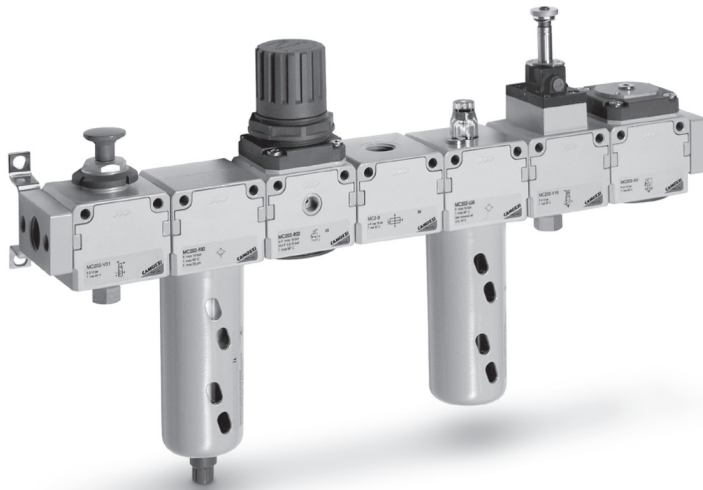


# Assembled FRL Series MC

Ports G1/4, G3/8 and G1/2



- » Clean design
- » Great modularity
- » Easy maintenance

The FRL Series MC in the assembled version can be easily assembled by means of modular tie rods on which it is possible to mount the single elements without any limits in the composition. The FRL groups Series MC are available already mounted (with a single code).

The connections can be made directly on the elements or on the terminal flanges (Kit A) with the advantage that in case of maintenance the group can be extracted without disconnecting the tubing. The version with flanges is supplied without tie-rods.

## GENERAL DATA

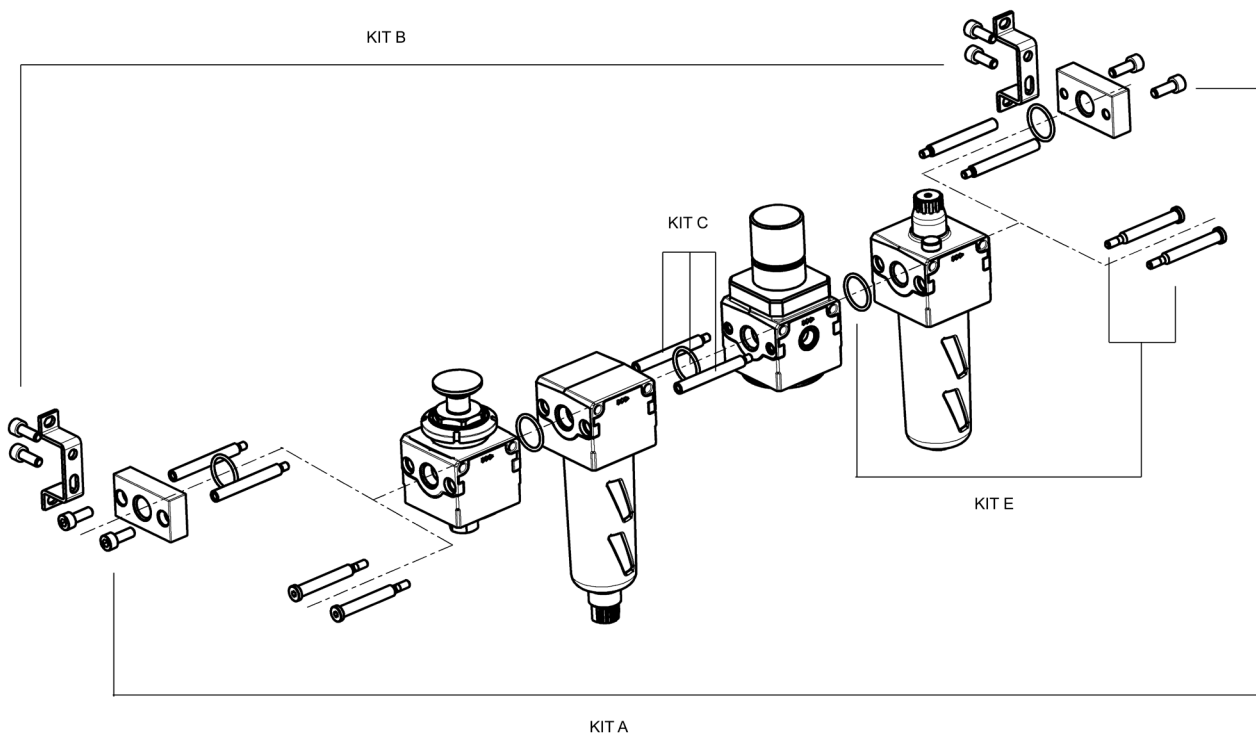
<b>Construction</b>	modular, compact
<b>Materials</b>	zama, NBR, technopolymer
<b>Ports</b>	G1/4 - G3/8 - G1/2
<b>Mounting</b>	vertical, in-line or wall-mounting
<b>Operating temperature</b>	-5°C + 50°C at 10 bar (with the dew point of the fluid lower than 2°C at the min. working temperature)
<b>Finish</b>	enamelled
<b>Flow</b>	determined at 6 bar inlet supply with $\Delta P$ 1 bar ( $\Delta P$ 0,5 only for FRL)

