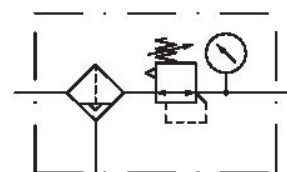


# Filter pressure regulator, Series NL2-FRE

0821300333

General series information  
AVENTICS Series NL2 Air Preparation Units

- The AVENTICS Series NL maintenance units are suitable for all areas: as individual components or as assembled maintenance units, for centralized or decentralized compressed air preparation, in compact or powerful versions, for use in high or low temperatures. This line offers a complete, customizable compressed air preparation technology. It includes an option to combine every component in the Series to achieve the desired function, making it possible to adjust the components precisely to the application requirements.



## Technical data

|                          |                                                    |
|--------------------------|----------------------------------------------------|
| Industry                 | Industrial                                         |
| Parts                    | Filter pressure regulator                          |
| Reservoir                | reservoir, polycarbonate, without protective guard |
| Port                     | G 3/8                                              |
| Nominal flow Qn          | 1650 l/min                                         |
| Filter porosity          | 5 µm                                               |
| Condensate drain         | fully automatic, open without pressure             |
| Pressure gauge           | with pressure gauge                                |
| Working pressure min.    | 2 bar                                              |
| Working pressure max     | 16 bar                                             |
| Min. ambient temperature | -10 °C                                             |
| Max. ambient temperature | 60 °C                                              |
| Regulation range min.    | 0.5 bar                                            |
| Regulation range max.    | 10 bar                                             |
| Type                     | 1-part                                             |

|                                                              |                                   |
|--------------------------------------------------------------|-----------------------------------|
| Type                                                         | Can be assembled into blocks      |
| Pressure supply                                              | single                            |
| Mounting orientation                                         | vertical                          |
| Regulator type                                               | Diaphragm-type pressure regulator |
| Regulator function                                           | with relieving air exhaust        |
| Filter element                                               | exchangeable                      |
| Filter reservoir volume                                      | 25 cm <sup>3</sup>                |
| Max. achievable compressed air class acc. to ISO 8573-1:2010 | 6 : 7 : -                         |
| Medium                                                       | Compressed air<br>Neutral gases   |
| Weight                                                       | 0.57 kg                           |

## Material

|                        |                                 |
|------------------------|---------------------------------|
| Housing material       | Die cast zinc                   |
| Seal material          | Acrylonitrile butadiene rubber  |
| Material front plate   | Acrylonitrile butadiene styrene |
| Material reservoir     | Polycarbonate                   |
| Material filter insert | Polyethylene                    |
| Part No.               | 0821300333                      |

## Technical information

The pressure dew point must be at least 15 °C under ambient and medium temperature and may not exceed 3 °C .

Nominal flow Q<sub>n</sub> with secondary pressure p<sub>2</sub> = 6 bar at Δp = 1 bar

