

FILTER-REGULATORS

SERIES MX

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



- Quality of delivered air according to ISO 8573-1:2010, Classes [7:8:4] and [6:8:4]
- With built-in pressure gauge or with ports for pressure gauge
- Lockable knob
- Tamper-proof system (lockable regulator)
- Polymer bowl locking system reducing the risk of accidents

Series MX filter-regulators integrate filter and pressure reducer in one unit. They are, therefore, compact and suitable for pre-filtering functions. Available with or without draining (relieving), they are equipped with a valve diaphragm for a direct pressure regulation and with an integrated condensate drainer, manual or automatic. Moreover, they are equipped with a built-in pressure gauge.

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

Construction	Modular, compact with filtering element in HDPE
Materials	See TABLE OF MATERIALS on the following page
Ports	MX2: G3/8 - G1/2 - G3/4 - MX3: G3/4 - G1
Condensate capacity	MX2: 55 cc - MX3: 85 cc
Mounting	Vertical in-line, wall-mounting (by means of clamps), panel mounting
Operating temperature	0,3 ÷ 16 bar / -5°C ÷ 50°C (with the dew point of the fluid lower than 2°C at the min. working temperature) 0,3 ÷ 10 bar / -5°C ÷ 60°C (with the dew point of the fluid lower than 2°C at the min. working temperature)
Quality of delivered air according to ISO 8573-1:2010	Class [6:8:4] with 5 µm filtering element Class [7:8:4] with 25 µm filtering element
Draining of condensate	MX2: manual-semi automatic (standard), automatic, depressurization protected, direct G1/8 exhaust MX3: manual-semi automatic (standard), automatic, direct G1/8 exhaust
Exit pressure	0,5 ÷ 10 bar (standard), 0,5 ÷ 4 bar and 0,5 ÷ 7 bar
Nominal flow	See FLOW DIAGRAMS on the following page
Fluid	Compressed air

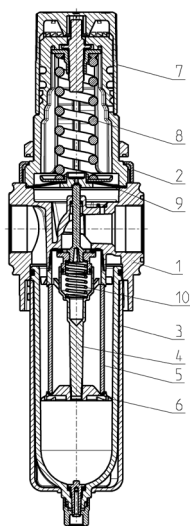
FILTER-REGULATORS
SERIES MX - CODING EXAMPLES
Coding example

MX	2	-	1/2	-	FR	0	0
MX	SERIES						
2	SIZE 2 = G3/8 - G1/2 - G3/4 3 = G3/4 - G1						
1/2	PORT 3/8 = G3/8 1/2 = G1/2 3/4 = G3/4 1 = G1						
FR	FILTER-REGULATOR						
0	FILTERING ELEMENT WITH DESIGN TYPE: 0 = 25 µm with relieving (standard) 1 = 5 µm with relieving 2 = 25 µm without relieving (with semiautomatic-manual drain only) 3 = 5 µm without relieving (with semiautomatic-manual drain only) 4 = 25 µm with relieving and by-pass valve 5 = 5 µm with relieving and by-pass valve 6 = 25 µm without relieving, with by-pass valve 7 = 5 µm without relieving, with by-pass valve						
0	DRAINING OF CONDENSATE (further details in the dedicated section) 0 = semiautomatic-manual drain 3 = automatic drain 5 = depressuring drain, protected 8 = without drain, with port G1/8						
0	OPERATING PRESSURE 0 = 0,5 ÷ 10 bar (standard) 4 = 0,5 ÷ 4 bar 7 = 0,5 ÷ 7 bar (MX2 only)						
4	PRESSURE GAUGE 0 = without pressure gauge (with threaded port) 2 = with built-in pressure gauge 0-6 and working pressure 0,5 ÷ 4 bar 3 = with built-in pressure gauge 0-10 and working pressure 0,5 ÷ 7 bar (MX2 only) 4 = with built-in pressure gauge 0-12 and working pressure 0,5 ÷ 10 bar (standard)						
LH	FLOW DIRECTION = from left to right (standard) LH = from right to left						

