NEWS 57
COMPONENTS FOR PNEUMATIC AUTOMATION

PNEUMAX
AIR SERVICE UNITS

AIRPLUS
General

The operational safety and durability of a pneumatic circuit depends on the quality of the compressed air. The compressed air and the moisture increase the rate of wear of the surfaces and seals, reducing the efficiency and the life of the pneumatic components. Furthermore the pressure fluctuation due to a discontinuous demand of air, adversely effect the correct operation of the circuit. To eliminate these disadvantages it is essential to install the service unit: filter, pressure regulator and lubricator.

Construction and working characteristics

The new FRL units AIRPLUS series represents the evolution of the well known and consolidated 1700 series. The main features are increased performances, reliability, easy and fast assembly and the introduction of the latest technical features.

With the exception of the air intake module and the pressure switch module all elements are available in two configurations: with technopolimer connections (IN and OUT), (T series), or with metal threaded inserts, (N series).

Bowls made of transparent polycarbonate (PC) are fitted with a bowl protection guard which is assembled on the body via a quick coupling mechanism provided with a safety button.

The filter, available with three filtration grades (3µm, 20µm and 50µm) is fitted as standard with a drain mechanism which can be operated manually or semi-automatically.

The regulator is based on the rolling diaphragm technology with low hysteresis and the system is balanced. The unit can be fitted with integrated flush mounting pressure gauge (0 to 12 bar range).

4 pressure ranges are available going from 0 to 12 bar and the regulating knob can be blocked in position simply by pressing it down. A dedicated version is available for battery mounting up to a maximum of 6 units.

The lubricator is based on the Venturi principle and the oil quantity is regulated via the adjusting screw positioned don the transparent polycarbonate (PC) regulating dome which also ensure clear visibility of the oil flow and regulation.

The oil suction pipe is fitted as standard with a sintered filter which ensures that any contaminant that should be present in the oil will reach the down stream circuit.

The soft start valve ensure a progressive pressurization of the down stream circuit avoiding sudden pressure surges which could be dangerous for the devices fitted on the down stream circuit.

The filling time can be easily adjusted via a built in flow regulator. The full flow rate is allowed only once the down stream pressure has reached 50% of the value of the inlet pressure.

The soft start valve needs, to be operated, a push and turn action (clockwise) in order to close it and discharge the down stream circuit.

The condense level in filer and filter-regulators bowls must never exceed the maximum level indicated on the bowls. With the exception of the air intake module and the pressure switch module all elements are available in two configurations: with technopolimer connections (IN and OUT), (T series), or with metal threaded inserts, (N series).

The air flow direction must follow the directions indicated on the single units in correspondence of the threaded connections. (IN and OUT)

Units provided with bowl must be mounted vertically with the bowl facing down.

Single units or groups can be panel mounted via the Y type flanges, regulators and filter-regulators can be mounted via the 90° zinc plated steel bracket. In order to mount the 90° bracket it is necessary to remove the regulating knob and then the locking ring before positioning the bracket.

All units must be operated according to the specified pressure and temperature ranges; fittings must be mounted without exciding the maximum torque allowed.

Ensure that the units cover plates are in position before pressure is applied. The cover plates are needed to lock in position the top part of the unit.

The condense level in filer and filter-regulators bowls must never exceed the maximum level indicated on the bowls. With manual or semi automatic drain the condense can be discharged via a 6/4mm tube directly connected to the drain tap.

On the pressure regulator the pressure value must always be set while pressure is rising and ideally the unit pressure range should be chosen based on the pressure value to be regulated.

The pressure switch module which can be set between 2 and 10 bar and the air intake module complete the range.

The oil refill can take place only with the bowl not under pressure. This size does not have the dedicated oil re-fill plug.

The manual shot off valve needs, to be operated, a push and turn action (clockwise) in order to close it and discharge the down stream circuit it is necessary to turn anti clock wise the knob.

The oil suction pipe is fitted as standard with a sintered filter which ensures that any contaminant that should be present in the oil will reach the down stream circuit.

The condense level in filer and filter-regulators bowls must never exceed the maximum level indicated on the bowls. With the exception of the air intake module and the pressure switch module all elements are available in two configurations: with technopolimer connections (IN and OUT), (T series), or with metal threaded inserts, (N series).

The pressure switch module which can be set between 2 and 10 bar and the air intake module complete the range.

The manual shot off valve needs, to be operated, a push and turn action (clockwise) in order to close it and discharge the down stream circuit it is necessary to turn anti clock wise the knob.

The soft start valve is used to slowly and progressively pressurize the down stream circuit, the time needed to do so can be set by means of the built in flow regulator.

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Instruction for installation and operation

The FRL unit must be installed as close as possible to the application.

The air flow direction must follow the directions indicated on the single units in correspondence of the threaded connections. (IN and OUT)

Units provided with bowl must be mounted vertically with the bowl facing down.

Single units or groups can be panel mounted via the Y type flanges, regulators and filter-regulators can be mounted via the 90° zinc plated steel bracket. In order to mount the 90° bracket it is necessary to remove the regulating knob and then the locking ring before positioning the bracket.

All units must be operated according to the specified pressure and temperature ranges; fittings must be mounted without exciding the maximum torque allowed.

Ensure that the units cover plates are in position before pressure is applied. The cover plates are needed to lock in position the top part of the unit.

The condense level in filer and filter-regulators bowls must never exceed the maximum level indicated on the bowls. With manual or semi automatic drain the condense can be discharged via a 6/4mm tube directly connected to the drain tap.

On the pressure regulator the pressure value must always be set while pressure is rising and ideally the unit pressure range should be chosen based on the pressure value to be regulated.

The pressure switch module which can be set between 2 and 10 bar and the air intake module complete the range.

The manual shot off valve needs, to be operated, a push and turn action (clockwise) in order to close it and discharge the down stream circuit it is necessary to turn anti clock wise the knob.

The soft start valve is used to slowly and progressively pressurize the down stream circuit, the time needed to do so can be set by means of the built in flow regulator.

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Maintenance

For any maintenance which requires the removal of the top plugs/supports from the body it is necessary to preventively remove the sides cover plates. If the top plugs/supports are removed with the sides plates still in their position the unit could be permanently damaged.

Bowls, plugs and supports are assembled with a bayonet type mechanism. In order to remove them rotate anti clockwise until the mechanical stop is reached and than remove from the body (for the bowls firstly press down the green safety button).

Bowls and transparent parts can be cleaned with water and neutral soap. Do not use solvents or alcohol.

Filtering elements (from filters and filter regulators) made of HDPE can be regenerated by washing and blowing them. In order to remove them it is necessary to remove the bowl unscrew the filter element and replace it with a new one or clean it.

The oil refill process can take place only if the bowl in not pressurized. The oil refill plug is not available on this size.

Should the pressure regulator not perform properly or should present a constant leakage from the relieving replaced the diaphragm by unloading completely the regulating spring before removing the regulation support.

Any other maintenance operation, in consideration of the complexity of the assembly, and the need of a through test according to the Pneumax spa specification, should be carried out by the manufacturer.

Fittings maximum recommended torque applicable

<table>
<thead>
<tr>
<th>THREAD</th>
<th>Technopolymer version (T)</th>
<th>Metal version (N)</th>
</tr>
</thead>
<tbody>
<tr>
<td>G1/8&quot;</td>
<td>4 Nm</td>
<td>/</td>
</tr>
<tr>
<td>G1/4&quot;</td>
<td>9 Nm</td>
<td>20 Nm</td>
</tr>
<tr>
<td>G3/8&quot;</td>
<td>16 Nm</td>
<td>25 Nm</td>
</tr>
<tr>
<td>G1/2&quot;</td>
<td>22 Nm</td>
<td>30 Nm</td>
</tr>
</tbody>
</table>
Series Airplus
Size 1

Air service units
Filter (F)

Operational characteristics

- Double filtering action: air flow centrifugation and filter element
- Filtering element made of HDPE (high density polyethylene) available in three different filtration grades (5µm, 20µm e 50µm), can be regenerated by washing it or replaced.
- Transparent bowl made off polycarbonate with bowl protection guard.
- Bowl assembly via bayonet type quick coupling mechanism with safety button.
- Semi-automatic drain mounted as standard.

Technical characteristics

Connections | G 1/8" - G 1/4"
Max. inlet pressure | 13 bar - 1,3 Mpa
Working temperature | -5°C ÷ +50°C
Weight with Technopolymer threads | gr. 120
Weight with threaded inserts | gr. 130
Filter pore size | 5 µm - 20 µm - 50 µm
Bowl capacity | 18 cm³
Assembly positions | Vertical
Max. fitting torque (with Technopolymer threads) | G1/4" = 9 Nm
Max. fitting torque (with threaded inserts) | G1/4" = 9 Nm

Ordering code

**171CFF**

<table>
<thead>
<tr>
<th>VERSION</th>
<th>ORDERING CODE</th>
</tr>
</thead>
<tbody>
<tr>
<td>N = Metal inserts</td>
<td>171CFF</td>
</tr>
<tr>
<td>T = Technopolymer thread</td>
<td>171CFF</td>
</tr>
</tbody>
</table>

CONNECTIONS

- A = G1/8" (only for insert versions)
- B = G1/4"

FILTER PORE SIZE

- A = 5 µm
- B = 20 µm
- C = 50 µm

Example: T171BFB : size 1, Filter with Technopolymer threads, G1/4" connections, 20 µm filter pore size

Flow rate curves

<table>
<thead>
<tr>
<th>Flow (Nl/min)</th>
<th>Pressure drop (bar)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>200</td>
<td>0.1</td>
</tr>
<tr>
<td>400</td>
<td>0.2</td>
</tr>
<tr>
<td>600</td>
<td>0.3</td>
</tr>
<tr>
<td>800</td>
<td>0.4</td>
</tr>
<tr>
<td>1000</td>
<td>0.5</td>
</tr>
<tr>
<td>1200</td>
<td>0.6</td>
</tr>
<tr>
<td>1400</td>
<td>0.7</td>
</tr>
<tr>
<td>1600</td>
<td>0.8</td>
</tr>
</tbody>
</table>

Inlet pressure (bar) | Pressure drop (bar)
2.5 | 0.9
4  | 0.6
6.3 | 0.3

G1/4" = 9 Nm
G1/4" = 9 Nm

Bowl removal maximum height

- 0,1
- 0,2
- 0,3
- 0,4
- 0,5
- 0,6
- 0,7
- 0,8
- 1

Series Airplus

Size 1

Air service units

Filter (F)
### Operational characteristics
- Coalesing filter element with filtration grade of 0.01µm
- Transparent bowl made off polycarbonate with bowl protection guard.
- Bowl assembly via bayonet type quick coupling mechanism with safety button.
- Semi-automatic drain mounted as standard.

### Note
In order to ensure a better grade of filtration it is recommended to use a 5 µm filter before the coalescing filter.

