

## Mini FRL Series



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**N015 Mini**

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**N020 Mini**

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**N070 Mini**

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**N030 Mini**

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**N040 Mini**

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**N100 Mini**

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**N400 Mini**

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**Accessories**

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## FRL Evo Series



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**Accessories**

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**AIR TREATMENT UNIT**



**FRL Series**



### Mini technical instruction

The FRL components must be assembled in the following order: Filter, Regulator, Lubricator.  
While connecting the components, be sure that the air flows towards the direction of the arrows located on the top of the components



### Assembling and Setting pressure

- 1 To set up each component, follow these steps:
  - Line up the plates up with the bodies.
  - Assemble the parts together, making sure that the o-ring seals are in their proper seats.
  - Tighten the screws on the plates.
- 2 To regulate the pressure, follow these instructions:
  - Turn the knob to the desired pressure.
  - Rotate the knob to increase or decrease the pressure.
  - Press the knob to block into position.

The pressure Gauge has to be assembled manually with the addition of liquid sealant.

The mini quick exhaust regulator allows the circuit downstream to exhaust rapidly when upstream pressure is interrupted.



### Mini technical instruction

- 1 The manual/semiautomatic condensation exhaust is normally in the open position; (i.e. it automatically exhausts the condensation when there is no pressure inside the bowl). Pressing the knob will exhaust the condensation even if there is pressure. Turning the knob counter-clockwise will close off the exhaust.
  - 2 To add oil to the lubricator, unscrew the plug located on the top or disassemble the bowl). Make sure that there is no pressure in the system before adding oil or disassembling the bowl.
  - 3 To remove the bowl, use CH3 caliper face spanners.
- The transparent bowl shows the condensation level in the filter and the oil level in the lubricator.



**N010 MINI**

**FILTER**



**TECHNICAL CHARACTERISTICS**



**Reference standard**

1907/2006  
**REACH** ✓

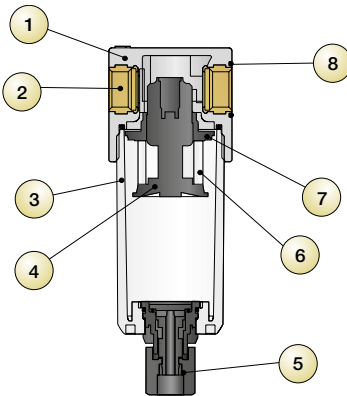
2011/65/CE  
**RoHS** ✓

PED  
2014/68/UE



**Component Parts and Materials**

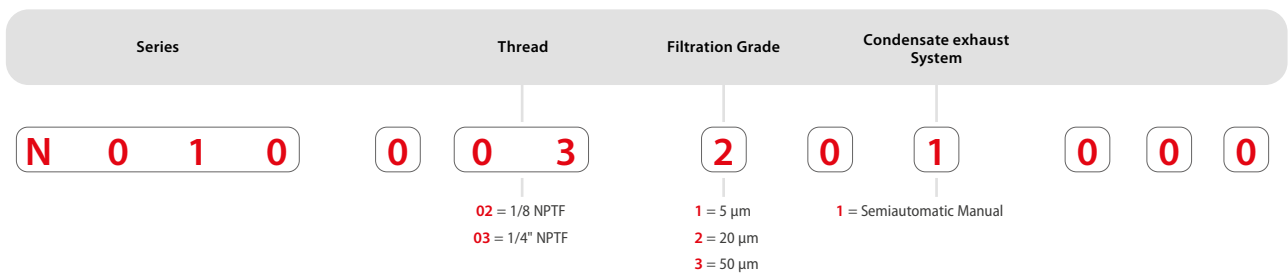
- 1 Technopolymeric Body
- 2 Brass Threaded insert
- 3 Technopolymeric Bowl
- 4 Technopolymeric Filter ring
- 5 Technopolymeric Condensate exhaust
- 6 PE Filtering cartridge
- 7 Technopolymeric Slinger
- 8 NBR O-Ring



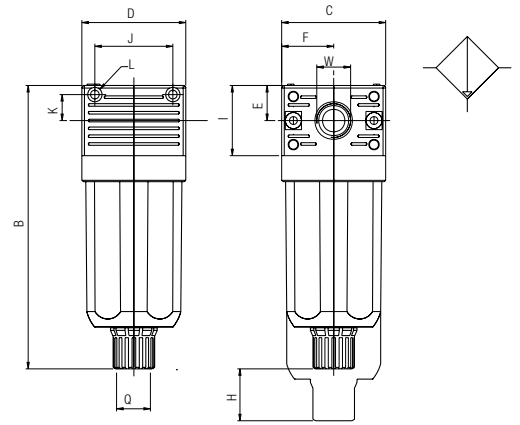
	FLUID	Compressed Air
	THREAD	1/8" NPTF 1/4" NPTF
	FILTRATION GRADE	5 µm 20 µm STANDARD 50 µm
	6 bar FLOW RATE with Δp 1 bar	800 NI/min
	MAX PRESSURE	15 bar (217 psi)
	TEMPERATURE	-10 °C (14 F) + 50 °C (122 F)
	ASSEMBLY POSITION	Vertical
	BOWL CAPACITY	17.5 cm <sup>3</sup>
	CONDENSATION EXHAUST	Manual    Semi Automatic



