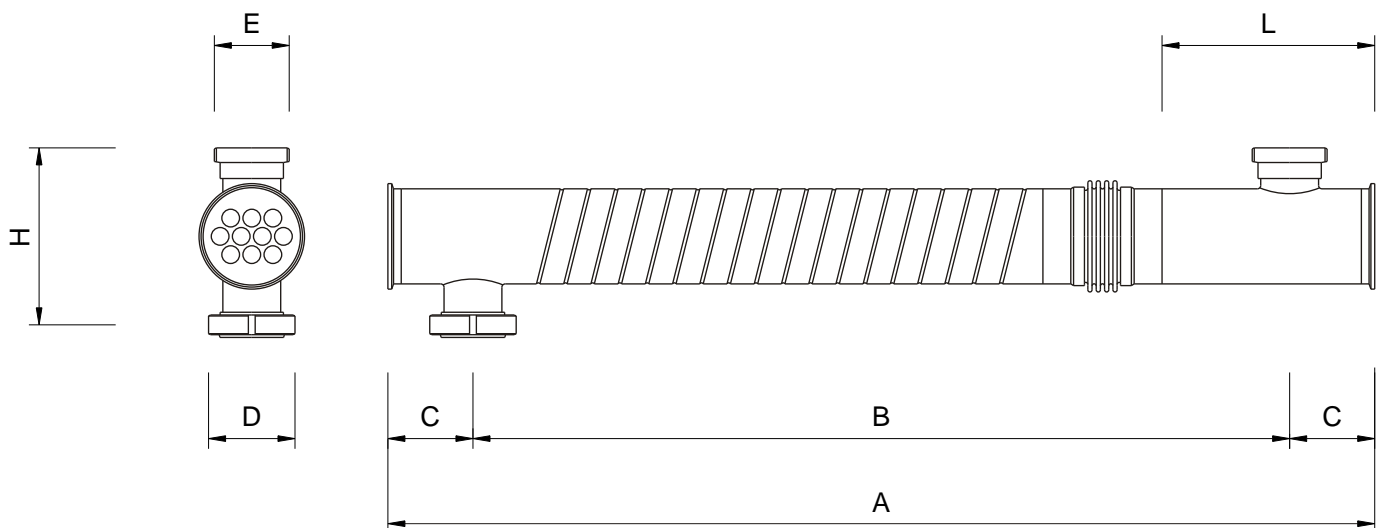
MODEL	SHELL VOLUME [litres]	TUBES VOLUME [litres]	EXCHANGE AREA [m ²]	SHELL SECTION [mm ²]	TUBES SECTION [mm ²]	WEIGHT [kg]
MLW 139 10 28 1 1000	8.50	4.47	0.80	8305.19	4908.74	25.9
MLW 139 10 28 1 1500	12.66	6.92	1.24	8305.19	4908.74	34.1
MLW 139 10 28 1 2000	16.81	9.38	1.68	8305.19	4908.74	42.4
MLW 139 10 28 1 3000	25.11	14.28	2.56	8305.19	4908.74	58.9
MLW 139 10 28 1 6000	50.03	29.01	5.20	8305.19	4908.74	108.5

Category calculation for second group's fluids - Gas, melted gas and liquids with a steam tension at maximum temperature > 0.5 bar

Article 3.3 1st Category 2nd Category

MODEL	VOLUME [litres]	PRESSURE [bar] *												
		1	2	3	4	5	6	7	8	9	10	11	12	
MLW 139 10 28 1 1000	Shell / Tubes					5.8							11.1	
MLW 139 10 28 1 1500	Shell / Tubes			3.9					7.2					
MLW 139 10 28 1 2000	Shell / Tubes		2.9				5.3						11.8	
MLW 139 10 28 1 3000	Shell / Tubes	1.9			3.5				7.9					
MLW 139 10 28 1 6000	Shell / Tubes		1.7		3.9				6.8					

* for higher pressure contact MBS



MODEL	DIMENSIONS [mm]						
	A	B	C	D	E	H	L
MLW 139 10 28 1 1000	950	700	125	DIN 11851 DN 150 F Flangia	DIN 11851 DN 80-100 M/F CLAMP 3" o 4"	260	312.5
MLW 139 10 28 1 1500	1450	1200					
MLW 139 10 28 1 2000	1950	1700					
MLW 139 10 28 1 3000	2950	2700					
MLW 139 10 28 1 6000	5950	5700					

Not binding technical datas; may be modified by the Manufactures without advise



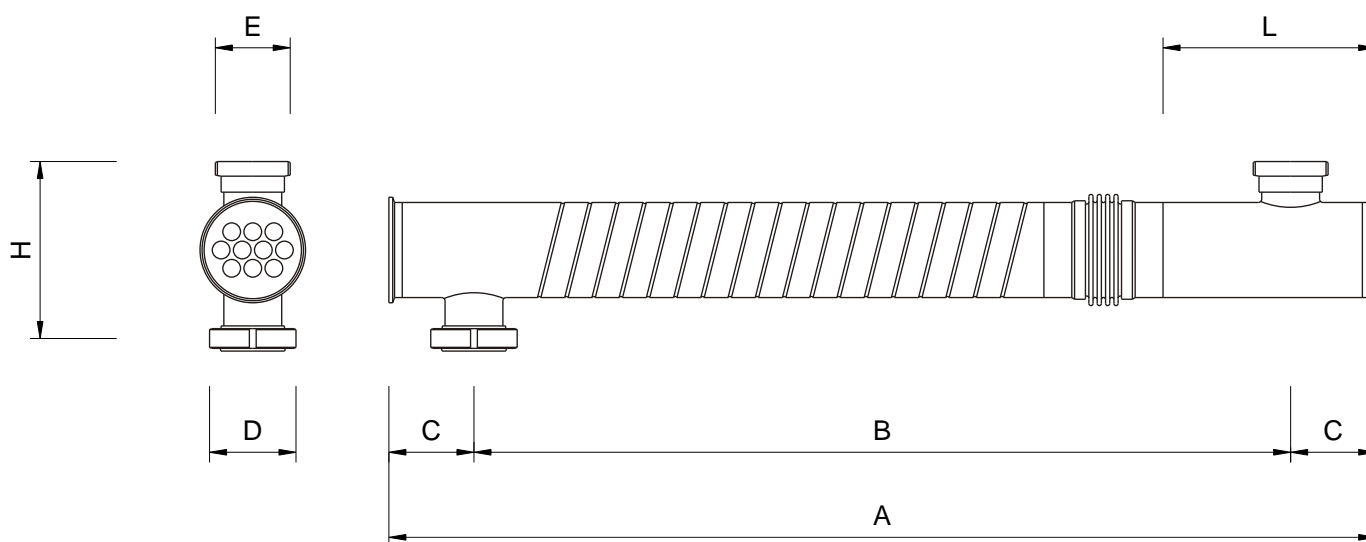
MODEL	SHELL VOLUME [litres]	TUBES VOLUME [litres]	EXCHANGE AREA [m ²]	SHELL SECTION [mm ²]	TUBES SECTION [mm ²]	WEIGHT [kg]
MLW 139 19 16 1 1000	10.63	2.66	0.87	10642.53	2924.82	23.3
MLW 139 19 16 1 1500	15.95	4.12	1.35	10642.53	2924.82	30.2
MLW 139 19 16 1 2000	21.27	5.59	1.82	10642.53	2924.82	37.1
MLW 139 19 16 1 3000	31.91	8.51	2.78	10642.53	2924.82	50.9
MLW 139 19 16 1 6000	63.84	17.29	5.64	10642.53	2924.82	92.1

Category calculation for second group's fluids - Gas, melted gas and liquids with a steam tension at maximum temperature > 0.5 bar

Article 3.3 1st Category 2nd Category

MODEL	VOLUME [litres]	PRESSURE [bar] *												
		1	2	3	4	5	6	7	8	9	10	11	12	
MLW 139 19 16 1 1000	Shell / Tubes				4.7									
MLW 139 19 16 1 1500	Shell / Tubes			3.1									12.5	12.1
MLW 139 19 16 1 2000	Shell / Tubes		2.3						8.9	9.4				
MLW 139 19 16 1 3000	Shell / Tubes	1.5					5.8	6.2						
MLW 139 19 16 1 6000	Shell / Tubes		2.8	3.1									11.5	

* for higher pressure contact MBS



MODEL	DIMENSIONS [mm]						
	A	B	C	D	E	H	L
MLW 139 19 16 1 1000	950	700	125	DIN 11851 DN 150 F Flangia more connections on demand	DIN 11851 DN 80-100 M/F CLAMP 3" o 4" more connections on demand	260	312.5
MLW 139 19 16 1 1500	1450	1200					
MLW 139 19 16 1 2000	1950	1700					
MLW 139 19 16 1 3000	2950	2700					
MLW 139 19 16 1 6000	5950	5700					