AIR TREATMENT

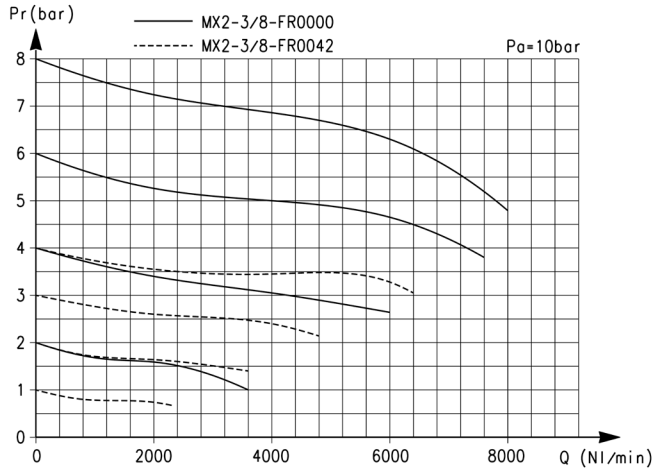
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For the assembly of a single component with fixing flanges or wall-mounting, see the section "FRL Series MX Assembled"

Filter-regulators Series MX - materials


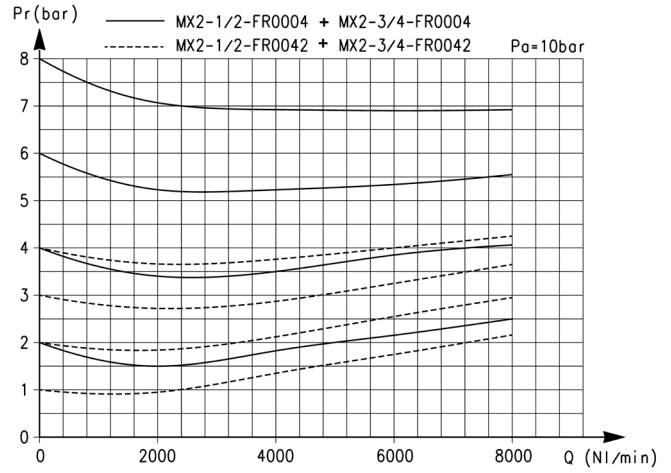
Parts	Materials
1 = Body	Aluminium
2 = Covering	Polyacetal
3 = Bowl / bowl cover	Polycarbonate/Polyamide
4 = Valve guide	Polyacetal
5 = Filtering element	Polyethylene
6 = Separation deflector	Polyacetal
7 = Knob	Polyamide
8 = Upper spring	Zinc-plated steel
9 = Diaphragm	NBR
10 = Lower spring	Stainless steel
Seals	NBR