### Technical characteristics

<table>
<thead>
<tr>
<th>Connections</th>
<th>G 1/8” - G 1/4”</th>
</tr>
</thead>
<tbody>
<tr>
<td>Max. inlet pressure</td>
<td>13 bar - 1.3 Mpa</td>
</tr>
<tr>
<td>Working temperature</td>
<td>-5°C + +50°C</td>
</tr>
<tr>
<td>Weight with Technopolymer threads</td>
<td>gr. 125</td>
</tr>
<tr>
<td>Weight with threaded inserts</td>
<td>gr. 135</td>
</tr>
<tr>
<td>Filter efficiency with 0.01 µm particle</td>
<td>99.97%</td>
</tr>
<tr>
<td>Bowl capacity</td>
<td>18cm³</td>
</tr>
<tr>
<td>Assembly positions</td>
<td>Vertical</td>
</tr>
</tbody>
</table>

#### Example: T171BDA: Coalescing size 1, Filter with Technopolymer threads, G1/4” connections, filter efficiency 99.97%

![Diagram of coalescing filter](image)

**Flow rate curves**

<table>
<thead>
<tr>
<th>Flow (Nl/min)</th>
<th>Pressure drop (bar)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>50</td>
<td>0.05</td>
</tr>
<tr>
<td>100</td>
<td>0.1</td>
</tr>
<tr>
<td>150</td>
<td>0.15</td>
</tr>
<tr>
<td>200</td>
<td>0.2</td>
</tr>
<tr>
<td>250</td>
<td>0.25</td>
</tr>
<tr>
<td>300</td>
<td>0.3</td>
</tr>
<tr>
<td>350</td>
<td>0.35</td>
</tr>
<tr>
<td>400</td>
<td>0.4</td>
</tr>
<tr>
<td>450</td>
<td>0.45</td>
</tr>
<tr>
<td>500</td>
<td>0.5</td>
</tr>
</tbody>
</table>

**MAX SUGGESTED FLOW FOR A CORRECT OPERATION**

- Inlet pressure (bar): 2.5, 4, 6.3

#### Ordering code

<table>
<thead>
<tr>
<th>CONNECTIONS</th>
<th>FILTER EFFICIENCY</th>
<th>ORDERING CODE</th>
</tr>
</thead>
<tbody>
<tr>
<td>A = G1/8”</td>
<td>99.97%</td>
<td>T171BDA</td>
</tr>
<tr>
<td>B = G1/4”</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* Bowl removal maximum height
### Operational characteristics

- Diaphragm pressure regulator with relieving.
- Low hysteresis rolling diaphragm.
- Balanced system.
- Available in four pressure ranges up to 12 bar.
- Operating knob can be locked in position by pressing it down once the desired P2 (regulated pressure) pressure value is achieved.
- Fitted with panel mounting locking ring.

**Note**
The pressure must be always regulating while increasing. For a more precise regulation and higher sensibility, the use of a regulator with a pressure range as close as possible to the regulated pressure is recommended.

### Technical characteristics

- **Connections**: G 1/8" - G 1/4"
- **Max. inlet pressure**: 13 bar - 1.3 Mpa
- **Working temperature**: -5°C + +50°C
- **Pressure gauge connections**: G 1/8"
- **Weight with Technopolymer threads**: gr. 130
- **Weight with threaded inserts**: gr. 140
- **Pressure range**:
  - 0-2 bar / 0-4 bar
  - 0-8 bar / 0-12 bar
- **Assembly positions**: Indifferent
- **Max. fitting torque**
  - (with Technopolymer threads): G1/8" = 4 Nm, G1/4" = 9 Nm
  - (with threaded inserts): G1/8" = 15 Nm, G1/4" = 15 Nm
- **Max. fitting torque**
  - (with Technopolymer threads): G1/8" = 4 Nm, G1/4" = 9 Nm
  - (with threaded inserts): G1/8" = 15 Nm, G1/4" = 15 Nm

### Ordering code

<table>
<thead>
<tr>
<th>VERSION</th>
<th>CONNECTIONS</th>
<th>ADJUSTING RANGE</th>
<th>OPTIONS</th>
</tr>
</thead>
<tbody>
<tr>
<td>N</td>
<td>A = G1/8&quot; (only for insert version)</td>
<td>B = G1/4&quot;</td>
<td>F = Controlled relief + improved relieving</td>
</tr>
<tr>
<td>T</td>
<td>G1/8&quot;</td>
<td>G1/4&quot;</td>
<td>L = no relieving</td>
</tr>
</tbody>
</table>

**Example**: T171BRC : size 1, Regulator with Technopolymer threads, G1/4" connections, 0 to 8 bar adjusting range

**Diagram**: Flow rate curves and adjustment characteristics.

**Flow rate curves**

- Downstream pressure vs. Flow (Nl/min)

**Adjustment characteristics**

- Downstream pressure vs. Inlet pressure (bar)

**Notes**

- G 1/8" - G 1/4" 13 bar - 1,3 Mpa
- -5°C ÷ +50°C
- G 1/8" gr. 130 gr. 140
- 0-2 bar / 0-4 bar 0-8 bar / 0-12 bar
- Assembly positions: Indifferent
- G1/8" = 4 Nm, G1/4" = 9 Nm
- G1/8" = 15 Nm, G1/4" = 15 Nm

**Diagram**: Diagram showing the flow rate curves and adjustment characteristics.
Air service units
Regulator including gauge (RM)

Example: T171BRMC: size 1, Regulator including gauge with Technopolymer threads, G1/4" connections, 0 to 8 bar adjusting range

### Operational characteristics

- Diaphragm pressure regulator with relieving.
- Low hysteresis rolling diaphragm.
- Balanced system.
- Available in four pressure ranges up to 12 bar.
- Operating knob can be locked in position by pressing it down once the desired P2 (regulated pressure) pressure value is achieved.
- Fitted with panel mounting locking ring.
- Built in gauge 0-12 bar range as standard.

**Note**

The pressure must be always regulating while increasing. For a more precise regulation and higher sensibility, the use of a regulator with a pressure range as close as possible to the regulated pressure is recommended.

### Technical characteristics

<table>
<thead>
<tr>
<th>Connections</th>
<th>G 1/8&quot; - G 1/4&quot;</th>
</tr>
</thead>
<tbody>
<tr>
<td>Max. inlet pressure</td>
<td>13 bar - 1.3 Mpa</td>
</tr>
<tr>
<td>Working temperature</td>
<td>-5°C ÷ +50°C</td>
</tr>
<tr>
<td>Weight with Technopolymer threads</td>
<td>gr. 140</td>
</tr>
<tr>
<td>Weight with threaded inserts</td>
<td>gr. 150</td>
</tr>
<tr>
<td>Pressure range</td>
<td>0-2 bar / 0-4 bar</td>
</tr>
<tr>
<td></td>
<td>0-8 bar / 0-12 bar</td>
</tr>
<tr>
<td>Assembly positions</td>
<td>Indifferent</td>
</tr>
<tr>
<td>Max. fitting torque (with Technopolymer threads)</td>
<td>G1/8&quot; = 4 Nm</td>
</tr>
<tr>
<td></td>
<td>G1/4&quot; = 9 Nm</td>
</tr>
<tr>
<td>Max. fitting torque (with threaded inserts)</td>
<td>G1/8&quot; = 15 Nm</td>
</tr>
<tr>
<td></td>
<td>G1/4&quot; = 15 Nm</td>
</tr>
</tbody>
</table>

### Ordering code

- **VERSION**
  - N = Metal inserts
  - T = Technopolymer thread
- **CONNECTIONS**
  - A = G1/8" (only for insert version)
  - B = G1/4"
- **ADJUSTING RANGE**
  - A = 0-2 bar
  - B = 0-4 bar
  - C = 0-8 bar
  - D = 0-12 bar
- **OPTIONS**
  - F = Controlled relief + improved relieving
  - L = no relieving
  - R = Improved relieving
### Operational characteristics

- Diaphragm pressure regulator with relieving.
- Low hysteresis rolling diaphragm.
- Balanced system.
- Available in four pressure ranges up to 12 bar.
- Operating knob can be locked in position by pressing it down once the desired P2 (regulated pressure) value is achieved.
- G1/8” output front connection.
- Air supply can be applied by both directions.

### Technical characteristics

**Connections**

- G 1/8” - G 1/4”

**Max. inlet pressure**

- 13 bar - 1.3 Mpa

**Working temperature**

- \(-5^\circ C \leq +50^\circ C\)

**Pressure gauge connections**

- G 1/8”

**Weight with Technopolymer threads**

- gr. 130

**Weight with threaded inserts**

- gr. 140

**Pressure range**

- 0-2 bar / 0-4 bar
- 0-8 bar / 0-12 bar

**Assembly positions**

- Indifferent

**Max. fitting torque**

- G1/8" = 4 Nm
- G1/4" = 9 Nm

**Max. fitting torque**

- G1/8" = 15 Nm
- G1/4" = 15 Nm

### Ordering code

Example: T171BBC : size 1, Regulator with Technopolymer threads, G1/4” connections, 0 to 8 bar adjusting range

### Note

The pressure must be always regulating while increasing. For a more precise regulation and higher sensibility, the use of a regulator with a pressure range as close as possible to the regulated pressure is recommended.
**Operational characteristics**
- Diaphragm pressure regulator with relieving.
- Low hysteresis rolling diaphragm.
- Balanced system.
- Available in four pressure ranges up to 12 bar.
- Operating knob can be locked in position by pressing it down once the desired P2 (regulated pressure) pressure value is achieved.
- G 1/8” output connection positioned on the opposite side of the built in gauge.
- Air supply can be applied by both directions.
- Built in gauge 0-12 bar range as standard.

**Technical characteristics**
- Connections: G 1/8” - G 1/4”
- Max. inlet pressure: 13 bar - 1.3 Mpa
- Working temperature: -5°C +50°C
- Weight with Technopolymer threads: gr. 140
- Weight with threaded inserts: gr. 150
- Pressure range: 0-2 bar / 0-4 bar
- Assembly positions: Indifferent
- Max. fitting torque (with Technopolymer threads): G1/8” = 4 Nm
- Max. fitting torque (with threaded inserts): G1/8” = 15 Nm

**Ordering code**
- **TURN CODE**
  - N = Metal inserts
  - T = Technopolymer thread
- **CONNECTIONS**
  - A = G1/8” (only for insert versions)
  - B = G1/4”
- **ADJUSTING RANGE**
  - A = 0-2 bar
  - B = 0-4 bar
  - C = 0-8 bar
  - D = 0-12 bar
- **OPTIONS**
  - F = Controlled relief + improved relieving
  - L = no relieving
  - R = Improved relieving

**Note**
The pressure must be always regulating while increasing. For a more precise regulation and higher sensibility, the use of a regulator with a pressure range as close as possible to the regulated pressure is recommended.

Example: T171BMC: size 1, Regulator including gauge with Technopolymer threads, G1/4” connections, 0 to 8 bar adjusting range
Series Airplus
Size 1

Manifold pressure regulators

Operational characteristics
- Inlet pressure common for the whole manifold of regulator.
- A maximum of 6 regulators can be mounted
- Air supply can be applied by both directions.

Note
The pressure must be always regulating while increasing. For a more precise regulation and higher sensibility, the use of a regulator with a pressure range as close as possible to the regulated pressure is recommended.

Technical characteristics
Connections: G 1/8” - G 1/4”
Max. inlet pressure: 13 bar - 1.3 Mpa
Working temperature: -5°C ÷ +50°C
Pressure range: 0-2 bar / 0-4 bar
Max. fitting torque (with Technopolymer threads) G1/8” = 4 Nm
G1/4” = 9 Nm
Max. fitting torque (with threaded inserts) G1/8” = 15 Nm
G1/4” = 15 Nm

Ordering code
VERSION
N = Metal inserts
T = Technopolymer thread
CONNECTIONS
A = G1/8” (only for insert version)
B = G1/4”
TYPE
B = Standard with flanges X
M = Manometer included with flanges X
W = Standard with flanges Y
Z = Manometer included with flanges Y
NUMBER REGULATORS
1 = 1 regulator
2 = 2 regulators
3 = 3 regulators
4 = 4 regulators
5 = 5 regulators
6 = 6 regulators
ADJUSTING RANGE
A = 0-2 bar
B = 0-4 bar
C = 0-8 bar
D = 0-12 bar
ADJUSTING RANGE 1
A = 0-2 bar
B = 0-4 bar
C = 0-8 bar
D = 0-12 bar
ADJUSTING RANGE 2
A = 0-2 bar
B = 0-4 bar
C = 0-8 bar
D = 0-12 bar
ADJUSTING RANGE 3
A = 0-2 bar
B = 0-4 bar
C = 0-8 bar
D = 0-12 bar
ADJUSTING RANGE 4
A = 0-2 bar
B = 0-4 bar
C = 0-8 bar
D = 0-12 bar
ADJUSTING RANGE 5
A = 0-2 bar
B = 0-4 bar
C = 0-8 bar
D = 0-12 bar
ADJUSTING RANGE 6
A = 0-2 bar
B = 0-4 bar
C = 0-8 bar
D = 0-12 bar

Example: GT171BB4CCCC : Combined group comprising 4 size 1 Regulators Technopolymer threads, G1/4” connections and 0 to 8 bar adjusting range
Air service units
Dimensions with Y type flanges

2 position manifold

3 position manifold

4 position manifold

5 position manifold

6 position manifold
### Operational characteristics

- Filter - diaphragm pressure regulator with relieving.
- Low hysteresis rolling diaphragm.
- Balanced system.
- Double filtering action: air flow centrifugation and filter element.
- Filtering element made of HDPE (high density polyethylene) available in three different filtration grades (5µm, 20µm e 50µm) can be regenerated by washing it or replaced.
- Transparent bowl made of polycarbonate with bowl protection guard.
- Bowl assembly via bayonet type quick coupling mechanism with safety button.
- Semi-automatic drain mounted as standard.
- Available in four pressure ranges up to 12 bar.
- Operating knob can be locked in position by pressing it down once the desired P2 (regulated pressure) pressure value is achieved.
- Fitted with panel mounting locking ring.