**Part Numbering System**



**N010**



**Dimensions**

B	C	D	E	F	H	I	J	K	L	W	Q
109	40	40	13.5	20	11	27	30	10	Ø X M3	1/8 - 1/4"	1/8

Part Number	Size	Thread (NPTF)	Filtration	Flow Rate (NPTF)
<b>N010 002 201 000</b>	FIL 0	1/8	20 µm	800 NI/min
<b>N010 003 201 000</b>	FIL 0	1/4"	20 µm	800 NI/min

**N015 MINI**

**COALESCER FILTER**



**TECHNICAL CHARACTERISTICS**



Reference standard

1907/2006  
**REACH** ✓

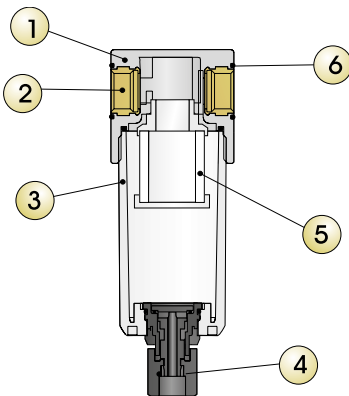
2011/65/CE  
**RoHS** ✓

PED  
2014/68/UE



**Component Parts and Materials**

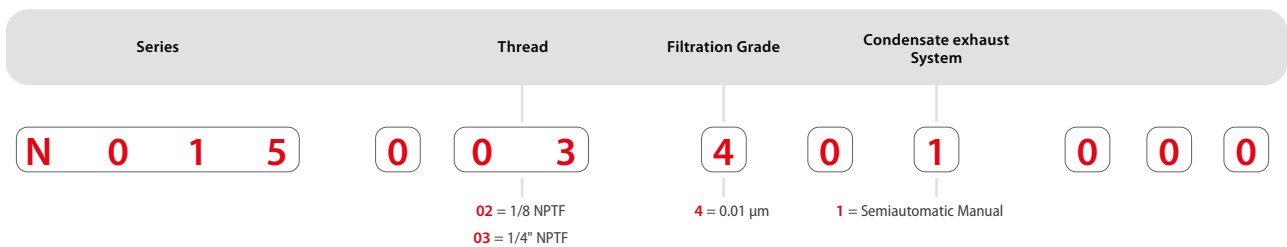
- 1 Technopolymeric Body
- 2 Brass Threaded insert
- 3 Technopolymeric Bowl
- 4 Technopolymeric Condensate exhaust
- 5 Coalescer cartridge
- 6 NBR O-Ring



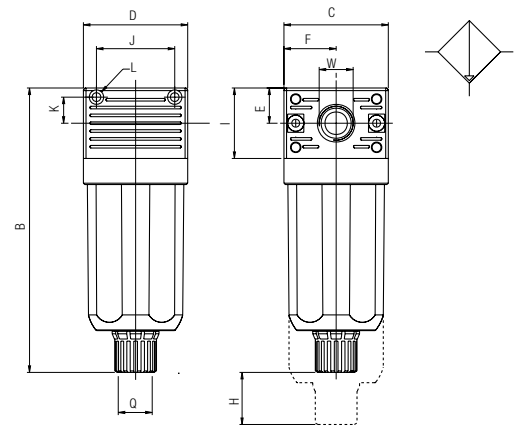
	FLUID	5 µm Filtred Compressed Air
	THREAD	1/8" NPTF 1/4" NPTF
	FILTRATION GRADE	0.01 µm
	6 bar FLOW RATE with Δp 1 bar	450 NI/min
	MAX PRESSURE	15 bar (217 psi)
	TEMPERATURE	-10 °C (14 F) + 50 °C (122 F)
	ASSEMBLY POSITION	Vertical
	BOWL CAPACITY	17.5 cm <sup>3</sup>
	CONDENSATION EXHAUST	Manual    Semi Automatic



**Part Numbering System**



**N015 Mini**



**Dimensions**

B	C	D	E	F	H	I	J	K	L	W	Q
109	40	40	13.5	20	11	27	30	10	Ø X M3	1/8 - 1/4"	1/8

NB: With Coalescer filter T015 we recommend to install a 5 µm Filter upstream..

Part Number	Size	Thread (NPTF)	Filtration	Flow Rate (NPTF)
<b>N015 002 401 000</b>	FC 0	1/8	0.01 µm	450 NI/min
<b>N015 003 401 000</b>	FC 0	1/4"	0.01 µm	450 NI/min