Not binding technical datas; may be modified by the Manufactures without advise



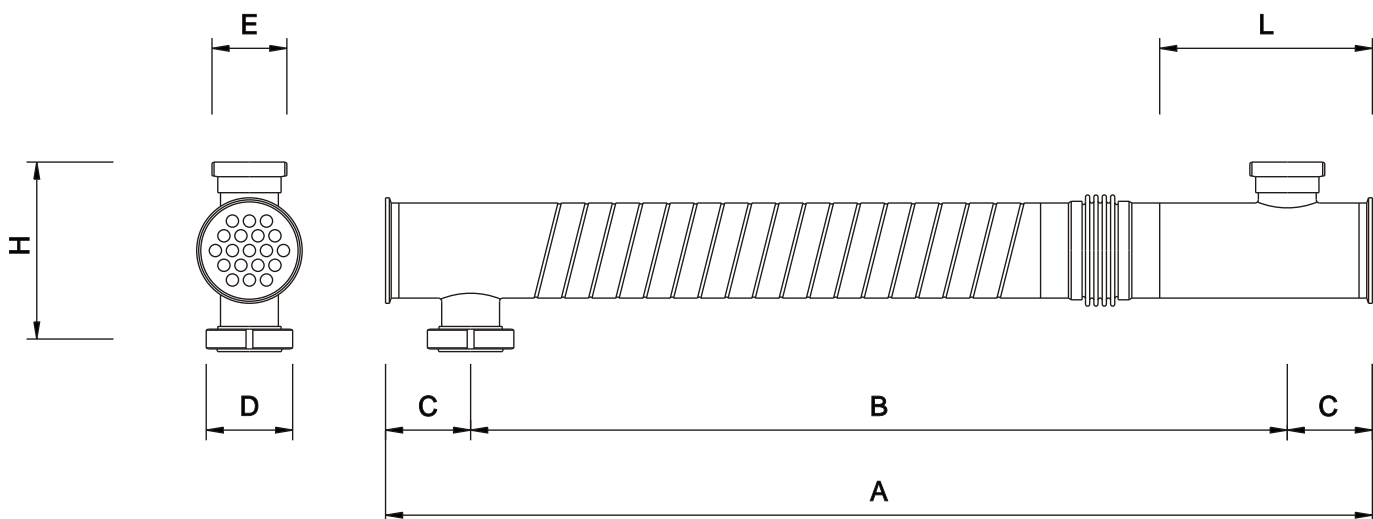
MODEL	SHELL VOLUME [litres]	TUBES VOLUME [litres]	EXCHANGE AREA [m ²]	SHELL SECTION [mm ²]	TUBES SECTION [mm ²]	WEIGHT [kg]
MLW 139 19 20 1 1000	8.67	4.40	1.09	8493.68	4834.91	25.1
MLW 139 19 20 1 1500	12.92	6.82	1.68	8493.68	4834.91	32.9
MLW 139 19 20 1 2000	17.17	9.23	2.28	8493.68	4834.91	40.7
MLW 139 19 20 1 3000	25.66	14.07	3.47	8493.68	4834.91	56.3
MLW 139 19 20 1 6000	51.14	28.57	7.06	8493.68	4834.91	103.2

Category calculation for second group's fluids - Gas, melted gas and liquids with a steam tension at maximum temperature > 0.5 bar

Article 3.3 1st Category 2nd Category

MODEL	VOLUME [litres]	PRESSURE [bar] *												
		1	2	3	4	5	6	7	8	9	10	11	12	
MLW 139 19 20 1 1000	Shell / Tubes					5.7							11.3	
MLW 139 19 20 1 1500	Shell / Tubes			3.8					7.3					
MLW 139 19 20 1 2000	Shell / Tubes		2.9				5.4						11.6	
MLW 139 19 20 1 3000	Shell / Tubes	1.9				3.5				7.7				
MLW 139 19 20 1 6000	Shell / Tubes		1.7			3.9					7.0			

* for higher pressure contact MBS



MODEL	DIMENSIONS [mm]						
	A	B	C	D	E	H	L
MLW 139 19 20 1 1000	950	700	125	DIN 11851 DN 150 F Flangia	DIN 11851 DN 80-100 M/F CLAMP 3" o 4"	260	312.5
MLW 139 19 20 1 1500	1450	1200					
MLW 139 19 20 1 2000	1950	1700					
MLW 139 19 20 1 3000	2950	2700					
MLW 139 19 20 1 6000	5950	5700					

Not binding technical datas; may be modified by the Manufactures without advise



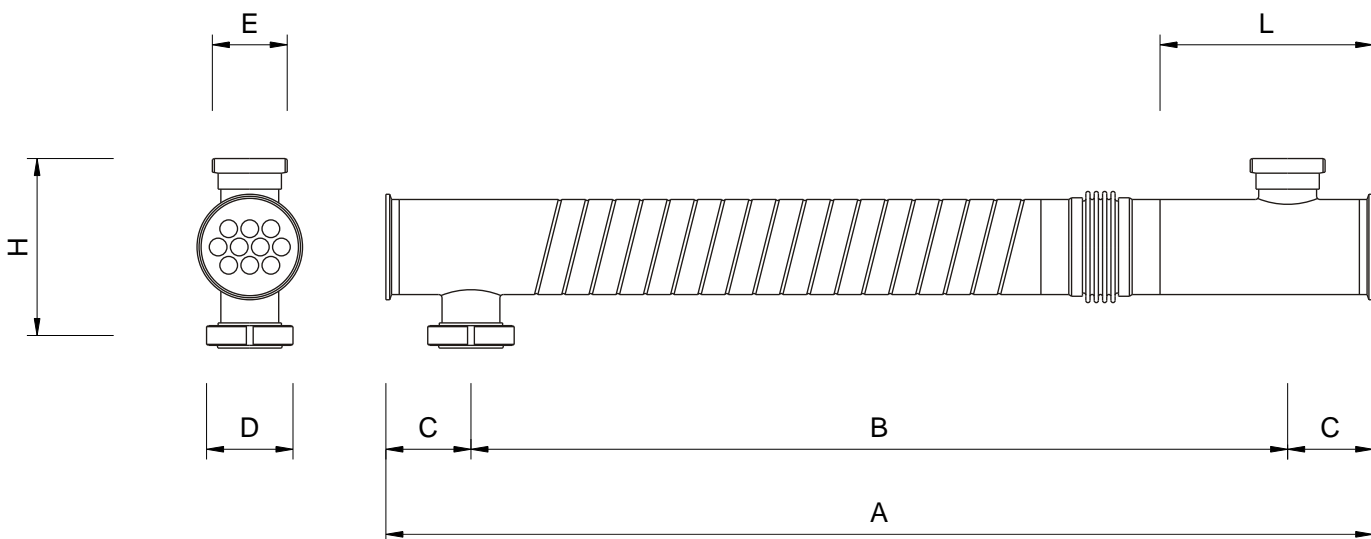
MODEL	SHELL VOLUME [litres]	TUBES VOLUME [litres]	EXCHANGE AREA [m ²]	SHELL SECTION [mm ²]	TUBES SECTION [mm ²]	WEIGHT [kg]
MLW 139 19 22 1 1000	7.53	5.43	1.19	7240.19	5969.03	25.9
MLW 139 19 22 1 1500	11.15	8.42	1.85	7240.19	5969.03	34.2
MLW 139 19 22 1 2000	14.77	11.40	2.51	7240.19	5969.03	42.5
MLW 139 19 22 1 3000	22.01	17.37	3.82	7240.19	5969.03	59.0
MLW 139 19 22 1 6000	43.73	35.28	7.76	7240.19	5969.03	108.8

Category calculation for second group's fluids - Gas, melted gas and liquids with a steam tension at maximum temperature > 0.5 bar

Article 3.3 1st Category 2nd Category

MODEL	VOLUME [litres]	PRESSURE [bar] *															
		1	2	3	4	5	6	7	8	9	10	11	12				
MLW 139 19 22 1 1000	Shell / Tubes						6.6				9.2						
MLW 139 19 22 1 1500	Shell / Tubes				4.4		5.9										
MLW 139 19 22 1 2000	Shell / Tubes			3.3	4.3												
MLW 139 19 22 1 3000	Shell / Tubes		2.2	2.8							9.0					11.5	
MLW 139 19 22 1 6000	Shell / Tubes	1.1	1.4			4.5		5.6									

* for higher pressure contact MBS



MODEL	DIMENSIONS [mm]						
	A	B	C	D	E	H	L
MLW 139 19 22 1 1000	950	700	125	DIN 11851 DN 150 F Flangia	DIN 11851 DN 80-100 M/F CLAMP 3" o 4"	260	312.5
MLW 139 19 22 1 1500	1450	1200					
MLW 139 19 22 1 2000	1950	1700					
MLW 139 19 22 1 3000	2950	2700					
MLW 139 19 22 1 6000	5950	5700					

Not binding technical datas; may be modified by the Manufactures without advise



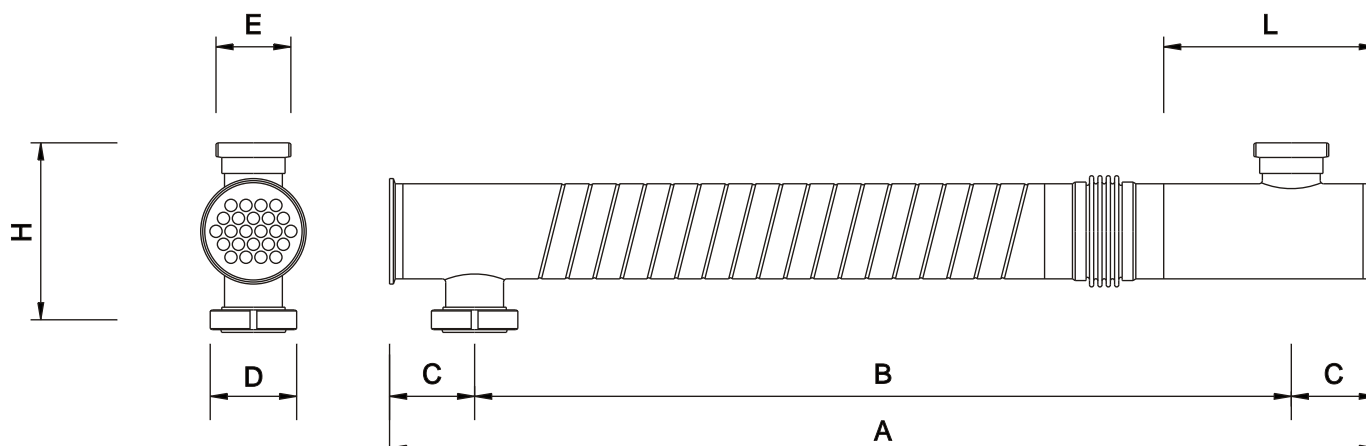
MODEL	SHELL VOLUME [litres]	TUBES VOLUME [litres]	EXCHANGE AREA [m ²]	SHELL SECTION [mm ²]	TUBES SECTION [mm ²]	WEIGHT [kg]
MLW 139 24 18 1 1000	8.55	4.39	1.24	8355.45	4825.49	26.1
MLW 139 24 18 1 1500	12.73	6.80	1.91	8355.45	4825.49	34.5
MLW 139 24 18 1 2000	16.90	9.22	2.59	8355.45	4825.49	42.9
MLW 139 24 18 1 3000	25.26	14.04	3.95	8355.45	4825.49	59.7
MLW 139 24 18 1 6000	50.33	28.52	8.02	8355.45	4825.49	110.1

