Series MX filters

MX2 ports: G3/8, G1/2, G3/4 - MX3 ports: G3/4, G1

Modular

Bowl with technopolymer cover and bayonet-type mounting



MX is the new series of air treatment components realized by Camozzi, 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.

- » Removal of impurities and condensate
- » High flow with minimum pressure decreases
- » Cartridge filters of 25 or 5 μm
- » Manual, automatic or depressuring drain
- » Bowl locking system reducing the risk of accidents

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

A special configurator, available on Camozzi website at http://catalogue.camozzi.com (sec. Configurators), allows the customer to choose the most suitable solution for his application, selecting single components or by configuring assembled FRLs.

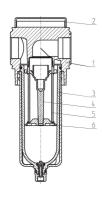
GENERAL DATA	
Construction	modular, compact with filtering element in HDPE
Materials	see TABLE OF MATERIALS (pag. 3/1.05.02)
Ports	MX2: G3/8 - G1/2 - G3/4 MX3: G3/4 - G1
Condensate capacity	MX2: 55 cc MX3: 85 cc
Mounting	vertical in-line wall-mounting (by means of clamps)
Operating temperature	-5°C ÷ 50°C up to 16 bar (with the dew point of the fluid lower than 2°C at the min. working temperature) -5°C ÷ 60°C up to 10 bar (with the dew point of the fluid lower than 2°C at the min. working temperature)
Porosity of filtering element	25 μm (standard) 5 μm
Draining of condensate	MX2: manual-semi automatic (standard), automatic, depressurization protected, without drain with port G1/8 MX3: manual-semi automatic (standard), without drain with port G1/8
Operating pressure	0,3 ÷ 16 bar (with automatic drain 1,5 ÷ 12 bar)
Nominal flow	see FLOW DIAGRAMS (pag. 3/1.05.03)
Fluid	compressed air

CODING EXAMPLE 3/8 MX 2 0 SERIES MX SIZE: 2 = G3/8 - G1/2 - G3/4 3 = G3/4 - G1 2 PORT: 3/8 = G3/8 1/2 = G1/2 3/4 = G3/4 1 = G1 3/8 FILTER F FILTERING ELEMENT: 0 = 25 μm (standard) 1 = 5 μm 0 DRAINING OF CONDENSATE:
0 = semiautomatic-manual drain (standard)
3 = automatic drain
5 = depressuring drain, protected
8 = without drain, with port G1/8 0 FLOW DIRECTION: = from left to right (standard) LH = from right to left LH

For the assembly of a single component with fixing flanges or wall-mounting, see the section "FRL Series MX Assembled" (pag. 3/1.50.01)



Filters Series MX - materials

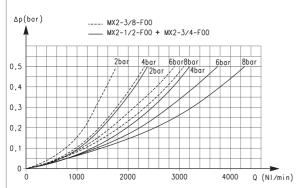


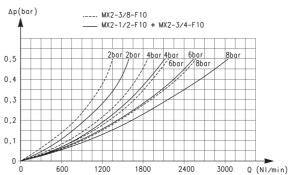
PARTS	MATERIALS
1 = Body	Aluminium
2 = Covering	Polyacetal
3 = Bowl with technopolymer cover	Polycarbonate/Polyamide
4 = Valve-guide	Polyacetal
5 = Filtering element	Polyethylene
6 = Separation deflector	Polyacetal
Seals	NBR

3

TREATMENT

MX2 FLOW DIAGRAMS





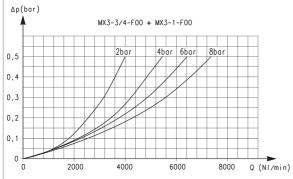
Reference diagram for models with filtering element = 25 μm

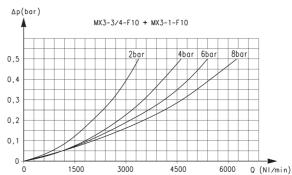
 Δp = Pressure drop Q = Flow

Reference diagram for models with filtering element = $5 \ \mu m$

 Δp = Pressure drop Q = Flow

MX3 FLOW DIAGRAMS





Reference diagram for models with filtering element = $25 \mu m$

 Δp = Pressure drop Q = Flow

Reference diagram for models with filtering element = $5 \mu m$

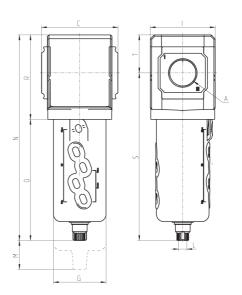
 Δp = Pressure drop Q = Flow

TREATMENT

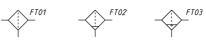


Filters Series MX - dimensions





Mod.	Α	С	G	- 1	L	М	N	0	R	S	Т	Weight (Kg)
MX2-3/8-F00	G3/8	70	55,3	68	G1/8	57,5	212	127	85	174,5	37,5	0.5
MX2-1/2-F00	G1/2	70	55,3	68	G1/8	57,5	212	127	85	174,5	37,5	0.5
MX2-3/4-F00	G3/4	70	55,3	68	G1/8	57,5	212	127	85	174,5	37,5	0.5
MX3-3/4-F00	G3/4	89,5	61,5	76	G1/8	75	241	142	99	196,5	44,5	0.8
MX3-1-F00	G1	89,5	61,5	76	G1/8	75	241	142	99	196,5	44,5	0.8



FT01 = filter without drain with threaded port

FT02 = filter with semiautomatic manual drain

FT03 = filter with automatic or depressuring drain

Series MX coalescing filters

MX2 ports: G3/8, G1/2, G3/4 - MX3 ports: G3/4, G1

Modular

Bowl with technopolymer cover and bayonet-type mounting

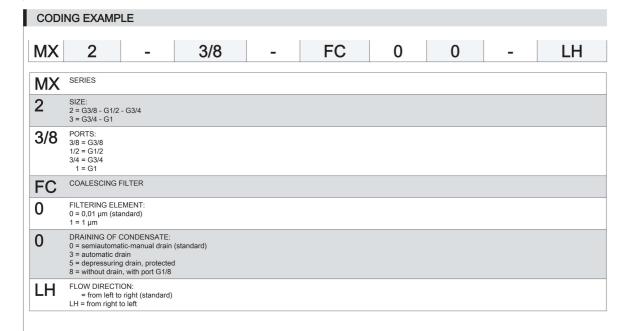


MX is the new series of air treatment components realized by Camozzi, characterized by a modern, linear and compact design, offering high performances. The perfect integration between metal alloys and technopolymers has allowed the realization of a reliable product, light and strong at the same time. Thanks to a new concept of modularity, moreover, the mounting of components has become easier.