**N020 MINI**

**REGULATOR**



**TECHNICAL CHARACTERISTICS**



Reference standard

1907/2006  
REACH ✓

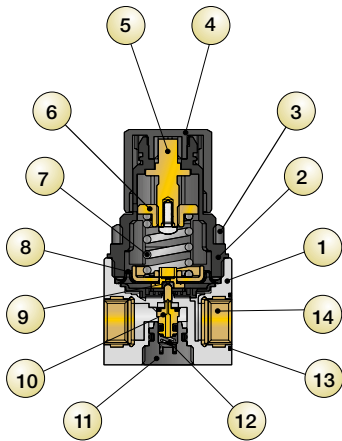
2011/65/CE  
RoHS ✓

PED  
2014/68/UE



**Component Parts and Materials**

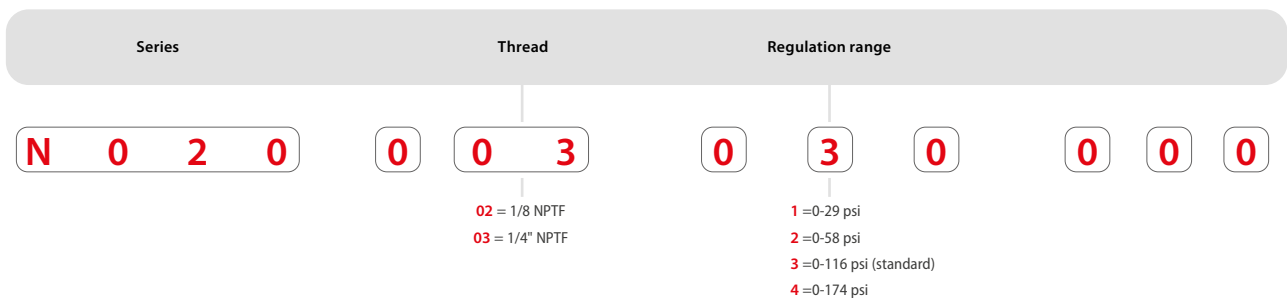
- 1 Technopolymeric Body
- 2 Technopolymeric Bell
- 3 Technopolymeric Fixing nut
- 4 Technopolymeric Knob
- 5 Brass Register screw
- 6 Brass Female screw
- 7 Steel Register spring
- 8 Membrane Rolling
- 9 NBR Relieving diaphragm
- 10 Shutter with NBR vulcanized seal
- 11 Technopolymeric Plug
- 12 Stainless steel Push-shutter spring
- 13 NBR O-Ring
- 14 Brass Threaded insert



	FLUID	Compressed Air
	THREAD	1/8" NPTF 1/4" NPTF
	FILTRATION GRADE	0-29 psi 0-58 psi 0-116 psi (standard) 0-174 psi
	6 bar FLOW RATE with Δp 1 bar	600 NI/min
	MAX PRESSURE	15 bar (217 psi)
	TEMPERATURE	-10 °C (14 F) + 50 °C (122 F)
	ASSEMBLY POSITION	Vertical
	Gauge THREAD	G 1/8

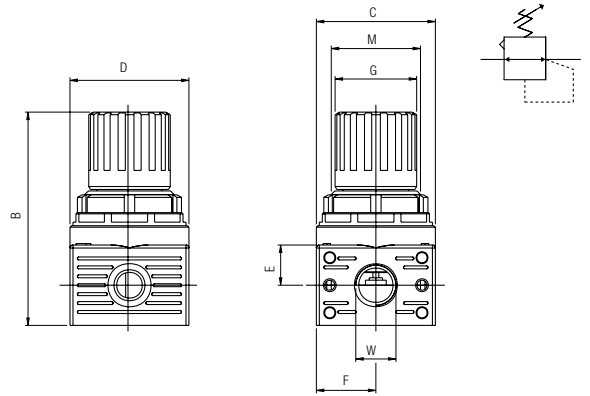


**Part Numbering System**





**N020 Mini**



**Dimensions**

B	C	D	E	F	G	I	M	W
74	40	40	13.5	20	27.5	27	M30X1.5	1/8 - 1/4"

Part Number	Size	Thread (NPTF)	Regulation	Flow Rate (NPTF)
<b>N020 002 030 000</b>	REG 0	1/8	0-116 psi	600 NI/min
<b>N020 003 030 000</b>	REG 0	1/4"	0-116 psi	600 NI/min