Category calculation for second group's fluids - Gas, melted gas and liquids with a steam tension at maximum temperature > 0.5 bar

Article 3.3 1st Category 2nd Category

MODEL	VOLUME [litres]	PRESSURE [bar] *												
		1	2	3	4	5	6	7	8	9	10	11	12	
MLW 139 24 18 1 1000	Shell / Tubes					5.8							11.3	
MLW 139 24 18 1 1500	Shell / Tubes			3.9					7.3					
MLW 139 24 18 1 2000	Shell / Tubes		2.9				5.4					11.8		
MLW 139 24 18 1 3000	Shell / Tubes	1.9			3.5				7.9					
MLW 139 24 18 1 6000	Shell / Tubes		1.7		3.9				7.0					

* for higher pressure contact MBS



MODEL	DIMENSIONS [mm]						
	A	B	C	D	E	H	L
MLW 139 24 18 1 1000	950	700	125	DIN 11851 DN 150 F Flangia more connections on demand	DIN 11851 DN 80-100 M/F CLAMP 3" o 4" more connections on demand	260	312.5
MLW 139 24 18 1 1500	1450	1200					
MLW 139 24 18 1 2000	1950	1700					
MLW 139 24 18 1 3000	2950	2700					
MLW 139 24 18 1 6000	5950	5700					

Not binding technical datas; may be modified by the Manufactures without advise



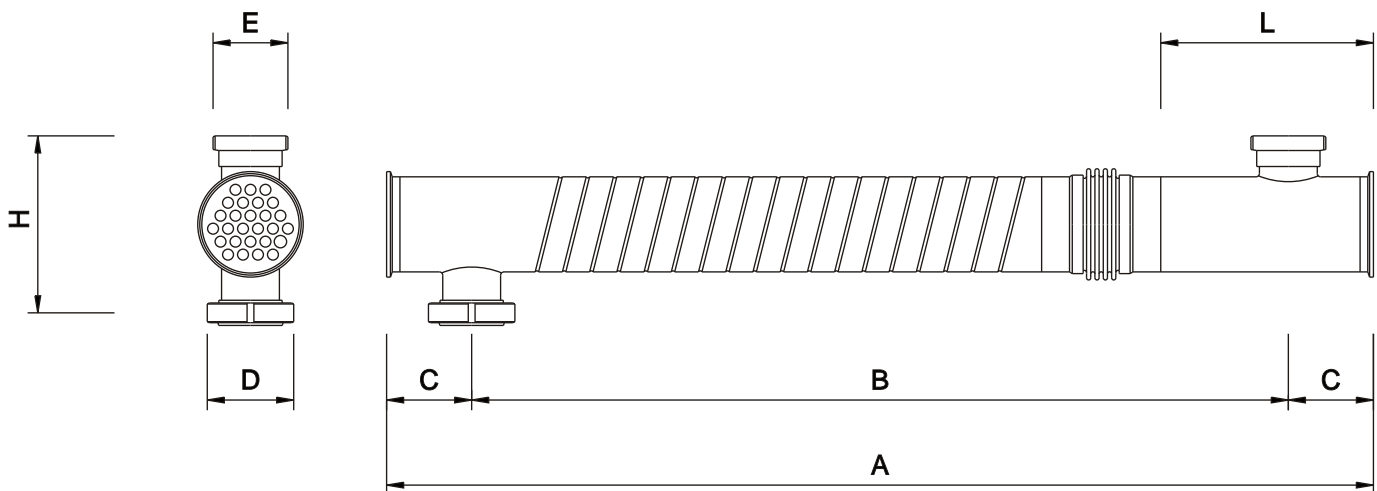
MODEL	SHELL VOLUME [litres]	TUBES VOLUME [litres]	EXCHANGE AREA [m ²]	SHELL SECTION [mm ²]	TUBES SECTION [mm ²]	WEIGHT [kg]
MLW 139 27 18 1 1000	7.85	4.94	1.39	7592.04	5428.67	27.2
MLW 139 27 18 1 1500	11.65	7.65	2.15	7592.04	5428.67	36.3
MLW 139 27 18 1 2000	15.45	10.37	2.92	7592.04	5428.67	45.3
MLW 139 27 18 1 3000	23.04	15.8	4.44	7592.04	5428.67	63.4
MLW 139 27 18 1 6000	45.81	32.08	9.02	7592.04	5428.67	117.5

Category calculation for second group's fluids - Gas, melted gas and liquids with a steam tension at maximum temperature > 0.5 bar

Article 3.3 1st Category 2nd Category

MODEL	VOLUME [litres]	PRESSURE [bar] *												
		1	2	3	4	5	6	7	8	9	10	11	12	
MLW 139 27 18 1 1000	Shell / Tubes						6.3					10.1		
MLW 139 27 18 1 1500	Shell / Tubes				4.2		6.5							
MLW 139 27 18 1 2000	Shell / Tubes			3.2	4.8									12.9
MLW 139 27 18 1 3000	Shell / Tubes		2.1	3.1					8.6					12.6
MLW 139 27 18 1 6000	Shell / Tubes	1.0	1.5		4.3		6.2							

* for higher pressure contact MBS



MODEL	DIMENSIONS [mm]						
	A	B	C	D	E	H	L
MLW 139 27 18 1 1000	950	700	125	DIN 11851 DN 150 F Flangia	DIN 11851 DN 80-100 M/F CLAMP 3" o 4"	260	312.5
MLW 139 27 18 1 1500	1450	1200					
MLW 139 27 18 1 2000	1950	1700					
MLW 139 27 18 1 3000	2950	2700					
MLW 139 27 18 1 6000	5950	5700					

Not binding technical datas; may be modified by the Manufactures without advise



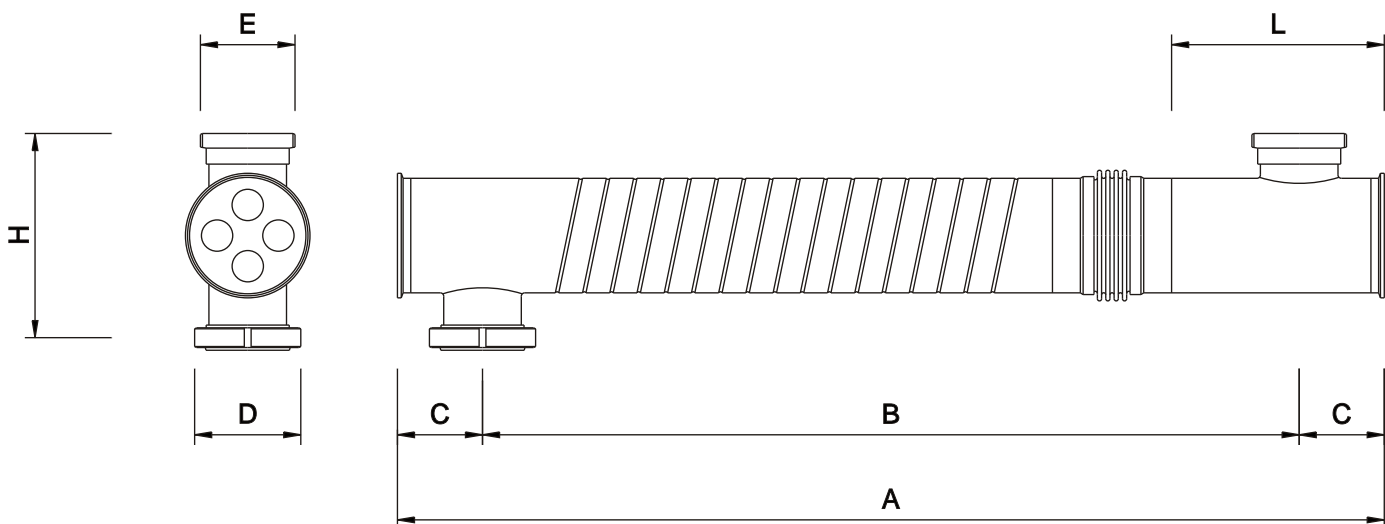
MODEL	SHELL VOLUME [litres]	TUBES VOLUME [litres]	EXCHANGE AREA [m ²]	SHELL SECTION [mm ²]	TUBES SECTION [mm ²]	WEIGHT [kg]
MLW 168 4 40 1 1000	15.75	3.91	0.46	16174.87	4300.84	28.3
MLW 168 4 40 1 1500	23.84	6.06	0.71	16174.87	4300.84	35.2
MLW 168 4 40 1 2000	31.93	8.21	0.96	16174.87	4300.84	42.1
MLW 168 4 40 1 3000	48.10	12.52	1.46	16174.87	4300.84	55.9
MLW 168 4 40 1 6000	96.63	25.42	2.97	16174.87	4300.84	97.3

Category calculation for second group's fluids - Gas, melted gas and liquids with a steam tension at maximum temperature > 0.5 bar

Article 3.3
 1st Category
 2nd Category
 3rd Category

MODEL	VOLUME [litres]	PRESSURE [bar] *												
		1	2	3	4	5	6	7	8	9	10	11	12	
MLW 168 4 40 1 1000	Shell / Tubes			3.1									12.6	12.7
MLW 168 4 40 1 1500	Shell / Tubes		2.0						8.3	8.2				
MLW 168 4 40 1 2000	Shell / Tubes	1.5					6.2	6.0						
MLW 168 4 40 1 3000	Shell / Tubes	1.0			3.9	4.1								
MLW 168 4 40 1 6000	Shell / Tubes		1.9	2.0					7.8			10.3		