- » High performance and compressed air purity
- » Air quality according to ISO 8573-1 standard
- » Cartridge filters 1 or 0,01 µm
- » Manual, automatic or depressing drain
- » Bowl locking system reducing the risk of accidents

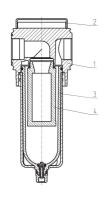
The Series MX has been realized to offer a multi-sector solution that guarantees saving in terms of installation time, space and costs. A special configurator, available on Camozzi website at http://catalogue.camozzi.com (sec. Configurators), allows the customer to choose the most suitable solution for his application, selecting single components or by configuring assembled FRI s

GENERAL DATA									
Construction	modular, compact								
Materials	see TABLE OF MATERIALS (pag. 3/1.10.02)								
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)								
Operating temperature	-5°C ÷ 50°C up to 16 bar (with the dew point of the fluid lower than 2°C at the min. working temperature) -5°C ÷ 60°C up to 10 bar (with the dew point of the fluid lower than 2°C at the min. working temperature)								
Draining of condensate	MX2: manual-semi automatic (standard), automatic, depressurization protected, without drain with port G1/8 MX3: manual-semi automatic (standard), without drain with port G1/8								
Operating pressure	0,3 ÷ 16 bar (with automatic drain 1,5 ÷ 12 bar)								
Nominal flow	see FLOW DIAGRAMS (pag. 3/1.10.03)								
Porosity of filtering element	0,01 μm 1 μm								
Residual oil content with inlet at 3 mg/m³	< 0,01mg/m³ < 0,1mg/m³								
Oil retain efficiency	99,80% 97%								
Particles retain efficiency	99,9999% 99,999%								
Fluid	compressed air								
Pre-filtering with filtering element of 1 μm Pre-filtering with filtering element of 0,01 μm	it is recommended to use a filter of 5 µm it is recommended to use a filter with residual oil of 0,1 mg/m³								



For the assembly of a single component with fixing flanges or wall-mounting, see the section "FRL Series MX Assembled" (pag. 3/1.50.01)

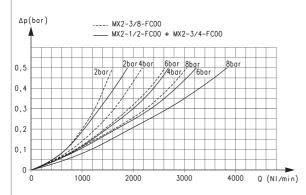
Coalescing filters Series MX - materials

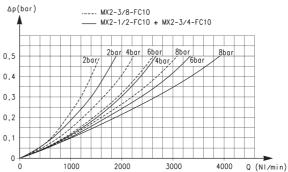


MATERIALS
Aluminium
Polyacetal
Polycarbonate/Polyamide
Borosilicate
NBR

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MX2 FLOW DIAGRAMS





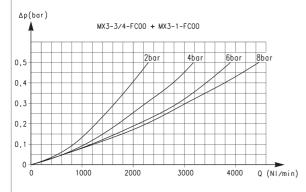
Reference diagram for models with filtering element = 0,01 μ m

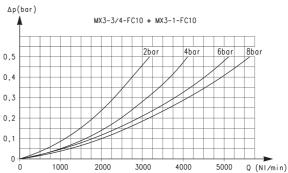
 Δp = Pressure drop Q = Flow

Reference diagram for models with filtering element = 1 μm

 Δp = Pressure drop Q = Flow

MX3 FLOW DIAGRAMS





Reference diagram for models with filtering element = $0.01 \mu m$

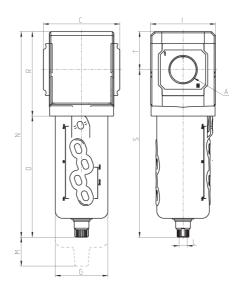
 Δp = Pressure drop Q = Flow

Reference diagram for models with filtering element = 1 μm

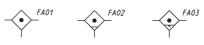
 Δp = Pressure drop Q = Flow

Coalescing filters Series MX - dimensions





Mod.	Α	С	G	-1	L	М	N	0	R	S	Т	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



FA01 = coalescing filter without drain with threaded port

FA02 = coalescing filter with semi-automatic manual drain

FA03 = coalescing filter with automatic or depressuring drain

Series MX activated carbon filters

MX2 ports: G3/8, G1/2, G3/4 - MX3 ports: G3/4, G1

Modular

Bowl with technopolymer cover and bayonet-type mounting



MX is the new series of air treatment components realized by Camozzi, 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.

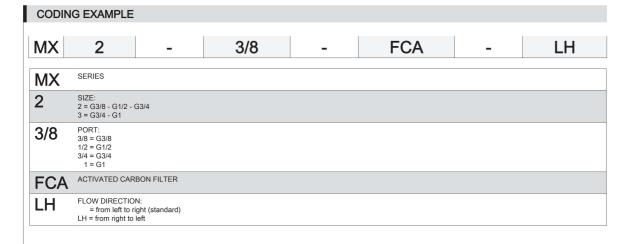
it is recommended to use a filter with residual oil of 0,01mg/m³

- » Removal of compressed air oil, liquid, and gas components through the active carbons
- » Air quality in compliance with ISO 8573-1 standard, up to class 1.7.1
- » Bowl locking system reducing the risk of accidents

The Series MX has been realized to offer a multi-sector solution that guarantees saving in terms of installation time, space and costs. A special configurator, available on Camozzi website at http://catalogue.camozzi.com (sec. Configurators), allows the customer to choose the most suitable solution for his application, selecting single components or by configuring assembled FRLs.

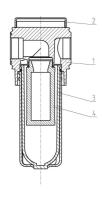
GENERAL DAT	⁻ A
Construction	modular, compact with activated carbon filtering element
Materials	see TABLE OF MATERIALS (pag. 3/1.15.02)
Ports	MX2: G3/8 - G1/2 - G3/4 MX3: G3/4 - G1
Mounting	vertical in-line wall-mounting (by means of clamps)
Operating temperature	10°C ÷ 40°C (t max = 60°C)
Draining of condensate	NO DRAINING
Operating pressure	0,3 ÷ 16 bar
Nominal flow	see FLOW DIAGRAMS (pag. 3/1.15.03)
Filtering element	active carbon
Residual oil content	< 0,003 mg/m³
Fluid	compressed air

Pre-filtering



For the assembly of a single component with fixing flanges or wall-mounting, see the section "FRL Series MX Assembled" (pag. 3/1.50.01)

Activated carbon filters Series MX - materials

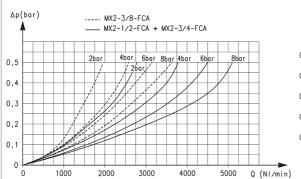


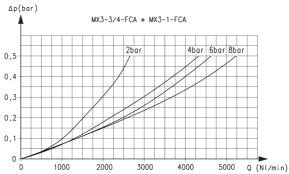
PARTS	MATERIALS
1 = Body	Aluminium
2 = Covering	Polyacetal
3 = Bowl with technopolymer cover	Polycarbonate/Polyamide
4 = Filtering element	Active carbon
Seals	NBR

3

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FLOW DIAGRAMS





Reference diagram for MX2

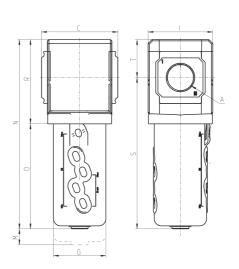
 Δp = Pressure drop Q = Flow

Reference diagram for MX3

 Δp = Pressure drop Q = Flow

Activated carbon filters Series MX - dimensions





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Mod.	Α	С	G	I	M	N	0	R	S	Т	Weight (Kg)
MX2-3/8-FCA	G3/8	70	55,3	68	89,5	189,5	104,5	85	152	37,5	0.5
MX2-1/2-FCA	G1/2	70	55,3	68	89,5	189,5	104,5	85	152	37,5	0.5
MX2-3/4-FCA	G3/4	70	55,3	68	89,5	189,5	104,5	85	152	37,5	0.5
MX3-3/4-FCA	G3/4	89,5	61,5	76	107	222	123	99,0	177,5	44,5	0.8
MX3-1-FCA	G1	89,5	61,5	76	107	222	123	99,0	177,5	44,5	0.8