**N070 MINI**

**QUICK EXHAUST REGULATOR**



**TECHNICAL CHARACTERISTICS**



Reference standard

1907/2006  
**REACH** ✓

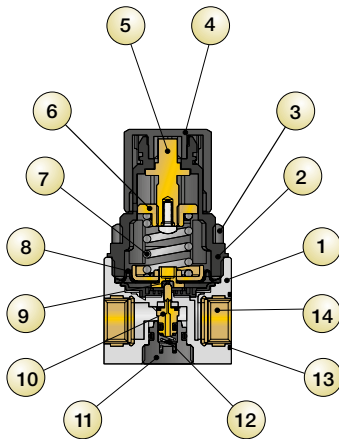
2011/65/CE  
**RoHS** ✓

PED  
2014/68/UE



**Component Parts and Materials**

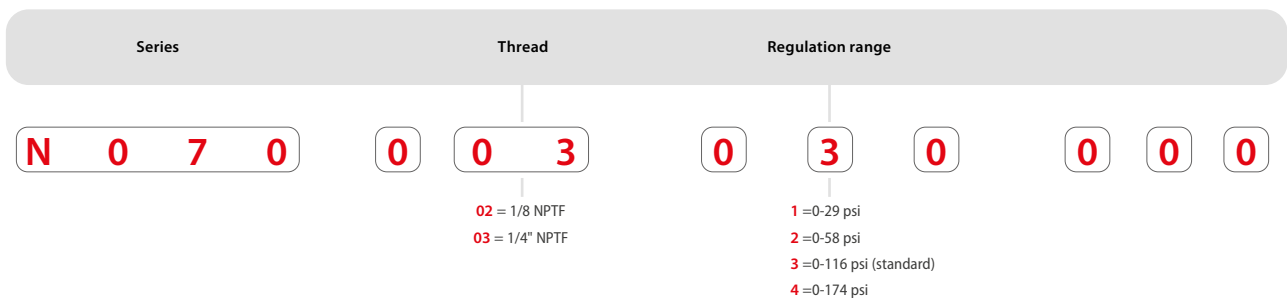
- 1 Technopolymeric Body
- 2 Technopolymeric Bell
- 3 Technopolymeric Fixing nut
- 4 Technopolymeric Knob
- 5 Brass Register screw
- 6 Brass Female screw
- 7 Steel Register spring
- 8 Membrane Rolling
- 9 NBR Relieving diaphragm
- 10 Shutter with NBR vulcanized seal
- 11 Technopolymeric Plug
- 12 Stainless steel Push-shutter spring
- 13 NBR O-Ring
- 14 Brass Threaded insert



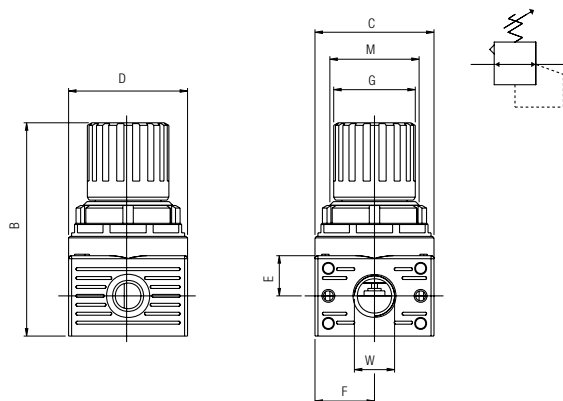
	FLUID	Compressed Air
	THREAD	1/8" NPTF 1/4" NPTF
	FILTRATION GRADE	0-29 psi 0-58 psi 0-116 psi (standard) 0-174 psi
	6 bar FLOW RATE with Δp 1 bar	600 NI/min
	MAX PRESSURE	15 bar (217 psi)
	TEMPERATURE	-10 °C (14 F) + 50 °C (122 F)
	ASSEMBLY POSITION	Vertical
	Gauge THREAD	G 1/8



**Part Numbering System**



**N070 Mini**



**Dimensions**

B	C	D	E	F	G	I	M	W
74	40	40	13.5	20	27.5	27	M30X1.5	1/8 - 1/4"

Part Number	Size	Thread (NPTF)	Regulation	Flow Rate (NPTF)
<b>N070 002 030 000</b>	REG. 0	1/8	0-116 psi	600 NI/min
<b>N070 003 030 000</b>	REG. 0	1/4"	0-116 psi	600 NI/min

**N080 MINI**

**WATER REGULATOR**



**TECHNICAL CHARACTERISTICS**



Reference standard

1907/2006  
REACH ✓

2011/65/CE  
RoHS ✓

PED  
2014/68/UE

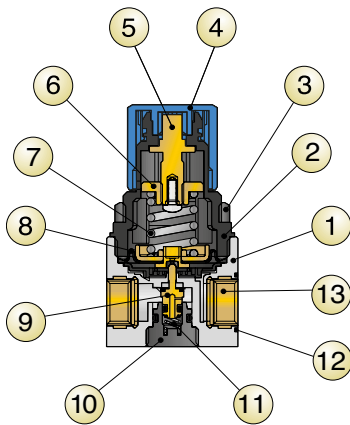


Food grade approved version also available.



**Component Parts and Materials**

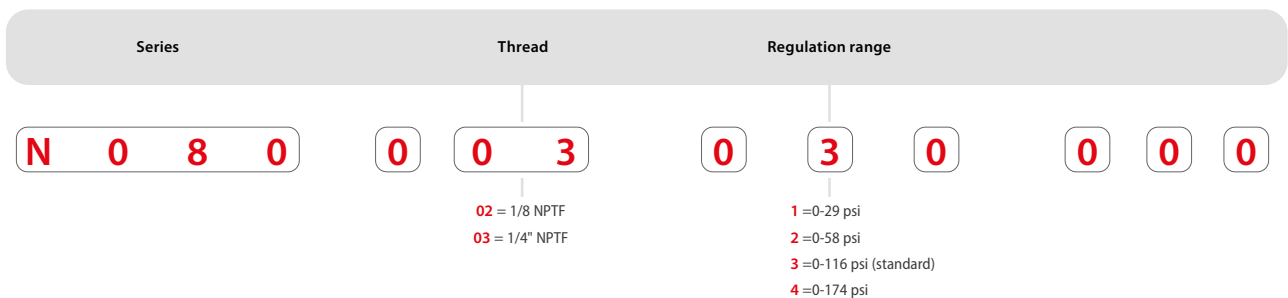
- 1 Technopolymeric Body
- 2 Technopolymeric Bell
- 3 Technopolymeric Fixing nut
- 4 Technopolymeric Knob
- 5 Brass Register screw
- 6 Brass Female screw
- 7 Steel Register spring
- 8 Membrane Rolling
- 9 Shutter with vulcanized NBR seal
- 10 Technopolymeric Plug
- 11 Stainless steel Push-shutter spring
- 12 NBR O-Ring
- 13 Brass Threaded insert