* for higher pressure contact MBS



MODEL	DIMENSIONS [mm]						
	A	B	C	D	E	H	L
MLW 168 4 40 1 1000	950	700	125	DIN 11851 Flangia UNI - ASA more connections on demand	DIN 11851 DN 80-100 M/F CLAMP 3" o 4" more connections on demand	300	312.5
MLW 168 4 40 1 1500	1450	1200					
MLW 168 4 40 1 2000	1950	1700					
MLW 168 4 40 1 3000	2950	2700					
MLW 168 4 40 1 6000	5950	5700					

Not binding technical datas; may be modified by the Manufactures without advise



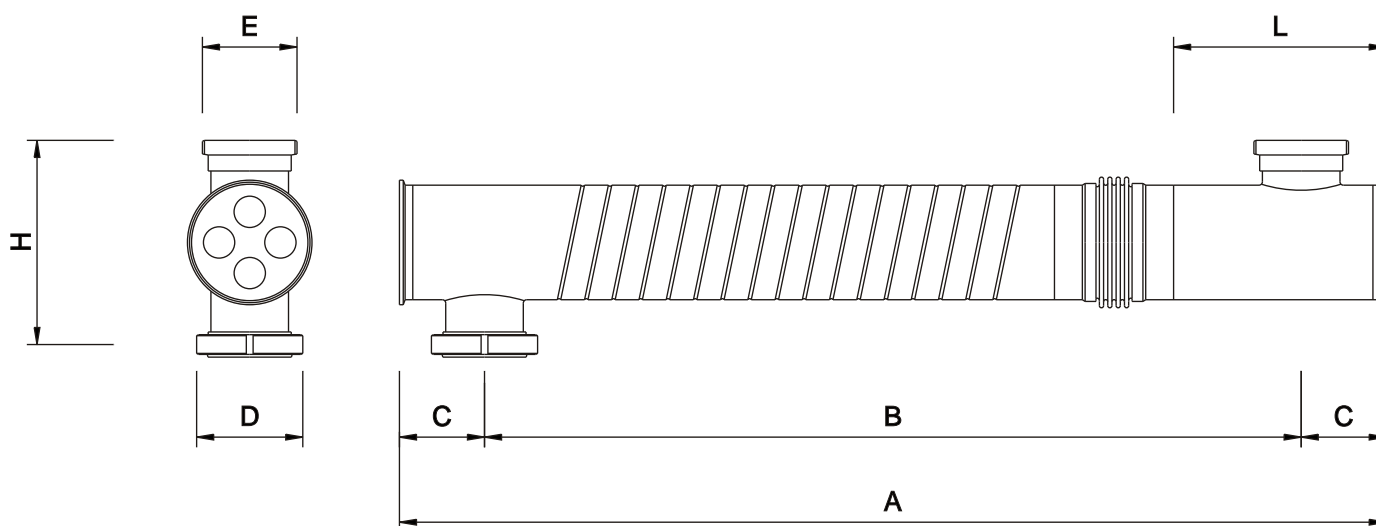
MODEL	SHELL VOLUME [litres]	TUBES VOLUME [litres]	EXCHANGE AREA [m ²]	SHELL SECTION [mm ²]	TUBES SECTION [mm ²]	WEIGHT [kg]
MLW 168 4 48 1 1000	13.66	5.87	0.55	13872.43	6446.83	29.4
MLW 168 4 48 1 1500	20.59	9.09	0.86	13872.43	6446.83	36.9
MLW 168 4 48 1 2000	27.53	12.31	1.16	13872.43	6446.83	44.4
MLW 168 4 48 1 3000	41.40	18.76	1.77	13872.43	6446.83	59.5
MLW 168 4 48 1 6000	83.02	38.10	3.59	13872.43	6446.83	104.6

Category calculation for second group's fluids - Gas, melted gas and liquids with a steam tension at maximum temperature > 0.5 bar

Article 3.3
 1st Category
 2nd Category
 3rd Category

MODEL	VOLUME [litres]	PRESSURE [bar] *												
		1	2	3	4	5	6	7	8	9	10	11	12	
MLW 168 4 48 1 1000	Shell / Tubes			3.6						8.5				
MLW 168 4 48 1 1500	Shell / Tubes		2.4				5.5				9.7			
MLW 168 4 48 1 2000	Shell / Tubes	1.8				4.0			7.2					
MLW 168 4 48 1 3000	Shell / Tubes	1.2		2.6		4.8						10.6		
MLW 168 4 48 1 6000	Shell / Tubes		1.3	2.4				5.2						12.0

* for higher pressure contact MBS



MODEL	DIMENSIONS [mm]						
	A	B	C	D	E	H	L
MLW 168 4 48 1 1000	950	700	125	DIN 11851 Flangia UNI - ASA more connections on demand	DIN 11851 DN 80-100 M/F CLAMP 3" o 4" more connections on demand	300	312.5
MLW 168 4 48 1 1500	1450	1200					
MLW 168 4 48 1 2000	1950	1700					
MLW 168 4 48 1 3000	2950	2700					
MLW 168 4 48 1 6000	5950	5700					

Not binding technical datas; may be modified by the Manufactures without advise



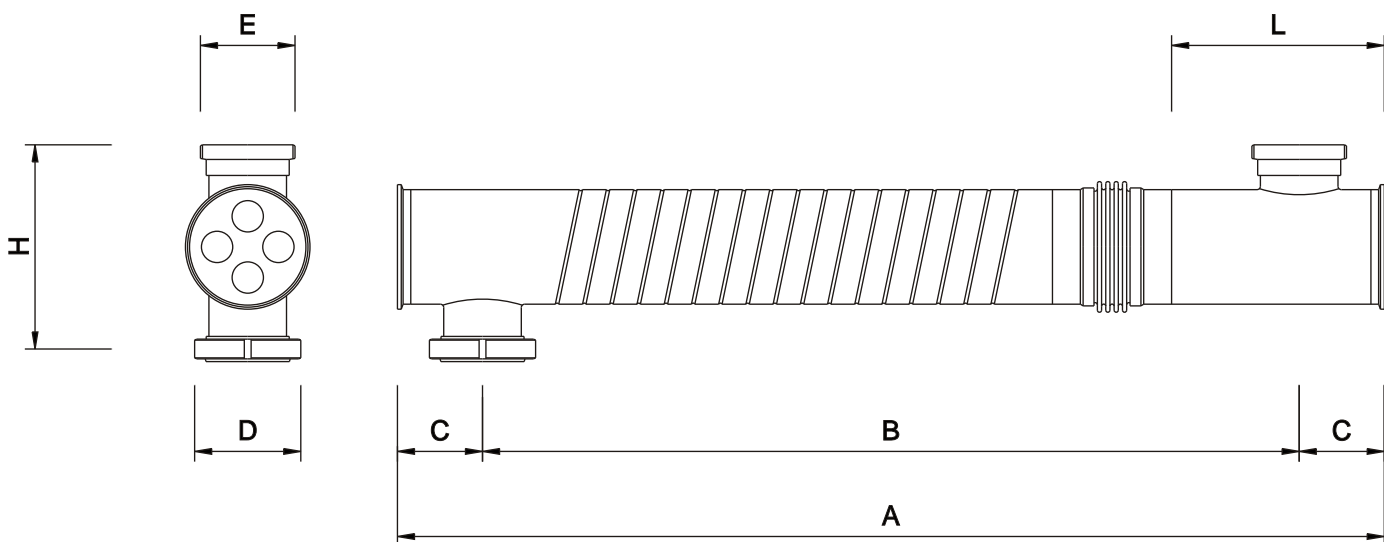
MODEL	SHELL VOLUME [litres]	TUBES VOLUME [litres]	EXCHANGE AREA [m ²]	SHELL SECTION [mm ²]	TUBES SECTION [mm ²]	WEIGHT [kg]
MLW 168 4 52 1 1000	12.60	6.86	0.59	12706.56	7542.96	29.9
MLW 168 4 52 1 1500	18.95	10.64	0.92	12706.56	7542.96	37.7
MLW 168 4 52 1 2000	25.30	14.41	1.25	12706.56	7542.96	45.5
MLW 168 4 52 1 3000	38.01	21.95	1.90	12706.56	7542.96	61.1
MLW 168 4 52 1 6000	76.13	44.58	3.86	12706.56	7542.96	107.8

Category calculation for second group's fluids - Gas, melted gas and liquids with a steam tension at maximum temperature > 0.5 bar

Article 3.3
1st Category
2nd Category
3rd Category

MODEL	VOLUME [litres]	PRESSURE [bar] *																
		1	2	3	4	5	6	7	8	9	10	11	12					
MLW 168 4 52 1 1000	Shell / Tubes			3.9						7.2								
MLW 168 4 52 1 1500	Shell / Tubes		2.6			4.6							10.5					
MLW 168 4 52 1 2000	Shell / Tubes	1.9			3.4					7.9								
MLW 168 4 52 1 3000	Shell / Tubes	1.3		2.2			5.2						9.1					
MLW 168 4 52 1 6000	Shell / Tubes		1.1	2.6			4.4											

* for higher pressure contact MBS



MODEL	DIMENSIONS [mm]						
	A	B	C	D	E	H	L
MLW 168 4 52 1 1000	950	700	125	DIN 11851 Flangia UNI - ASA more connections on demand	DIN 11851 DN 80-100 M/F CLAMP 3" o 4" more connections on demand	300	312.5
MLW 168 4 52 1 1500	1450	1200					
MLW 168 4 52 1 2000	1950	1700					
MLW 168 4 52 1 3000	2950	2700					
MLW 168 4 52 1 6000	5950	5700					