MX2 filter regulators flow diagrams



Pr = Regulated pressure
Q = Flow

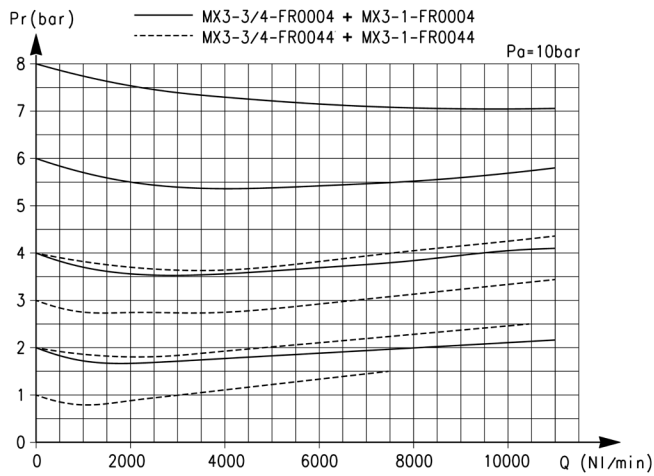
Pa = Inlet pressure



Pr = Regulated pressure
Q = Flow

Pa = Inlet pressure

MX3 filter-regulators flow diagram

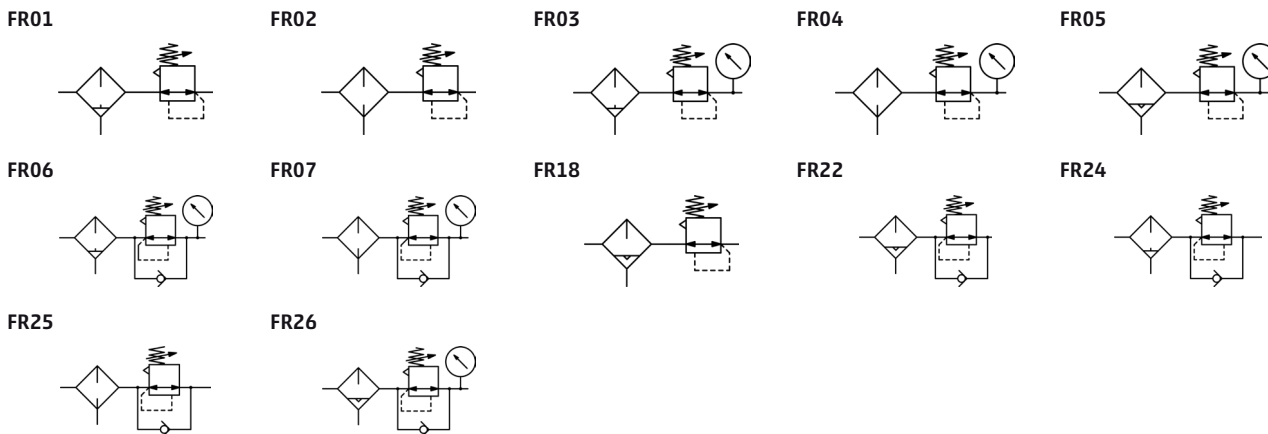


Pr = Regulated pressure
Q = Flow

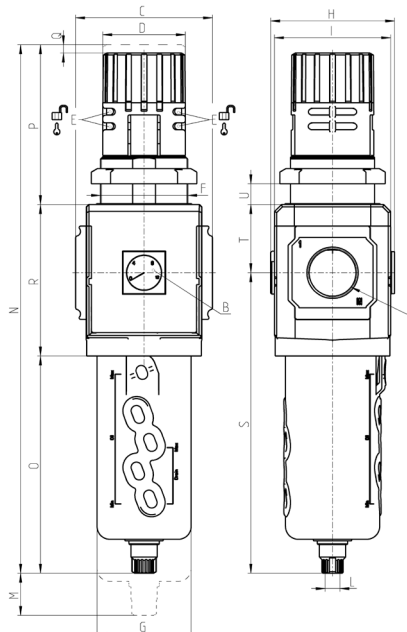
Pa = Inlet pressure

FILTER-REGULATORS
SERIES MX - PNEUMATIC SYMBOLS
Pneumatic symbols

- FR01 = filter-reg. with relieving and manual/semiautomatic drain
- FR02 = filter-reg. with relieving and direct exhaust
- FR03 = filter-reg. with relieving, pressure gauge and manual/semiautomatic drain
- FR04 = filter-reg. with relieving, pressure gauge and direct exhaust
- FR05 = filter-reg. with relieving, pressure gauge and automatic drain
- FR06 = filter-reg. with relieving, pressure gauge, manual/semiautomatic drain and by-pass valve
- FR07 = filter-reg. with rel., pres. gauge, dir. exh. and by-pass valve
- FR18 = filter-reg. with relieving and automatic drain
- FR22 = filter-reg. without relieving, with pressure gauge, automatic-depressurisation drain and by-pass valve
- FR24 = filter-reg. with rel. and man/semiaut drain and bypass valve
- FR25 = filter-reg. with relieving, direct exhaust and by-pass valve
- FR26 = filter-reg. without relieving, automatic-depressurisation drain and by-pass valve

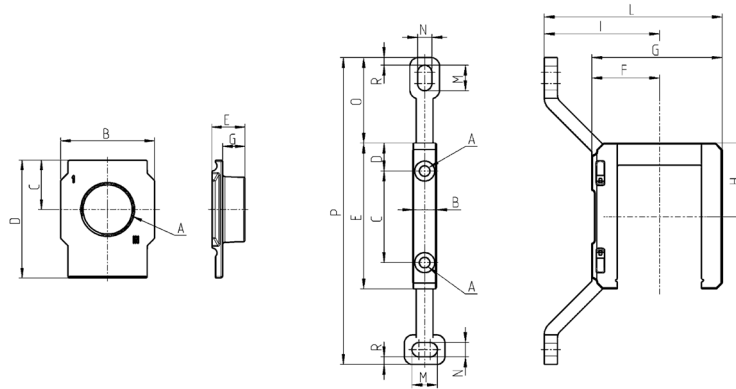
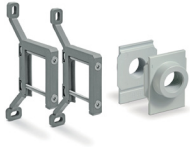


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Filter-regulators Series MX - Dimensions