### COMPOSITION OF THE KITS

- EXAMPLE BODY TYPE [ M ] with female no through threads: - regulator - filter-regulator - Manifold regulator group, an assembly of more manifold regulators counts as a body type "M".

- EXAMPLE BODY TYPE [ P ] with through holes:  
 - filter - lubricator - soft start valve - take off block - isolation valve

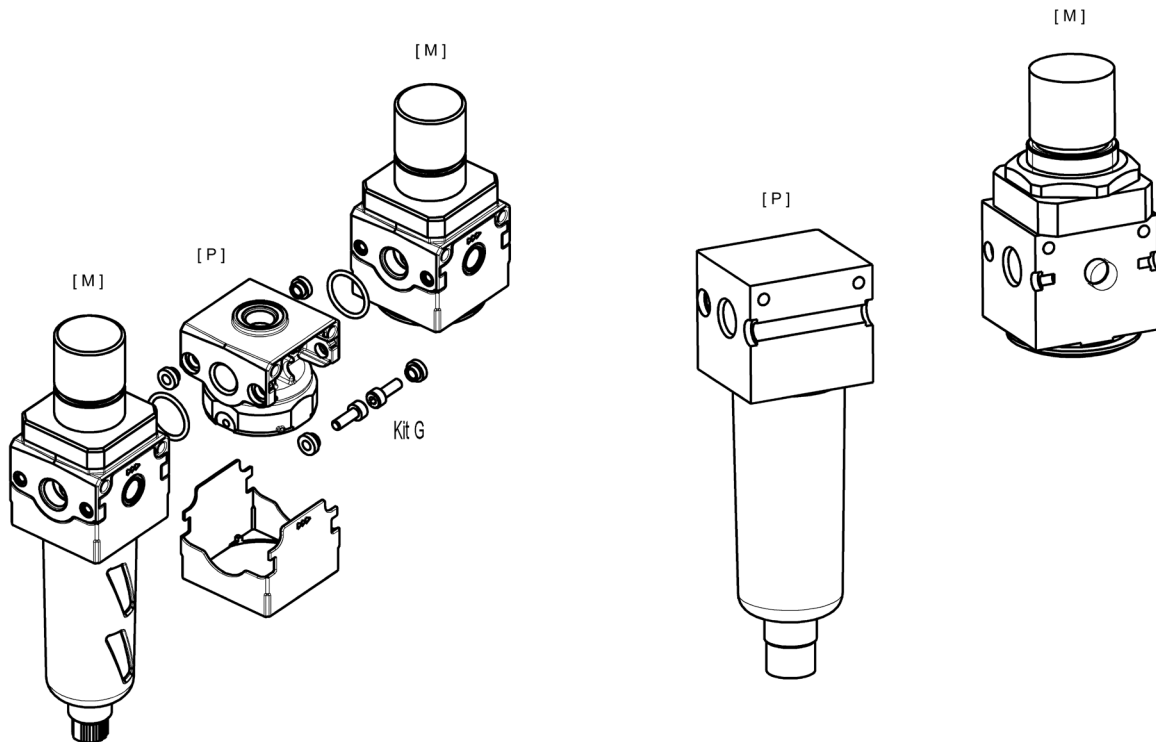
The "x" in the codes in the following table refer to the size, see the section 3/05.07 [ Accessories for FRL ]