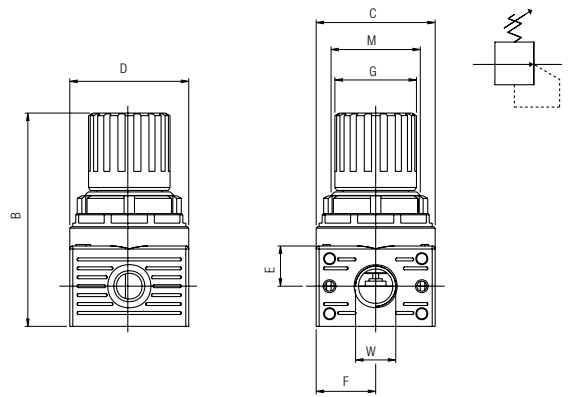
	FLUID	Water
	THREAD	1/8" NPTF 1/4" NPTF
	FILTRATION GRADE	0-29 psi 0-58 psi 0-116 psi (standard) 0-174 psi
	MAX PRESSURE	15 bar (217 psi)
	TEMPERATURE	+ 5 °C (41 F) + 50 °C (122 F)
	ASSEMBLY POSITION	Vertical
	Gauge THREAD	G 1/8



**Part Numbering System**



**N080 Mini**



**Dimensions**

B	C	D	E	F	G	I	M	W
74	40	40	13.5	20	27.5	27	M30X1.5	1/8 - 1/4"

Part Number	Size	Thread (NPTF)	Regulation
<b>N080 002 030 000</b>	WATER REG. 0	1/8	0-116 psi
<b>N080 003 030 000</b>	WATER REG. 0	1/4"	0-116 psi

**N030 MINI**

**FILTER REGULATOR**



**TECHNICAL CHARACTERISTICS**



**Reference standard**

1907/2006  
**REACH** ✓

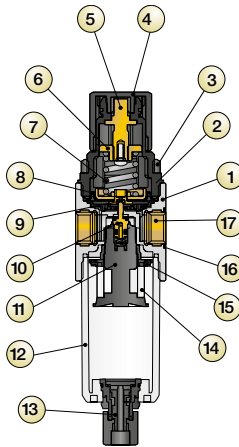
2011/65/CE  
**RoHS** ✓

PED  
2014/68/UE



**Component Parts and Materials**

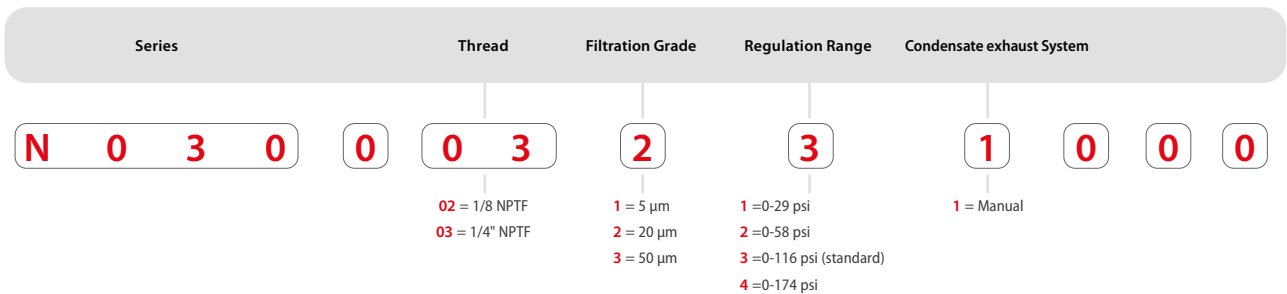
- 1 Technopolymeric Body
- 2 Technopolymeric Bell
- 3 Technopolymeric Fixing nut
- 4 Technopolymeric Knob
- 5 Brass Register screw
- 6 Brass Female screw
- 7 Register spring made in steel
- 8 Rolling membrane
- 9 NBR Relieving diaphragm
- 10 Shutter with vulcanized NBR seal
- 11 Technopolymeric Filter ring
- 12 Technopolymeric Bowl
- 13 Technopolymeric Condensate exhaust
- 14 PE Filtering cartridge
- 15 Technopolymeric Slinger
- 16 NBR O-Ring
- 17 Brass Threaded insert