3/1.15.03

Series MX pressure regulators

MX2 ports: G3/8, G1/2, G3/4 - MX3 ports: G3/4, G1

Manifold ports: G1/2 (MX2 only)

Modular - Available with built-in pressure gauges or ports for gauges



The availability of constant values of the secondary pressure ensures performance optimization and energy saving. The tamper-proof system allows to adjust pressure safely through 2 intervals with primary pressure compensation. All regulators are equipped with

- » Minimal pressure decreases
- » Knob with closure
- » Tamper-proof system (lockable regulator)
- » Integral return exhaust (relieving)
- » Manifold version also available

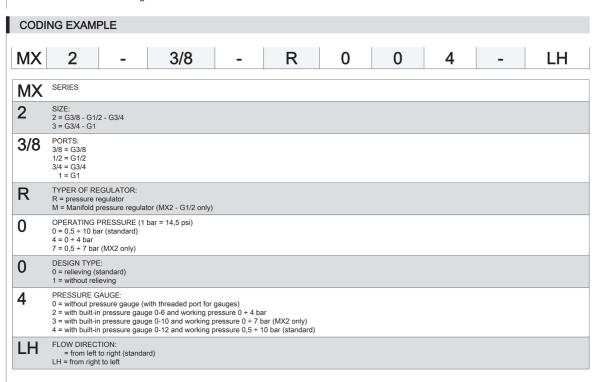
The Series MX has been realized to offer a multi-sector solution that guarantees saving in terms of installation time, space and costs. A special configurator, available on Camozzi website at http://catalogue. camozzi.com (sec. Configurators), allows the customer to choose the most suitable solution for his application, selecting single components or

by configuring assembled FRLs.

an integrated locking system and built-in pressure gauges for a more compact product. The regulators Series MX are suitable also for panel mountings. **GENERAL DATA**

Construction modular, compact, diaphragm type Materials see TABLE OF MATERIALS (pag. 3/1.20.02) MX2: G3/8 - G1/2 - G3/4 Ports MX3: G3/4 - G1 Manifold regulator: G1/2 (MX2 only) vertical in-line Mounting wall-mounting (by means of clamps) panel mouting -5°C ÷ 50°C up to 16 bar (with the dew point of the fluid lower than 2°C at the min. working temperature) Operating temperature -5°C ÷ 60°C up to 10 bar (with the dew point of the fluid lower than 2°C at the min. working temperature) Inlet pressure 0 ÷ 16 bar 0,5 ÷ 10 bar (standard) Outlet pressure 0 ÷ 4 bar 0,5 ÷ 7 bar (MX2 only) with relieving (standard) Overpressure exhaust without relieving Nominal flow see FLOW DIAGRAMS (pag. 3/1.20.03) Fluid compressed air version with built-in pressure gauge (standard) Pressure gauge version with G1/4 ports for pressure gauge (MX3 only) version with G1/8 ports for pressure gauge (MX2 only)

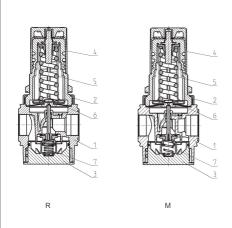
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For the assembly of a single component with fixing flanges or wall-mounting, see the section "FRL Series MX Assembled" (pag. 3/1.50.01)



R = pressure regulator M = Manifold pressure regulator

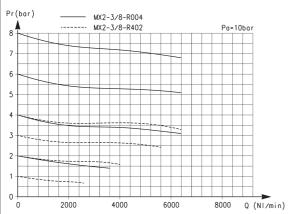


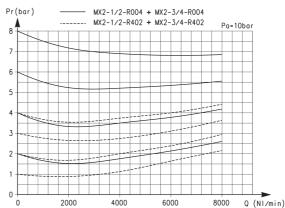
PARTS	MATERIALS
1 = Body	Aluminium
2 = Covering	Polyacetal
3 = Valve holder plug	Polyacetal
4 = Regulator knob	Polyamide
5 = Upper spring	Zinc-plated steel
6 = Diaphragm	NBR
7 = Lower spring	Stainless steel
Seals	NBR

3

TREATMENT

MX2 FLOW DIAGRAMS





Pr = Regulated pressure

Q = Flow

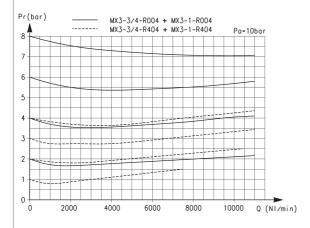
Pa = Inlet pressure

Pr = Regulated pressure

Q = Flow

Pa = Inlet pressure

MX3 FLOW DIAGRAM



Pr = Regulated pressure

Q = Flow

Pa = Inlet pressure





Pressure regulators Series MX - dimensions

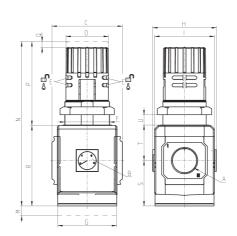


PR01 = regulator without relieving PR02 = regulator with relieving

PR05 = regulator without relieving and with pressure gauge PR06 = regulator with relieving and pressure gauge







MX2-3/8-R004 G3/8	0 ÷ 12	70	45	Ø4	1117 15												
10/0 4/0 D004 04/0				Ø 4	M47x1,5	70	74,5	68	45	166	78	5	88	50,5	37,5	0 ÷ 13	0.6
MX2-1/2-R004 G1/2	0 ÷ 12	70	45	Ø 4	M47x1,5	70	74,5	68	45	166	78	5	88	50,5	37,5	0 ÷ 13	0.6
MX2-3/4-R004 G3/4	0 ÷ 12	70	45	Ø 4	M47x1,5	70	74,5	68	45	166	78	5	88	50,5	37,5	0 ÷ 13	0.6
MX3-3/4-R004 G3/4	0 ÷ 12	89,5	54	Ø 4	M57x1,5	75	81	76	45	206	104	5	102	57,5	44,5	0 ÷ 20	1
MX3-1-R004 G1	0 ÷ 12	89,5	54	Ø 4	M57x1,5	75	81	76	45	206	104	5	102	57,5	44,5	0 ÷ 20	1

3 TREATMENT

MANIFOLD pressure regulator Series MX - dimensions

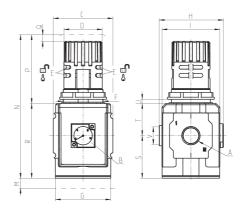
The picture on the left side shows that it is possibile to assembly a certain numer of regulators with the same inlet pressure using proper mounting kits, with or without terminals.

The regulation of the outlet pressure (OUT port) of each regulator can be set up rotating the knob clockwise or anticlockwise unitl the desired pressure is reached.

This regulation has no effect on pressures of previous or following regulators.

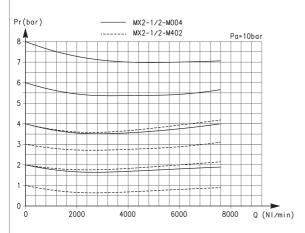
regulators.