Mod.	Description	Supplied with:
MCxxx-FL	Kit A	1 right flange 1 left flange 4 screws - 2 O-ring
MCxxx-ST	Kit B	2 brackets + 4 screws
MCx-TMF	Kit C	2 tie rods male-female 1 O-ring
MCx-TFF	Kit D	2 tie rods female-female
MCx-VM	Kit E	2 male screws 1 O-ring
MCx-VMF	Kit F	2 male screws 2 female screws 1 O-ring
MCx-VMD	Kit G	4 screws 4 spacers + 2 O-ring To be used on a body type "P" positioned in between two body types "M".

**ASSEMBLY EXAMPLE WITH AND WITHOUT TERMINAL FLANGES**

- the body types [M] are with female no through threads
- the body types [P] are with through holes



Assembly between types P and M	KIT for ass. without terminal flanges	KIT for ass. with terminal flanges
<b>P + M</b>	1 kit E	1 Kit A + 1 Kit C
<b>M + P</b>	1 kit E	1 Kit A + 1 Kit C
<b>P + P</b>	1 Kit F	1 Kit A + 1 Kit C + 1 Kit D
<b>P + M + P</b>	2 Kit E	1 Kit A + 2 Kit C
<b>P + P + P</b>	1 Kit F + 1 Kit C	1 Kit A + 2 Kit C + 1 Kit D
<b>M + P + P</b>	1 Kit E + 1 Kit C	1 Kit A + 2 Kit C
<b>M + P + M</b>	1 Kit G	1 Kit A + 1 Kit G
<b>P + M + P + P</b>	2 Kit E + 1 Kit C	1 Kit A + 3 Kit C
<b>P + P + M + P + P</b>	2 Kit E + 2 Kit C	1 Kit A + 4 Kit C

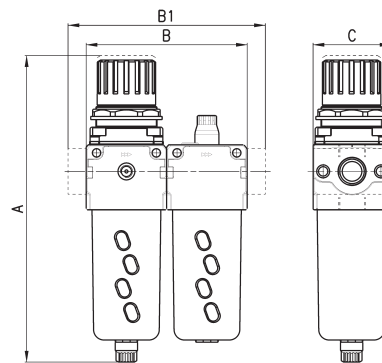
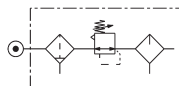
**CODING EXAMPLE**

