

# COALESCING FILTERS

## SERIES MX

MX2 ports: G3/8, G1/2, G3/4 - MX3 ports: G3/4, G1  
 Modular  
 Bowl with technopolymer cover and bayonet-type mounting



- High performance and compressed air quality (according to ISO 8573-1)
- Quality of delivered air according to ISO 8573-1:2010, Classes [1:8:1] and [2:8:2]
- Manual, automatic or depressing drain
- Polymer bowl locking system
- Visual blockage indicator

The Series MX air treatment components are characterized by a modern, linear and compact design, offering high performances. The perfect integration between metal alloys and technopolymers has allowed the realization of a reliable product, light and strong at the same time.

Thanks to a new concept of modularity, moreover, the mounting of components has become easier.

The Series MX has been realized to offer a multi-sector solution that guarantees saving in terms of installation time, space and costs.

### General Data

<b>Construction</b>	Modular, compact
<b>Materials</b>	See TABLE OF MATERIALS on the following page
<b>Ports</b>	MX2: G3/8, G1/2, G3/4 - MX3: G3/4, G1
<b>Condensate capacity</b>	MX2: 55 cm <sup>3</sup> - MX3: 85 cm <sup>3</sup>
<b>Mounting</b>	Vertical in-line or wall-mounting (by means of clamps)
<b>Working temperature</b>	-5°C ÷ 50°C up to 16 bar (with the dew point of the fluid lower than 2°C at the min. working temp.) -5°C ÷ 60°C up to 10 bar (with the dew point of the fluid lower than 2°C at the min. working temp.)
<b>Draining of condensate</b>	Manual-semi automatic (standard), automatic, depressurization protected, direct G1/8 exhaust
<b>Nominal flow</b>	See FLOW DIAGRAMS on the following pages
<b>Quality of delivered air according to ISO 8573-1:2010</b>	Class [2:8:2] with 1 µm filtering element Class [1:8:1] with 0,01 µm filtering element
<b>Residual oil content with inlet at 3 mg/m<sup>3</sup></b>	< 0,01 mg/m <sup>3</sup> < 0,1 mg/m <sup>3</sup>
<b>Oil retain efficiency</b>	99,80% 97%
<b>Particles retain efficiency</b>	99,99999% 99,9999%
<b>Fluid</b>	Compressed air
<b>Pre-filtering with filtering element of 1µm</b>	It is recommended to use a filter of 5µm
<b>Pre-filtering with filtering element of 0,01 µm</b>	It is recommended to use a filter of 1µm

**COALESCING FILTERS**  
**SERIES MX - CODING EXAMPLES**
**Coding Example**

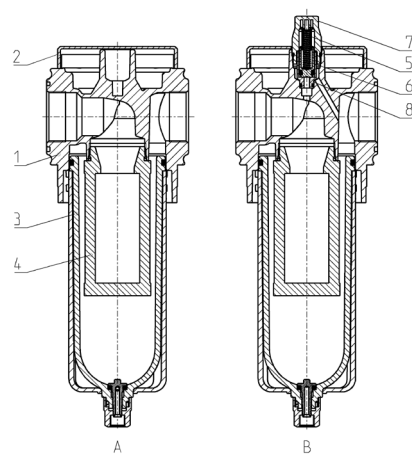
<b>MX</b>	<b>2</b>	<b>-</b>	<b>1/2</b>	<b>-</b>	<b>FC</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>-</b>	<b>LH</b>
<b>MX</b>	SERIES									
<b>2</b>	SIZE 2 = G3/8 - G1/2 - G3/4 3 = G3/4 - G1									
<b>1/2</b>	PORTS 3/8 = G3/8 1/2 = G1/2 3/4 = G3/4 1 = G1									
<b>FC</b>	COALESCING FILTER									
<b>0</b>	FILTERING ELEMENT 0 = 0,01 µm (standard) 1 = 1 µm									
<b>0</b>	DRAINING OF CONDENSATE 0 = Semiautomatic-manual drain (standard - only for polymer bowl) 3 = Automatic drain 5 = Depressuring drain, protected (only for polymer bowl) 8 = Without drain, with port G1/8									
<b>1</b>	VISUAL BLOCKAGE INDICATOR = Not present 1 = Present									
<b>LH</b>	FLOW DIRECTION = From left to right (standard) LH = From right to left									

For the assembly of a single component with fixing flanges or wall-mounting, see the section "FRL Series MX Assembled".