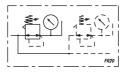




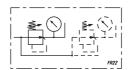
Mod.	Α	B (bar)	С	D	Е	F	G	Н	- 1	M	N	Р	Q	R	S	Т	U	V (OUT)	Weight (Kg)
MX2-1/2-M004	G1/2	0 ÷ 12	70	45	Ø 4	M47x1,5	70	75,5	68	45	166	78	5	88	50,5	37,5	0 ÷ 13	G1/2	0,6

MANIFOLD REGULATOR - FLOW DIAGRAM and PNEUMATIC SYMBOLS









Pr = Regulated pressure

Q = Flow

Pa = Inlet pressure

FR19 = Manifold regulator with relieving and without manometer FR20 = Manifold regulator with relieving and manometer FR21 = Manifold regulator without relieving nor manometer

FR22 = Manifold regulator without relieving and with manometer

Series MX lubricators

MX2 ports: G3/8, G1/2, G3/4 - MX3 ports: G3/4, G1

Modular

Bowl with technopolymer cover and bayonet-type mounting



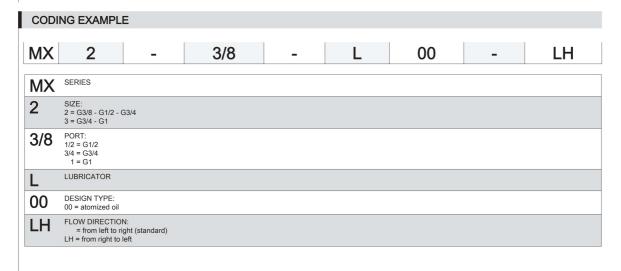
MX is the new series of air treatment components realized by Camozzi, characterized by a modern, linear and compact design, offering high performances. The perfect integration between metal alloys and technopolymers has allowed the realization of a reliable product, light and strong at the same time. Thanks to a new concept of modularity, moreover, the mounting of components has become easier.

These proportional lubricators enable a precision metering.

- » Regulation screw
- » Ability to refill the oil even with system under pressure
- » High flow
- » Check of the oil level through plastic cover openings
- » Bowl locking system reducing the risk of accidents

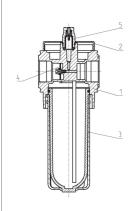
The Series MX has been realized to offer a multi-sector solution that guarantees saving in terms of installation time, space and costs. A special configurator, available on Camozzi website at http://catalogue.camozzi.com (sec. Configurators), allows the customer to choose the most suitable solution for his application, selecting single components or by configuring assembled

GENERAL DATA	
Construction	modular, compact
Materials	see TABLE OF MATERIALS (pag. 3/1.25.02)
Ports	MX2: G3/8 - G1/2 - G3/4 MX3: G3/4 - G1
Oil capacity	MX2: 118 cc MX3: 170 cc
Oil refilling	even during use
Mounting	vertical in-line wall-mounting (by means of clamps)
Operating temperature	-5°C ÷ 50°C up to 16 bar (with the dew point of the fluid lower than 2°C at the min. working temperature) -5°C ÷ 60°C up to 10 bar (with the dew point of the fluid lower than 2°C at the min. working temperature)
Oil for lubrication	use ISO VG32 oils. Once applied, the lubrication should never be interrupted.
Operating pressure	0 ÷ 16 bar
Min. air consumption for lubrication at 1 bar	MX2: 17 NI/min MX3: 50 NI/min
Min. air consumption for lubrication at 6 bar	MX2: 38 NI/min MX3: 90 NI/min
Nominal flow	see FLOW DIAGRAMS (pag 3/1.25.03)



For the assembly of a single component with fixing flanges or wall-mounting, see the section "FRL Series MX Assembled" (pag. 3/1.50.01)

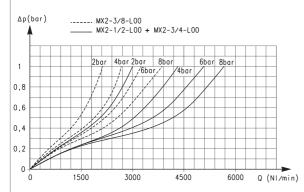
Lubricators Series MX - materials

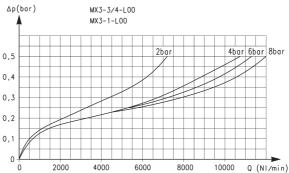


PARTS	MATERIALS
1 = Body	Aluminium
2 = Covering	Polyacetal
B = Bowl with technopolymer cover	Polycarbonate/Polyamide
1 = Diaphragm	NBR
5 = Viewer	Polyamide
Seals	NBR

TREATMENT

FLOW DIAGRAMS





Reference diagram for MX2

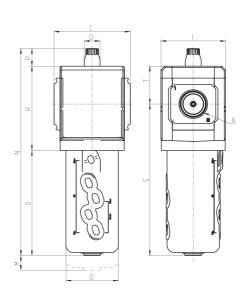
Δp = Pressure drop Q = Flow

Reference diagram for MX3

 Δp = Pressure drop Q = Flow

Lubricators Series MX - dimensions





	LU
-	—

Mod.	Α	С	D	G	I	M	N	0	Р	R	S	Т	Weight (Kg)
MX2-3/8-L00	G3/8	70	18,5	55,5	68	84,5	210	104,5	20,5	85	152	37,5	0.5
MX2-1/2-L00	G1/2	70	18,5	55,5	68	84,5	210	104,5	20,5	85	152	37,5	0.5
MX2-3/4-L00	G3/4	70	18,5	55,5	68	84,5	210	104,5	20,5	85	152	37,5	0.5
MX3-3/4-L00	G3/4	89,5	18,5	61,5	76	100	243	123	21	99	178	44,5	0.8
MX3-1-L00	G1	89,5	18,5	61,5	76	100	243	123	21	99	178	44,5	0.8

Series MX filter-regulators

MX2 ports: G3/8, G1/2, G3/4 - MX3 ports: G3/4, G1

Modular

Bowl with technopolymer cover and bayonet-type mounting



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.

- Filtering between 25 μm or 5 μm
- » Available versions: with built-in gauge or with ports for gauge
- » Lockable knob with closure
- » Bowl locking system reducing the risk of accidents

The Series MX has been realized to offer a multi-sector solution that guarantees saving in terms of installation time, space and costs. A special configurator, available on Camozzi website at http://catalogue. camozzi.com (sec. Configurators), allows the customer to choose the most suitable solution for his application, selecting single components or by configuring assembled

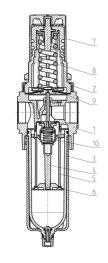
GENERAL DATA	
Construction	modular, compact with filtering element in HDPE
Materials	see TABLE OF MATERIALS (pag. 3/1.30.02)
Ports	MX2: G3/8 - G1/2 - G3/4 MX3: G3/4 - G1
Condensate capacity	MX2: 55 cc MX3: 85 cc
Mounting	vertical in-line wall-mounting (by means of clamps) panel mounting
Operating temperature	-5°C ÷ 50°C up to 16 bar (with the dew point of the fluid lower than 2°C at the min. working temperature) -5°C ÷ 60°C up to 10 bar (with the dew point of the fluid lower than 2°C at the min. working temperature)
Porosity of filtering element	25 μm (standard) 5 μm
Draining of condensate	MX2: manual-semi automatic (standard), automatic, depressurization protected, without drain with port G1/8 MX3: manual-semi automatic (standard), without drain with port G1/8
Operating pressure	0,3 ÷ 16 bar ((with automatic drain 1,5 ÷ 12)
Nominal flow	see FLOW DIAGRAMS (pag. 3/1.30.03)
Fluid	compressed air
Pressure gauge	version with built-in pressure gauge (standard) version with G1/4 ports for pressure gauge (MX3 only) version with G1/8 ports for pressure gauge (MX2 only)

