



NORTH AMERICAN FRL CATALOG &gt; Release 8.2

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# FRL Series MC Assembly Hardware Kits

## LEGEND \*

All Components use an abbreviated Single-Letter code for determining KITS required. (see table below for examples of various assemblies and KITS)

- F** = Filter (MC\*\*\*-F00) - with "pass-through" assembly holes
- R** = Regulator (MC\*\*\*-R00) - with threaded fixed assembly holes
- L** = Lubricator (MC\*\*\*-L00) - with "pass-through" assembly holes
- D** = Filter- Regulator Combo / In-Line Unit (MC\*\*\*-D00) - with threaded fixed assembly holes
- V** = 3/2-way Manual "Lock-Out" Valve, or Solenoid Shut-Off Valve, or Air-Pilot Shut-Off Valve (MC\*\*\*-V01, MC\*\*\*-V16, MC\*\*\*-V36) - with "pass-through" assembly holes
- B** = Additional outlet pressure block, "Take-Off" Block (MC\*-B\*\*) - with "pass-through" assembly holes
- AV** = Slow start valve / Soft-Start valve (MC\*\*\*-AV) - with "pass-through" assembly holes

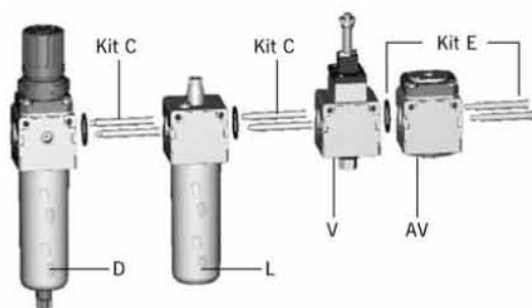


## INSTRUCTIONS

1. In deciding which KITS to use for assembly, you must first decide if End-Plates, (KIT A), are to be used based upon customer preference. This affects the number of Tie-Rod KITS, (KIT C or KIT D) that will be required, as opposed to Cap-Screw KITS, (KIT E or KIT F), when no End-Plates are used in assembly.
2. ONLY Regulators and Filter-Regulators have threads in their bodies, which require Tie-Rod or Cap-Screw KITS to terminate in them. All other components allow the Tie-Rods and Cap-Screws to pass through their bodies. This allows for the most common Tie-Rod set, (KIT C), to be used in all assemblies, and merely change the final terminating/outside Tie-Rods or Cap-Screws based on the use of End-Plates, or not.
3. If no Regulators or Filter-Regulators are used, and all components are a "Pass-Through" type with no threads, then alternate KITS D or F would be used to finish the Tie-Rod or Cap-Screw assembly.

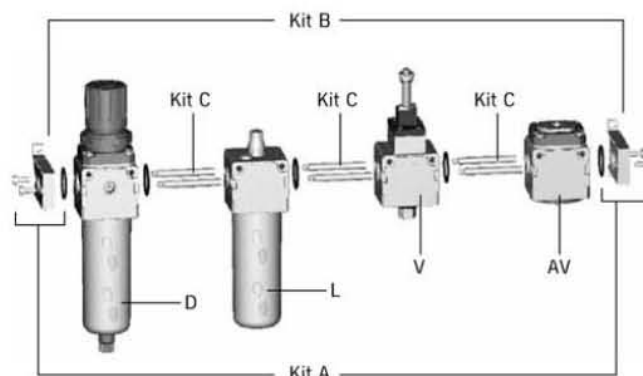
### FRL without End-Plates

1D + 1L + 1V + 1AV + 2 kit C + 1 kit E



### FRL with End-Plates + Wall-Mount Brackets

1D + 1L + 1V + 1AV + 3 kit C + 1 kit A + 1 kit B



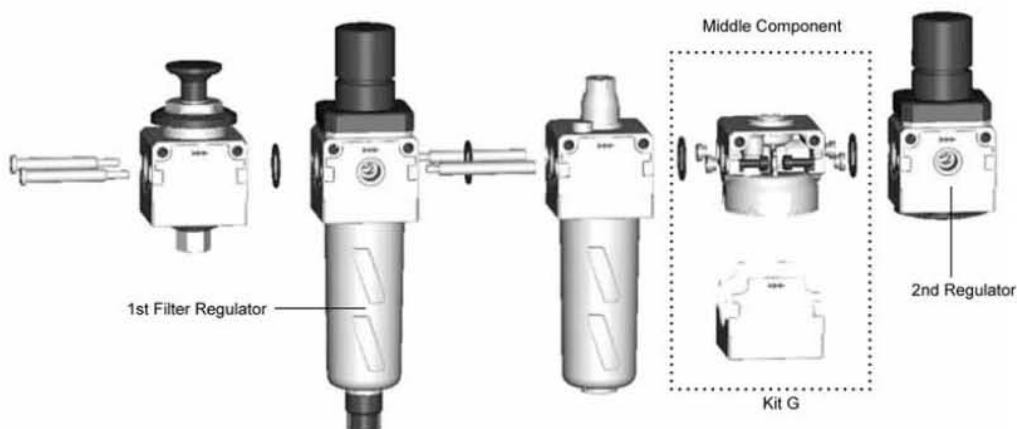
EXAMPLE OF FRL MODULAR ASSEMBLY, Based on Components in assembly using Legend above \*