**Coalescing filters Series MX - materials**

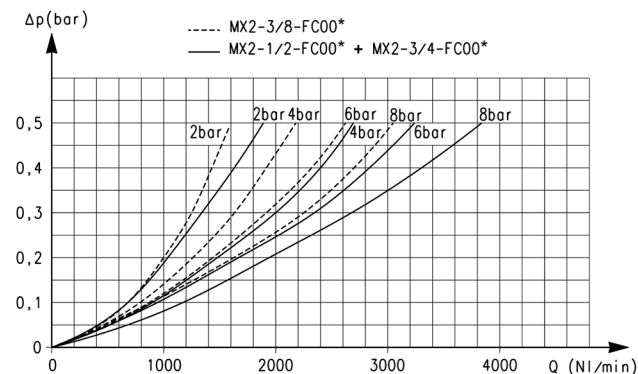
A = Filter

B = Filter with visual blockage indicator



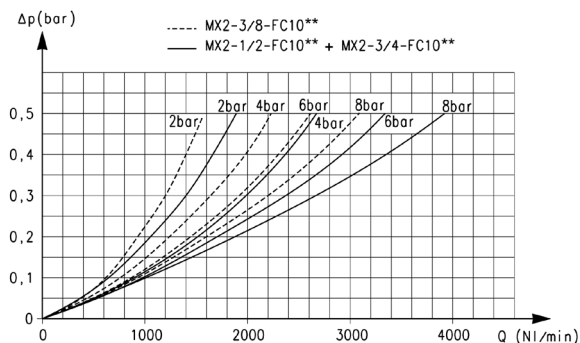
Parts	Materials
<b>1 = Body</b>	Aluminium
<b>2 = Covering</b>	Polyacetal
<b>3 = Bowl / bowl cover</b>	Polycarbonate/Polyamide
<b>4 = Filtering element</b>	Borosilicate
<b>5 = Upper spring</b>	Stainless steel
<b>6 = Piston</b>	Anodized aluminium
<b>7 = Visual blockage indicator</b>	Polycarbonate
<b>8 = Indicator body</b>	Brass
<b>Seals</b>	NBR

### MX2 coalescing filters flow diagrams



\* Reference diagram for models with filtering element = 0,01 µm

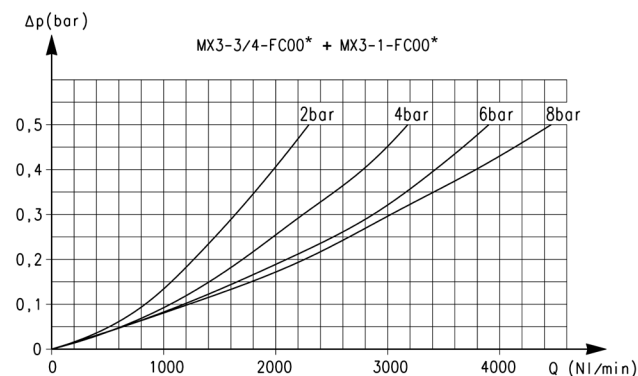
Δp = Pressure drop (bar)  
Q = Flow (NL/min)