MC	2	02	-	C	-	5	-	FL
----	---	----	---	---	---	---	---	----

<b>MC</b>	MC = SERIES
<b>2</b>	SIZE 1 = G1/4 2 = G3/8 - G1/2
<b>02</b>	PORT 04 = G1/4 38 = G3/8 02 = G1/2
<b>C</b>	ASSEMBLY GROUP C = D + L E = V01 + D + L FRL = F + R + L GN = D + L + V16 + AV HNA = V01 + D + L + V16 + AV + PRESS NO HNC = V01 + D + L + V16 + AV + PRESS NC N = V01 + D PN = D + V16 + AV QN = V01 + D + V16 + AV TN = V01 + D + L + V16 + AV U = F13 + FB3 (only for 3/8 - 1/2) ZNA = V01 + D + V16 + AV + PRESS NO ZNC = V01 + D + V16 + AV + PRESS NC
<b>5</b>	FILTERING ELEMENT 5 = 5 µm (standard) 25 = 25 µm (upon request)
<b>FL</b>	VERSION FL = with terminal flanges (without brackets)
<p><b>LEGEND:</b>                  D = Filter-regulator 0.5-10 bar, semi-automatic-manual drain with relieving, filtering element 5 µm or 25 µm                  L = Lubricator                  V01 = 3/2-way manually operated valve                  F = Filter 5 µm or 25 µm                  R = Regulator 0.5-10 bar with relieving                  V16 = 3/2-way electropneumatically operated valve                  AV = Soft start valve                  PRESS NO = Pressure switch, Normally Open                  PRESS NC = Pressure switch, Normally Closed                  F13 = Filter 5 µm with automatic drain                  FB3 = Coalescing filter 0.01 µm with automatic drain</p>	

**Assembly group C**

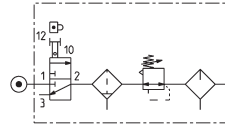
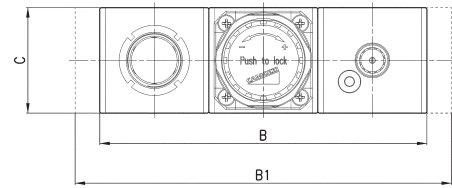
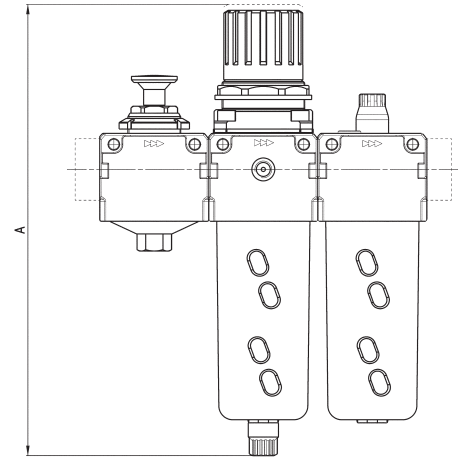
Components:  
Filter-regulator  
Lubricator



DIMENSIONS						
Mod.	A	B	B1	C	Flow rate (NI/min)	
MC104-C-5	193,5	90	-	45	1450	
MC238-C-5	256,5	124	-	60	4800	
MC202-C-5	256,5	124	-	60	4900	
MC104-C-5-FL	193,5	-	114	45	1450	
MC238-C-5-FL	256,5	-	152	60	4800	
MC202-C-5-FL	256,5	-	152	60	4900	

**Assembly group E**

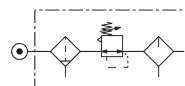
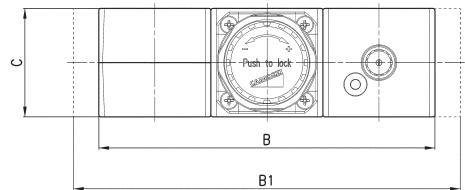
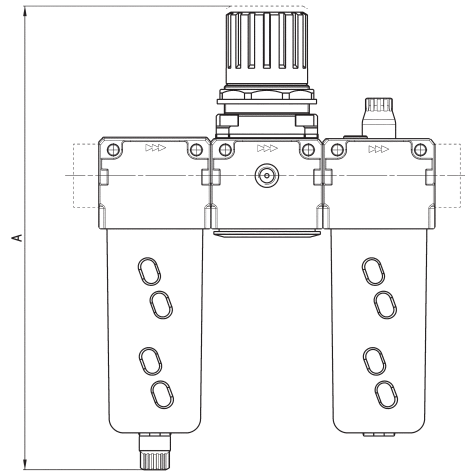

Components:  
 Lockable isolation 3/2-way valve  
 Filter-regulator  
 Lubricator