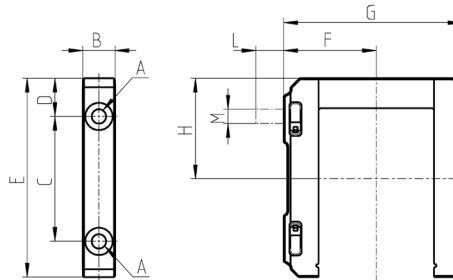
Mod.	A	B	C	D	F	G	H	I	L	M	N	O	P	Q	R	S	T	U	Weight [kg]
MX2-3/8-FR....-	G3/8	G1/8	70	45	M47x1,5	55,5	74,5	68	G1/8	66	290	127	78	5	85	174,5	37,5	0 ± 16	0,8
MX2-1/2-FR....-	G1/2	G1/8	70	45	M47x1,5	55,5	74,5	68	G1/8	66	290	127	78	5	85	174,5	37,5	0 ± 16	0,8
MX2-3/4-FR....-	G3/4	G1/8	70	45	M47x1,5	55,5	74,5	68	G1/8	66	290	127	78	5	85	174,5	37,5	0 ± 16	0,8
MX3-3/4-FR....-	G3/4	G1/4	89,5	54	M57x1,5	61,5	81	76	G1/8	75	345	142	104	5	99	196,5	44,5	0 ± 20	1,3
MX3-1-FR....-	G1	G1/4	89,5	54	M57x1,5	61,5	81	76	G1/8	75	345	142	104	5	99	196,5	44,5	0 ± 20	1,3

Rapid clamps kit with wall fixing brackets + flanges



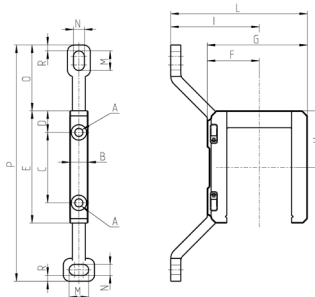
Mod.	A	B	C	The kit is supplied with:
MX2-3/8-KK	G 3/8	174	140	1x MX2-3/8-FL + 2x MX2-Y
MX2-1/2-KK	G 1/2	174	140	1x MX2-1/2-FL + 2x MX2-Y
MX2-3/4-KK	G 3/4	174	140	1x MX2-3/4-FL + 2x MX2-Y
MX3-3/4-KK	G 3/4	221	179	1x MX2-3/4-FL + 2x MX2-Y
MX3-1-KK	G 1	221	179	1x MX2-1-FL + 2x MX2-Y

Rapid clamp kit

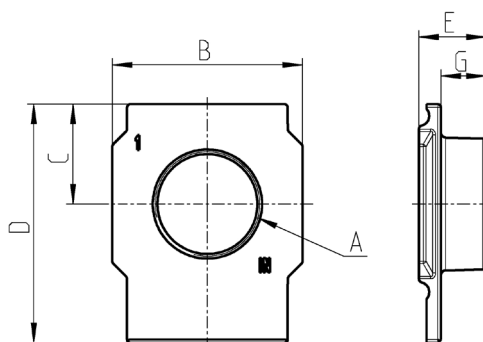
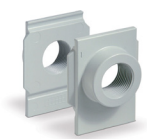


Mod.	A	B	C	D	E	F	G	H	L	M	Notes
MX2-X	5,2	12	46	14	73,5	37,5	70,5	37	-	-	
MX2-Z	5,2	12	46	14	73,5	37,5	70,5	37	14	M5	Kit with wall fixing screw
MX3-X	6,2	14	54	16,5	86	40	77	43,5	-	-	
MX3-Z	6,2	14	54	16,5	86	40	77	43,5	13	M6	Kit with wall fixing screw

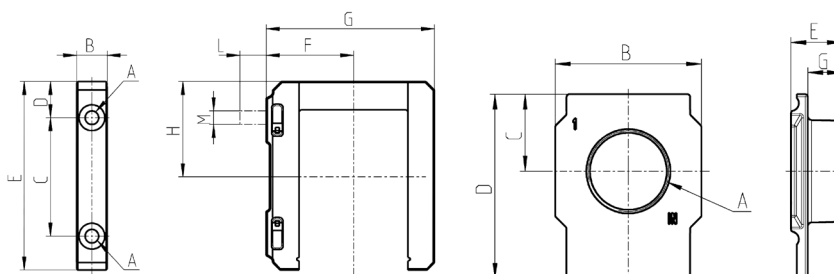
Rapid clamp kit with wall fixing brackets