Not binding technical datas; may be modified by the Manufacturers without advise



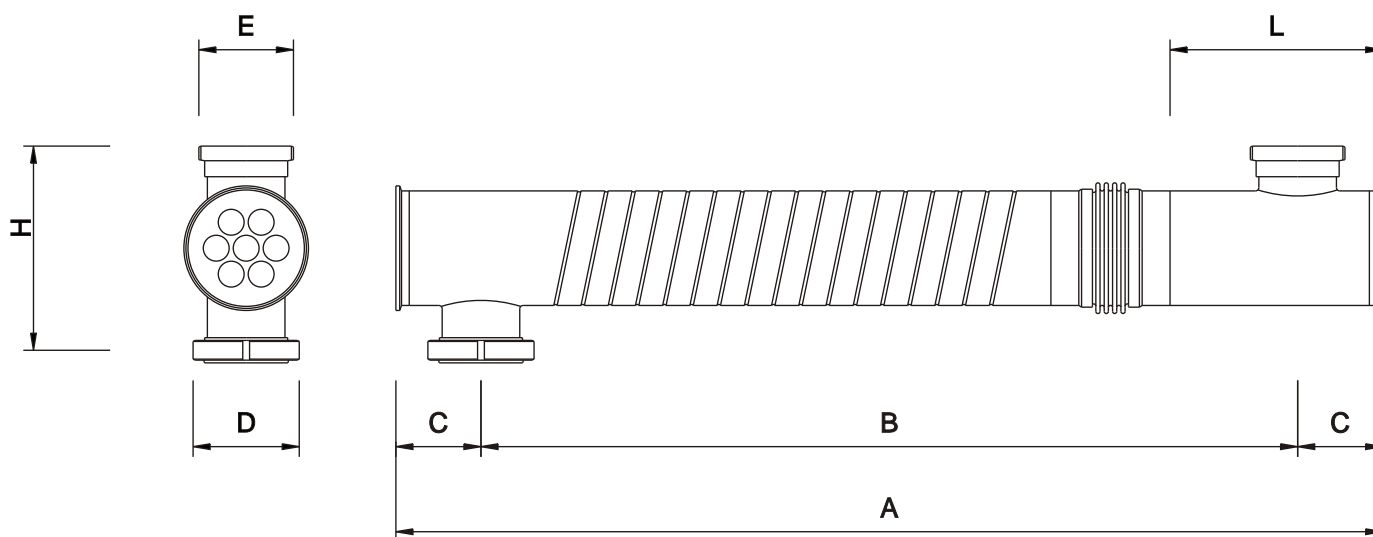
MODEL	SHELL VOLUME [litres]	TUBES VOLUME [litres]	EXCHANGE AREA [m ²]	SHELL SECTION [mm ²]	TUBES SECTION [mm ²]	WEIGHT [kg]
MLW 168 7 34 1 1000	14.54	4.81	0.68	14845.98	5283.37	30.8
MLW 168 7 34 1 1500	21.97	7.45	1.05	14845.98	5283.37	39.0
MLW 168 7 34 1 2000	29.39	10.09	1.43	14845.98	5283.37	47.3
MLW 168 7 34 1 3000	44.24	15.37	2.18	14845.98	5283.37	63.8
MLW 168 7 34 1 6000	88.77	31.22	4.42	14845.98	5283.37	113.4

Category calculation for second group's fluids - Gas, melted gas and liquids with a steam tension at maximum temperature > 0.5 bar

Article 3.3
 1st Category
 2nd Category
 3rd Category

MODEL	VOLUME [litres]	PRESSURE [bar] *												
		1	2	3	4	5	6	7	8	9	10	11	12	
MLW 168 7 34 1 1000	Shell / Tubes			3.4								10.3		
MLW 168 7 34 1 1500	Shell / Tubes		2.2					6.7			9.1			
MLW 168 7 34 1 2000	Shell / Tubes	1.7				4.9		6.8						
MLW 168 7 34 1 3000	Shell / Tubes	1.1			3.2	4.5								
MLW 168 7 34 1 6000	Shell / Tubes		1.6	2.2					6.4				11.2	

* for higher pressure contact MBS



MODEL	DIMENSIONS [mm]						
	A	B	C	D	E	H	L
MLW 168 7 34 1 1000	950	700	125	DIN 11851 Flangia UNI - ASA more connections on demand	DIN 11851 DN 80-100 M/F CLAMP 3" o 4" more connections on demand	300	312.5
MLW 168 7 34 1 1500	1450	1200					
MLW 168 7 34 1 2000	1950	1700					
MLW 168 7 34 1 3000	2950	2700					
MLW 168 7 34 1 6000	5950	5700					

Not binding technical datas; may be modified by the Manufacturers without advise



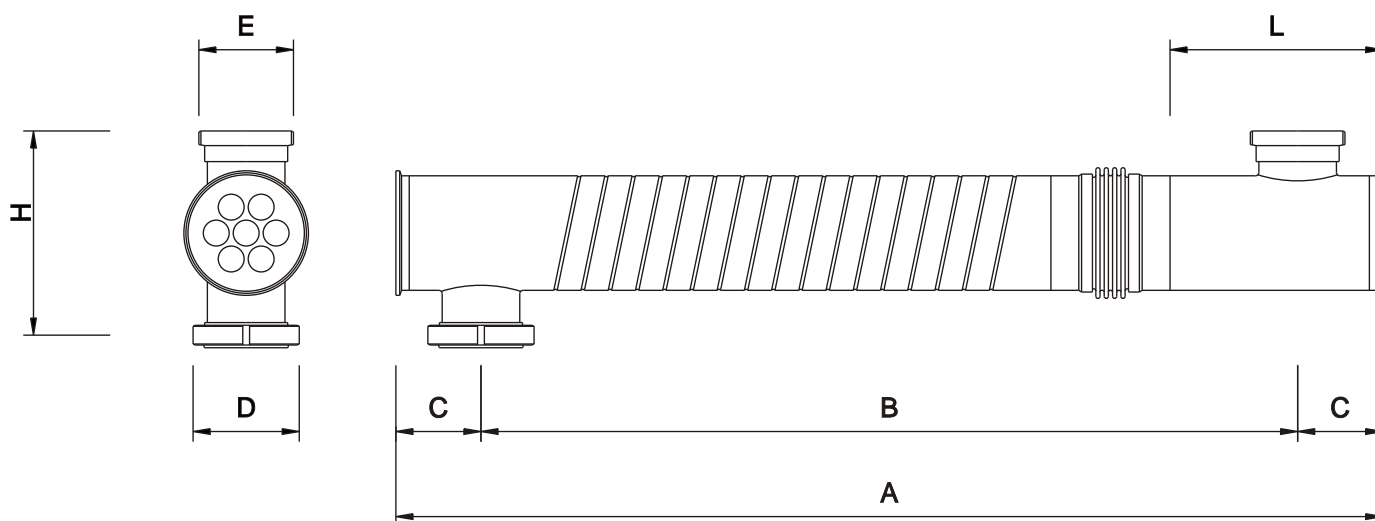
MODEL	SHELL VOLUME [litres]	TUBES VOLUME [litres]	EXCHANGE AREA [m ²]	SHELL SECTION [mm ²]	TUBES SECTION [mm ²]	WEIGHT [kg]
MLW 168 7 40 1 1000	12.32	6.85	0.80	12404.96	7526.47	32.2
MLW 168 7 40 1 1500	18.53	10.61	1.24	12404.96	7526.47	41.2
MLW 168 7 40 1 2000	24.73	14.38	1.68	12404.96	7526.47	50.2
MLW 168 7 40 1 3000	37.13	21.90	2.56	12404.96	7526.47	68.3
MLW 168 7 40 1 6000	74.35	44.48	5.20	12404.96	7526.47	122.6

Category calculation for second group's fluids - Gas, melted gas and liquids with a steam tension at maximum temperature > 0.5 bar

Article 3.3
1st Category
2nd Category
3rd Category

MODEL	VOLUME [litres]	PRESSURE [bar] *															
		1	2	3	4	5	6	7	8	9	10	11	12				
MLW 168 7 40 1 1000	Shell / Tubes				4.0					7.2							
MLW 168 7 40 1 1500	Shell / Tubes		2.6			4.7							10.7				
MLW 168 7 40 1 2000	Shell / Tubes		2.0		3.4						8.0						
MLW 168 7 40 1 3000	Shell / Tubes	1.3		2.2			5.3						9.1				
MLW 168 7 40 1 6000	Shell / Tubes		1.1	2.6			4.4										

* for higher pressure contact MBS



MODEL	DIMENSIONS [mm]						
	A	B	C	D	E	H	L
MLW 168 7 40 1 1000	950	700	125	DIN 11851 Flangia UNI - ASA more connections on demand	DIN 11851 DN 80-100 M/F CLAMP 3" o 4" more connections on demand	300	312.5
MLW 168 7 40 1 1500	1450	1200					
MLW 168 7 40 1 2000	1950	1700					
MLW 168 7 40 1 3000	2950	2700					
MLW 168 7 40 1 6000	5950	5700					