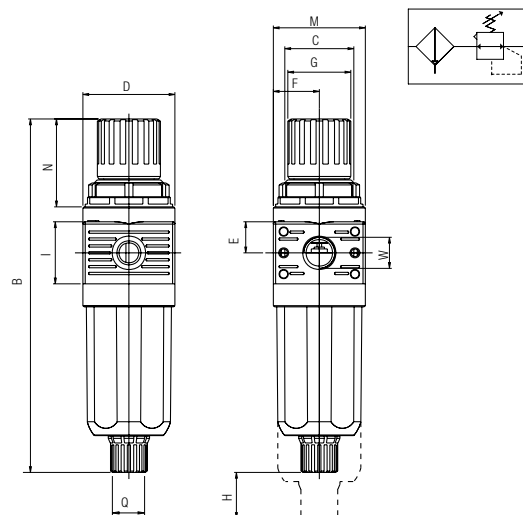
	FLUID	Compressed Air
	THREAD	1/8" NPTF 1/4" NPTF
	REGULATION RANGE	0-29 psi 0-58 psi 0-116 psi (standard) 0-174 psi
	FILTRATION GRADE	5 µm 20 µm STANDARD 50 µm
	6 bar FLOW RATE with Δp 1 bar	600 NI/min
	MAX PRESSURE	15 bar (217 psi)
	TEMPERATURE	+ 5 °C (41 F) + 50 °C (122 F)
	ASSEMBLY POSITION	Vertical
	BOWL CAPACITY	17.5 cm <sup>3</sup>
	CONDENSATE EXHAUST	Manual      Semi Automatic
	Gauge THREAD	G 1/8



**Part Numbering System**



**N030 Mini**



**Dimensions**

B	C	D	E	F	G	H	I	M	N	W
156	M30X1.5	40	13.5	20	27.5	11	27	40	40	1/8 - 1/4"

Part Number	Size	Thread (NPTF)	Filtration	Regulation	Flow Rate (NPTF)
<b>N030 002 231 000</b>	FR 0	1/8	20µm	0-116 psi	600 NI/min
<b>N030 003 231 000</b>	FR 0	1/4"	20µm	0-116 psi	600 NI/min

**N040 MINI**

**LUBRICATOR**



**TECHNICAL CHARACTERISTICS**



Reference standard

1907/2006  
REACH ✓

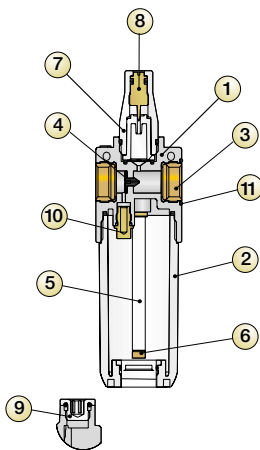
2011/65/CE  
RoHS ✓

PED  
2014/68/UE



**Component Parts and Materials**

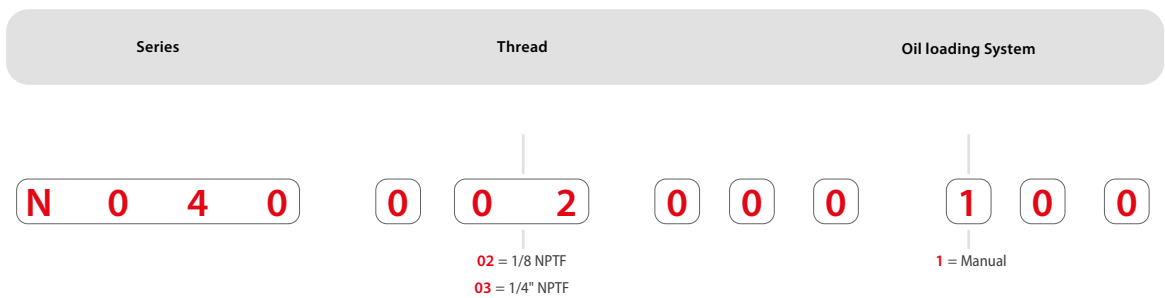
- 1 Technopolymeric Body
- 2 Technopolymeric Bowl
- 3 Brass Threaded insert
- 4 Venturi Membrane device
- 5 Oil aspiration tube made in PA11
- 6 Small filter
- 7 Trasparent technopolymeric Visual dome
- 8 Brass Oil regulating capacity pin
- 9 Brass Oil loading plug
- 10 Brass Air diffuser
- 11 NBR O-Ring



	FLUID	Compressed Air
	THREAD	1/8" NPTF 1/4" NPTF
	6 bar FLOW RATE with $\Delta p$ 1 bar	700 NI/min
	MAX PRESSURE	15 bar (217 psi)
	TEMPERATURE	-10 °C (14 F) + 50 °C (122 F)
	WALL CLAMPING SCREWS	M3
	ASSEMBLY POSITION	Vertical
	BOWL CAPACITY	28 cm <sup>3</sup>
	RECOMMENDED OILS	ISO VG 22A CLASS ISO 3448 NORMA

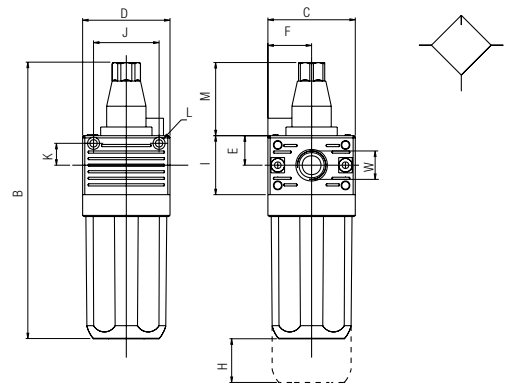


**Part Numbering System**





**N040 Mini**



**Dimensions**

B	C	D	E	F	H	I	J	K	L	M	W
130	40	40	13.5	20	11	27	30	10	Ø X M3	33.5	1/8 - 1/4"