**DIMENSIONS**

Mod.	A	B	B1	C	Flow rate (NI/min)
<b>MC104-E-5</b>	193,5	135	-	45	1450
<b>MC238-E-5</b>	256,5	186	-	60	4800
<b>MC202-E-5</b>	256,5	186	-	60	4950
<b>MC104-E-5-FL</b>	193,5	-	159	45	1450
<b>MC238-E-5-FL</b>	256,5	-	214	60	4800
<b>MC202-E-5-FL</b>	256,5	-	214	60	4950

**Assembly group FRL**

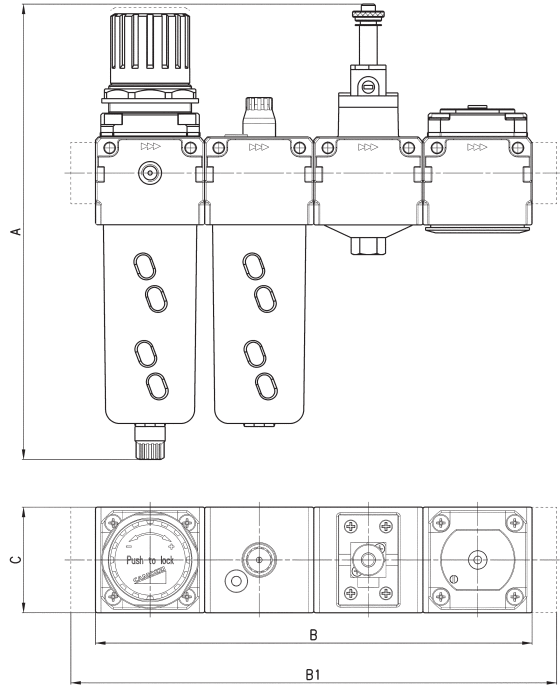

Components:  
 Filter  
 Regulator  
 Lubricator


**DIMENSIONS**

Mod.	A	B	B1	C	Flow rate (NI/min)
<b>MC104-FRL-5</b>	193	135	-	45	1450
<b>MC238-FRL-5</b>	256,5	186	-	60	4800
<b>MC202-FRL-5</b>	256,5	186	-	60	4900
<b>MC104-FRL-5-FL</b>	193,5	-	159	45	1450
<b>MC238-FRL-5-FL</b>	256,5	-	214	60	4800
<b>MC202-FRL-5-FL</b>	256,5	-	214	60	4900

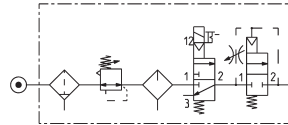
### Assembly group GN

- Components:
- Filter-regulator
- Lubricator
- Lockable isolation 3/2-way valve
- Soft start valve



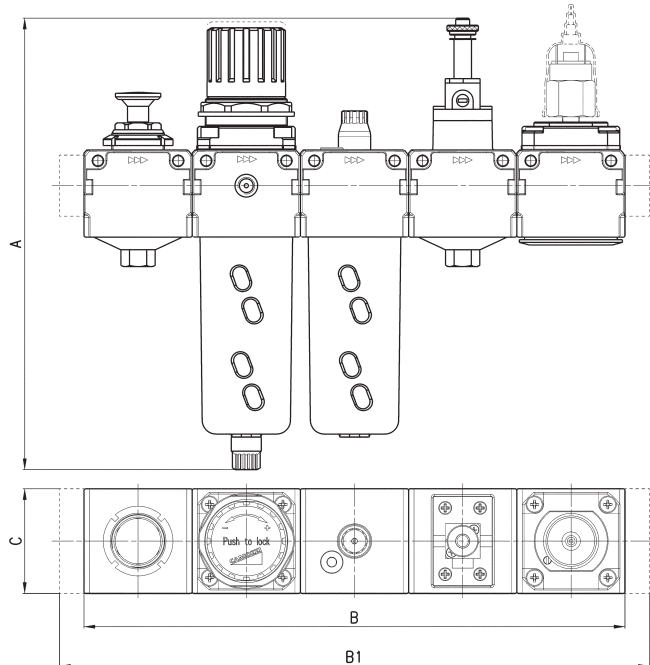
**DIMENSIONS**

Mod.	A	B	B1	C	Flow rate (NI/min)
MC104-GN-5	208	180	-	45	1450
MC238-GN-5	259	248	-	60	4800
MC202-GN-5	259	248	-	60	4900
MC104-GN-5-FL	208	-	204	45	1450
MC238-GN-5-FL	259	-	276	60	4800
MC202-GN-5-FL	259	-	276	60	4950



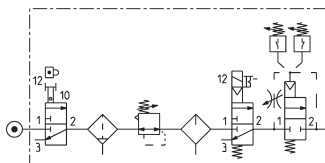
### Assembly group HN...