\*\* Reference diagram for models with filtering element = 1 µm

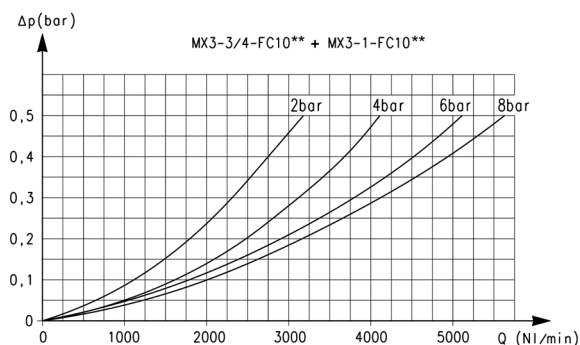
Δp = Pressure drop (bar)  
Q = Flow (NL/min)

### MX3 coalescing filters flow diagrams



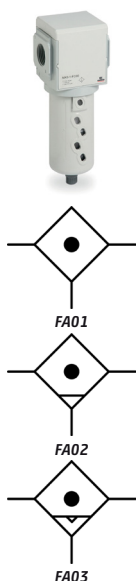
\* Reference diagram for models with filtering element = 0,01 µm

Δp = Pressure drop (bar)  
Q = Flow (NL/min)

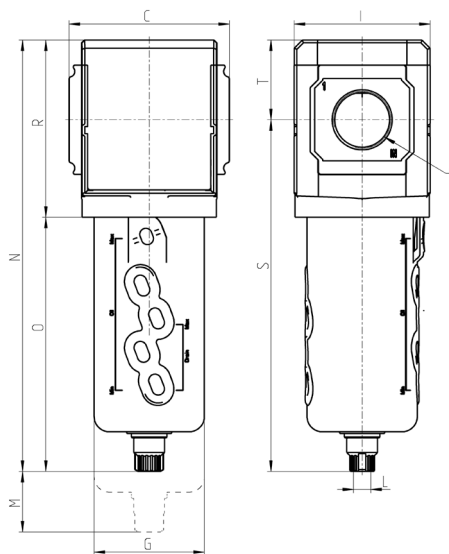


\*\* Reference diagram for models with filtering element = 1 µm

Δp = Pressure drop (bar)  
Q = Flow (NL/min)

**COALESCING FILTERS**  
**SERIES MX - DIMENSIONS**
**Coalescing filters Series MX - dimensions**


FA01 = Coalescing filter without drain with port G1/8  
 FA02 = Coalescing filter with semiautomatic manual drain  
 FA03 = Coalescing filter with automatic or depressuring drain



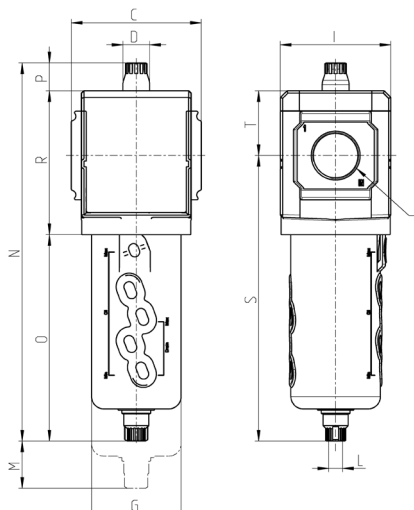
Mod.	A	C	G	I	L	M	N	O	R	S	T	Weight [kg]
MX2-3/8-FC00	G3/8	70	55,3	68	G1/8	52	212	127	85	174,5	37,5	0,5
MX2-1/2-FC00	G1/2	70	55,3	68	G1/8	52	212	127	85	174,5	37,5	0,5
MX2-3/4-FC00	G3/4	70	55,3	68	G1/8	52	212	127	85	174,5	37,5	0,5
MX3-3/4-FC00	G3/4	89,5	61,5	76	G1/8	75	241	142	99	196,5	44,5	0,8
MX3-1-FC00	G1	89,5	61,5	76	G1/8	75	241	142	99	196,5	44,5	0,8

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**Coalescing filters with visual blockage indicator Series MX - dimensions**