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CODI	ING EXAMPLE
MX	2 - 3/8 - FR 0 0 0 4 - LH
MX	SERIES
2	SIZE: 2 = G3/8 - G1/2 - G3/4 3 = G3/4 - G1
3/8	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)
0	DRAINING OF CONDENSATE: 0 = semiautomatic-manual drain (standard) 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 + 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 ÷ 4 bar 3 = with built-in pressure gauge 0-10 and working pressure 0 ÷ 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

For the assembly of a single component with fixing flanges or wall-mounting, see the section "FRL Series MX Assembled" (pag. 3/1.50.01)

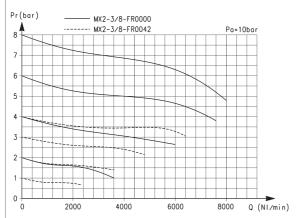
Filter-regulators Series MX - materials

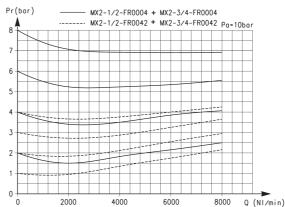


PARTS	MATERIALS
1 = Body	Aluminium
2 = Covering	Polyacetal
3 = Bowl with technopolymer cover	Polycarbonate/Polyamide
4 = Valve guide	Polyacetal
5 = Filtering element	Polyethylene
6 = Separation deflector	Polyacetal
7 = Knob	Polyamide
8 = Upper spring	Zinc-plated steel
9 = Diaphragm	NBR
10 = Lower spring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

TREATMENT

MX2 FLOW DIAGRAMS





Pr = Regulated pressure

Q = Flow

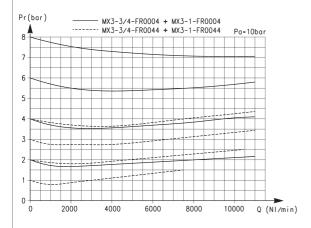
Pa = Inlet pressure

Pr = Regulated pressure

Q = Flow

Pa = Inlet pressure

MX3 FLOW DIAGRAM



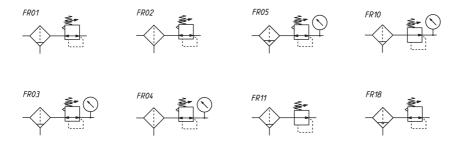
Pr = Regulated pressure

Q = Flow

Pa = Inlet pressure

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PNEUMATIC SYMBOLS



FR01 = filter-regulator with relieving and manual drain FR02 = filter-regulator with relieving and without drain

FR03 = filter-regulator with relieving, manual drain and pressure gauge FR04 = filter-regulator with relieving, without drain

and with pressure gauge

FR05 = filter-regulator with relieving, automatic drain and pressure gauge

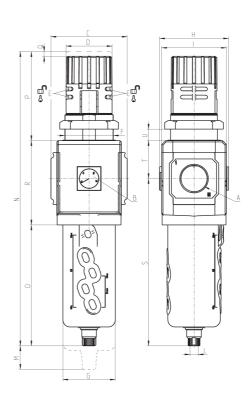
FR10 = filter-regulator with manual drain, without relieving

and with pressure gauge
FR11 = filter-regulator with manual drain and wiithout relieving

FR18 = filter-regulator with relieving and automatic drain

Filter-regulators Series MX - dimensions





Mod.	Α	B (bar)	С	D	E	F	G	Н	- 1	L	M	N	0	Р	Q	R	S	Т	U	Weight (Kg)
MX2-3/8-FR0004	G3/8	0 ÷ 12	70	45	Ø 4.7	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-FR0004	G1/2	0 ÷ 12	70	45	Ø 4.7	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-FR0004	G3/4	0 ÷ 12	70	45	Ø 4.7	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-FR0004	G3/4	0 ÷ 12	89,5	54	Ø 4	M57x1,5	61,5	81	76	G1/8	75	345	142	104	5	99	196,5	44,5	0 ÷ 20	1.3
MX3-1-FR0004	G1	0 ÷ 12	89,5	54	Ø 4	M57x1,5	61,5	81	76	G1/8	75	345	142	104	5	99	196,5	44,5	0 ÷ 20	1.3

Series MX lockable isolation 3/2-way valves

MX2 ports: G3/8, G1/2, G3/4 - MX3 ports: G3/4, G1

Modular

Manual, electro-pneumatic, servo-pilot and pneumatic control



Manual isolation valves are ideal to allow an easy access to the FRL group. The system is depressurized with the de-activation of the valve.

Electropneumatic isolation valves: ideal where manual access is difficult, they allow a maximum positioning flexibility and are designed to pressurize or depressurize pneumatic systems. The built-in manual override guarantees security in case of an emergency.

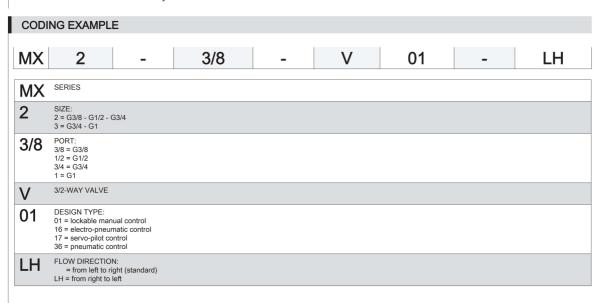
- Standard tamperproof lock-out (manual valve)
- » One/more locks for the lockout feature (manual valve)
- » Actuation at 24 V, 110 V or 230 V
- » Exhaust in atmosphere
- » Silencers available on request

The Series MX has been realized to offer a multi-sector solution that guarantees saving in terms of installation time, space and costs. A special configurator, available on Camozzi website at http://catalogue. camozzi.com (sec. Configurators), allows the customer to choose the most suitable solution for his application, selecting single components or by configuring assembled

GENERAL DATA	
Construction	modular, compact, spool-type
Materials	see TABLE OF MATERIALS (pag. 3/1.35.02)
Ports	MX2: G3/8 - G1/2 - G3/4 MX3: G3/4 - G1
Mounting	in-line wall-mounting (by means of clamps)
Operating temperature	-5° C ÷ 50° C up to 16 bar (with the dew point of the fluid lower than 2° C at the min. working temperature) -5° C ÷ 60° C up to 10 bar (with the dew point of the fluid lower than 2° C at the min. working temperature)
Operating pressure	Manual valve: -0,8 bar ÷ 10 bar Electro-pneumatic valve: 2 bar ÷ 10 bar Servopilot or pneumatic valve: -0,8 bar ÷ 10 bar (with pilot 2 ÷ 10 bar)
Nominal flow	see FLOW DIAGRAMS (pag. 3/1.35.03 e 3/1.35.04)
Nominal exhaust flow at 6 bar with ∆p = 1 bar	MX2: 6000 NI/min MX3: 9200 NI/min
Fluid	compressed air