- Components:
- Lockable isolation 3/2-way valve
- Filter-regulator
- Lubricator
- Lockable isolation 3/2-way valve
- Soft start valve + pressure switch (NC)



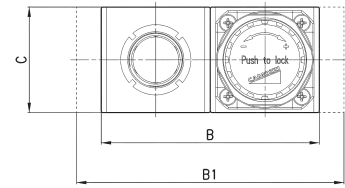
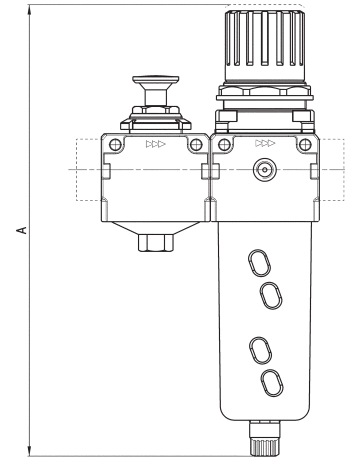
**DIMENSIONS**

Mod.	A	B	B1	C	Flow rate (NI/min)
MC104-HN...-5	208	225	-	45	1450
MC238-HN...-5	259	310	-	60	4800
MC202-HN...-5	259	310	-	60	4950
MC104-HN...-5-FL	208	-	249	45	1450
MC238-HN...-5-FL	259	-	338	60	4800
MC202-HN...-5-FL	259	-	338	60	4950

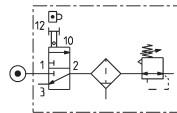



**Assembly group N**

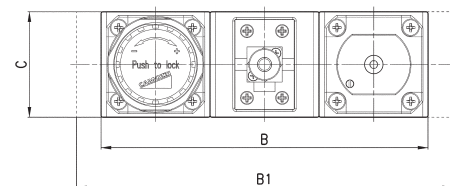
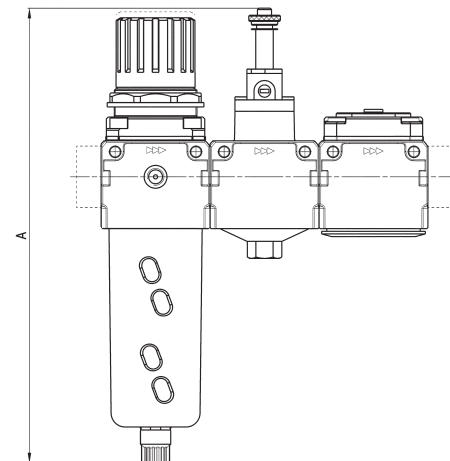
Components:  
 Lockable isolation 3/2-way valve  
 Filter-regulator



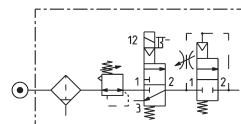
DIMENSIONS					
Mod.	A	B	B1	C	Flow rate (NI/min)
<b>MC104-N-5</b>	193,5	90	-	45	1450
<b>MC238-N-5</b>	256,5	124	-	60	4800
<b>MC202-N-5</b>	256,5	124	-	60	4950
<b>MC104-N-5-FL</b>	193,5	-	114	45	1450
<b>MC238-N-5-FL</b>	256,5	-	152	60	4800
<b>MC202-N-5-FL</b>	256,5	-	152	60	4950


**Assembly group PN**

Components:  
 Filter-regulator  
 Lockable isolation 3/2-way valve  
 Soft start valve