### Note

The pressure must be always regulating while increasing. For a more precise regulation and higher sensibility, the use of a regulator with a pressure range as close as possible to the regulated pressure is recommended.

### Technical characteristics

- Connections: G 1/8" - G 1/4"
- Max. inlet pressure: 13 bar - 1.3 Mpa
- Working temperature: -5°C + 50°C
- Pressure gauge connections: G 1/8"
- Weight with Technopolymer threads: gr. 190
- Weight with threaded inserts: gr. 200
- Pressure range: 0-2 bar / 0-4 bar
- Filter pore size: 5 µm - 20 µm - 50 µm
- Bowl capacity: 18 cm³
- Assembly positions: Vertical
- Max. fitting torque (with Technopolymer threads): G1/8" = 4 Nm
- Max. fitting torque (with threaded inserts): G1/8" = 15 Nm

### Ordering code

<table>
<thead>
<tr>
<th>VERSION</th>
<th>N</th>
<th>T</th>
</tr>
</thead>
<tbody>
<tr>
<td>VERSION</td>
<td>N = Metal inserts</td>
<td>T = Technopolymer thread</td>
</tr>
<tr>
<td>CONNECTIONS</td>
<td>A = G1/8&quot; (only for insert versions)</td>
<td>B = G1/4&quot;</td>
</tr>
<tr>
<td>FILTER PORE SIZE</td>
<td>A = 5 µm</td>
<td>B = 20 µm</td>
</tr>
<tr>
<td>ADJUSTING RANGE</td>
<td>A = 0-2 bar</td>
<td>B = 0-4 bar</td>
</tr>
</tbody>
</table>

### Example: T171BEBC : size 1, Filter-regulator with Technopolymer threads, G1/4" connections, 20 µm filtering pore size, 0 to 8 bar adjusting range
Air service units
Filter-regulator including gauge (EM)

Example: T171BEMBC : size 1, Filter-Regulator including gauge with Technopolymer threads, G1/4" connections, with 20 µm filtering pore size, 0 to 8 bar adjusting range

Operational characteristics
- Filter - diaphragm pressure regulator with relieving.
- Low hysteresis rolling diaphragm.
- Balanced system.
- Double filtering action: air flow centrifugation and filter element.
- Filtering element made of HDPE (high density polyethylene) available in three different filtration grades (5µm, 20µm e 50µm) can be regenerated by washing it or replaced.
- Transparent bowl made off polycarbonate with bowl protection guard.
- Bowl assembly via bayonet type quick coupling mechanism with safety button.
- Semi-automatic drain mounted as standard.
- Available in four pressure ranges up to 12 bar.
- Operating knob can be locked in position by pressing it down once the desired P2 (regulated pressure) pressure value is achieved.
- Fitted with panel mounting locking ring.
- Built in gauge 0-12 bar range as standard.

Technical characteristics
- Connections
  G 1/8" - G 1/4"
- Max. inlet pressure
  13 bar - 1.3 Mpa
- Working temperature
  -5°C ÷ +50°C
- Weight with Technopolymer threads
  gr. 200
- Weight with threaded inserts
  gr. 210
- Pressure range
  0-2 bar / 0-4 bar
  0-8 bar / 0-12 bar
- Filter pore size
  5 µm - 20 µm - 50 µm
- Bowl capacity
  18 cm³
- Assembly positions
  Vertical
- Max. fitting torque
  (with Technopolymer threads)
  G1/4" = 9 Nm
- Max. fitting torque
  (with threaded inserts)
  G1/8" = 15 Nm
  G1/4" = 15 Nm

Note
The pressure must be always regulating while increasing. For a more precise regulation and higher sensibility, the use of a regulator with a pressure range as close as possible to the regulated pressure is recommended.
**Series Airplus**

**Size 1**

**Lubricator (L)**

**Flow rate curves**

- Oil mist lubrication with variable orifice size in function of the flow rate
- Oil quantity regulation mechanism and oil quantity visualization dome made of polycarbonate.
- Transparent bowl made of polycarbonate with bowl protection guard.
- Bowl assembly via bayonet type quick coupling mechanism with safety button.

**Operational characteristics**

**Technical characteristics**

**Ordering code**

- Connections: G 1/8" - G 1/4"
- Max. inlet pressure: 13 bar - 1.3 Mpa
- Working temperature: -5°C ÷ +50°C
- Weight with Technopolymer threads: gr. 110
- Weight with threaded inserts: gr. 120
- Indicative oil drip rate: 1 drop every 300/600 Nl
- Oil type: FD22 - HG32

**Note**

- Install as close as possible to the point of fuse
- Do not use alcohol, deterging oils or solvents.

---

**Example:** T171BL : size 1, Lubricator with Technopolymer threads, G 1/4" connections

---

**Operational characteristics**

- Connections
- Max. inlet pressure
- Working temperature
- Weight with Technopolymer threads
- Weight with threaded inserts
- Indicative oil drip rate
- Oil type
- Bowl capacity
- Assembly positions
- Max. fitting torque (with Technopolymer threads)
- Max. fitting torque (with threaded inserts)
- Min. operational flow at 6,3 bar

**Technical characteristics**

- G 1/8" = 9 Nm
- G 1/4" = 15 Nm
- 40 Nl/min.
## Operational characteristics

- Manual operated 3 ways poppet valve.
- Double handle action for valve opening: pushing and rotating (clockwise).
- The valve can be closed and the down stream circuit depressurized by rotating anticlockwise the knob.
- Knob lockable with three padlocks.

## Technical characteristics

<table>
<thead>
<tr>
<th>Connections</th>
<th>G 1/8” - G 1/4”</th>
</tr>
</thead>
<tbody>
<tr>
<td>Max. inlet pressure</td>
<td>13 bar - 1,3 Mpa</td>
</tr>
<tr>
<td>Working temperature</td>
<td>-5°C ÷ +50°C</td>
</tr>
<tr>
<td>Weight with Technopolymer threads</td>
<td>gr. 100</td>
</tr>
<tr>
<td>Weight with threaded inserts</td>
<td>gr. 110</td>
</tr>
<tr>
<td>Assembly positions</td>
<td>Indifferent</td>
</tr>
<tr>
<td>Handle opening and closing angle</td>
<td>90°</td>
</tr>
<tr>
<td>Max. fitting torque (with Technopolymer threads)</td>
<td>G1/4” = 9 Nm</td>
</tr>
<tr>
<td>Max. fitting torque (with threaded inserts)</td>
<td>G1/8” = 15 Nm</td>
</tr>
<tr>
<td>G1/4” = 15 Nm</td>
<td></td>
</tr>
<tr>
<td>Nominal flow at 6 bar with Δp=1</td>
<td>1400 Nl/min.</td>
</tr>
<tr>
<td>Exhaust nominal flowrate at 6 bar with Δp=1</td>
<td>550 Nl/min.</td>
</tr>
</tbody>
</table>

---

Example: T171BVL : size 1, Shut-off valve with Technopolymer threads, G1/4” connections
### Operational characteristics

- Solenoid operated 3 ways poppet valve.
- Available also with 15mm solenoid operator.

<table>
<thead>
<tr>
<th>Supply and operating connections</th>
<th>G 1/8&quot; - G 1/4&quot;</th>
</tr>
</thead>
<tbody>
<tr>
<td>Discharge connections</td>
<td>G 1/4&quot;</td>
</tr>
<tr>
<td>Working temperature</td>
<td>-5°C ÷ +50°C</td>
</tr>
<tr>
<td>Weight with Technopolymer threads</td>
<td>gr. 130</td>
</tr>
<tr>
<td>Weight with threaded inserts</td>
<td>gr. 140</td>
</tr>
<tr>
<td>Assembly positions</td>
<td>Indifferent</td>
</tr>
<tr>
<td>Min. Pressure working</td>
<td>2,5 bar</td>
</tr>
<tr>
<td>Max. Pressure working</td>
<td>10 bar</td>
</tr>
<tr>
<td>Max. fitting torque (with (G1/4))</td>
<td>9 Nm</td>
</tr>
<tr>
<td>Max. fitting torque (with (G1/8))</td>
<td>15 Nm</td>
</tr>
<tr>
<td>Nominal flow at 6 bar with (\Delta p=1)</td>
<td>1400 Nl/min.</td>
</tr>
<tr>
<td>Exhaust nominal flowrate at 6 bar with (\Delta p=1)</td>
<td>550 Nl/min.</td>
</tr>
</tbody>
</table>

### Technical characteristics

<table>
<thead>
<tr>
<th>Ordering code</th>
<th>(1710VEA)</th>
</tr>
</thead>
<tbody>
<tr>
<td>CONNECTIONS</td>
<td>N = Metal inserts</td>
</tr>
<tr>
<td></td>
<td>T = Technopolymer thread</td>
</tr>
<tr>
<td>VERSION</td>
<td>A = G1/8&quot; (only for insert version)</td>
</tr>
<tr>
<td></td>
<td>B = G1/4&quot;</td>
</tr>
<tr>
<td>15 mm COIL VOLTAGE</td>
<td>A4 = 12 V DC</td>
</tr>
<tr>
<td></td>
<td>A5 = 24 V DC</td>
</tr>
<tr>
<td></td>
<td>A6 = 24 V AC (50-60 Hz)</td>
</tr>
<tr>
<td></td>
<td>A7 = 110 V AC (50-60 Hz)</td>
</tr>
<tr>
<td></td>
<td>A8 = 220 V AC (50-60 Hz)</td>
</tr>
<tr>
<td></td>
<td>A9 = 24 V DC (1 Watt)</td>
</tr>
<tr>
<td>22 mm COIL VOLTAGE</td>
<td>B2 = Without coil</td>
</tr>
<tr>
<td></td>
<td>B4 = 12 V DC</td>
</tr>
<tr>
<td></td>
<td>B5 = 24 V DC</td>
</tr>
<tr>
<td></td>
<td>B6 = 24 V AC (50-60 Hz)</td>
</tr>
<tr>
<td></td>
<td>B7 = 110 V AC (50-60 Hz)</td>
</tr>
<tr>
<td></td>
<td>B8 = 220 V AC (50-60 Hz)</td>
</tr>
<tr>
<td></td>
<td>B9 = 24 V DC (2 Watt)</td>
</tr>
<tr>
<td>30 mm COIL VOLTAGE</td>
<td>C2 = Without coil</td>
</tr>
<tr>
<td></td>
<td>C5 = 24 V DC</td>
</tr>
<tr>
<td></td>
<td>C6 = 24 V AC (50-60 Hz)</td>
</tr>
<tr>
<td></td>
<td>C7 = 110 V AC (50-60 Hz)</td>
</tr>
<tr>
<td></td>
<td>C8 = 230 V AC (50-60 Hz)</td>
</tr>
<tr>
<td></td>
<td>C9 = 24 V DC (2 Watt)</td>
</tr>
</tbody>
</table>
Air service units
Progressive start-up valve (AP)

Example: T171BAP: size 1, Progressive start-up valve with Technopolymer threads, G1/4" connections

<table>
<thead>
<tr>
<th>Operational characteristics</th>
<th>Technical characteristics</th>
<th>Ordering code</th>
</tr>
</thead>
<tbody>
<tr>
<td>Full pressure is allowed once the down stream circuit pressure reaches 50% of the inlet pressure.</td>
<td>Max. inlet pressure: 13 bar - 1,3 Mpa</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Working temperature: -5°C ÷ +50°C</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Weight with Technopolymer threads: gr. 70</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Weight with threaded inserts: gr. 80</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Max. fitting torque:</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(with Technopolymer threads): G1/4&quot; = 9 Nm</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(with threaded inserts): G1/8&quot; = 15 Nm</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Assembly positions: Indifferent</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Min. pressure working: 2,5 bar - 0,25 Mpa</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Nominal flow at 6 bar with Δp=1: 1400 Nl/min.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Fully open built in flow regulator Flow rate: 75 Nl/min.</td>
<td></td>
</tr>
</tbody>
</table>

Connections

Max. inlet pressure: 13 bar - 1,3 Mpa
Working temperature: -5°C ÷ +50°C
Weight with Technopolymer threads: gr. 70
Weight with threaded inserts: gr. 80
Max. fitting torque (with Technopolymer threads): G1/4" = 9 Nm
Max. fitting torque (with threaded inserts): G1/8" = 15 Nm
Assembly positions: Indifferent
Min. pressure working: 2,5 bar - 0,25 Mpa
Nominal flow at 6 bar with Δp=1: 1400 Nl/min.
Fully open built in flow regulator Flow rate: 75 Nl/min.