3

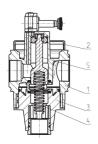
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For the assembly of a single component with fixing flanges or wall-mounting, see the section "FRL Series MX Assembled" (pag. 3/1.50.01)

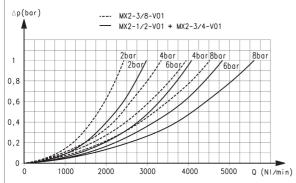


Lockable isolation 3/2-way valves Series MX - materials



PARTS	MATERIALS
1 = Body	Aluminium
2 = Covering	Polyacetal
3 = Valve holder plug	Polyacetal
4 = Lower spring	Zinc-plated steel
5 = Spool	Stainless steel (MXV16 - V17 - V36) Aluminium (MXV01)
Seals	NBR

NOMINAL FLOW DIAGRAM for valves Mod. MX...V01



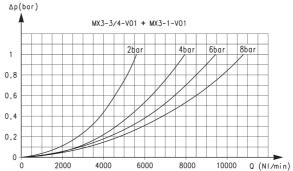


Diagram for lockable manual control valves MX2

 Δp = Pressure drop Q = Flow

Diagram for lockable manual control valves MX3

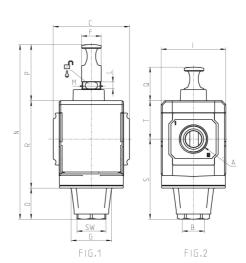
 Δp = Pressure drop

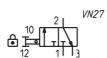
Q = Flow

Lockable manual valves Series MX - dimensions

Fig. 1 = closed valve Fig. 2 = open valve







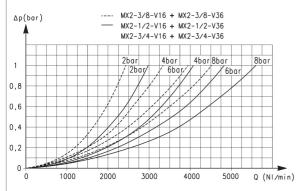
Mod.	Α	В	С	F	G	- 1	L	M	N	0	Р	Q	R	S	SW	Т	Weight (Kg)
MX2-3/8-V01	G3/8	G 1/2	70	18	34,5	68	9	8	152	13	51	31	88	63,5	27	37,5	0.5
MX2-1/2-V01	G 1/2	G 1/2	70	18	34,5	68	9	8	152	13	51	31	88	63,5	27	37,5	0.5
MX2-3/4-V01	G3/4	G 1/2	70	18	34,5	68	9	8	152	13	51	31	88	63,5	27	37,5	0.5
MX3-3/4-V01	G3/4	G3/4	89,5	23	48	76	8	14,5	205,5	37	66,5	40	102	94,5	34	44,5	0.9
MX3-1-V01	G1	G3/4	89,5	23	48	76	8	14,5	205,5	37	66,5	40	102	94,5	34	44,5	0.9

MX...-V36

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TREATMENT

NOMINAL FLOW DIAGRAM for valves Mod. MX...V16 and MX...V36



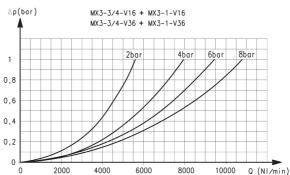


Diagram for electro-pneumatic or pneumatic control valves MX2

Diagram for electro-pneumatic or pneumatic control valves MX3

MX...-V16

MX2

МХЗ

 Δp = Pressure drop Q = Flow

 Δp = Pressure drop Q = Flow

Q – Flow

3/2-way isolation valves Series MX - dimensions

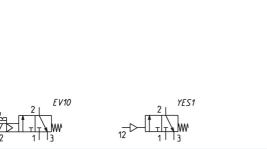
Electro-pneumatic or pneumatic valves





EV10 = solenoid valve, 3/2 NC, monostable, with bistable manual override

YES1 = pneumatically operated valve, 3/2, monostable, mechanical spring



68

68

68

68

68

76

76

76

76

Ν

171

171

171

122

122

122

180,5

180.5

164

164

0

13

13

13

13

13

37

37

37

37

Р

70

70

70

21

21

21

41,5

41.5

25.5

25,5

102

102

102

102

63,5

94,5

94.5

94.5

94,5

34

34

34

34

34

37,5

44,5

44.5

44 5

44,5

G1/8

G1/8

G1/8

			_SW _G			A
		014/			144-1-1-446-1	0 1 1
R	S	SW	Т	Υ	Weight (Kg)	Symbol
88	63,5	34	37,5	-	0.5	EV10
88	63,5	34	37,5	-	0.5	EV10
88	63,5	34	37,5	-	0.5	EV10
88	63,5	34	37,5	G1/8	0.5	YES1
88	63,5	34	37,5	G1/8	0.5	YES1

MX3-1-V16
MX3-3/4-V36
MX3-1-V36
3/1.35.04

Mod.

MX2-3/8-V16

MX2-1/2-V16

MX2-3/4-V16

MX2-3/8-V36

MX2-1/2-V36

MX2-3/4-V36

MX3-3/4-V16

В

G1/2

G1/2

G1/2

G1/2

G1/2

G3/4

G3/4

G3/4

G3/4

G3/8

G1/2

G3/4

G3/8

G1/2

G3/4

G3/4

G1

G3/4

G1

С

70

70

70

70

70

70

89,5

89.5

89.5

89,5

G

34,5

34,5

34.5

34,5

34,5

34,5

48

48

48

48

0.5

0.9

0.9

0.9

0.9

YES1

EV10

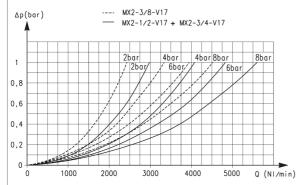
EV10

YES1

YES1

TREATMENT

FLOW DIAGRAM for valves Mod. MX...V17



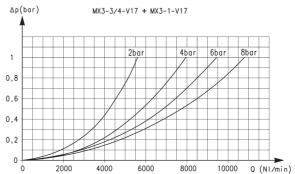


Diagram for servo-pilot control valves MX2

 Δp = Pressure drop Q = Flow

Diagram for servo-pilot control valves MX3

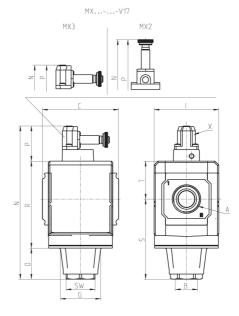
 Δp = Pressure drop Q = Flow

3/2-way isolation valves Series MX - dimensions

Servo-pilot valves



EV53 = solenoid valve, 3/2, monostable, solenoid pilot with separate air supply and bistable manual override



	2 1	EV53
	1	w
12	'' ' 	3

Mod.	Α	В	С	G	I	N	0	Р	R	S	SW	Т	X	Weight (Kg)
MX2-3/8-V17	G3/8	G1/2	70	34,5	68	171	13	70	88	63,5	34	37,5	M5	0.5
MX2-1/2-V17	G1/2	G1/2	70	34,5	68	171	13	70	88	63,5	34	37,5	M5	0.5
MX2-3/4-V17	G3/4	G1/2	70	34,5	68	171	13	70	88	63,5	34	37,5	M5	0.5
MX3-3/4-V17	G3/4	G3/4	89,5	48	76	180,5	37	41,5	102	94,5	34	44,5	M5	0.9
MX3-1-V17	G1	G3/4	89,5	48	76	180,5	37	41,5	102	94,5	34	44,5	M5	0.9

Series MX soft start valves

MX2 ports: G3/8, G1/2, G3/4 - MX3 ports: G3/4, G1

Modular

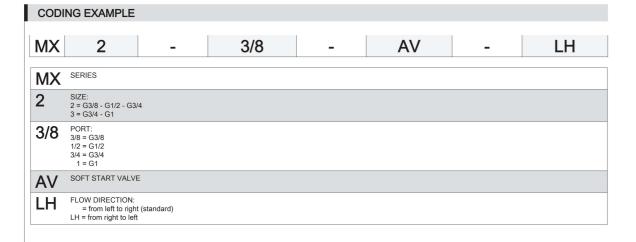


These soft start valves allow a gradual increase of the pressure in pneumatic systems. The pressure increases slowly according to the set regulation until it reaches half of the set value, then it increases rapidly. The valve poppet shifts slowly and securely to the open position to prevent sudden and unsafe movements of the pneumatic components in the system.