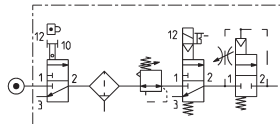
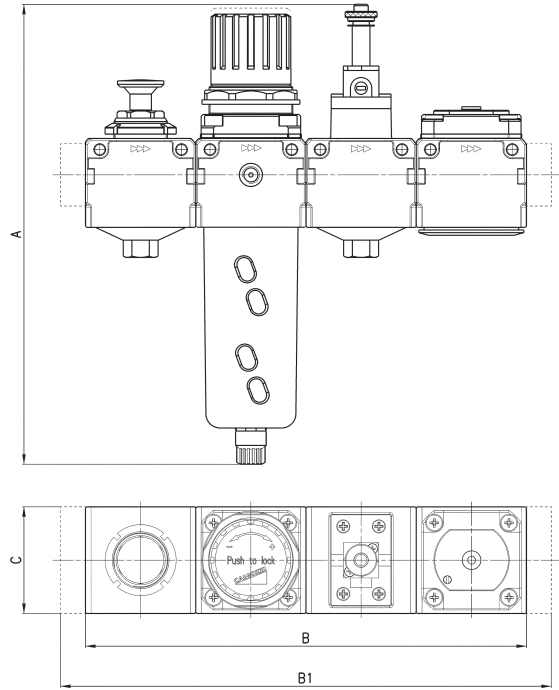


DIMENSIONS					
Mod.	A	B	B1	C	Flow rate (NI/min)
<b>MC104-PN-5</b>	208	135	-	45	1450
<b>MC238-PN-5</b>	259	186	-	60	4800
<b>MC202-PN-5</b>	259	186	-	60	4950
<b>MC104-PN-5-FL</b>	208	-	159	45	1450
<b>MC238-PN-5-FL</b>	259	-	214	60	4800
<b>MC202-PN-5-FL</b>	259	-	214	60	4950



### Assembly group QN

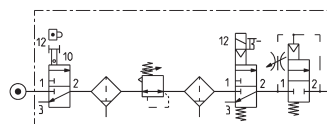
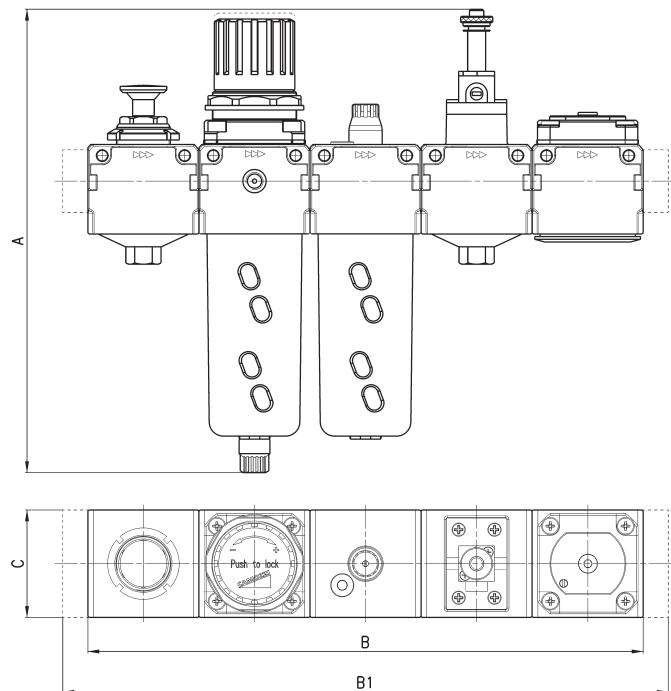
- Components:  
 Lockable isolation 3/2-way valve  
 Filter-regulator  
 Lockable isolation 3/2-way valve  
 Soft start valve