Ordering code:

- **VERSION**: N = Metal inserts, T = Technopolymer thread
- **CONNECTIONS**: A = G1/8" (only for insert versions), B = G1/4"
Example: T171BPA: size 1, Air intake with Technopolymer threads, G1/4” connections

<table>
<thead>
<tr>
<th>Operational characteristics</th>
<th>Technical characteristics</th>
<th>Ordering code</th>
</tr>
</thead>
<tbody>
<tr>
<td>Available with two G1/4” threaded connections.</td>
<td>G1/4”*</td>
<td>T171BPA</td>
</tr>
<tr>
<td>Attention</td>
<td>Max. inlet pressure</td>
<td>13 bar - 1.3 Mpa</td>
</tr>
<tr>
<td>For this product are available only Technopolymer connections</td>
<td>Working temperature</td>
<td>-5°C ÷ +50°C</td>
</tr>
<tr>
<td>Max. fitting torque (with Technopolymer threads)</td>
<td>Weight</td>
<td>gr. 52</td>
</tr>
<tr>
<td></td>
<td>Assembly positions</td>
<td>Indifferent</td>
</tr>
</tbody>
</table>

*G1/4” = 9 Nm
Air service units
Pressure switch (PP)

Example: T171BPP - Size 1, Pressure switch with Technopolymer threads, G1/4" connections

<table>
<thead>
<tr>
<th>Operational characteristics</th>
<th>Technical characteristics</th>
</tr>
</thead>
<tbody>
<tr>
<td>Connections</td>
<td>G 1/4&quot;</td>
</tr>
<tr>
<td>Max. inlet pressure</td>
<td>13 bar - 1.3 Mpa</td>
</tr>
<tr>
<td>Working temperature</td>
<td>-5°C ÷ +50°C</td>
</tr>
<tr>
<td>Weight</td>
<td>gr. 138</td>
</tr>
<tr>
<td>Microswitch capacity</td>
<td>1A</td>
</tr>
<tr>
<td>Grade of protection</td>
<td>IP 65</td>
</tr>
<tr>
<td>(with connector assembled)</td>
<td></td>
</tr>
<tr>
<td>Adjusting range</td>
<td>2 -10 bar</td>
</tr>
<tr>
<td>Assembly positions</td>
<td>Indifferent</td>
</tr>
<tr>
<td>Max. fitting torque</td>
<td>G1/4&quot; = 9 Nm</td>
</tr>
<tr>
<td>(with Technopolymer threads)</td>
<td></td>
</tr>
<tr>
<td>Microswitch maximum tension</td>
<td>250 VAC</td>
</tr>
</tbody>
</table>

Attention
For this product are available only Technopolymer connections

Connection
1 = Neutral
2 = N.C contact
3 = N.O contact

DIN 43650 type C connector
Example: T171X: Size 1 coupling flange

**Operational characteristics**

- Enables the quick connection of two functions
- Weight: gr. 12

<table>
<thead>
<tr>
<th>Weight gr. 12</th>
<th>Ordering code</th>
</tr>
</thead>
<tbody>
<tr>
<td>T171X</td>
<td></td>
</tr>
</tbody>
</table>

Example: T171Y: Size 1 coupling flange with mounting holes

**Operational characteristics**

- Used to couple together two elements and to panel mount them.
- Used to panel mount one single element.
- Weight: gr. 18

<table>
<thead>
<tr>
<th>Weight gr. 18</th>
<th>Ordering code</th>
</tr>
</thead>
<tbody>
<tr>
<td>T171Y</td>
<td></td>
</tr>
</tbody>
</table>
### Operational characteristics

- Allows for regulators and filter regulators to be panel mounted.

| Weight gr. | 32 |

| Ordering code | 17150 |

### Pressure gauge

#### Dimensions

<table>
<thead>
<tr>
<th>CODE</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
<th>G</th>
<th>Weight gr.</th>
</tr>
</thead>
<tbody>
<tr>
<td>17070A</td>
<td>44</td>
<td>10</td>
<td>26</td>
<td>41</td>
<td>14</td>
<td>1/8&quot;</td>
<td>60</td>
</tr>
<tr>
<td>17070B</td>
<td>45</td>
<td>10</td>
<td>27</td>
<td>49</td>
<td>14</td>
<td>1/8&quot;</td>
<td>80</td>
</tr>
</tbody>
</table>

#### Ordering code

<table>
<thead>
<tr>
<th>17070A, B, C</th>
<th>VERSION</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 = Dial Ø40</td>
<td>A = Scale 0-4 bar</td>
</tr>
<tr>
<td>2 = Dial Ø50</td>
<td>B = Scale 0-6 bar</td>
</tr>
<tr>
<td>3 = Scale Ø12 bar</td>
<td>C = Scale 0-12 bar</td>
</tr>
</tbody>
</table>
## Operational characteristics

- Combined group comprising Filter-regulator with built in manometer and Lubricator assembled with a (Y) type coupling kit for panel mounting. Built in gauge 0 to 12 bar as standard.

**Note**

The pressure must be always regulating while increasing. For a more precise regulation and higher sensibility, the use of a regulator with a pressure range as close as possible to the regulated pressure is recommended.

## Technical characteristics

<table>
<thead>
<tr>
<th>Connections</th>
<th>G 1/8&quot; - G 1/4&quot;</th>
</tr>
</thead>
<tbody>
<tr>
<td>Max. inlet pressure</td>
<td>13 bar - 1.3 Mpa</td>
</tr>
<tr>
<td>Working temperature</td>
<td>-5°C + +50°C</td>
</tr>
<tr>
<td>Weight with Technopolymer threads</td>
<td>gr. 328</td>
</tr>
<tr>
<td>Weight with threaded inserts</td>
<td>gr. 348</td>
</tr>
<tr>
<td>Pressure range</td>
<td>0-2 bar / 0-4 bar</td>
</tr>
<tr>
<td></td>
<td>0-8 bar / 0-12 bar</td>
</tr>
<tr>
<td>Filter pore size</td>
<td>5 µm - 20 µm - 50 µm</td>
</tr>
<tr>
<td>Bowl capacity</td>
<td>18 cm³</td>
</tr>
<tr>
<td>Indicative oil drip rate</td>
<td>1 drop every 300/600 Nl</td>
</tr>
<tr>
<td>Oil type</td>
<td>FD22 - HG32</td>
</tr>
<tr>
<td>Bowl capacity</td>
<td>36 cm³</td>
</tr>
<tr>
<td>Assembly positions</td>
<td>Vertical</td>
</tr>
<tr>
<td>Max. fitting torque</td>
<td>G1/4&quot; = 9 Nm</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Filter pore size</th>
<th>20 µm / 0-8 bar</th>
</tr>
</thead>
<tbody>
<tr>
<td>Weight with threaded inserts</td>
<td>gr. 348</td>
</tr>
<tr>
<td>Pressure range</td>
<td>0-2 bar / 0-4 bar</td>
</tr>
<tr>
<td></td>
<td>0-8 bar / 0-12 bar</td>
</tr>
<tr>
<td>Filter pore size</td>
<td>20 µm - 50 µm</td>
</tr>
<tr>
<td>Bowl capacity</td>
<td>18 cm³</td>
</tr>
<tr>
<td>Indicative oil drip rate</td>
<td>1 drop every 300/600 Nl</td>
</tr>
<tr>
<td>Oil type</td>
<td>FD22 - HG32</td>
</tr>
<tr>
<td>Bowl capacity</td>
<td>36 cm³</td>
</tr>
<tr>
<td>Assembly positions</td>
<td>Vertical</td>
</tr>
<tr>
<td>Max. fitting torque</td>
<td>G1/4&quot; = 9 Nm</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Filter pore size</th>
<th>50 µm / 0-8 bar</th>
</tr>
</thead>
<tbody>
<tr>
<td>Weight with threaded inserts</td>
<td>gr. 348</td>
</tr>
<tr>
<td>Pressure range</td>
<td>0-2 bar / 0-4 bar</td>
</tr>
<tr>
<td></td>
<td>0-8 bar / 0-12 bar</td>
</tr>
<tr>
<td>Filter pore size</td>
<td>50 µm - 20 µm - 50 µm</td>
</tr>
<tr>
<td>Bowl capacity</td>
<td>18 cm³</td>
</tr>
<tr>
<td>Indicative oil drip rate</td>
<td>1 drop every 300/600 Nl</td>
</tr>
<tr>
<td>Oil type</td>
<td>FD22 - HG32</td>
</tr>
<tr>
<td>Bowl capacity</td>
<td>36 cm³</td>
</tr>
<tr>
<td>Assembly positions</td>
<td>Vertical</td>
</tr>
<tr>
<td>Max. fitting torque</td>
<td>G1/4&quot; = 9 Nm</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Filter pore size</th>
<th>50 µm / 0-12 bar</th>
</tr>
</thead>
<tbody>
<tr>
<td>Weight with threaded inserts</td>
<td>gr. 348</td>
</tr>
<tr>
<td>Pressure range</td>
<td>0-2 bar / 0-4 bar</td>
</tr>
<tr>
<td></td>
<td>0-8 bar / 0-12 bar</td>
</tr>
<tr>
<td>Filter pore size</td>
<td>50 µm - 20 µm - 50 µm</td>
</tr>
<tr>
<td>Bowl capacity</td>
<td>18 cm³</td>
</tr>
<tr>
<td>Indicative oil drip rate</td>
<td>1 drop every 300/600 Nl</td>
</tr>
<tr>
<td>Oil type</td>
<td>FD22 - HG32</td>
</tr>
<tr>
<td>Bowl capacity</td>
<td>36 cm³</td>
</tr>
<tr>
<td>Assembly positions</td>
<td>Vertical</td>
</tr>
<tr>
<td>Max. fitting torque</td>
<td>G1/4&quot; = 9 Nm</td>
</tr>
</tbody>
</table>

### Ordering code

- **G171BHG**
- **G171BH1G**
- **G171BHG1**

**Example:** GT171BHGG: size 1, combined group comprising Filter-regulator and Lubricator, Technopolymer threads, G1/4" connections, 0 to 8 bar adjusting range and 20 µm filter pore size.
Air service units
Service unit assembled (F + RM + L)

Example: GT171BKG: size 1 combined group comprising Filter, Regulator and Lubricator Technopolymer threads, G1/4" connections, 0 to 8 bar adjusting range and 20 µm filter pore size

Operational characteristics
Combined group comprising Filter, Regulator with built in manometer and Lubricator assembled with two (Y) type coupling kits for panel mounting.
Built in gauge 0 to 12 bar as standard

Note
The pressure must be always regulating while increasing. For a more precise regulation and higher sensibility, the use of a regulator with a pressure range as close as possible to the regulated pressure is recommended.