FA04 = Coalescing filter without drain, with port G1/8 and visual blockage indicator  
 FA05 = Coalescing filter with semiautomatic manual drain and visual blockage indicator  
 FA06 = Coalescing filter with automatic or depressuring drain and visual blockage indicator



Mod.	A	C	D	G	I	L	M	N	O	P	R	S	T	Weight [kg]
MX2-3/8-FC001	G3/8	70	18,5	55,3	68	G1/8	75	231	127	19,5	85	174,5	37,5	0,5
MX2-1/2-FC001	G1/2	70	18,5	55,3	68	G1/8	75	231	127	19,5	85	174,5	37,5	0,5
MX2-3/4-FC001	G3/4	70	18,5	55,3	68	G1/8	75	231	127	19,5	85	174,5	37,5	0,5
MX3-3/4-FC001	G3/4	89,5	18,5	61,5	76	G1/8	90	260	142	19,5	99	196,5	44,5	0,8
MX3-1-FC001	G1	89,5	18,5	61,5	76	G1/8	90	260	142	19,5	99	196,5	44,5	0,8

## Rapid clamp kit



**Materials:**  
 Technopolymer clamp, NBR  
 O-ring, zinc-plated steel  
 nuts and screws.

The MX2-X kit is supplied with:  
 1x Rapid clamp,  
 1x O-ring OR 3125 \*;  
 2x Hexagonal nuts M5;  
 2x Screws M5x69.

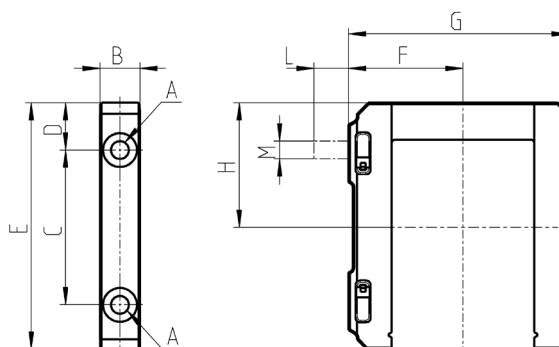
The MX2-Z kit is supplied with:  
 1x Rapid clamp,  
 1x O-ring OR 3125 \*;  
 1x Hexagonal nut M5;  
 1x Screw M5x69;  
 1x Screw M5x85 for wall fixing.

\*It can be ordered separately (cod. 160-39-11/19).

The MX3-X kit is supplied with:  
 1x Rapid clamp,  
 1x O-ring OR 38X2,8 \*\*;  
 2x Square nuts M6;  
 2x Screws M6x75.

The MX3-Z kit is supplied with:  
 1x Rapid clamp,  
 1x O-ring OR 38X2,8 \*\*;  
 1x Square nut M6,  
 1x Screw M6x75;  
 1x Screw M6x90 for wall fixing.

\*\*It can be ordered separately (OR 38X2,8 NBR).



Mod.	A	B	C	D	E	F	G	H	L	M	Notes
MX2-X	5,2	12	46	14	73,5	37,5	70,5	37	-	-	
MX2-Z	5,2	12	46	14	73,5	37,5	70,5	37	14	M5	Kit with wall fixing screw
MX3-X	6,2	14	54	16,5	86	40	77	43,5	-	-	
MX3-Z	6,2	14	54	16,5	86	40	77	43,5	13	M6	Kit with wall fixing screw

**COALESCING FILTERS**  
**SERIES MX - ACCESSORIES**
**Rapid clamp kit with wall fixing brackets**

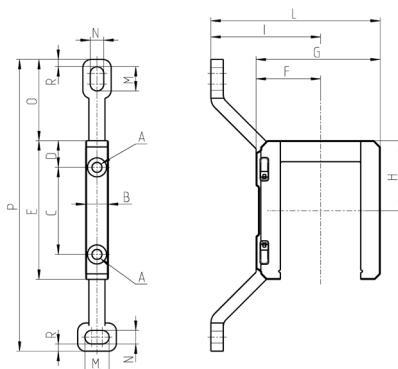

The MX2-Y kit is supplied with:  
 1x rapid wall clamp;  
 1x O-ring OR 3125 \*\*;  
 2x hexagonal nuts;  
 2x screws M5x69.