DIMENSIONS					
Mod.	A	B	B1	C	Flow rate (NI/min)
MC104-QN-5	208	180	-	45	1450
MC238-QN-5	259	248	-	60	4800
MC202-QN-5	259	248	-	60	4950
MC104-QN-5-FL	208	-	204	45	1450
MC238-QN-5-FL	259	-	276	60	4800
MC202-QN-5-FL	259	-	276	60	4950

### Assembly group TN

- Components:  
 Lockable isolation 3/2-way valve  
 Filter-regulator  
 Lubricator  
 Lockable isolation 3/2-way valve  
 Soft start valve

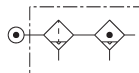
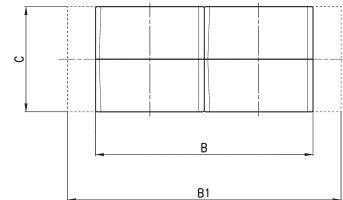
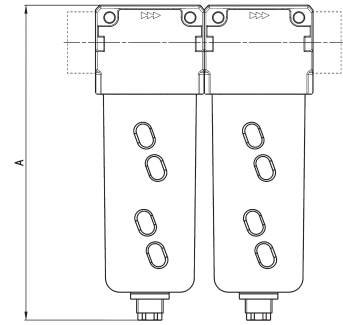


DIMENSIONS					
Mod.	A	B	B1	C	Flow rate (NI/min)
MC104-TN-5	208	225	-	45	1450
MC238-TN-5	259	310	-	60	4800
MC202-TN-5	259	310	-	60	4950
MC104-TN-5-FL	208	-	249	45	1450
MC238-TN-5-FL	259	-	338	60	4800
MC202-TN-5-FL	259	-	338	60	4950




**Assembly group U**

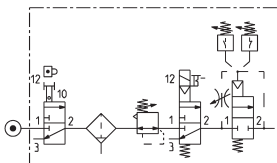
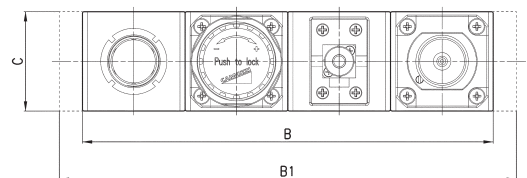
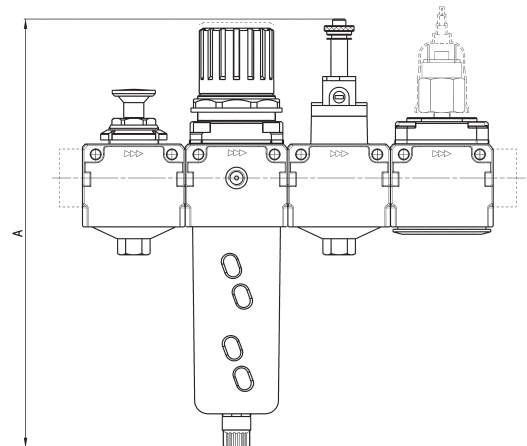
Components:  
Filter  
Coalescing filter


**DIMENSIONS**

Mod.	A	B	B1	C	Flow rate (NI/min)
<b>MC238-U-5</b>	180	124	-	60	2050
<b>MC202-U-5</b>	180	124	-	60	2300
<b>MC238-U-5-FL</b>	180	-	152	60	2050
<b>MC202-U-5-FL</b>	180	-	152	60	2300


**Assembly group ZN...**

Components:  
Lockable isolation 3/2-way valve  
Filter-regulator  
Lockable isolation 3/2-way valve  
Soft start valve + pressure switch  
(NO or NC)


**DIMENSIONS**

Mod.	A	B	B1	C	Flow rate (NI/min)
<b>MC104-ZN...-5</b>	208	180	-	45	1450
<b>MC238-ZN...-5</b>	259	248	-	60	4800
<b>MC202-ZN...-5</b>	259	248	-	60	4950
<b>MC104-ZN...-5-FL</b>	208	-	204	45	1450
<b>MC238-ZN...-5-FL</b>	259	-	276	60	4800
<b>MC202-ZN...-5-FL</b>	259	-	276	60	4950