Technical characteristics

<table>
<thead>
<tr>
<th>Connections</th>
<th>G 1/8&quot; - G 1/4&quot;</th>
</tr>
</thead>
<tbody>
<tr>
<td>Max. inlet pressure</td>
<td>13 bar - 1.3 Mpa</td>
</tr>
<tr>
<td>Working temperature</td>
<td>-5°C to +50°C</td>
</tr>
<tr>
<td>Weight with Technopolymer threads</td>
<td>gr. 406</td>
</tr>
<tr>
<td>Weight with threaded inserts</td>
<td>gr. 436</td>
</tr>
<tr>
<td>Pressure range</td>
<td>0-2 bar / 0-4 bar</td>
</tr>
<tr>
<td>0-8 bar / 0-12 bar</td>
<td></td>
</tr>
<tr>
<td>Filter pore size</td>
<td>5 µm - 20 µm - 50 µm</td>
</tr>
<tr>
<td>Bowl capacity</td>
<td>18 cm³</td>
</tr>
<tr>
<td>Indicative oil drip rate</td>
<td>1 drop every 300/600 Nl</td>
</tr>
<tr>
<td>Oil type</td>
<td>FD22 - HG32</td>
</tr>
<tr>
<td>Bowl capacity</td>
<td>36 cm³</td>
</tr>
<tr>
<td>Assembly positions</td>
<td>Vertical</td>
</tr>
<tr>
<td>Max. fitting torque (with Technopolymer threads)</td>
<td>G1/4&quot; = 9 Nm</td>
</tr>
<tr>
<td>Max. fitting torque (with threaded inserts)</td>
<td>G1/8&quot; = 15 Nm</td>
</tr>
<tr>
<td>G1/4&quot; = 15 Nm</td>
<td></td>
</tr>
<tr>
<td>Min. operational flow at 6,3 bar</td>
<td>40 Nl/min</td>
</tr>
</tbody>
</table>

Ordering code

| VERSION | N = Metal inserts |
| CONNECTIONS | T = Technopolymer thread |
| A = G1/8" (only for insert versions) |
| B = G1/4" |

Flow rate curves

<table>
<thead>
<tr>
<th>Flow rate curves</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inlet pressure 7 bar</td>
</tr>
<tr>
<td>Adjusting range 0-8 bar</td>
</tr>
</tbody>
</table>

Adjustment characteristics

<table>
<thead>
<tr>
<th>Flow rate curves</th>
</tr>
</thead>
<tbody>
<tr>
<td>Downstream pressure (bar)</td>
</tr>
<tr>
<td>Flow Q=34 Nl/min</td>
</tr>
<tr>
<td>Flow Q=22 Nl/min</td>
</tr>
<tr>
<td>Flow Q=15 Nl/min</td>
</tr>
</tbody>
</table>

Inlet pressure (bar)

<table>
<thead>
<tr>
<th>Inlet pressure (bar)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Downstream pressure (bar)</td>
</tr>
<tr>
<td>Flow Q=34 Nl/min</td>
</tr>
<tr>
<td>Flow Q=22 Nl/min</td>
</tr>
<tr>
<td>Flow Q=15 Nl/min</td>
</tr>
</tbody>
</table>

Series Airplus
Size 1
Operational characteristics

Combined group comprising Filter-regulator with built in manometer, Air intake and Lubricator assembled with two (Y) type coupling kits for panel mounting. Built in gauge 0 to 12 bar as standard

Note

The pressure must be always regulating while increasing. For a more precise regulation and higher sensibility, the use of a regulator with a pressure range as close as possible to the regulated pressure is recommended.
**Air service units**

**Service unit assembled (EM + PP + L)**

---

**Operational characteristics**

Combined group comprising Filter-regulator with built in manometer, Pressure switch and Lubricator assembled with two (Y) type coupling kits for panel mountings. Built in gauge 0 to 12 bar as standard

**Note**

The pressure must be always regulating while increasing. For a more precise regulation and higher sensibility, the use of a regulator with a pressure range as close as possible to the regulated pressure is recommended.

---

**Technical characteristics**

<table>
<thead>
<tr>
<th>Connections</th>
<th>G 1/8” - G 1/4”</th>
</tr>
</thead>
<tbody>
<tr>
<td>Max. inlet pressure</td>
<td>13 bar - 1.3 Mpa</td>
</tr>
<tr>
<td>Working temperature</td>
<td>-5°C + +50°C</td>
</tr>
<tr>
<td>Weight with Technopolymer threads</td>
<td>gr. 484</td>
</tr>
<tr>
<td>Weight with threaded inserts</td>
<td>gr. 504</td>
</tr>
<tr>
<td>Pressure range</td>
<td>0-2 bar / 0-4 bar</td>
</tr>
<tr>
<td></td>
<td>0-8 bar / 0-12 bar</td>
</tr>
<tr>
<td>Filter pore size</td>
<td>5 µm - 20 µm - 50 µm</td>
</tr>
<tr>
<td>Bowl capacity</td>
<td>18 cm³</td>
</tr>
<tr>
<td>Indicative oil drip rate</td>
<td>1 drop every 300/600 Nl</td>
</tr>
<tr>
<td>Oil type</td>
<td>FD22 - HG32</td>
</tr>
<tr>
<td>Bowl capacity</td>
<td>36 cm³</td>
</tr>
<tr>
<td>Assembly positions</td>
<td>Vertical</td>
</tr>
<tr>
<td>Max. fitting torque (with Technopolymer threads)</td>
<td>G1/4” = 9 Nm</td>
</tr>
<tr>
<td>Max. fitting torque (with threaded inserts)</td>
<td>G1/8” = 15 Nm</td>
</tr>
<tr>
<td>Min. operational flow at 6,3 bar</td>
<td>40 Nl/min.</td>
</tr>
</tbody>
</table>
**Operational characteristics**

Combined group comprising manual shut-off valve, Filter-regulator with built in manometer, assembled with one (Y) type coupling kit for panel mountings.

**Note**

The pressure must be always regulating while increasing. For a more precise regulation and higher sensibility, the use of a regulator with a pressure range as close as possible to the regulated pressure is recommended.

---

**Technical characteristics**

<table>
<thead>
<tr>
<th>Connections</th>
<th>G 1/8&quot; - G 1/4&quot;</th>
</tr>
</thead>
<tbody>
<tr>
<td>Max. inlet pressure</td>
<td>13 bar - 1.3 Mpa</td>
</tr>
<tr>
<td>Working temperature</td>
<td>-5°C ÷ +50°C</td>
</tr>
<tr>
<td>Weight with Technopolymer threads</td>
<td>gr. 318</td>
</tr>
<tr>
<td>Weight with threaded inserts</td>
<td>gr. 338</td>
</tr>
<tr>
<td>Pressure range</td>
<td>0-2 bar / 0-4 bar</td>
</tr>
<tr>
<td>G = 5 µm / 0-12 bar</td>
<td></td>
</tr>
<tr>
<td>H = 20 µm / 0-12 bar</td>
<td></td>
</tr>
<tr>
<td>N = 50 µm / 0-8 bar</td>
<td></td>
</tr>
<tr>
<td>P = 50 µm / 0-12 bar</td>
<td></td>
</tr>
<tr>
<td>Filter pore size</td>
<td>5 µm - 20 µm - 50 µm</td>
</tr>
<tr>
<td>Bowl capacity</td>
<td>16 cm³</td>
</tr>
<tr>
<td>Indicative oil drip rate</td>
<td>1 drop every 300/600 Nl</td>
</tr>
<tr>
<td>Oil type</td>
<td>FD22 - HG32</td>
</tr>
<tr>
<td>Bowl capacity</td>
<td>36 cm³</td>
</tr>
<tr>
<td>Assembly positions</td>
<td>Vertical</td>
</tr>
<tr>
<td>Max. fitting torque (with Technopolymer threads)</td>
<td>G1/4&quot; = 9 Nm</td>
</tr>
<tr>
<td>Max. fitting torque (with threaded inserts)</td>
<td>G1/4&quot; = 15 Nm</td>
</tr>
<tr>
<td>Min. operational flow at 6,3 bar</td>
<td>40 Nl/min.</td>
</tr>
</tbody>
</table>
Air service units
Service unit assembled (VL + EM + L)

Example: GT171BVHG - Size 1 Combined group comprising Shut-off valve, Filter-regulator and Lubricator Technopolymer threads, G1/4" connections 0 to 8 bar adjusting range and 20 µm filter pore size

Operational characteristics

Combined group comprising manual shut-off valve, Filter - regulator with built in manometer and Lubricator assembled with two(Y) type coupling kits for panel mountings. Built in gauge 0 to 12 bar as standard

Note
The pressure must be always regulating while increasing. For a more precise regulation and higher sensibility, the use of a regulator with a pressure range as close as possible to the regulated pressure is recommended.

Technical characteristics

Connections G 1/8" - G 1/4"
Max. inlet pressure 13 bar - 1.3 Mpa
Working temperature -5°C + +50°C
Weight with Technopolymer threads gr. 446
Weight with threaded inserts gr. 476
Pressure range
0-2 bar / 0-4 bar
0-8 bar / 0-12 bar
Filter pore size
5 µm - 20 µm - 50 µm
Bowl capacity 18 cm³
Indicative oil drip rate 1 drop every 300/600 Nl
Oil type FD22 - HG32
Bowl capacity 36 cm³
Assembly positions Vertical
Max. fitting torque (with Technopolymer threads) G1/4" = 9 Nm
Max. fitting torque (with threaded inserts) G1/8" = 15 Nm
G1/4" = 15 Nm
Min. operational flow at 6,3 bar 40 Nl/min.

Ordering code

G171BVHG
VERSION
N = Metal inserts
T = Technopolymer thread
CONNECTIONS
A = G1/8" (only for insert versions)
B = G1/4"
FILTER PORE SIZE
C = 5 µm / 0-8 bar
D = 5 µm / 0-12 bar
G = 20 µm / 0-8 bar
H = 20 µm / 0-12 bar
N = 50 µm / 0-8 bar
P = 50 µm / 0-12 bar

Connections
Flow rate curves
Adjustment characteristics
Inlet pressure 7 bar
Adjusting range 0-8 bar
Flow Q=34 Nl/min
Flow Q=22 Nl/min
Flow Q=15 Nl/min
Inlet pressure (bar)
0 200 400 600 800 1000 1200 1400
Flow (Nl/min)
0 1 2 3 4 5 6 7
Downstream pressure (bar)
0 1 2 3 4 5 6 7 8 9 10
Flow rate curves
Flow rate curves
Air service units
Service unit assembled (VL + F + RM + L)

Example: GT171BVKG: size 1 combined group comprising Shut-off valve, Filter, Regulator and Lubricator Technopolymer threads, G1/4" connections 0 to 8 bar adjusting range and 20 µm filter pore size

### Operational characteristics

- Combined group comprising manual shut-off valve, Filter, Regulator with built in manometer and Lubricator, assembled with two (Y) type coupling kits for panel mounting and one (X) type coupling kit.
- Built in pressure gauge 0 to 12 bar range

**Note**

The pressure must be always regulating while increasing. For a more precise regulation and higher sensibility, the use of a regulator with a pressure range as close as possible to the regulated pressure is recommended.

### Technical characteristics

- **Connections**: G 1/8" - G 1/4"
- **Max. inlet pressure**: 13 bar - 1.3 Mpa
- **Working temperature**: -5°C ÷ +50°C
- **Weight with Technopolymer threads**: gr. 518
- **Weight with threaded inserts**: gr. 558
- **Pressure range**: 0-2 bar / 0-4 bar
- **0-8 bar / 0-12 bar**
- **Filter pore size**: 5 µm - 20 µm - 50 µm
- **Bowl capacity**: 18 cm³
- **Indicative oil drip rate**: 1 drop every 300/600 Nl
- **Oil type**: FD22 - HG32
- **Assembly positions**: Vertical
- **Max. fitting torque**
- (with Technopolymer threads): G1/4" = 9 Nm
- (with threaded inserts): G1/4" = 15 Nm
- **Min. operational flow at 6,3 bar**: 40 Nl/min.