Part Number	Size	Thread (NPTF)	Flow Rate (NPTF)
<b>N040 002 000 100</b>	LUB 0	1/8	700 NI/min
<b>N040 003 000 100</b>	LUB 0	1/4"	700 NI/min

**N100 MINI**

**FILTER REGULATOR + LUBRICATOR**



**TECHNICAL CHARACTERISTICS**



**Reference standard**

1907/2006  
**REACH** ✓

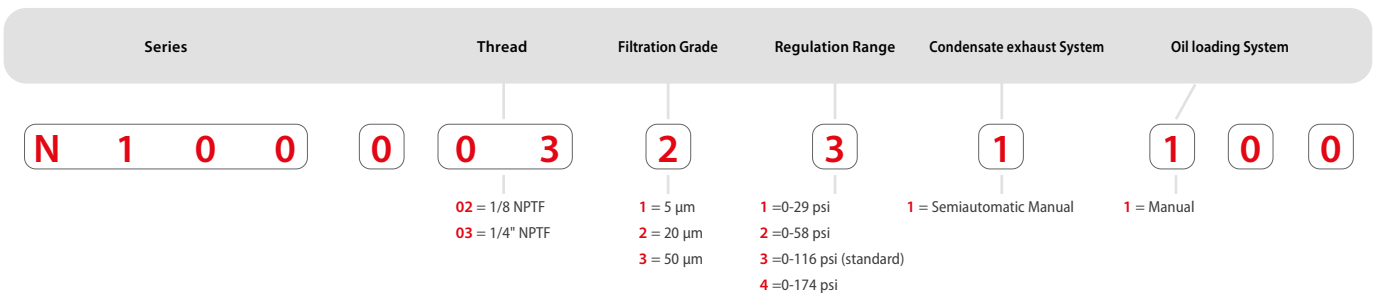
2011/65/CE  
**RoHS** ✓

PED  
2014/68/UE

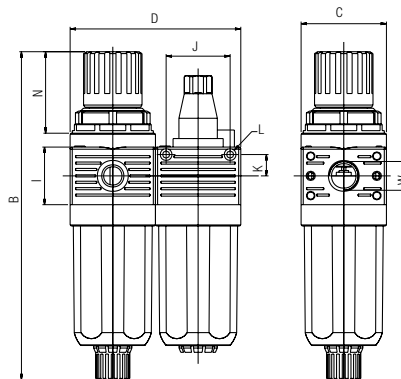
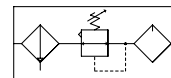
	FLUID	Compressed Air
	THREAD	1/8" NPTF 1/4" NPTF
	FILTRATION GRADE	5 µm 20 µm STANDARD 50 µm
	REGULATION RANGE	0-29 psi 0-58 psi 0-116 psi (standard) 0-174 psi
	6 bar FLOW RATE with Δp 1 bar	260 NI/min
	MAX PRESSURE	15 bar (217 psi)
	TEMPERATURE	-10 °C (14 F) + 50 °C (122 F)
	WALL CLAMPING SCREWS	M3
	ASSEMBLY POSITION	Vertical
	BOWL CAPACITY	28 cm <sup>3</sup>
	RECOMMENDED OILS	ISO VG 22A CLASS ISO 3448 NORMA



**Part Numbering System**



**N100 Mini**



**Dimensions**

B	C	D	I	J	K	L	N	W
156	40	80	27	30	10	Ø X M3	40	1/8 - 1/4"

Part Number	Size	Thread (NPTF)	Filtration	Regulation	Flow Rate (NPTF)
<b>N100 002 231 100</b>	FR+L 0	1/8	20µm	0-116 psi	260 NI/min
<b>N100 003 231 100</b>	FR+L 0	1/4"	20µm	0-116 psi	260 NI/min

**N400 MINI**

**FILTER + FILTER COALESSER**



**TECHNICAL CHARACTERISTICS**



Reference standard

1907/2006  
**REACH** ✓

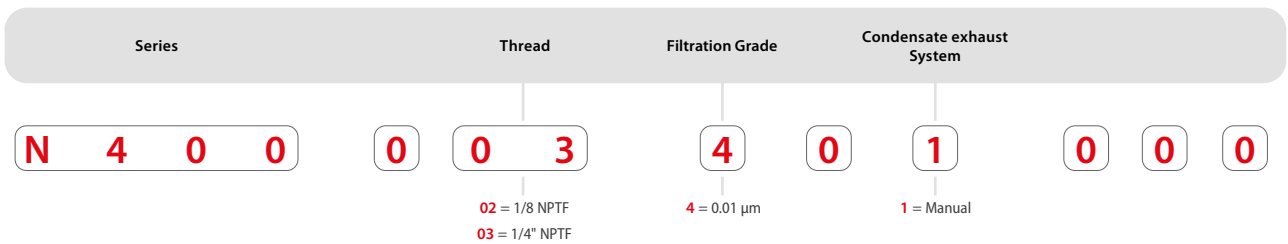
2011/65/CE  
**RoHS** ✓

PED  
2014/68/UE

	FLUID	Compressed Air
	THREAD	1/8" NPTF 1/4" NPTF
	FILTRATION GRADE	5 µm + 0.01 µm
	6 bar FLOW RATE with Δp 1 bar	370 NI/min
	MAX PRESSURE	15 bar (217 psi)
	TEMPERATURE	-10 °C (14 F) + 50 °C (122 F)
	WALL CLAMPING SCREWS	M3
	ASSEMBLY POSITION	Vertical