\*\* It can be ordered separately (cod. 160-39- 11/19).

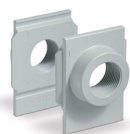
**Materials:**  
 technopolymer clamp, NBR  
 O-ring, zinc-plated steel  
 nuts and screws.

The kit MX3-Y is supplied with:  
 1x wall rapid clamp;  
 1x O-ring 38X2,8 \*\*;  
 2x square nuts M6;  
 2x screws M6x75.

\*\* It can be also separately ordered (OR 38X2,8 NBR).

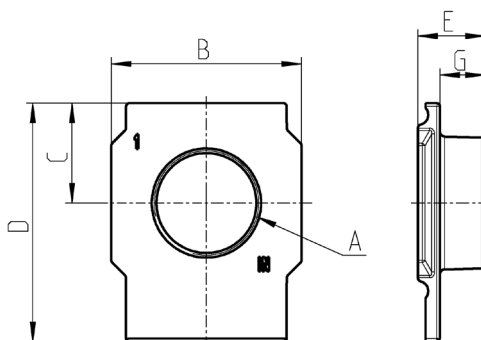


Mod.	A	B	C	D	E	F	G	H	I	L	M	N	O	P	R
MX2-Y	5,2	12	46	14	73,5	32,5	70,5	37	70,5	103	12	6,5	42	152	4
MX3-Y	6,2	14	54	16,5	86	40	77	43,5	68	105	15	8,4	50,5	181	4,5

**Terminal flanges (IN/OUT)**


**Materials:**  
 painted aluminium flanges.

Supplied with:  
 1x flange INLET side  
 1x flange OUTLET side



Mod.	A	B	C	D	E	G
MX2-3/8-FL	G3/8	50	26,5	63,5	17	11
MX2-1/2-FL	G1/2	50	26,5	63,5	17	11
MX2-3/4-FL	G3/4	50	26,5	63,5	17	11
MX3-3/4-FL	G3/4	58	30,5	73	20,5	13,5
MX3-1-FL	G1	58	30,5	73	20,5	13,5

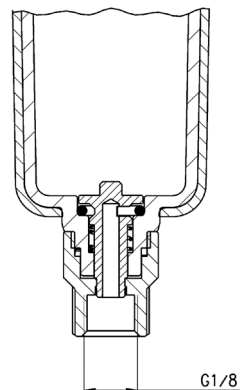


## Semi-automatic manual drain Type 0



**Functioning:** with the operator mechanism turned clockwise, each time the pressure falls below 0,3 bar, the draining of condensate will be released; when resetting the pressure, the drain will close again. The release can also be carried out manually; when the bowl is pressurised, the operator mechanism is pushed upwards.

Assembled with Filtering element 25µ, Filtering element 5µ, Filtering element 1µ, Filtering element 0.01µ.



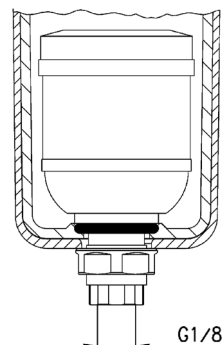
Mod. filter	Bowl with semiautomatic manual drain
N10...-F	N1-F71
N10...-D	N1-F71
N10...-FB	N1-F71
N20...-F	N2-F71
N20...-D	N2-F71
N20...-FB	N2-F71
MC104-F	MC1-F71
MC104-D	MC1-F71
MC104-FB	MC1-F71
MC202-F	MC2-F71
MC202-D	MC2-F71
MC202-FB	MC2-F71
MC238-F	MC2-F71
MC238-D	MC2-F71
MC238-FB	MC2-F71
MX2...-F	MX2-F2-P
MX2...FR	MX2-F2-P
MX2...-FC	MX2-F2-P
MX3...-F	MX3-F2-P
MX3...-FR	MX3-F2-P
MX3...-FC	MX3-F2-P
MD1-F0..	MD1-FSP01
MD1-F1..	MD1-FSP04
MD1-FR0..	MD1-FSP01
MD1-FR1..	MD1-FSP04
MD1-FC0..	MD1-FCSP01
MD1-FC1..	MD1-FCSP04