### Ordering code

- **VERSION**
- **N = Metal inserts**
- **T = Technopolymer thread**
- **CONNECTIONS**
- **A = G1/8" (only for insert versions)**
- **B = G1/4"**
- **FILTER PORE SIZE**
- **ADJUSTING RANGE**
- **C = 5 µm / 0-8 bar**
- **D = 5 µm / 0-12 bar**
- **G = 20 µm / 0-8 bar**
- **H = 20 µm / 0-12 bar**
- **N = 50 µm / 0-8 bar**
- **P = 50 µm / 0-12 bar**

---

### Flow rate curves

**Inlet pressure 7 bar**
Adjusting range 0-8 bar

**Flow rate curves**

**Downstream pressure (bar)**

<table>
<thead>
<tr>
<th>Flow (Nl/min)</th>
<th>0</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
<td>8</td>
</tr>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
<td>8</td>
<td>9</td>
</tr>
<tr>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
<td>8</td>
<td>9</td>
<td>10</td>
</tr>
</tbody>
</table>

**Adjustment characteristics**

**Downstream pressure (bar)**

**Flow Q=34 Nl/min**

**Flow Q=22 Nl/min**

**Flow Q=15 Nl/min**

---

| **Example** | GT171BVKG: size 1 combined group comprising Shut-off valve, Filter, Regulator and Lubricator Technopolymer threads, G1/4" connections 0 to 8 bar adjusting range and 20 µm filter pore size | **Version** | G1/8" - G 1/4"
|-------------|---------------------------------------------------------------|------------|-----------------
| **Connections** | G 1/8" - G 1/4" | **Version** | G1/4"**
| **Max. inlet pressure** | 13 bar - 1.3 Mpa | **Max. inlet pressure** | 13 bar - 1.3 Mpa
| **Working temperature** | -5°C ÷ +50°C | **Working temperature** | -5°C ÷ +50°C
| **Weight with Technopolymer threads** | gr. 518 | **Weight with Technopolymer threads** | gr. 518
| **Weight with threaded inserts** | gr. 558 | **Weight with threaded inserts** | gr. 558
| **Pressure range** | 0-2 bar / 0-4 bar | **Pressure range** | 0-2 bar / 0-4 bar
| **0-8 bar / 0-12 bar** | 0-8 bar / 0-12 bar | **0-8 bar / 0-12 bar** | 0-8 bar / 0-12 bar
| **Filter pore size** | 5 µm - 20 µm - 50 µm | **Filter pore size** | 5 µm - 20 µm - 50 µm
| **Bowl capacity** | 18 cm³ | **Bowl capacity** | 18 cm³
| **Indicative oil drip rate** | 1 drop every 300/600 Nl | **Indicative oil drip rate** | 1 drop every 300/600 Nl
| **Oil type** | FD22 - HG32 | **Oil type** | FD22 - HG32
| **Assembly positions** | Vertical | **Assembly positions** | Vertical
| **Max. fitting torque** | G1/4" = 9 Nm | **Max. fitting torque** | G1/4" = 9 Nm
| (with Technopolymer threads) | G1/4" = 9 Nm | (with threaded inserts) | G1/4" = 15 Nm
| **Min. operational flow at 6,3 bar** | 40 Nl/min. | **Min. operational flow at 6,3 bar** | 40 Nl/min.
Operational characteristics

| Connections | G 1/8" - G 1/4" |
| Max. inlet pressure | 13 bar - 13 Mpa |
| Working temperature | -5°C + 50°C |
| Weight with Technopolymer threads | gr. 510 |
| Weight with threaded inserts | gr. 540 |
| Pressure range | 0-2 bar / 0-4 bar |
| | 0-8 bar / 0-12 bar |
| Filter pore size | 5 µm - 20 µm - 50 µm |
| Bowl capacity | 18 cm³ |
| Indicative oil drip rate | 1 drop every 300/600 Nl |
| Oil type | FD22 - HG32 |
| Bowl capacity | 36 cm³ |
| Assembly positions | Vertical |
| Max. fitting torque (with Technopolymer threads) | G1/4" = 9 Nm |
| Max. fitting torque (with threaded inserts) | G1/8" = 15 Nm |
| G1/4" = 15 Nm |
| Min. operational flow at 6.3 bar | 40 Nl/min. |

Technical characteristics

| Ordering code |
| G0171BVNG |

Example: GT171BVNG - size 1 combined group comprising Shut-off valve, Filter-regulator, Air intake and Lubricator, Technopolymer threads, G1/4" connections 0 to 8 bar adjusting range and 20 µm filter pore size.

The pressure must be always regulating while increasing. For a more precise regulation and higher sensibility, the use of a regulator with a pressure range as close as possible to the regulated pressure is recommended.
Series Airplus
Size 1
Air service units
Service unit assembled (VL + EM + PP + L)

Example: GT171BVRG : size 1 combined group comprising Shut-off valve, Filter-regulator, Pressure switch and Lubricator Technopolymer threads, G1/4” connections adjusting range 0 to 8 bar and 20 µm filter pore size

Operational characteristics
Combined group comprising manual shut-off valve, Filter-regulator with built in manometer, Pressure switch and Lubricator, assembled with two (Y) type coupling kits for panel mounting and one (X) type coupling kit. Built in pressure gauge 0 to 12 bar range

Note
The pressure must be always regulating while increasing. For a more precise regulation and higher sensibility, the use of a regulator with a pressure range as close as possible to the regulated pressure is recommended.

Technical characteristics
Connections
Max. inlet pressure
Working temperature
Weight with Technopolymer threads
Weight with threaded inserts
Pressure range
Filter pore size
Bowl capacity
Indicative oil drip rate
Oil type
Bowl capacity
Assembly positions
Max. fitting torque
Min. operational flow at 6.3 bar

Ordering code
VERSION
N = Metal inserts
T = Technopolymer thread
CONNECTIONS
A = G1/8” (only for insert versions)
B = G1/4”
FILTER PORE SIZE
ADJUSTING RANGE
C = 5 µm / 0-8 bar
D = 5 µm / 0-12 bar
G = 20 µm / 0-8 bar
H = 20 µm / 0-12 bar
N = 50 µm / 0-8 bar
P = 50 µm / 0-12 bar
Air service units  
Service unit assembled (VL + EM + L + VE + AP)

Example: GT171BVHSGB9 : size 1 combined group comprising shut-off valve, Filter-regulator, Lubricator, Electric shut-off valve Progressive start-up valve Technopolymer threads, G1/4" connections 0 to 8 bar adjusting range and 20 µm filter pore size

**Operational characteristics**

Combined group comprising manual shut-off valve, Filter - regulator with built in manometer, Lubricator, Electric shut- off valve and Progressive start-up valve assembled with two (Y) type coupling kits for panel mounting and two (X) type coupling kits. Built in gauge 0 to 12 bar as standard

**Note**

The pressure must be always regulating while increasing. For a more precise regulation and higher sensibility, the use of a regulator with a pressure range as close as possible to the regulated pressure is recommended.

**Flow rate curves**

- Flow rate curves
  - Inlet pressure 7 bar
  - Adjusting range 0-6 bar

**Adjustment characteristics**

- Flow Q=34 Nl/min
- Flow Q=22 Nl/min
- Flow Q=15 Nl/min

**Inlet pressure** 7 bar

**Graph**

- Flow rate curves
  - Inlet pressure 7 bar
  - Adjusting range 0-6 bar

**Technical characteristics**

<table>
<thead>
<tr>
<th>Connections</th>
<th>G 1/8&quot; - G 1/4&quot;</th>
</tr>
</thead>
<tbody>
<tr>
<td>Max. inlet pressure</td>
<td>13 bar - 1.3 Mpa</td>
</tr>
<tr>
<td>Working temperature</td>
<td>-5°C + 50°C</td>
</tr>
<tr>
<td>Weight with Technopolymer threads</td>
<td>gr. 670</td>
</tr>
<tr>
<td>Weight with threaded inserts</td>
<td>gr. 720</td>
</tr>
<tr>
<td>Pressure range</td>
<td>0-2 bar / 0-4 bar</td>
</tr>
<tr>
<td>0-8 bar / 0-12 bar</td>
<td></td>
</tr>
<tr>
<td>Filter pore size</td>
<td>5 µm - 20 µm - 50 µm</td>
</tr>
<tr>
<td>Bowl capacity</td>
<td>18 cm³</td>
</tr>
<tr>
<td>Indicative oil drip rate</td>
<td>1 drop every 300-600 Nl</td>
</tr>
<tr>
<td>Oil type</td>
<td>FD22 - HG32</td>
</tr>
<tr>
<td>Bowl capacity</td>
<td>36 cm³</td>
</tr>
<tr>
<td>Assembly positions</td>
<td>Vertical</td>
</tr>
<tr>
<td>Max. fitting torque (with Technopolymer threads)</td>
<td>G1/4&quot; = 9 Nm</td>
</tr>
<tr>
<td>Max. fitting torque (with threaded inserts)</td>
<td>G1/8&quot; = 15 Nm</td>
</tr>
<tr>
<td>Min. operational flow at 6,3 bar</td>
<td>40 Nl/min.</td>
</tr>
</tbody>
</table>

**Ordering code**

- **CONNECTIONS**
  - T = Technopolymer thread
  - A = G1/8" (only for insert versions)
  - B = G1/4" |
  - **VERSI0N**
  - N = Metal inserts
  - **CONNECTIONS**
  - **FILTER PORE SIZE**
  - C = 5 µm / 8/16 bar
  - D = 5 µm / 0-12 bar
  - G = 20 µm / 0-8 bar
  - H = 20 µm / 0-12 bar
  - N = 50 µm / 0-8 bar
  - P = 50 µm / 0-12 bar
  - **COIL VOLTAGE**
  - A4 = 12 V DC
  - A5 = 24 V DC
  - A6 = 24 V AC (50-60 Hz)
  - A7 = 110 V AC (50-60 Hz)
  - A8 = 220 V AC (50-60 Hz)
  - A9 = 24 V DC (1 Watt)
  - A4 = 12 V DC
  - A5 = 24 V DC
  - A6 = 24 V AC (50-60 Hz)
  - A7 = 110 V AC (50-60 Hz)
  - A8 = 220 V AC (50-60 Hz)
  - A9 = 24 V DC (1 Watt)

**Series Airplus**  
Size 1

**Example:** GT171BVHSGB9 - size 1 combined group comprising Shut-off valve, Filter-regulator, Lubricator, Electric shut-off valve Progressive start-up valve Technopolymer threads, G1/4" connections 0 to 8 bar adjusting range and 20 µm filter pore size.
### Operational characteristics

Combined group comprising Electric shut-off valve and Progressive start-up valve assembled with a (Y) type coupling kit for panel mounting.

<table>
<thead>
<tr>
<th>Connections</th>
<th>G 1/8&quot; - G 1/4&quot;</th>
</tr>
</thead>
<tbody>
<tr>
<td>Max. inlet pressure</td>
<td>10 bar - 1 Mpa</td>
</tr>
<tr>
<td>Min. inlet pressure</td>
<td>2.5 bar - 0.25 Mpa</td>
</tr>
<tr>
<td>Working temperature</td>
<td>-5°C ÷ +50°C</td>
</tr>
<tr>
<td>Weight with Technopolymer threads</td>
<td>gr. 218</td>
</tr>
<tr>
<td>Weight with threaded inserts</td>
<td>gr. 238</td>
</tr>
<tr>
<td>Assembly positions</td>
<td>Indifferent</td>
</tr>
<tr>
<td>Max. fitting torque (with Technopolymer threads)</td>
<td>G1/4&quot; = 9 Nm</td>
</tr>
<tr>
<td>Max. fitting torque (with threaded inserts)</td>
<td>G1/8&quot; = 15 Nm</td>
</tr>
</tbody>
</table>

**Operational characteristics**

- Flow at 6 bar with $\Delta p = 1$ | 1200 Nl/min.