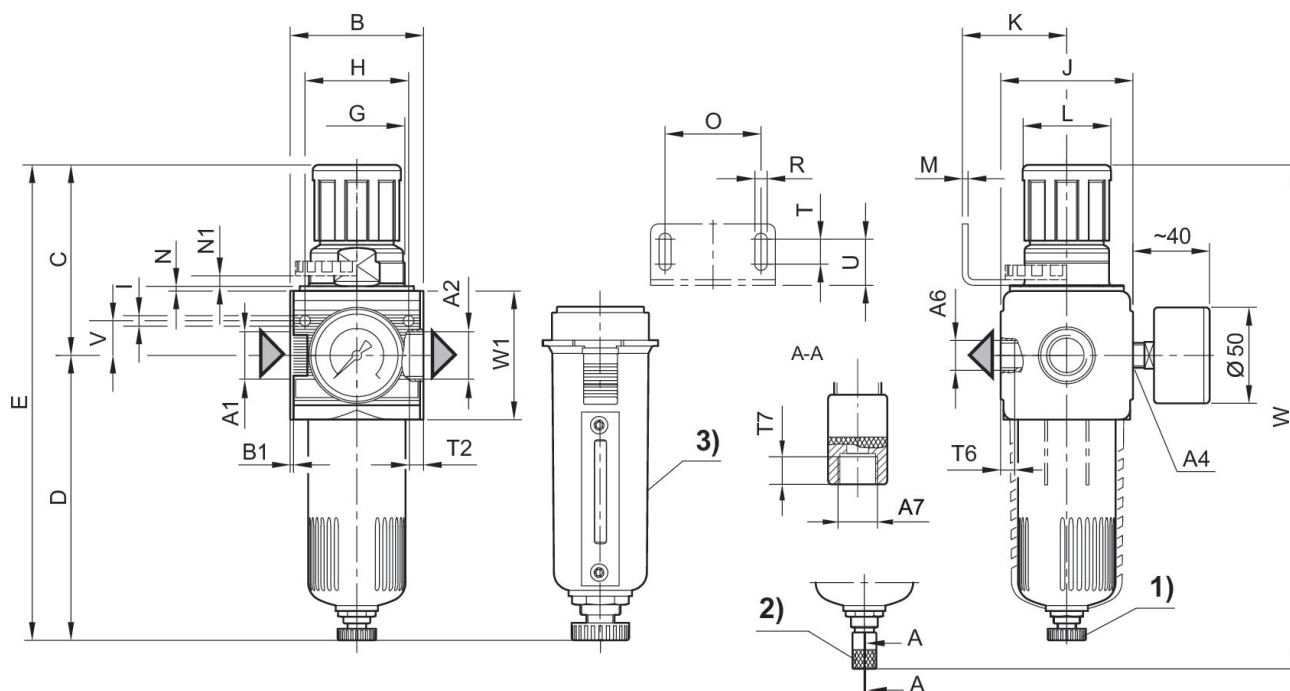
Note: Polycarbonate reservoirs are susceptible to solvents, supplementary information can be found at "Customer information".

A change in the flow direction (from air supply on the left to air supply on the right) occurs by rotating installation by 180° about the vertical axis. Please see the operating instructions for further details.

Also suitable for separation of fluid oil or water due to the design.

The rear pressure gauge connection on the pressure regulator is closed with a blanking plug, the front connection is open. Depending on the customer application, a second blanking plug may be necessary. Please order separately (see accessories).

## Dimensions



A1 = input A2 = output A6 = output

A7 = condensate drain

1) Semi-automatic condensate drain 2) fully automatic condensate drain

3) Metal reservoir

## Dimensions in mm

| Part No.   | A1    | A2    | A4    | A6    | A7    | B  | B1  | C  | D     |
|------------|-------|-------|-------|-------|-------|----|-----|----|-------|
| 0821300300 | G 1/4 | G 1/4 | G 1/4 | G 1/4 | G 1/8 | 48 | 1.5 | 71 | 124.5 |
| 0821300301 | G 1/4 | G 1/4 | G 1/4 | G 1/4 | G 1/8 | 48 | 1.5 | 71 | 124.5 |
| 0821300302 | G 1/4 | G 1/4 | G 1/4 | G 1/4 | G 1/8 | 48 | 1.5 | 71 | 124.5 |
| 0821300303 | G 1/4 | G 1/4 | G 1/4 | G 1/4 | G 1/8 | 48 | 1.5 | 71 | 124.5 |
| 0821300304 | G 1/4 | G 1/4 | G 1/4 | G 1/4 | G 1/8 | 48 | 1.5 | 71 | 124.5 |
| 0821300307 | G 1/4 | G 1/4 | G 1/4 | G 1/4 | G 1/8 | 48 | 1.5 | 71 | 124.5 |
| 0821300308 | G 1/4 | G 1/4 | G 1/4 | G 1/4 | G 1/8 | 48 | 1.5 | 71 | 124.5 |
| 0821300305 | G 1/4 | G 1/4 | G 1/4 | G 1/4 | G 1/8 | 48 | 1.5 | 71 | 124.5 |
| 0821300330 | G 3/8 | G 3/8 | G 1/4 | G 1/4 | G 1/8 | 48 | 1.5 | 71 | 124.5 |
| 0821300331 | G 3/8 | G 3/8 | G 1/4 | G 1/4 | G 1/8 | 48 | 1.5 | 71 | 124.5 |
| 0821300332 | G 3/8 | G 3/8 | G 1/4 | G 1/4 | G 1/8 | 48 | 1.5 | 71 | 124.5 |
| 0821300333 | G 3/8 | G 3/8 | G 1/4 | G 1/4 | G 1/8 | 48 | 1.5 | 71 | 124.5 |
| 0821300334 | G 3/8 | G 3/8 | G 1/4 | G 1/4 | G 1/8 | 48 | 1.5 | 71 | 124.5 |
| 0821300335 | G 3/8 | G 3/8 | G 1/4 | G 1/4 | G 1/8 | 48 | 1.5 | 71 | 124.5 |