## Automatic drain (Type 3)



**Functioning:** the presence of liquid inside the bowl raises the float, thus opening the exhaust valve.

Assembled with Filtering element 25µ, Filtering element 5µ, Filtering element 1µ, Filtering element 0.01µ.



Mod. filter	Bowl with automatic drain
MC202-F	MC2-F71/3
MC202-D	MC2-F71/3
MC202-FB	MC2-F71/3
MC238-F	MC2-F71/3
MC238-D	MC2-F71/3
MC238-FB	MC2-F71/3
MX2...-F	MX2-F2/1-P
MX2...FR	MX2-F2/1-P
MX2...FC	MX2-F2/1-P
MX3...-F	MX3-F2/1-P
MX3...FR	MX3-F2/1-P
MX3...FC	MX3-F2/1-P
MD1-F0..	MD1-FSP08
MD1-F1..	MD1-FSP07
MD1-FR0..	MD1-FSP08
MD1-FR1..	MD1-FSP07

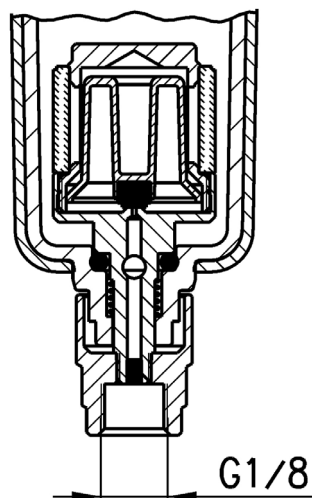
## Depressurisation drain, protected (Type 5)



**Solution similar to the Type 4 but requiring a  $\Delta P = 1$  bar.**

Functioning: this version has a filtering element which prevents any impurities from clogging the exhaust hole.

Assembled with Filtering element 25 $\mu$ , Filtering element 5 $\mu$ , Filtering element 1 $\mu$ , Filtering element 0.01 $\mu$ .



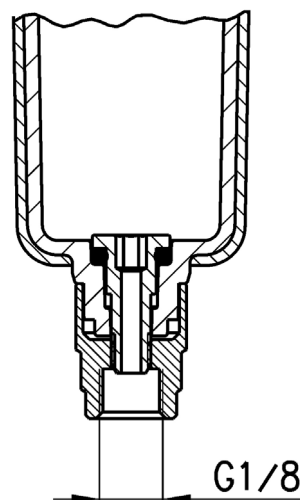
Mod. filter	Bowl with depressurization drain, protected
N20...-F	N2-F71/1
N20...-D	N2-F71/1
N20...-FB	N2-F71/1
MC104-F	MC1-F71/1
MC104-D	MC1-F71/1
MC104-FB	MC1-F71/1
MC202-F	MC2-F71/1
MC202-D	MC2-F71/1
MC202-FB	MC2-F71/1
MC238-F	MC2-F71/1
MC238-D	MC2-F71/1
MC238-FB	MC2-F71/1
MX2...-F	MX2-F2/3-P
MX2...-FR	MX2-F2/3-P
MX2...-FC	MX2-F2/3-P
MX3...-F	MX3-F2/3-P
MX3...-FR	MX3-F2/3-P
MX3...-FC	MX3-F2/3-P
MD1-F0..	MD1-FSP03
MD1-F1..	MD1-FSP06
MD1-FR0..	MD1-FSP03
MD1-FR1..	MD1-FSP06
MD1-FC0..	MD1-FCSP03
MD1-FC1..	MD1-FCSP06

## Bowl without drain (Type 8)



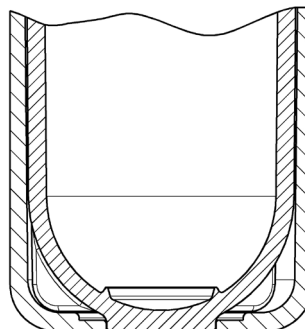
The solution with port G1/8 is used to assemble the items to the bowl which is realized with a through hole of Ø3 mm and a threaded port G1/8.