Not binding technical datas; may be modified by the Manufactures without advise



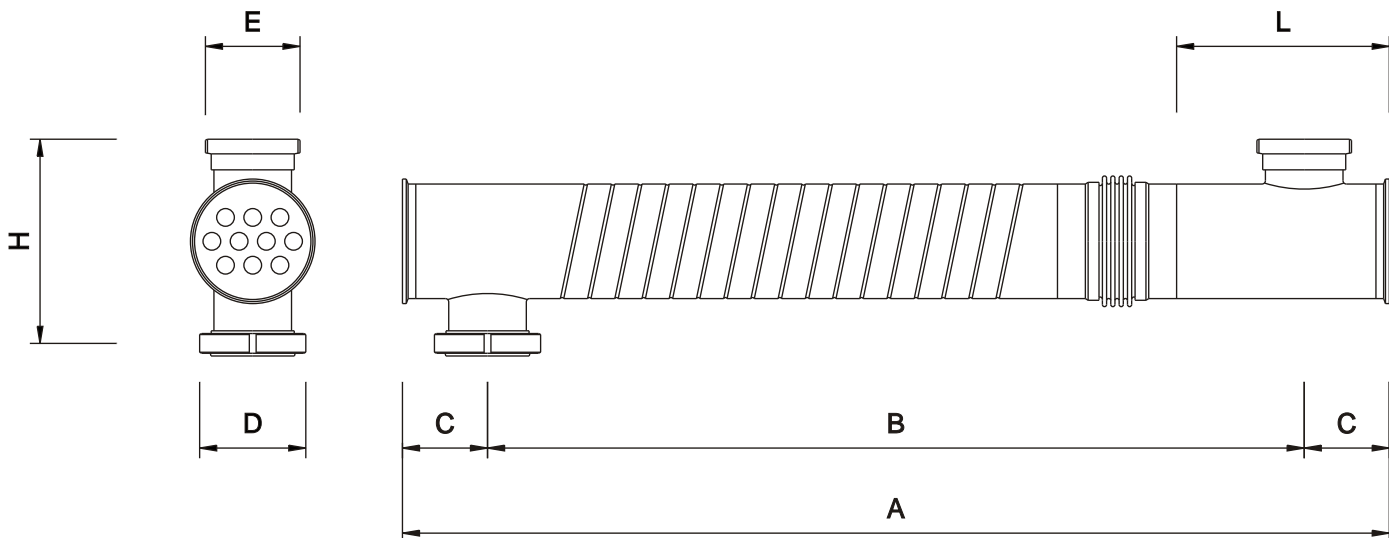
MODEL	SHELL VOLUME [litres]	TUBES VOLUME [litres]	EXCHANGE AREA [m ²]	SHELL SECTION [mm ²]	TUBES SECTION [mm ²]	WEIGHT [kg]
MLW 168 10 25 1 1000	15.72	3.59	0.73	16134.35	3940.81	31.1
MLW 168 10 25 1 1500	23.78	5.56	1.13	16134.35	3940.81	39.6
MLW 168 10 25 1 2000	31.85	7.53	1.52	16134.35	3940.81	48.1
MLW 168 10 25 1 3000	47.99	11.47	2.32	16134.35	3940.81	65.0
MLW 168 10 25 1 6000	96.39	23.29	4.72	16134.35	3940.81	115.9

Category calculation for second group's fluids - Gas, melted gas and liquids with a steam tension at maximum temperature > 0.5 bar

Article 3.3
 1st Category
 2nd Category
 3rd Category

MODEL	VOLUME [litres]	PRESSURE [bar] *											
		1	2	3	4	5	6	7	8	9	10	11	12
MLW 168 10 25 1 1000	Shell / Tubes			3.1									12.7
MLW 168 10 25 1 1500	Shell / Tubes		2.1						8.4	8.9			
MLW 168 10 25 1 2000	Shell / Tubes	1.5					6.2	6.6					
MLW 168 10 25 1 3000	Shell / Tubes	1.0			4.1	4.3							
MLW 168 10 25 1 6000	Shell / Tubes		2.0	2.1						8.5		10.3	

* for higher pressure contact MBS



MODEL	DIMENSIONS [mm]						
	A	B	C	D	E	H	L
MLW 168 10 25 1 1000	950	700	125	DIN 11851 Flangia UNI - ASA more connections on demand	DIN 11851 DN 80-100 M/F CLAMP 3" o 4" more connections on demand	300	312.5
MLW 168 10 25 1 1500	1450	1200					
MLW 168 10 25 1 2000	1950	1700					
MLW 168 10 25 1 3000	2950	2700					
MLW 168 10 25 1 6000	5950	5700					

Not binding technical datas; may be modified by the Manufactures without advise



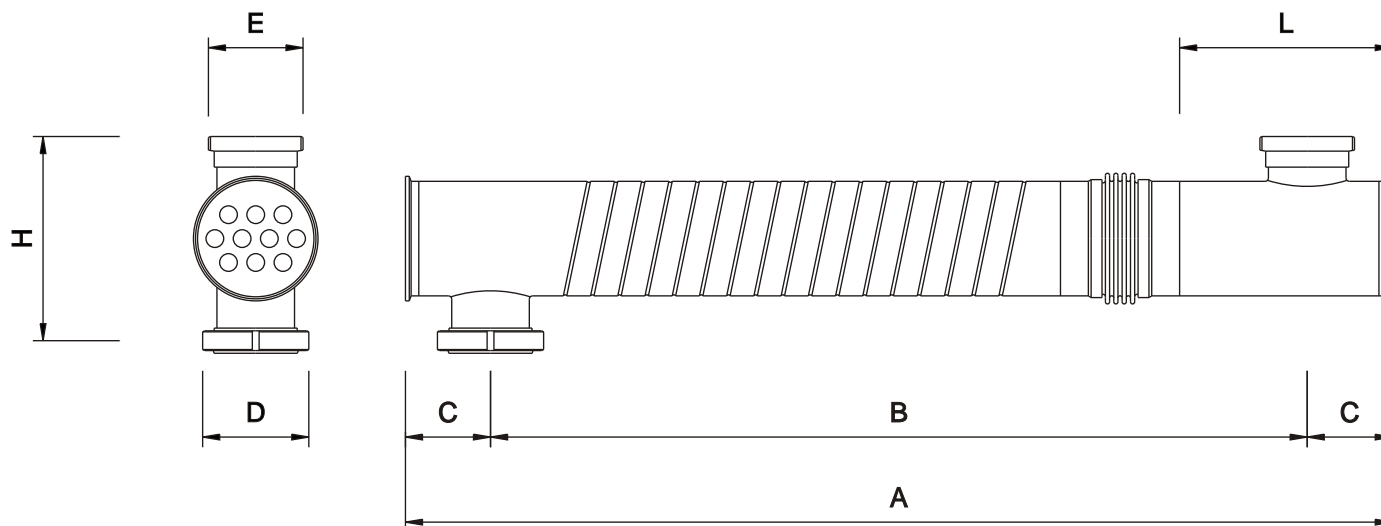
MODEL	SHELL VOLUME [litres]	TUBES VOLUME [litres]	EXCHANGE AREA [m ²]	SHELL SECTION [mm ²]	TUBES SECTION [mm ²]	WEIGHT [kg]
MLW 168 10 28 1 1000	14.72	4.47	0.80	15043.90	4908.74	32.0
MLW 168 10 28 1 1500	22.25	6.92	1.24	15043.90	4908.74	41.0
MLW 168 10 28 1 2000	29.77	9.38	1.68	15043.90	4908.74	49.9
MLW 168 10 28 1 3000	44.81	14.28	2.56	15043.90	4908.74	67.8
MLW 168 10 28 1 6000	89.94	29.01	5.20	15043.90	4908.74	121.6

Category calculation for second group's fluids - Gas, melted gas and liquids with a steam tension at maximum temperature > 0.5 bar

Article 3.3
1st Category
2nd Category
3rd Category

MODEL	VOLUME [litres]	PRESSURE [bar] *												
		1	2	3	4	5	6	7	8	9	10	11	12	
MLW 168 10 28 1 1000	Shell / Tubes			3.3									11.1	
MLW 168 10 28 1 1500	Shell / Tubes		2.2						7.2	8.9				
MLW 168 10 28 1 2000	Shell / Tubes	1.6					5.3	6.7						
MLW 168 10 28 1 3000	Shell / Tubes	1.1			3.5	4.4								
MLW 168 10 28 1 6000	Shell / Tubes		1.7	2.2					6.8				11.1	

* for higher pressure contact MBS



MODEL	DIMENSIONS [mm]						
	A	B	C	D	E	H	L
MLW 168 10 28 1 1000	950	700	125	DIN 11851 Flangia UNI - ASA more connections on demand	DIN 11851 DN 80-100 M/F CLAMP 3" o 4" more connections on demand	300	312.5
MLW 168 10 28 1 1500	1450	1200					
MLW 168 10 28 1 2000	1950	1700					
MLW 168 10 28 1 3000	2950	2700					
MLW 168 10 28 1 6000	5950	5700					

Not binding technical datas; may be modified by the Manufactures without advise



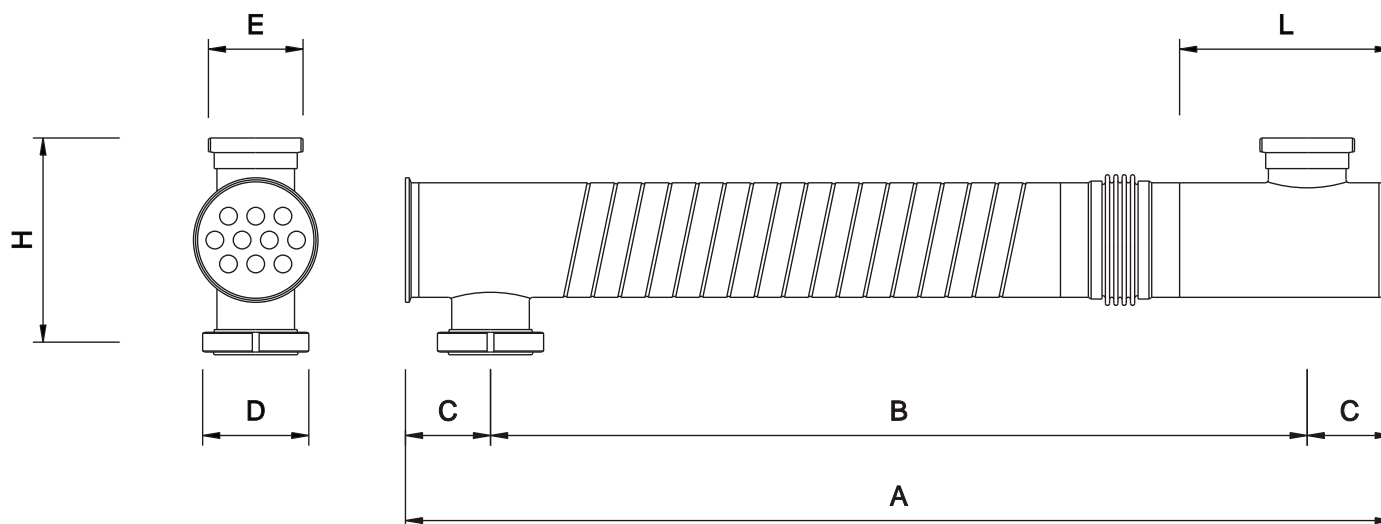
MODEL	SHELL VOLUME [litres]	TUBES VOLUME [litres]	EXCHANGE AREA [m ²]	SHELL SECTION [mm ²]	TUBES SECTION [mm ²]	WEIGHT [kg]
MLW 168 10 34 1 1000	14.72	4.47	0.80	15043.90	4908.74	32.0
MLW 168 10 34 1 1500	22.25	6.92	1.24	15043.90	4908.74	41.0
MLW 168 10 34 1 2000	29.77	9.38	1.68	15043.90	4908.74	49.9
MLW 168 10 34 1 3000	44.81	14.28	2.56	15043.90	4908.74	67.8
MLW 168 10 34 1 6000	89.94	29.01	5.20	15043.90	4908.74	121.6