### Technical characteristics

<table>
<thead>
<tr>
<th>Ordering code</th>
<th>GT171BSB2</th>
</tr>
</thead>
<tbody>
<tr>
<td>VERSION</td>
<td>N = Metal inserts</td>
</tr>
<tr>
<td>CONN</td>
<td>T = Technopolymer thread</td>
</tr>
<tr>
<td>CONNECTIONS</td>
<td>A = G1/8&quot; (only for insert versions)</td>
</tr>
<tr>
<td></td>
<td>B = G1/4&quot;</td>
</tr>
<tr>
<td>15 mm COIL VOLTAGE</td>
<td>A4 = 12 V DC</td>
</tr>
<tr>
<td></td>
<td>A5 = 24 V DC</td>
</tr>
<tr>
<td></td>
<td>A6 = 24 V AC (50-60 Hz)</td>
</tr>
<tr>
<td></td>
<td>A7 = 110 V AC (50-60 Hz)</td>
</tr>
<tr>
<td></td>
<td>A8 = 220 V AC (50-60 Hz)</td>
</tr>
<tr>
<td></td>
<td>A9 = 24 V DC (1 Watt)</td>
</tr>
<tr>
<td>22 mm COIL VOLTAGE</td>
<td>B2 = Without coil M2 mechanic</td>
</tr>
<tr>
<td></td>
<td>B4 = 12 V DC</td>
</tr>
<tr>
<td></td>
<td>B5 = 24 V DC</td>
</tr>
<tr>
<td></td>
<td>B6 = 24 V AC (50-60 Hz)</td>
</tr>
<tr>
<td></td>
<td>B7 = 110 V AC (50-60 Hz)</td>
</tr>
<tr>
<td></td>
<td>B8 = 220 V AC (50-60 Hz)</td>
</tr>
<tr>
<td></td>
<td>B9 = 24 V DC (2 Watt)</td>
</tr>
<tr>
<td>30 mm COIL VOLTAGE</td>
<td>C2 = Without coil M1 mechanic</td>
</tr>
<tr>
<td></td>
<td>C5 = 24 V DC</td>
</tr>
<tr>
<td></td>
<td>C6 = 24 V AC (50-60 Hz)</td>
</tr>
<tr>
<td></td>
<td>C7 = 110 V AC (50-60 Hz)</td>
</tr>
<tr>
<td></td>
<td>C8 = 230 V AC (50-60 Hz)</td>
</tr>
<tr>
<td></td>
<td>C9 = 24 V DC (2 Watt)</td>
</tr>
</tbody>
</table>
Air service units
Service unit assembled (VL + F + RM + L + VE + AP)

Example: GT171BVKSG9 : size 1 combined group comprising Shut-off valve, Filter, Regulator, Lubricator, Electrical shut-off valve and Progressive start-up valve Technopolymer threads, G1/4" connections 0 to 8 bar adjusting range 20 µm filter pore size and 24V DC(2W) coil

Operational characteristics
Combined group comprising manual shut-off valve, Filter, Regulator with built in manometer, Lubricator, Electric shut-off valve and Progressive start-up valve assembled with two (Y) type coupling kits for panel mounting and three (X) type coupling kits. Built in pressure gauge 0 to 12 bar range

Note
The pressure must be always regulating while increasing. For a more precise regulation and higher sensibility, the use of a regulator with a pressure range as close as possible to the regulated pressure is recommended.

Technical characteristics
Connections
G 1/8" - G 1/4"
Max. inlet pressure
13 bar - 1,3 Mpa
Working temperature
-5°C + 50°C
Weight with Technopolymer threads
gr. 742
Weight with threaded inserts
gr. 802
Pressure range
0-2 bar / 0-4 bar
0-8 bar / 0-12 bar
Filter pore size
5 µm - 20 µm - 50 µm
Bowl capacity
18 cm³
Indicative oil drip rate
1 drop every 300/600 Nl
Oil type
FD22 - HG32
Bowl capacity
36 cm³
Assembly positions
Vertical
Max. fitting torque
G1/4" = 9 Nm
(with Technopolymer threads)
Max. fitting torque
G1/8" = 15 Nm
(with threaded inserts)
Min. operational flow at 6,3 bar
40 Nl/min.

Ordering code

Series Airplus
Size 1

33
Series Airplus
Size 1
Air service units
Service unit assembled (VL + EM + PA + L + VE + AP)

G1/4” connections 0 to 8 bar adjusting range, 20 µm filter pore size and 24V DC(2W) coil.

Operational characteristics
Combined group comprising manual shut-off valve, Filter - regulator with built in manometer, Air intake, Lubricator, Electric shut-off valve and Progressive start-up valve assembled with two (Y) type coupling kits for panel mounting and three (X) type coupling kits.
Built in pressure gauge 0 to 12 bar range.

Note
The pressure must be always regulating while increasing. For a more precise regulation and higher sensibility, the use of a regulator with a pressure range as close as possible to the regulated pressure is recommended.

---

Technical characteristics

| Connections | G 1/8” - G 1/4” |
| Max. inlet pressure | 13 bar - 1.3 Mpa |
| Working temperature | -5°C to +50°C |
| Weight with Technopolymer threads | gr. 734 |
| Weight with threaded inserts | gr. 784 |
| Pressure range | 0-2 bar / 0-4 bar |
| | 0-8 bar / 0-12 bar |
| Filter pore size | 5 µm - 20 µm - 50 µm |
| Bowl capacity | 18 cm³ |
| Indicative oil drip rate | 1 drop every 300/600 Nl |
| Oil type | FD22 - HG32 |
| Bowl capacity | 36 cm³ |
| Assembly positions | Vertical |
| Max. fitting torque (with Technopolymer threads) | G1/4” = 9 Nm |
| Max. fitting torque (with threaded inserts) | G1/8” = 15 Nm |
| G1/4” = 15 Nm |
| Min. operational flow at 6,3 bar | 40 Nl/min. |

---

Ordering code

| VERSION | 1 N = Metal inserts |
| FILTER PORE SIZE | 2 T = Technopolymer thread |
| ADJUSTING RANGE | 3 CONNECTIONS |
| FILTER VOLTAGE | 4 A = G1/8” (only for insert versions) |
| 5 B = G1/4” |
| 6 15 mm COIL VOLTAGE |
| 7 30 mm COIL VOLTAGE |
| 8 36 mm COIL VOLTAGE |

---

| CONNECTIONS |
| 1 A4 = 12 V DC |
| 2 A5 = 24 V DC |
| 3 A6 = 24 V AC (50-60 Hz) |
| 4 A7 = 110 V AC (50-60 Hz) |
| 5 A8 = 220 V AC (50-60 Hz) |
| 6 A9 = 24 V DC (1 Watt) |

---

| CONNECTIONS |
| 1 B2 = Without coil |
| 2 B3 = M1 mechanic |
| 3 B4 = 12 V DC |
| 4 B5 = 24 V DC |
| 5 B6 = 24 V AC (50-60 Hz) |
| 6 B7 = 110 V AC (50-60 Hz) |
| 7 B8 = 220 V AC (50-60 Hz) |
| 8 B9 = 24 V DC (2 Watt) |

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Flow rate curves

Adjustment range 0-8 bar

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Flow rate curves

Adjustment range 0-12 bar

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Flow rate curves

Adjustment range 0-2 bar / 0-4 bar

---

Flow rate curves

Adjustment range 0-8 bar / 0-12 bar

---

Flow rate curves

Adjustment range 0-2 bar / 0-4 bar

---

Flow rate curves

Adjustment range 0-8 bar / 0-12 bar

---

Flow rate curves

Adjustment range 0-2 bar / 0-4 bar
Operational characteristics

Combined group comprising manual shut-off valve, Filter - regulator with built in manometer, Pressure switch, Lubricator, Electric shut-off valve and Progressive start-up valve assembled with two (Y) type coupling kits for panel mounting and three (X) type coupling kits.

Built in pressure gauge 0 to 12 bar range

Note

The pressure must be always regulating while increasing. For a more precise regulation and higher sensibility, the use of a regulator with a pressure range as close as possible to the regulated pressure is recommended.

Technical characteristics

Connections

- G 1/8" - G 1/4"
- Filter pore size: 5 µm - 20 µm - 50 µm

Max. inlet pressure: 13 bar - 1.3 Mpa

Working temperature: -5°C ÷ +50°C

Pressure range:
- 0-2 bar / 0-4 bar
- 0-8 bar / 0-12 bar

The pressure must be always regulating while increasing. For a more precise regulation and higher sensibility, the use of a regulator with a pressure range as close as possible to the regulated pressure is recommended.

Ordering code

Example: GT171BVRSGB9 - size 1 combined group comprising Shut-off valve, Filter-regulator, Pressure switch, Lubricator, Electrical shut-off valve and Progressive start-up valve

Technopolymer threads, G1/4" connections 0 to 8 bar adjusting range, 20 µm filter pore size and 24V DC(2W) coil

Connections

- A = G1/8" (only for insert versions)
- B = G1/4"

Max. fitting torque
- G1/4" = 9 Nm
- G1/8" = 15 Nm

Min. operational flow at 6,3 bar: 40 Nl/min.

Example: GT171GVRSGB9: size 1 combined group comprising Shut-off valve, Filter-regulator, Pressure switch, Lubricator, Electrical shut-off valve and Progressive start-up valve

Technopolymer threads, G1/4" connections 0 to 8 bar adjusting range, 20 µm filter pore size and 24V DC(2W) coil

Connections

- A = G1/8" (only for insert versions)
- B = G1/4"

Max. fitting torque
- G1/4" = 9 Nm
- G1/8" = 15 Nm

Min. operational flow at 6,3 bar: 40 Nl/min.
Construction and working characteristics

The new FRL units AIRPLUS series represents the evolution of the well known and consolidated 1700 series. The main features are increased performances, reliability, easy and fast assembly and the introduction of the latest technical features.

With the exception of the air intake module and the pressure switch module all elements are available in two configurations: with technopolimer connections (IN and OUT), (T series), or with metal threaded inserts, (N series).

Bowls made of transparent polycarbonate (PC) are fitted with a bowl protection guard which is assembled on the body via a quick coupling mechanism provided with a safety button.

The filter, available with three filtration grades (5µm, 20µm and 50µm) is fitted as standard with a drain mechanism which can be operated manually or semi-automatically. On request is available the auto-drain mechanism.

The regulator is based on the rolling diaphragm technology with low hysteresis and the system is balanced. The unit can be fitted with integrated flush mounting pressure gauge (0 to 12 bar range).

4 pressure ranges are available going from 0 to 12 bar and the regulating knob can be blocked in position simply by pressing it down. A dedicated version is available for battery mounting, up to a maximum of 6 units.

The lubricator is based on the Venturi principle and the oil quantity is regulated via the adjusting screw positioned don the transparent polycarbonate (PC) regulating dome which also ensure clear visibility of the oil flow and regulation.

The oil suction pipe is fitted as standard with a sintered filter which ensures that any contaminant that should be present in the oil will reach the down stream circuit.

The soft start valve is used to slowly and progressively pressurize the down stream circuit avoiding sudden pressure surges which could be dangerous for the devices fitted on the down stream circuit.

The filling time can be easily adjusted via a built in flow regulator. The full flow rate is allowed only once the down stream pressure has reached 50% of the value of the inlet pressure.

The pressure switch module which can be set between 2 and 10 bar and the air intake module complete the range.

Instruction for installation and operation

The FRL unit must be installed as close as possible to the application.

The air flow direction must follow the directions indicated on the single units in correspondence of the threaded connections. (IN and OUT)

Units provided with bowl must be mounted vertically with the bowl facing down.

Single units or groups can be panel mounted via the Y type flanges, regulators and filter-regulators can be mounted via the 90° zinc plated steel bracket. In order to mount the 90° bracket it is necessary to remove the regulating knob and then the locking ring before positioning the bracket.

All units must be operated according to the specified pressure and temperature ranges; fittings must be mounted without exciding the maximum torque allowed.

Ensure that the units cover plates are in position before pressure is applied. The cover plates are needed to lock in position the top part of the unit.

The condense level in filter and filter-regulators bowls must never exceed the maximum level indicated on the bowls. With manual or semi automatic drain the condense can be discharged via a 6/4mm tube directly connected to the drain tap.

On the pressure regulator the pressure value must always set while pressure is rising and ideally the unit pressure range should be chosen based on the pressure value to be regulated.

Lubricators must be filled with class FD22 and HG32 oils. Ensure, both on the inlet and on the outlet, that the flow rate is above the minimum flow rate required to operate the unit. Below this value the units does not operate.

The oil quantity can be regulated via the regulating screw on the transparent polycarbonate dome through which it is also clearly visible the oil flow. A drop every 300-600 litres should be allowed.