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

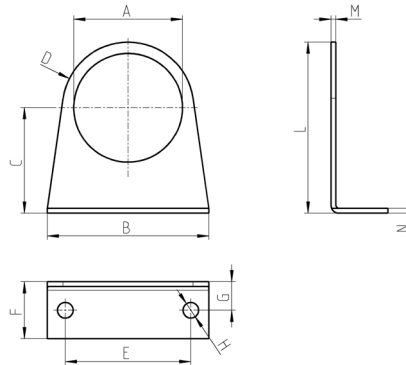
FILTER-REGULATORS
SERIES MX - DIMENSIONS
Terminal flanges (IN/OUT)


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

Rapid clamps kit + flanges


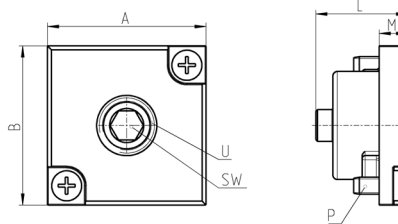
Mod.	A	B	C	The kit is supplied with:
MX2-3/8-HH	G 3/8	174	-	1x MX2-3/8-FL + 2x MX2-X
MX2-1/2-HH	G 3/8	174	-	1x MX2-1/2-FL + 2x MX2-X
MX2-3/4-HH	G 3/4	174	-	1x MX2-3/4-FL + 2x MX2-X
MX2-3/8-JJ	G 3/8	174	140	1x MX2-3/8-FL + 2x MX2-Z
MX2-1/2-JJ	G 1/2	174	140	1x MX2-1/2-FL + 2x MX2-Z
MX2-3/4-JJ	G 3/4	174	140	1x MX2-3/4-FL + 2x MX2-Z
MX3-3/4-HH	G 3/4	221	-	1x MX3-3/4-FL + 2x MX3-X
MX3-1-HH	G 1	221	-	1x MX3-1-FL + 2x MX3-X
MX3-3/4-JJ	G 3/4	221	179	1x MX3-3/4-FL + 2x MX3-Z
MX3-1-JJ	G 1	221	179	1x MX3-1-FL + 2x MX3-Z

Fixing bracket for regulators



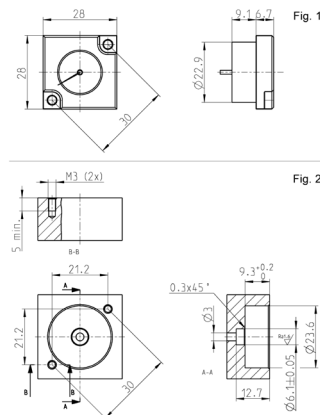
Mod.	A	B	C	D	E	F	G	H	L	M	N
MX2-S	Ø47,2	73	60,5	R29,5	54	25	15	Ø6,2	90	2,5	2,5
MX3-S	Ø57,2	85	55,5	R34,5	66	30	15	Ø8,2	90	2,5	2,5

Block for pressure gauge fixing

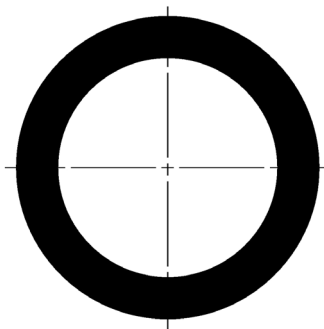


Mod.	A	B	L	M	P	U	SW
MX2-R26/1-P	28	28	16,5	5	M3x7	1/8	5
MX3-R26/1-P	28	28	16,5	5	M3x7	1/4	6

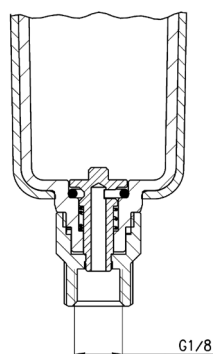
Built-in pressure gauge



Mod.	Range
MX3-R34/W-P	0 ÷ 4 bar
MX3-R31/W-P	0 ÷ 6 bar
MX3-R32/W-P	0 ÷ 10 bar
MX3-R30/W-P	0 ÷ 12 bar