- » Security function to maintain the command sequence
- » Opening of the main air path at about 50% of the value of the inlet pressure
- » Pressure switches available on request

The Series MX has been realized to offer a multi-sector solution that guarantees saving in terms of installation time, space and costs. A special configurator, available on Camozzi website at http://catalogue.camozzi.com (sec. Configurators), allows the customer to choose the most suitable solution for his application, selecting single components or by configuring assembled FRLs.

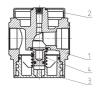
GENERAL DATA	
Construction	modular, compact, poppet-type
Materials	see TABLE OF MATERIALS (pag. 3/1.40.02)
Ports	MX2: G3/8 - G1/2 - G3/4 MX3: G3/4 - G1
Mounting	in-line wall-mounting (by means of clamps)
Operating temperature	-5°C ÷ 50°C up to 16 bar (with the dew point of the fluid lower than 2°C at the min. working temperature) -5°C ÷ 60°C up to 10 bar (with the dew point of the fluid lower than 2°C at the min. working temperature)
Operating pressure	2 ÷ 16 bar
Nominal flow (at 6 bar with ΔP 1 bar)	MX2: 5800 I/min (G1/2, G3/4) MX2: 4500 I/min (G3/8) MX3: 8500 I/min
Fluid	compressed air



For the assembly of a single component with fixing flanges or wall-mounting, see the section "FRL Series MX Assembled" (pag. 3/1.50.01)



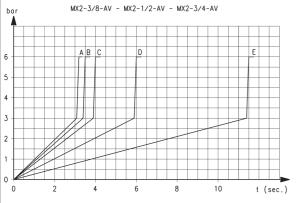
Soft start valves Series MX - materials

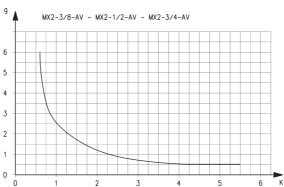


PARTS	MATERIALS
1 = Body	Aluminium
2 = Covering	Polyacetal
3 = Valve holder plug	Polyacetal
4 = Lower spring	Stainless steel
Seals	NBR

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MX2 DIAGRAMS FOR PRESSURISATION TIMES



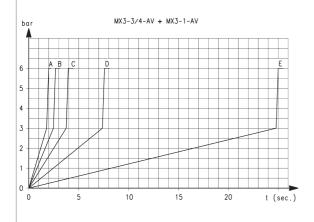


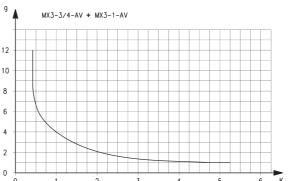
Pressurisation times as to the number of turns of the regulation screw, with downstream volume of 5 litres. A = 5 turns - B = 4 turns - C = 3 turns - D = 2 turns - E = 1 turn. K = number of turns of the regulation screw required to obtain the required pressurisation time with an inlet pressure of 6 bar. Variations of the inlet pressure can cause deviations of the pressure time by $\pm~20\%$. K = t/V where: V = volume of the downstream system in litres; t = desired pressuring time in seconds.

EXAMPLE: V = 5 litres t = 16 seconds K = 16/5 = 3,2

Using in the graph this value K, the number of turns of the regulation screw will be approx. 0,8.

MX3 DIAGRAMS FOR PRESSURISATION TIMES





Pressurisation times as to the number of turns of the regulation screw, with downstream volume of 5 litres. A = 5 turns - B = 4 turns - C = 3 turns - D = 2 turns - E = 1 turn. K = number of turns of the regulation screw required to obtain the required pressurisation time with an inlet pressure of 6 bar. Variations of the inlet pressure can cause deviations of the pressure time by $\pm~20\%$. K = t/V where: V = volume of the downstream system in litres; t = desired pressuring time in seconds.

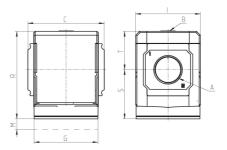
EXAMPLE: V = 5 litres t = 16 seconds K = 16/5 = 3,2

Using in the graph this value K, the number of turns of the regulation screw will be approx. 1,8.



Soft start valves Series MX - dimensions







Mod.	Α	В	С	G	- 1	M	R	S	Т	Weight (Kg)
MX2-3/8-AV	G3/8	G1/8	70	65	68	46,5	88	50,5	37,5	0.4
MX2-1/2-AV	G1/2	G1/8	70	65	68	46,5	88	50,5	37,5	0.4
MX2-3/4-AV	G3/4	G1/8	70	65	68	46,5	88	50,5	37,5	0.4
MX3-3/4-AV	G3/4	G1/8	89,5	75	76	48	102	57,5	44,5	0.7
MX3-1-AV	G1	G1/8	89,5	75	76	48	102	57,5	44,5	0.7

Series MX take-off blocks

MX2 port: G1/2 - MX3 port: G1

Modular

lubricated air.



The Take-off blocks, when equipped with a no return valve, can be used to bleed non

- » Compact design
- » Available with or without VNR (no return valve)
- » Pressure switches available on request

The Series MX has been realized to offer a multi-sector solution that guarantees saving in terms of installation time, space and costs. A special configurator, available on Camozzi website at http://catalogue.camozzi.com (sec. Configurators), allows the customer to choose the most suitable solution for his application, selecting single components or by configuring assembled FRLs.