Category calculation for second group's fluids - Gas, melted gas and liquids with a steam tension at maximum temperature > 0.5 bar

Article 3.3
1st Category
2nd Category
3rd Category

MODEL	VOLUME [litres]	PRESSURE [bar] *															
		1	2	3	4	5	6	7	8	9	10	11	12				
MLW 168 10 34 1 1000	Shell / Tubes				4.1				7.2								
MLW 168 10 34 1 1500	Shell / Tubes		2.7			4.6									11.0		
MLW 168 10 34 1 2000	Shell / Tubes		2.0		3.4					8.2							
MLW 168 10 34 1 3000	Shell / Tubes	1.3		2.2			5.5					9.1					
MLW 168 10 34 1 6000	Shell / Tubes		1.1	2.7			4.4										

* for higher pressure contact MBS



MODEL	DIMENSIONS [mm]						
	A	B	C	D	E	H	L
MLW 168 10 34 1 1000	950	700	125	DIN 11851 Flangia UNI - ASA more connections on demand	DIN 11851 DN 80-100 M/F CLAMP 3" o 4" more connections on demand	300	312.5
MLW 168 10 34 1 1500	1450	1200					
MLW 168 10 34 1 2000	1950	1700					
MLW 168 10 34 1 3000	2950	2700					
MLW 168 10 34 1 6000	5950	5700					

Not binding technical datas; may be modified by the Manufactures without advise



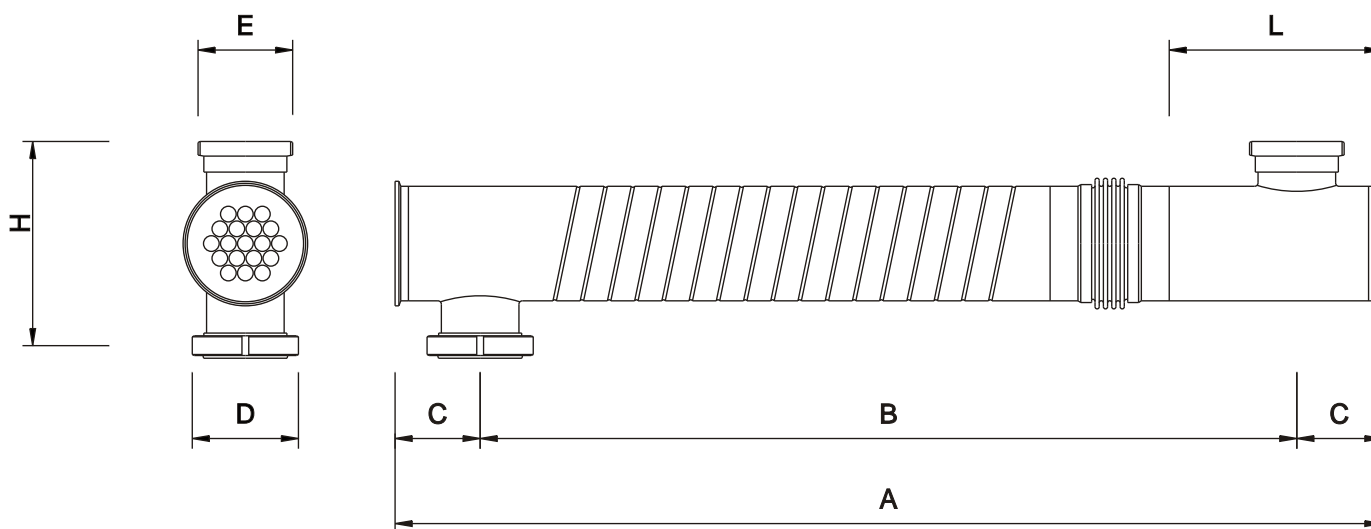
MODEL	SHELL VOLUME [litres]	TUBES VOLUME [litres]	EXCHANGE AREA [m ²]	SHELL SECTION [mm ²]	TUBES SECTION [mm ²]	WEIGHT [kg]
MLW 168 19 20 1 1000	14.90	4.40	1.09	15232.40	4834.91	31.2
MLW 168 19 20 1 1500	22.51	6.82	1.68	15232.40	4834.91	39.7
MLW 168 19 20 1 2000	30.13	9.23	2.28	15232.40	4834.91	48.2
MLW 168 19 20 1 3000	45.36	14.07	3.47	15232.40	4834.91	65.2
MLW 168 19 20 1 6000	91.06	28.57	7.06	15232.40	4834.91	116.3

Category calculation for second group's fluids - Gas, melted gas and liquids with a steam tension at maximum temperature > 0.5 bar

Article 3.3
1st Category
2nd Category
3rd Category

MODEL	VOLUME [litres]	PRESSURE [bar] *												
		1	2	3	4	5	6	7	8	9	10	11	12	
MLW 168 19 20 1 1000	Shell / Tubes			3.3									11.3	
MLW 168 19 20 1 1500	Shell / Tubes		2.2						7.3	8.8				
MLW 168 19 20 1 2000	Shell / Tubes	1.6					5.4	6.6						
MLW 168 19 20 1 3000	Shell / Tubes	1.1			3.5	4.4								
MLW 168 19 20 1 6000	Shell / Tubes		1.7	2.1					7.0				10.9	

* for higher pressure contact MBS



MODEL	DIMENSIONS [mm]						
	A	B	C	D	E	H	L
MLW 168 19 20 1 1000	950	700	125	DIN 11851 Flangia UNI - ASA more connections on demand	DIN 11851 DN 80-100 M/F CLAMP 3" o 4" more connections on demand	300	312.5
MLW 168 19 20 1 1500	1450	1200					
MLW 168 19 20 1 2000	1950	1700					
MLW 168 19 20 1 3000	2950	2700					
MLW 168 19 20 1 6000	5950	5700					

Not binding technical datas; may be modified by the Manufactures without advise



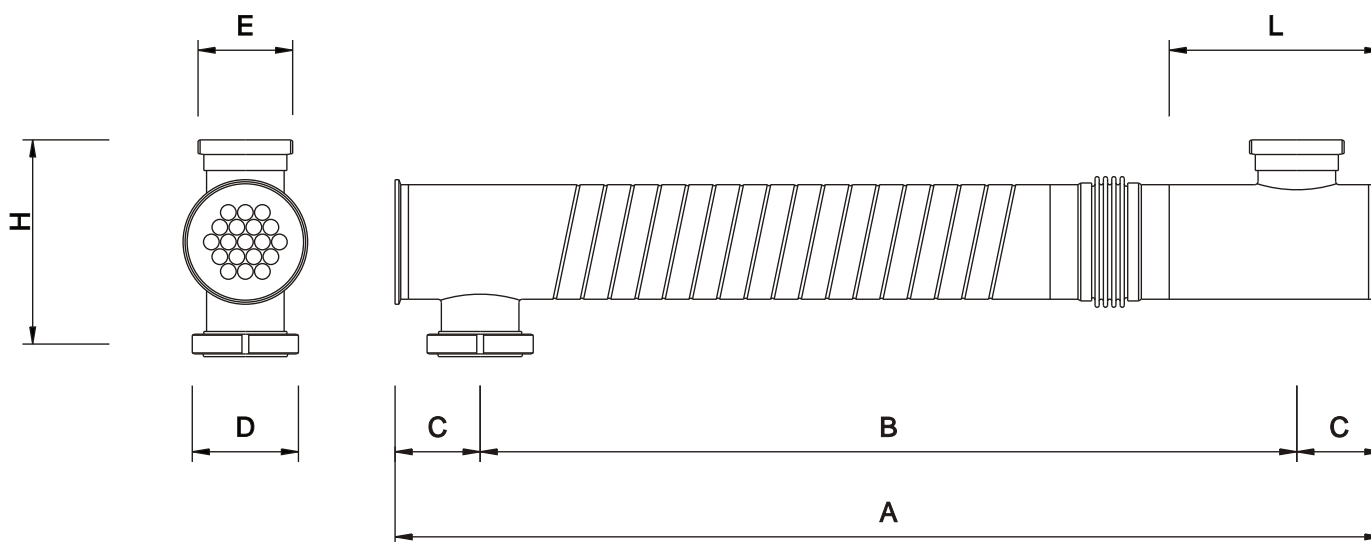
MODEL	SHELL VOLUME [litres]	TUBES VOLUME [litres]	EXCHANGE AREA [m ²]	SHELL SECTION [mm ²]	TUBES SECTION [mm ²]	WEIGHT [kg]
MLW 168 19 22 1 1000	13.76	5.43	1.19	13978.90	5969.03	32.0
MLW 168 19 22 1 1500	20.74	8.42	1.85	13978.90	5969.03	41.0
MLW 168 19 22 1 2000	27.73	11.40	2.51	13978.90	5969.03	50.0
MLW 168 19 22 1 3000	41.71	17.37	3.82	13978.90	5969.03	68.0
MLW 168 19 22 1 6000	83.65	35.28	7.76	13978.90	5969.03	121.8

Category calculation for second group's fluids - Gas, melted gas and liquids with a steam tension at maximum temperature > 0.5 bar

Article 3.3
1st Category
2nd Category
3rd Category

MODEL	VOLUME [litres]	PRESSURE [bar] *															
		1	2	3	4	5	6	7	8	9	10	11	12				
MLW 168 19 22 1 1000	Shell / Tubes			3.6								9.2					
MLW 168 19 22 1 1500	Shell / Tubes		2.4				5.9					9.6					
MLW 168 19 22 1 2000	Shell / Tubes	1.8				4.3			7.2								
MLW 168 19 22 1 3000	Shell / Tubes	1.1		2.8		4.7										11.5	
MLW 168 19 22 1 6000	Shell / Tubes		1.4	2.3				5.6								11.9	