Assembled with Filtering element 25µ, Filtering element 5µ, Filtering element 1µ, Filtering element 0.01µ.



Mod. filter	Bowl without drain (1/8 port)
N10...-F	N1-F71-1/8
N10...-D	N1-F71-1/8
N10...-FB	N1-F71-1/8
N20...-F	N2-F71-1/8
N20...-D	N2-F71-1/8
N20...-FB	N2-F71-1/8
MC104-F	MC1-F71-1/8
MC104-D	MC1-F71-1/8
MC104-FB	MC1-F71-1/8
MC202-F	MC2-F71-1/8
MC202-D	MC2-F71-1/8
MC202-FB	MC2-F71-1/8
MC238-F	MC2-F71-1/8
MC238-D	MC2-F71-1/8
MC238-FB	MC2-F71-1/8
MX2...-F	MX2-F2/2-P
MX2...FR	MX2-F2/2-P
MX2...FC	MX2-F2/2-P
MX3...-F	MX3-F2/2-P
MX3...-FR	MX3-F2/2-P
MX3...-FC	MX3-F2/2-P
MD1-F0..	MD1-FSP02
MD1-F1..	MD1-FSP05
MD1-FR0..	MD1-FSP02
MD1-FR1..	MD1-FSP05
MD1-FC0..	MD1-FCSP02
MD1-FC1..	MD1-FCSP05

**COALESCING FILTERS**  
**SERIES MX - ACCESSORIES**
**Closed bowl**

 Assembled with Activated carbon filter.


Mod. filter	Closed bowl
N20...-FCA	N2-L71
MC104-FCA	MC1-L71
MC202-FCA	MC2-L71
MC238-FCA	MC2-L71
MX2...-FCA	MX2-L2-P
MX3...-FCA	MX3-L2-P
MD1-FCA..	MD1-FCASP01

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**Coalescing filters**

 Assembled with Semi-automatic manual drain, Automatic drain, Depressurisation drain, Depressurisation drain protected, Bowl without drain.

Mod. filter	Filtering element 0.01 μ
N10...-FB	MX1-F10
N20...-FB	MX1-F10
MC104-FB	MX1-F10
MC202-FB	MX2-F10
MC238-FB	MX2-F10
MX2...-FC	MX2-F10
MX3...-FC	MX3-F10
MD1-FC0.. *	MD1-F10

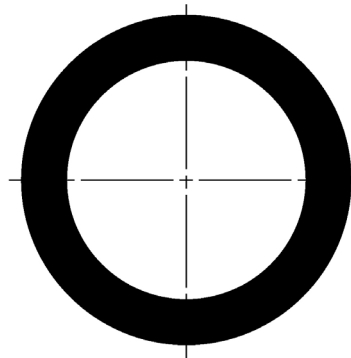
## Coalescing filters



Assembled with Semi-automatic manual drain, Automatic drain, Depressurisation drain protected, Bowl without drain.

Mod. filter	Filtering element 1 μ
MX2...-FC	MX2-F9
MX3...-FC	MX3-F9
MD1-FC1.. *	MD1-F9

## O-ring for assembling



Mod.	O-ring	For assembly
160-39-11/19	OR 3125	MX2
C401-F33	OR 38X2,8	MX3
458-33/1	OR 2068	MC104
80-26-11/4T	OR 3100	MC238, MC202