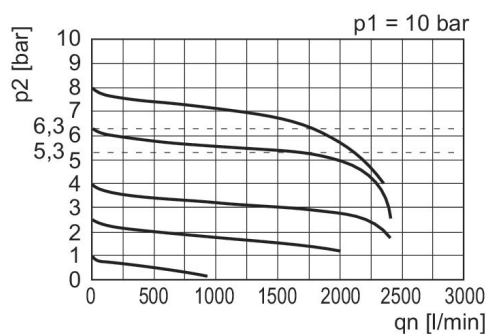
| Part No.   | E   | G       | H  | I   | J  | K    | L  | M | N   |
|------------|-----|---------|----|-----|----|------|----|---|-----|
| 0821300300 | 191 | M30x1,5 | 36 | 4.4 | 47 | 43.5 | 28 | 3 | 3.5 |
| 0821300301 | 191 | M30x1,5 | 36 | 4.4 | 47 | 43.5 | 28 | 3 | 3.5 |
| 0821300302 | 191 | M30x1,5 | 36 | 4.4 | 47 | 43.5 | 28 | 3 | 3.5 |

| Part No.   | E   | G       | H  | I   | J  | K    | L  | M | N   |
|------------|-----|---------|----|-----|----|------|----|---|-----|
| 0821300303 | 191 | M30x1,5 | 36 | 4.4 | 47 | 43.5 | 28 | 3 | 3.5 |
| 0821300304 | 191 | M30x1,5 | 36 | 4.4 | 47 | 43.5 | 28 | 3 | 3.5 |
| 0821300307 | 191 | M30x1,5 | 36 | 4.4 | 47 | 43.5 | 28 | 3 | 3.5 |
| 0821300308 | 191 | M30x1,5 | 36 | 4.4 | 47 | 43.5 | 28 | 3 | 3.5 |
| 0821300305 | 191 | M30x1,5 | 36 | 4.4 | 47 | 43.5 | 28 | 3 | 3.5 |
| 0821300330 | 191 | M30x1,5 | 36 | 4.4 | 47 | 43.5 | 28 | 3 | 3.5 |
| 0821300331 | 191 | M30x1,5 | 36 | 4.4 | 47 | 43.5 | 28 | 3 | 3.5 |
| 0821300332 | 191 | M30x1,5 | 36 | 4.4 | 47 | 43.5 | 28 | 3 | 3.5 |
| 0821300333 | 191 | M30x1,5 | 36 | 4.4 | 47 | 43.5 | 28 | 3 | 3.5 |
| 0821300334 | 191 | M30x1,5 | 36 | 4.4 | 47 | 43.5 | 28 | 3 | 3.5 |
| 0821300335 | 191 | M30x1,5 | 36 | 4.4 | 47 | 43.5 | 28 | 3 | 3.5 |