* for higher pressure contact MBS



MODEL	DIMENSIONS [mm]						
	A	B	C	D	E	H	L
MLW 168 19 22 1 1000	950	700	125	DIN 11851 Flangia UNI - ASA more connections on demand	DIN 11851 DN 80-100 M/F CLAMP 3" o 4" more connections on demand	300	312.5
MLW 168 19 22 1 1500	1450	1200					
MLW 168 19 22 1 2000	1950	1700					
MLW 168 19 22 1 3000	2950	2700					
MLW 168 19 22 1 6000	5950	5700					

Not binding technical datas; may be modified by the Manufactures without advise



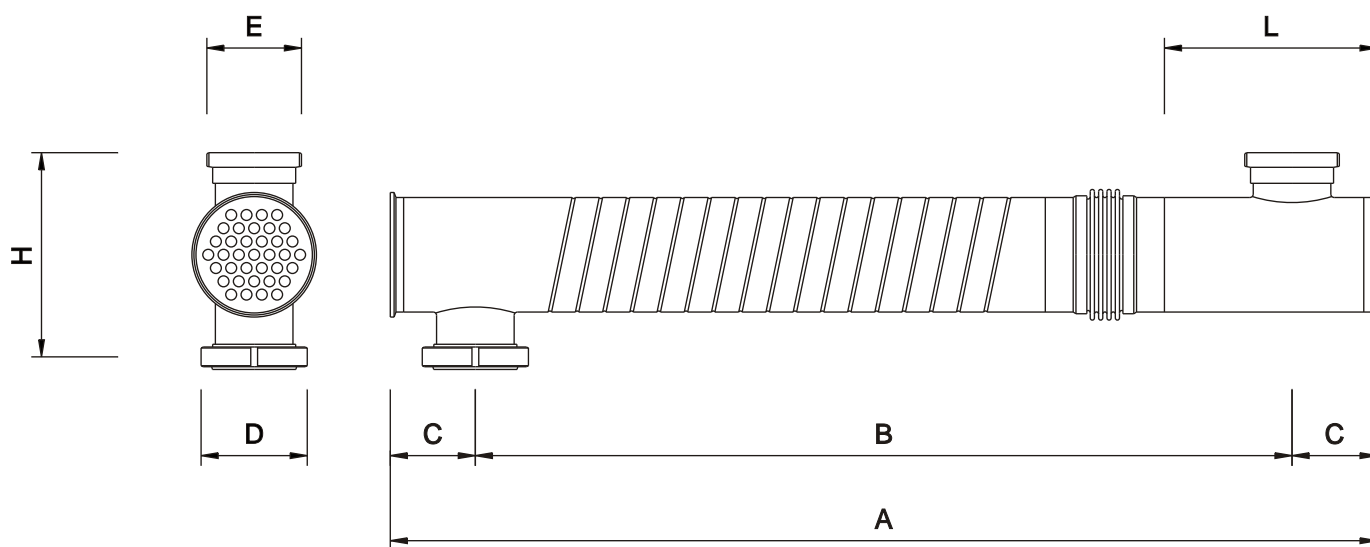
MODEL	SHELL VOLUME [litres]	TUBES VOLUME [litres]	EXCHANGE AREA [m ²]	SHELL SECTION [mm ²]	TUBES SECTION [mm ²]	WEIGHT [kg]
MLW 168 37 16 1 1000	13.56	5.18	1.69	13762.13	5695.71	35.5
MLW 168 37 16 1 1500	20.44	8.03	2.62	13762.13	5695.71	46.4
MLW 168 37 16 1 2000	27.32	10.88	3.55	13762.13	5695.71	57.3
MLW 168 37 16 1 3000	41.08	16.57	5.41	13762.13	5695.71	79.2
MLW 168 37 16 1 6000	82.37	33.66	10.99	13762.13	5695.71	144.6

Category calculation for second group's fluids - Gas, melted gas and liquids with a steam tension at maximum temperature > 0.5 bar

Article 3.3
1st Category
2nd Category
3rd Category

MODEL	VOLUME [litres]	PRESSURE [bar] *															
		1	2	3	4	5	6	7	8	9	10	11	12				
MLW 168 37 16 1 1000	Shell / Tubes			3.6								9.6					
MLW 168 37 16 1 1500	Shell / Tubes		2.4					6.2			9.7						
MLW 168 37 16 1 2000	Shell / Tubes	1.8				4.5			7.3								
MLW 168 37 16 1 3000	Shell / Tubes	1.2			3.0	4.8											12.0
MLW 168 37 16 1 6000	Shell / Tubes		1.4	2.4				5.9									12.1

* for higher pressure contact MBS



MODEL	DIMENSIONS [mm]						
	A	B	C	D	E	H	L
MLW 168 37 16 1 1000	950	700	125	DIN 11851 Flangia UNI - ASA more connections on demand	DIN 11851 DN 80-100 M/F CLAMP 3" o 4" more connections on demand	300	312.5
MLW 168 37 16 1 1500	1450	1200					
MLW 168 37 16 1 2000	1950	1700					
MLW 168 37 16 1 3000	2950	2700					
MLW 168 37 16 1 6000	5950	5700					

Not binding technical datas; may be modified by the Manufactures without advise



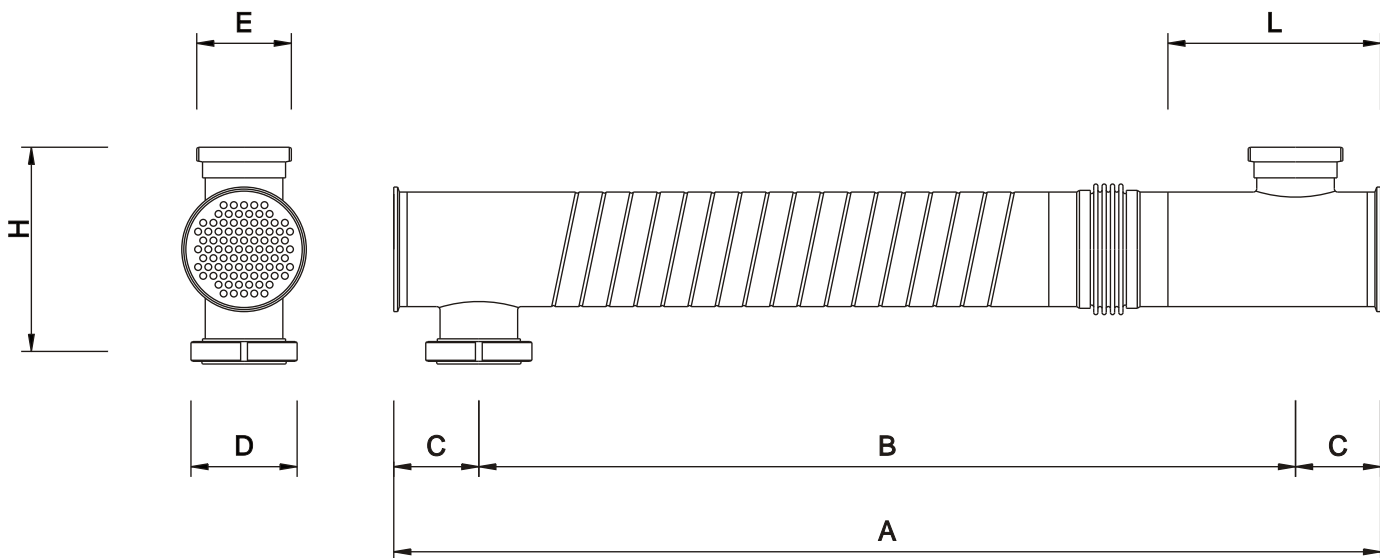
MODEL	SHELL VOLUME [litres]	TUBES VOLUME [litres]	EXCHANGE AREA [m ²]	SHELL SECTION [mm ²]	TUBES SECTION [mm ²]	WEIGHT [kg]
MLW 168 88 12 1 1000	11.27	6.29	3.02	11248.86	6911.50	44.8
MLW 168 88 12 1 1500	16.90	9.75	4.68	11248.86	6911.50	60.8
MLW 168 88 12 1 2000	22.52	13.20	6.34	11248.86	6911.50	76.8
MLW 168 88 12 1 3000	33.77	20.11	9.65	11248.86	6911.50	108.8
MLW 168 88 12 1 6000	67.52	40.85	19.61	11248.86	6911.50	204.7

Category calculation for second group's fluids - Gas, melted gas and liquids with a steam tension at maximum temperature > 0.5 bar

Article 3.3
1st Category
2nd Category
3rd Category

MODEL	VOLUME [litres]	PRESSURE [bar] *															
		1	2	3	4	5	6	7	8	9	10	11	12				
MLW 168 88 12 1 1000	Shell / Tubes				4.4				7.9								
MLW 168 88 12 1 1500	Shell / Tubes		2.9				5.1								11.8		
MLW 168 88 12 1 2000	Shell / Tubes		2.2		3.7					8.8							
MLW 168 88 12 1 3000	Shell / Tubes	1.4		2.4			5.9						9.9				
MLW 168 88 12 1 6000	Shell / Tubes		1.2	2.9			4.8										

* for higher pressure contact MBS



MODEL	DIMENSIONS [mm]						
	A	B	C	D	E	H	L
MLW 168 88 12 1 1000	950	700	125	DIN 11851 Flangia UNI - ASA more connections on demand	DIN 11851 DN 80-100 M/F CLAMP 3" o 4" more connections on demand	300	312.5
MLW 168 88 12 1 1500	1450	1200					
MLW 168 88 12 1 2000	1950	1700					
MLW 168 88 12 1 3000	2950	2700					
MLW 168 88 12 1 6000	5950	5700					

Not binding technical datas; may be modified by the Manufactures without advise