GENERAL DATA	
Construction	modular, compact, diaphragm-type
Materials	see TABLE OF MATERIALS (pag. 3/1.45.02)
Ports	MX2: G1/2 MX3: G1
Take-off ports	MX2: G1/2 MX3: G1
Mounting	in-line wall-mounting (by means of clamps)
Operating temperature	-5°C ÷ 50°C up to 16 bar (with the dew point of the fluid lower than 2°C at the min. working temperature) -5°C ÷ 60°C up to 10 bar (with the dew point of the fluid lower than 2°C at the min. working temperature)
Operating pressure	0 ÷ 16 bar
Nominal flow at 6 bar with Δp = 1 bar	MX2-1/2-B00 = 6800 NI/min MX2-1/2-B01 = 5700 NI/min MX3-1-B00 = 14500 NI/min MX3-1-B01 = 10500 NI/min
Fluid	compressed air

CODI	NG EXAMPLE
MX	2 - 1/2 - B 00 - LH
MX	SERIES
2	SIZE: 2 = G1/2 3 = G1
1/2	PORT: 2 = G1/2 3 = G1
В	TAKE-OFF BLOCK
00	DESIGN TYPE: 00 = without no return valve (standard) 11 = with no return valve 02 = without no return valve, with double O-ring seat
LH	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" (pag. 3/1.50.01)



Take-off blocks Series MX - materials



PARTS	MATERIALS
1 = Body	Aluminium
2 = Covering	Polyacetal
Seals	NBR

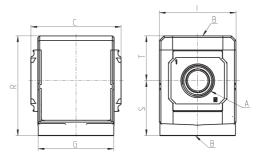
CAMOZZI



Series MX take-off blocks - dimensions

TABLE NOTE:

* to complete the code see the CODING EXAMPLE





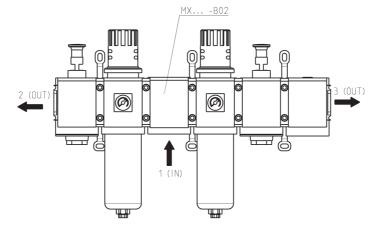
Mod.	Α	В	С	G	- 1	R	S	Т	Weight (Kg)
MX2-1/2-B*	G1/2	G1/2	70	65	68	86	47,5	38,5	0.4
MX3-1-B*	G1	G1	89,5	75	76	99	54,5	44,5	0.6

BL01 = take-off block with VNR

Use of the take-off block MX...- B02

The take-off block with double O-ring seat is particularly suitable when Series MX modules have to be supplied through the same pressure source.

source.
The modules which are connected to the left side are of LH kind.



ACCESSORIES FOR SERIES MX



Rapid clamps



Rapid clamps with brackets



Terminal flanges (IN/OUT)



Fixing brackets for regulators



Block for pressure gauge fixing



Assembly O-ring



Systems of rapid connections designed to make mounting easier.



Rapid clamp kit Mod. MX2-... and MX3...

The kit MX2-X is supplied with: 1 rapid clamp, 1 O-ring OR 3125 *, 2 exagonal nuts M5, 2 screws M5x69.

The kit MX2-Z is supplied with: 1 rapid clamp, 1 O-ring OR 3125 *, 1 exagonal nut M5, 1 screw M5x69, 1 screw M5x85 for wall fixing.

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

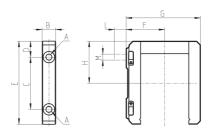
The kit MX3-X is supplied with: 1 rapid clamp, 1 O-ring OR 38X2,8 **, 2 square nuts M6, 2 screws M6x75.

The kit MX3-Z is supplied with: 1 rapid clamp, 1 O-ring OR 38X2,8 **, 1 square nut M6, 1 screw M6x75, 1 screw M6x90 for wall fixing.

** it can be ordered separately (OR 38X2,8 NBR)

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

See positioning scheme on p. 3/1.50.04



DIMENSIONS											
Mod.	Α	В	С	D	E	F	G	Н	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

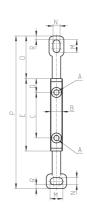


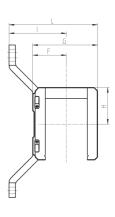
Rapid clamp kit with wall fixing brackets - size 2

The kit MX2-Y is supplied with: 1 wall rapid clamp, 1 O-ring OR 3125 **, 2 exagonal nuts, 2 screws M5x69.

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

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





Mod.	Α	В	С	D	Е	F	G	Н	- 1	L	M	Ν	0	Р	R
MX2-Y	5,2	12	46	14	73,5	32,5	70,5	37	70,5	103	12	6,5	42	152	4

See positioning scheme on p. 3/1.50.04



3

TREATMENT

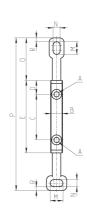


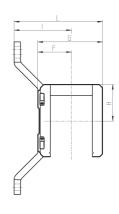
Rapid clamp kit with wall fixing brackets - size 3

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

** it can be also separately ordered (OR 38X2,8 NRR)

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





Mod.	Α	В	С	D	Е	F	G	Н	- 1	L	M	N	0	Р	R
MX3-Y	6,2	14	54	16,5	86	40	77	43,5	68	105	15	8,4	50,5	181	4,5

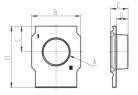
See positioning scheme on p. 3/1.50.04

Terminal flanges (IN/OUT)

The kit is supplied with:

- 1 flange INLET side
- 1 flange OUTLET side

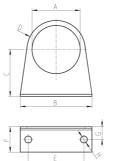
Materials: painted aluminium flanges.



Mod.	Α	В	С	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

Fixing bracket for regulators

The kit is supplied with 1 zinc-plated steel bracket





Mod.	Α	В	С	D	Е	F	G	Н	L	М	N
MX2-S	Ø 47,2	73	60,5	R29,5	54	25	15	Ø 6,2	90	2,5	2,5
MX3-S	Ø 57.2	85	55.5	R34.5	66	30	15	Ø 8.2	90	2.5	2.5













See positioning scheme on page 3/1.50.04



Mod.	The kit is supplied with:
MX2-3/8-HH	1x MX2-3/8-FL + 2x MX2-X
MX2-1/2-HH	1x MX2-1/2-FL + 2x MX2-X
MX2-3/4-HH	1x MX2-3/4-FL + 2x MX2-X
MX2-3/8-JJ	1x MX2-3/8-FL + 2x MX2-Z
MX2-1/2-JJ	1x MX2-1/2-FL + 2x MX2-Z
MX2-3/4-JJ	1x MX2-3/4-FL + 2x MX2-Z
MX3-3/4-HH	1x MX3-3/4-FL + 2x MX3-X
MX3-1-HH	1x MX3-1-FL + 2x MX3-X
MX3-3/4-JJ	1x MX3-3/4-FL + 2x MX3-Z
MX3-1-JJ	1x MX3-1-FL + 2x MX3-Z



See positioning scheme on page 3/1.50.04.



Mod.	The kit is supplied with:	
MX2-3/8-KK	1x MX2-3/8-FL + 2x MX2-Y	
MX2-1/2-KK	1x MX2-1/2-FL + 2x MX2-Y	
MX2-3/4-KK	1x MX2-3/4-FL + 2x MX2-Y	
MX3-3/4-KK	1x MX3-3/4-FL + 2x MX3-Y	
MX3-1-KK	1x MX3-1-FL + 2x MX3-Y	

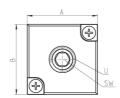


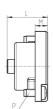
Block for pressure gauge fixing



The kit is supplied with:
1 block
1 grain

- 2 screws
- 1 seal



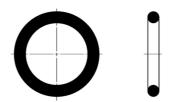


New

DIMENSIONS							
Mod.	Α	В	L	M	Р	U	SW
MX2-R26-P	28	28	16.5	5	M3X7	1/8	5
MX3-R26-P	28	28	16.5	5	M3X7	1/4	6



O-ring for assembling



Mod.	O-ring	For assembly	
160-39-11/19	OR 3125	MX2	
OR 38X2,8 NBR	OR 38X2,8	MX3	