ASSEMBLY WITHOUT END-PLATES		ASSEMBLY WITH END-PLATES	
Components *	KITS Needed	Components *	KITS Needed
F + R + L	2 kit E	F + R + L	1 kit A + 2 kit C
D + L	1 kit E	D + L	1 kit A + 1 kit C
D + B + L	1 kit E + 1 kit C	D + B + L	1 kit A + 2 kit C
D + B + R + L	2 kit E + 1 kit C	D + B + R + L	1 kit A + 3 kit C
V + F + R + L	2 kit E + 1 kit C	V + F + R + L	1 kit A + 3 kit C
V + F + R + L + V + AV	2 kit E + 3 kit C	V + F + R + L	1 kit A + 5 kit C
F + L	1 kit F	F + L	1 kit A + 1 kit C + 1 Kit D
F + L + V + AV	2 kit C + 1 kit F	F + L + V + AV	1 kit A + 3 kit C + 1 Kit D
V + D + V + AV	2 kit E + 1 kit C	V + D + V + AV	1 kit A + 3 kit C


**KIT COMPOSITION**

Kit A	Left and Right End-plate + 4 cap-screws + 2 O-Rings	Kit D	2 Female-Female tie-rods
Kit B	2 Wall-Mount supports + 4 M5 screws	Kit E	2 male cap-screws + 1 o-ring
Kit C	2 Male-Female tie-rods + 1 O-Ring	Kit F	2 male cap-screws + 2 female cap-screws + 1 o-ring
		Kit G **	4 male cap-screws + 4 washers/bushings + 2 o-rings

\*\* Example of KIT "G" used below. KIT "G" is to be used whenever there is a second regulator or filter-regulator in the same common assembly. KIT "G" allows the component to the left of the second regulator to be assembled onto the second regulator on its right side and also back into the component or tie-rod KIT to its left side. You must remove the outer plastic shell or cover of that middle component in order to assemble the bushings and cap-screws of Kit "G" both to the left and right.



**\*\* NOTE:** See below table for all KIT Part Numbers when ordering, or checking stock and price.

Part Numbers For Kits			
KIT	1/4" Units	3/8" Units	1/2" Units
Kit A	MC104-FL-TF	MC238-FL-TF	MC202-FL-TF
Kit B	MC104-ST	MC104-ST	MC104-ST
Kit C	MC1-TMF	MC2-TMF	MC2-TMF
Kit D	MC1-TFF	MC2-TFF	MC2-TFF
Kit E	MC1-VM	MC2-VM	MC2-VM
Kit F	MC1-VMF	MC2-VMF	MC2-VMF
Kit G	MC1-VMD	MC2-VMD	MC2-VMD