| Part No.   | N1 | O  | R   | T | T2  | T6 | T7  | U    | V    |
|------------|----|----|-----|---|-----|----|-----|------|------|
| 0821300300 | 3  | 38 | 5.4 | 8 | 9.5 | 7  | 8.5 | 18.5 | 12.3 |
| 0821300301 | 3  | 38 | 5.4 | 8 | 9.5 | 7  | 8.5 | 18.5 | 12.3 |
| 0821300302 | 3  | 38 | 5.4 | 8 | 9.5 | 7  | 8.5 | 18.5 | 12.3 |
| 0821300303 | 3  | 38 | 5.4 | 8 | 9.5 | 7  | 8.5 | 18.5 | 12.3 |
| 0821300304 | 3  | 38 | 5.4 | 8 | 9.5 | 7  | 8.5 | 18.5 | 12.3 |
| 0821300307 | 3  | 38 | 5.4 | 8 | 9.5 | 7  | 8.5 | 18.5 | 12.3 |
| 0821300308 | 3  | 38 | 5.4 | 8 | 9.5 | 7  | 8.5 | 18.5 | 12.3 |
| 0821300305 | 3  | 38 | 5.4 | 8 | 9.5 | 7  | 8.5 | 18.5 | 12.3 |
| 0821300330 | 3  | 38 | 5.4 | 8 | 9.5 | 7  | 8.5 | 18.5 | 12.3 |
| 0821300331 | 3  | 38 | 5.4 | 8 | 9.5 | 7  | 8.5 | 18.5 | 12.3 |
| 0821300332 | 3  | 38 | 5.4 | 8 | 9.5 | 7  | 8.5 | 18.5 | 12.3 |
| 0821300333 | 3  | 38 | 5.4 | 8 | 9.5 | 7  | 8.5 | 18.5 | 12.3 |
| 0821300334 | 3  | 38 | 5.4 | 8 | 9.5 | 7  | 8.5 | 18.5 | 12.3 |
| 0821300335 | 3  | 38 | 5.4 | 8 | 9.5 | 7  | 8.5 | 18.5 | 12.3 |

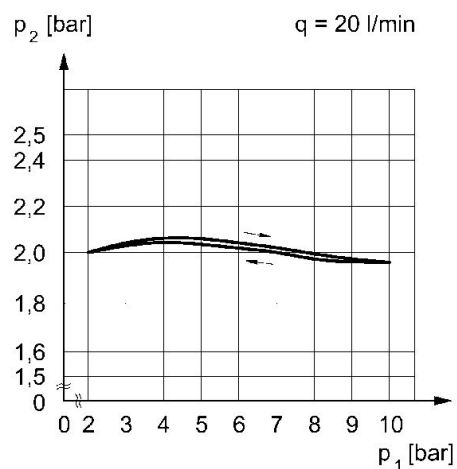
| Part No.   | W     | W1 |
|------------|-------|----|
| 0821300300 | 217.5 | 52 |
| 0821300301 | 217.5 | 52 |
| 0821300302 | 217.5 | 52 |
| 0821300303 | 217.5 | 52 |
| 0821300304 | 217.5 | 52 |
| 0821300307 | 217.5 | 52 |
| 0821300308 | 217.5 | 52 |
| 0821300305 | 217.5 | 52 |
| 0821300330 | 217.5 | 52 |
| 0821300331 | 217.5 | 52 |
| 0821300332 | 217.5 | 52 |
| 0821300333 | 217.5 | 52 |
| 0821300334 | 217.5 | 52 |
| 0821300335 | 217.5 | 52 |

## Flow rate characteristic, $p_2 = 0,05 - 7$ bar



$p_1$  = Working pressure  $p_2$  = Secondary pressure  $q_n$  = Nominal flow

## Pressure characteristics curve



$p_1$  = working pressure  $p_2$  = secondary pressure  $q$  = flow rate