FILTER-REGULATORS
SERIES MX - ACCESSORIES
O-ring for assembling


Mod.	O-ring	For assembly
160-39-11/19	OR 3125	MX2
OR 38x2,8 NBR	OR 38x2,8	MX3

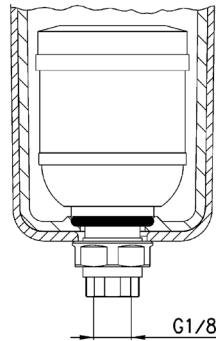
Semi-automatic manual drain Type 0


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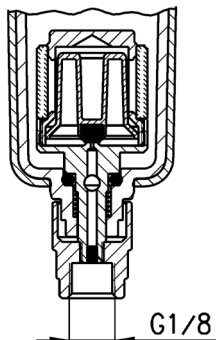
Mod. filter	Bowl with semiautomatic manual drain
N10...-F	N1-F71
N10...-D	N1-F71
N10...-FB	N1-F71
N20...-F	N2-F71
N20...-D	N2-F71
N20...-FB	N2-F71
MC104-F	MC1-F71
MC104-D	MC1-F71
MC104-FB	MC1-F71
MC202-F	MC2-F71
MC202-D	MC2-F71
MC202-FB	MC2-F71
MC238-F	MC2-F71
MC238-D	MC2-F71
MC238-FB	MC2-F71
MX2...-F	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)



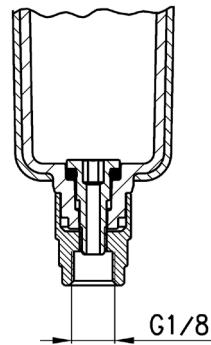
Mod. filter	Bowl with automatic drain
MC202-F	MC2-F71/3
MC202-D	MC2-F71/3
MC202-FB	MC2-F71/3
MC238-F	MC2-F71/3
MC238-D	MC2-F71/3
MC238-FB	MC2-F71/3
MX2...-F	MX2-F2/1-P
MX2...FR	MX2-F2/1-P
MX2...FC	MX2-F2/1-P
MX3...-F	MX3-F2/1-P
MX3...-FR	MX3-F2/1-P
MX3...-FC	MX3-F2/1-P
MD1-F0..	MD1-FSP08
MD1-F1..	MD1-FSP07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

Depressurisation drain, protected (Type 5)



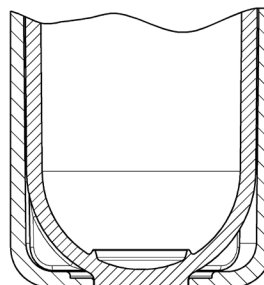
Mod. filter	Bowl with depressurization drain, protected
N20...-F	N2-F71/1
N20...-D	N2-F71/1
N20...-FB	N2-F71/1
MC104-F	MC1-F71/1
MC104-D	MC1-F71/1
MC104-FB	MC1-F71/1
MC202-F	MC2-F71/1
MC202-D	MC2-F71/1
MC202-FB	MC2-F71/1
MC238-F	MC2-F71/1
MC238-D	MC2-F71/1
MC238-FB	MC2-F71/1
MX2...-F	MX2-F2/3-P
MX2...FR	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)



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

Closed bowl



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

FILTER-REGULATORS
SERIES MX - ACCESSORIES
Surface filters


Mod. filter	Filtering element 25 μ
N10...-F	C104-F20/3
N10...-D	C104-F20/3
N20...-F	C104-F20/3
N20...-D	C104-F20/3
MC104-F	C104-F20/3
MC104-D	C104-F20/3
MC202-F	C238-F11/3
MC202-D	C238-F11/3
MC238-F	C238-F11/3
MC238-D	C238-F11/3
MX2...-F	C238-F11/3
MX2...FR	C238-F11/3
MX3...-F	MX3-F7
MX3...-FR	MX3-F7
MD1-F0..*	C104-F20/3
MD1-FR0..*	C104-F20/3

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Surface filters


Mod. filter	Filtering element 5 μ
N10...-F	C104-F21/3
N10...-D	C104-F21/3
N20...-F	C104-F21/3
N20...-D	C104-F21/3
MC104-F	C104-F21/3
MC104-D	C104-F21/3
MC202-F	C238-F12/3
MC202-D	C238-F12/3
MC238-F	C238-F12/3
MC238-D	C238-F12/3
MX2...-F	C238-F12/3
MX2...FR	C238-F12/3
MX3...-F	MX3-F8
MX3...-FR	MX3-F8
MD1-F1..*	C104-F21/3
MD1-FR1..*	C104-F21/3