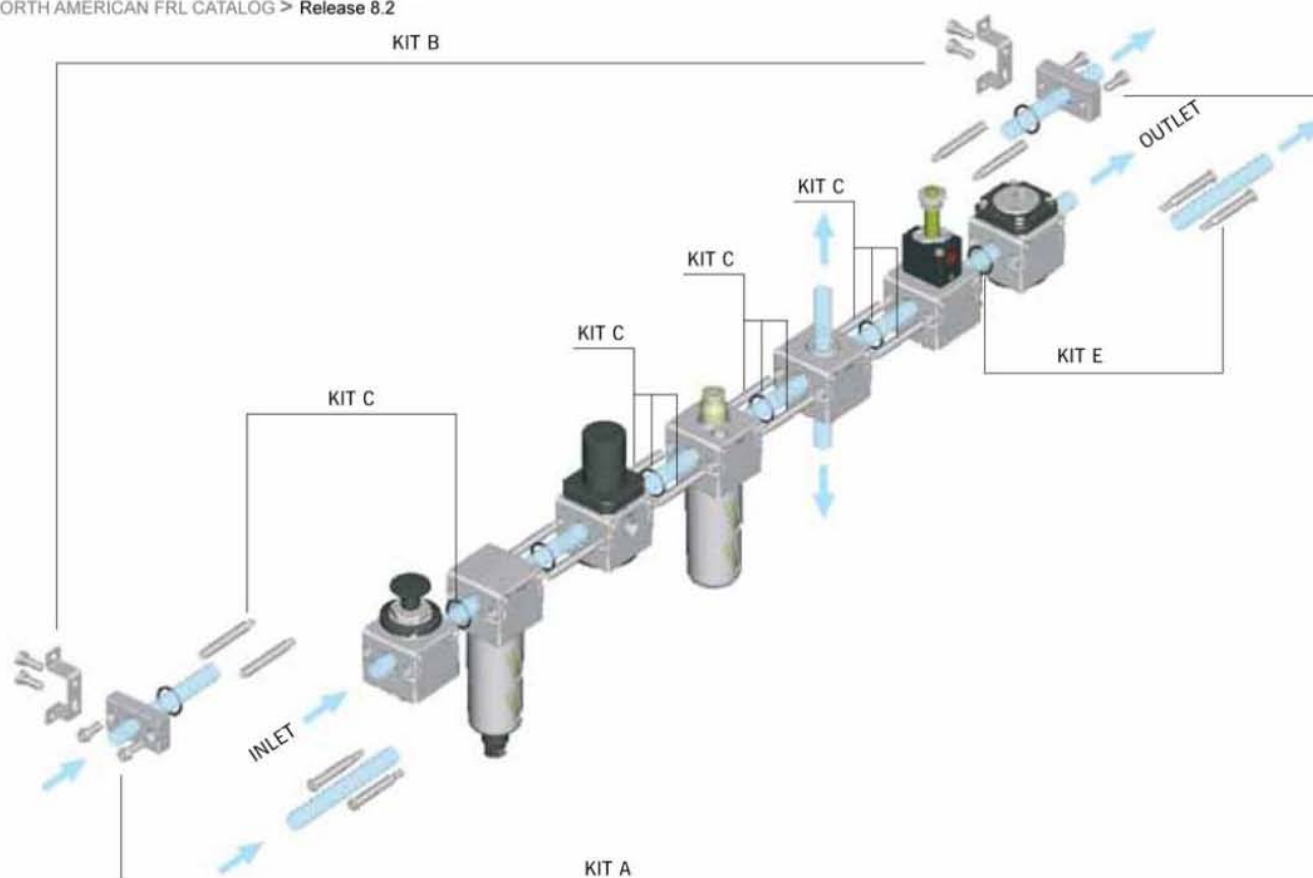
\*\* All kits and accessories located at end of chapter and in Appendix section. Consult for ordering codes and descriptions.



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MODULAR FRL SERIES MC



## Types Kit

### Components

- Kit A: 1 right flanges + 1 left flanges + 4 screws + 2 O-ring
- Kit B: 2 brackets + 4 screws
- Kit C: 2 tie-rods male-female + 1 O-ring
- Kit D: 2 tie rods female-female
- Kit E: 2 male screws + 1 O-ring
- Kit F: 2 male screws + 2 female screws + 1 O-ring
- Kit G: 4 screws + 4 washers + 2 O-ring

N.B. only one "M" can be present within the assembled composition; for assembly configurations which differ from the ones described, you can add only types "P" and for each added element you need a Kit "C".

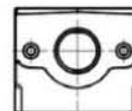
## Assembly Kit Requirements – Guide to Kits with Body types "P" and "M"

Components	Without terminal flanges	With terminal flanges
P + M	1 Kit E	1 Kit A + 1 Kit C
M + P	1 Kit E	1 Kit A + 1 Kit C
P + P	1 Kit F	1 Kit A + 1 Kit C + 1 Kit D
P + M + P	2 Kit E	1 Kit A + 2 Kit C
P + P + P	1 Kit F + 1 Kit C	1 Kit A + 2 Kit C + 1 Kit D
M + P + P	1 Kit E + 1 Kit C	1 Kit A + 2 Kit C
P + M + P + P	2 Kit E + 1 Kit C	1 Kit A + 3 Kit C
P + P + M + P + P	2 Kit E + 2 Kit C	1 Kit A + 4 Kit C

## Examples body type "M"

With female no through threads

- R = Regulator (MC\*\*\*-R00) – with threaded fixed assembly holes
- D = Filter- Regulator Combo / In-Line Unit (MC\*\*\*-D00) – with threaded fixed assembly holes
- H = Manifold Regulator ( MC104-M00TF) , with threaded fixed assembly holes



## Examples body type "P"

With through holes

- F = Filter (MC\*\*\*-F00) - with "pass-through" assembly holes
- L = Lubricator (MC\*\*\*-L00) - with "pass-through" assembly holes
- AV = Slow start valve / Soft-Start valve (MC\*\*\*-AV) - with "pass-through" assembly holes
- V = 3/2-way Manual "Lock-Out" Valve, or Solenoid Shut-Off Valve, or Air-Pilot Shut-Off Valve (MC\*\*\*-V01, MC\*\*\*-V16, MC\*\*\*-V36) - with "passthrough" assembly holes
- B = Additional outlet pressure block, "Take-Off" Block (MC\*-B\*\*\*) - with "pass-through" assembly holes