**Part Numbering System**





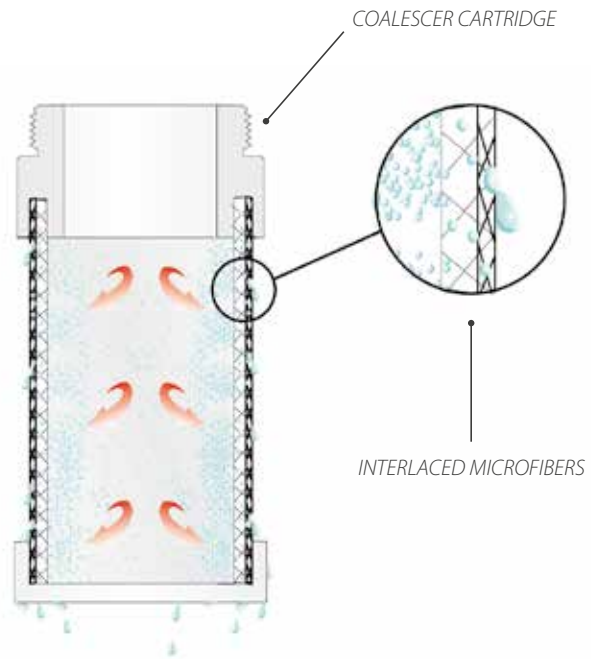
**Information**

The coalescer cartridge is made of a microfiber inner layer with an external stainless steel structure.

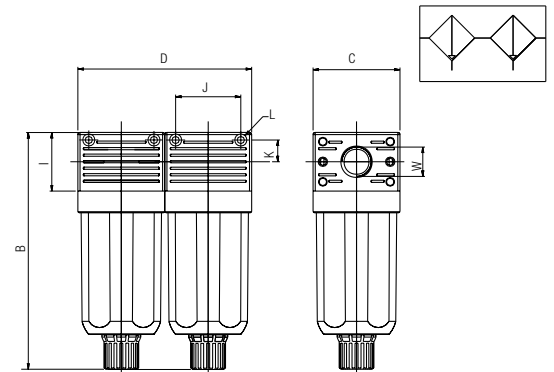
The coalescing cartridge uses inertial impact, interception and coalescence to collect excess liquid. This liquid will then drain into the bottom of the bowl.

The coalescing filter is used as oil separator which removes oil-vapours from the air output.

We recommend installing a 5 µm filter upstream to protect the coalescing filter from choking the cartridge.



**N400 Mini**



**Dimensions**

B	C	D	I	J	K	L	W
109	40	80	27	30	10	Ø X M3	1/8 - 1/4"

Part Number	Size	Thread (NPTF)	Filtration	Flow Rate (NPTF)
<b>N400 002 401 000</b>	FIL+FC 0	1/8	5µm + 0.01µm	370 NI/min
<b>N400 003 401 000</b>	FIL+FC 0	1/4"	5µm + 0.01µm	370 NI/min

**FRL ACCESSORIES**

**T500**

CONNECTION PLATE



Part Number

**T500 000 000 000**

FRL 0

**T520**

BOWL FOR FILTER UNIT



Part Number

**T520 000 001 000**

FRL 0

**T530**

BOWL FOR LUBRICATOR UNIT



Part Number

**T530 000 000 100**

FRL 0

**T545**

COALESCER FILTER



Part Number

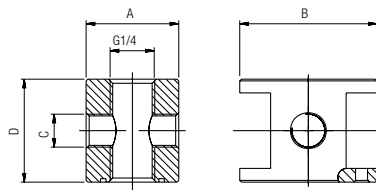
**T545 000 000 000**

FRL 0

**DIS00**

AIR DISTRIBUTOR

Part Number		A	B	C	D
<b>DIS00 001 100 NE</b>	FRL 0	27	40	1/8	30



**FIL04**

SINTERED FILTER

Part Number		
<b>FIL04 003 805 SC</b>	FRL 0	5 µm
<b>FIL04 003 820 SC</b>	FRL 0	20 µm
<b>FIL04 003 850 SC</b>	FRL 0	50 µm



**REG06**

REGISTER SPRING

Part Number		
<b>REG06 005 401 SC</b>	FRL 0	0-29 psi
<b>REG06 005 402 SC</b>	FRL 0	0-58 psi
<b>REG06 005 403 SC</b>	FRL 0	0-116 psi (standard)
<b>REG06 005 404 SC</b>	FRL 0	0-174 psi



**REG09**

MEMBRANE

Part Number	
<b>REG09 001 700 SC</b>	FRL 0



**REG16**

CLAMP BRACKET

Part Number	A	B	C	D	F
<b>REG16 005 000 NE</b> FRL 0	21.5	5.5	12	15	31