The oil suction pipe is fitted as standard with a sintered filter which ensures that any contaminant that should be present in the oil will reach the down stream circuit.

The new FRL units AIRPLUS series represents the evolution of the well known and consolidated 1700 series.
Maintenance

For any maintenance which requires the removal of the top plugs/supports from the body it is necessary to preventively remove the sides cover plates. If the top plugs/supports are removed with the sides plates still in their position the unit could be permanently damaged.

Bowls, plugs and supports are assembled with a bayonet type mechanism. In order to remove them rotate anti-clockwise until the mechanical stop is reached and then remove from the body (for the bowls firstly press down the green safety button).

Bowls and transparent parts can be cleaned with water and neutral soap. Do not use solvents or alcohol.

Filtering elements (from filters and filter regulators) made of HDPE can be regenerated by washing and blowing them. In order to remove them it is necessary to remove the bowl unscrew the filter element and replace it with a new one or clean it. The oil can be re-filled while the pneumatic circuit is pressurized thanks to the exhaust valve which is built in the refill plug and allows for the bowl to be depressurized. In order to be able to un-mount the bowl it is necessary unscrew the refill plug positioned near the oil dome, once this operation has been carried out it is possible to remove the bowl to re-fill it or to refill from the refill plug. Refilling directly the bowl is suggested.

Should the pressure regulator not perform properly or should present a constant leakage from the relieving replaced the diaphragm by unloading completely the regulating spring before removing the regulation support.

Any other maintenance operation, in consideration of the complexity of the assembly, and the need of a thorough test according to the Pneumax spa specification, should be carried out by the manufacturer.

Fittings maximum recommended torque applicable

<table>
<thead>
<tr>
<th>THREAD</th>
<th>Technopolymer version (T)</th>
<th>Metal version (N)</th>
</tr>
</thead>
<tbody>
<tr>
<td>G1/8&quot;</td>
<td>4 N/m</td>
<td>20 N/m</td>
</tr>
<tr>
<td>G1/4&quot;</td>
<td>9 N/m</td>
<td>25 N/m</td>
</tr>
<tr>
<td>G3/8&quot;</td>
<td>16 N/m</td>
<td></td>
</tr>
<tr>
<td>G1/2&quot;</td>
<td>22 N/m</td>
<td>30 N/m</td>
</tr>
</tbody>
</table>
**Air service units**

**Filter (F)**

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**Operational characteristics**

- Double filtering action: air flow centrifugation and filter element
- Filtering element made of HDPE (high density polyethylene) available in three different filtration grades (5µm, 20µm e 50µm) can be regenerated by washing it or replaced.
- Transparent bowl made off polycarbonate with bowl protection guard.
- Bowl assembly via bayonet type quick coupling mechanism with safety button.
- Semi-automatic drain mounted as standard; automatic drain upon request.

---

**Technical characteristics**

<table>
<thead>
<tr>
<th>Connections</th>
<th>G 1/4&quot; - G 3/8&quot;</th>
</tr>
</thead>
<tbody>
<tr>
<td>Max. inlet pressure</td>
<td>13 bar - 1,3 Mpa</td>
</tr>
<tr>
<td>Working temperature</td>
<td>-5°C ÷ +50°C</td>
</tr>
<tr>
<td>Weight with Technopolymer threads</td>
<td>gr. 220</td>
</tr>
<tr>
<td>Weight with threaded inserts</td>
<td>gr. 230</td>
</tr>
<tr>
<td>Filter pore size</td>
<td>5 µm - 20 µm - 50 µm</td>
</tr>
<tr>
<td>Bowl capacity</td>
<td>34 cm³</td>
</tr>
<tr>
<td>Assembly positions</td>
<td>Vertical</td>
</tr>
<tr>
<td>Max. fitting torque</td>
<td>G3/8&quot; = 16 Nm</td>
</tr>
<tr>
<td>(with Technopolymer threads)</td>
<td></td>
</tr>
<tr>
<td>Max. fitting torque</td>
<td>G1/4&quot; = 20 Nm</td>
</tr>
<tr>
<td>(with threaded inserts)</td>
<td>G3/8&quot; = 25 Nm</td>
</tr>
</tbody>
</table>

---

**Ordering code**

Example: T172BFB : size 2, Filter with Technopolymer threads, G3/8" connections, 20 µm filter pore size

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**Flow rate curves**

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*Example: T172BFB : size 2, Filter with Technopolymer threads, G3/8" connections, 20 µm filter pore size*
Operational characteristics

- Coalescing filter element with filtration grade of 0.01µm
- Transparent bowl made off polycarbonate with bowl protection guard.
- Bowl assembly via bayonet type quick coupling mechanism with safety button.
- Semi-automatic drain mounted as standard; automatic drain upon request.

Note
In order to ensure a better grade of filtration it is recommended to use a 5 µm filter before the coalescing filter.

Technical characteristics

- Connections: G 1/4" - G 3/8"
- Max. inlet pressure: 13 bar - 1.3 Mpa
- Working temperature: -5°C ÷ +50°C
- Weight with Technopolymer threads: gr. 225
- Weight with threaded inserts: gr. 235
- Filter efficiency with 0.01 µm particle: 99.97%
- Bowl capacity: 34 cm³
- Assembly positions: Vertical
- Max. fitting torque (with Technopolymer threads): G3/8" = 16 Nm
- Max. fitting torque (with threaded inserts): G1/4" = 20 Nm

Ordering code

Example: T172BDA : Coalescing size 2; Filter with Technopolymer threads, G3/8" connections, filter efficiency 99.97%
Series Airplus
Size 2

Air service units
Regulator (R)

Example: T172BRC : size 2, Regulator with Technopolymer threads, G3/8" connections, 0 to 8 bar adjusting range

Operational characteristics
- Diaphragm pressure regulator with relieving.
- Low hysteresis rolling diaphragm.
- Balanced system.
- Available in four pressure ranges up to 12 bar.
- Operating knob can be locked in position by pressing it down once the desired P2 (regulated pressure) pressure value is achieved.
- Fitted with panel mounting locking ring.

Note
The pressure must be always regulating while increasing. For a more precise regulation and higher sensibility, the use of a regulator with a pressure range as close as possible to the regulated pressure is recommended.

Technical characteristics

| Connections | G 1/4" - G 3/8" |
| Max. inlet pressure | 13 bar - 1.3 Mpa |
| Working temperature | -5°C + +50°C |
| Pressure gauge connections | G 1/8" |
| Weight with Technopolymer threads | gr. 300 |
| Weight with threaded inserts | gr. 310 |
| Pressure range | 0-2 bar / 0-4 bar |
| Assembly positions | Indifferent |
| Max. fitting torque (with Technopolymer threads) | G1/8" = 4 Nm |
| G3/8" = 16 Nm |
| Max. fitting torque (with threaded inserts) | G1/4" = 20 Nm |
| G3/8" = 25 Nm |

Ordering code

Example: T172BRC : size 2, Regulator with Technopolymer threads, G3/8" connections, 0 to 8 bar adjusting range

Connections
- N = Metal inserts
- T = Technopolymer thread

CONNECTIONS
- A = G1/4" (only for insert versions)
- B = G3/8"

ADJUSTING RANGE
- A = 0-2 bar
- B = 0-4 bar
- C = 0-8 bar
- D = 0-12 bar

OPTIONS
- F = Controlled relief + improved relieving
- L = no relieving
- R = Improved relieving
**Operational characteristics**

- Diaphragm pressure regulator with relieving.
- Low hysteresis rolling diaphragm.
- Balanced system.
- Available in four pressure ranges up to 12 bar.
- Operating knob can be locked in position by pressing it down once the desired P2 (regulated pressure) pressure value is achieved.
- Fitted with panel mounting locking ring.
- Built in gauge 0-12 bar range as standard.

**Note**

The pressure must be always regulating while increasing. For a more precise regulation and higher sensibility, the use of a regulator with a pressure range as close as possible to the regulated pressure is recommended.
Operational characteristics

- Filter - diaphragm pressure regulator with relieving.
- Low hysteresis rolling diaphragm.
- Balanced system.
- Double filtering action: air flow centrifugation and filter element.
- Filtering element made of HDPE (high density polyethylene) available in three different filtration grades (5µm, 20µm e 50µm) can be regenerated by washing it or replaced.
- Transparent bowl made off polycarbonate with bowl protection guard.
- Bowl assembly via bayonet type quick coupling mechanism with safety button.
- Semi-automatic drain mounted as standard; automatic drain upon request.
- Available in four pressure ranges up to 12 bar.
- Operating knob can be locked in position by pressing it down once the desired P2 (regulated pressure) pressure value is achieved.
- Fitted with panel mounting locking ring.

Note

The pressure must be always regulating while increasing. For a more precise regulation and higher sensibility, the use of a regulator with a pressure range as close as possible to the regulated pressure is recommended.

Technical characteristics

- Connections
- G 1/4" - G 3/8"
- Max. inlet pressure
- 13 bar - 1.3 Mpa
- Working temperature
- -5°C ÷ +50°C
- Pressure gauge connections
- G 1/8"
- Weight with Technopolymer threads
- gr. 390
- Weight with threaded inserts
- gr. 400
- Pressure range
- 0-2 bar / 0-4 bar
- 0-8 bar / 0-12 bar
- Filter pore size
- 5 µm - 20 µm - 50 µm
- Bowl capacity
- 34 cm³
- Assembly positions
- Vertical
- Max. fitting torque
- (with Technopolymer threads)
- G1/8" = 4 Nm
- G3/8" = 16 Nm
- Max. fitting torque
- (with threaded inserts)
- G1/4" = 20 Nm
- G3/8" = 25 Nm

Ordering code

Example : T172BEBC : size 2, Filter-regulator with Technopolymer threads, G3/8" connections, 20 µm filtering pore size, 0 to 8 bar adjusting range
Air service units
Filter-regulator including gauge (EM)

Example: T172BEMBC : size 2, Filter-Regulator including gauge with Technopolymer threads, G3/8” connections, with 20 µm filtering pore size, 0 to 8 bar adjusting range

Operational characteristics
- Filter - diaphragm pressure regulator with relieving.
- Low hysteresis rolling diaphragm.
- Balanced system.
- Double filtering action: air flow centrifugation and filter element.
- Filtering element made of HDPE (high density polyethylene) available in three different filtration grades (5µm, 20µm e 50µm) can be regenerated by washing it or replaced.
- Transparent bowl made of polycarbonate with bowl protection guard.
- Bowl assembly via bayonet type quick coupling mechanism with safety button.
- Semi-automatic drain mounted as standard; automatic drain upon request.
- Available in four pressure ranges up to 12 bar.
- Operating knob can be locked in position by pressing it down once the desired P2 (regulated pressure) pressure value is achieved.
- Fitted with panel mounting locking ring.
- Built in gauge 0-12 bar range as standard.

Note
The pressure must be always regulating while increasing. For a more precise regulation and higher sensibility, the use of a regulator with a pressure range as close as possible to the regulated pressure is recommended.

Technical characteristics
- Connections G 1/4” - G 3/8”
- Max. inlet pressure 13 bar - 1,3 Mpa
- Working temperature -5°C + +50°C
- Weight with Technopolymer threads gr. 400
- Weight with threaded inserts gr. 410
- Pressure range 0-2 bar / 0-4 bar
- 0-8 bar / 0-12 bar
- Filter pore size 5 µm - 20 µm - 50 µm
- Bowl capacity 34 cm³
- Assembly positions Vertical
- Max. fitting torque (with Technopolymer threads) G3/8” = 16 Nm
- Max. fitting torque (with threaded inserts) G1/4” = 20 Nm
G3/8” = 25 Nm

Ordering code
- VERSION
  N = Metal inserts
  T = Technopolymer thread
- CONNECTIONS
  A = G1/4” (only for insert versions)
  B = G3/8”
- FILTER PORE SIZE
  A = 5 µm
  B = 20 µm
  C = 50 µm
- ADJUSTING RANGE
  A = 0-2 bar
  B = 0-4 bar
  C = 0-8 bar
  D = 0-12 bar
- OPTIONS
  Standard(without options)
  S = Automatic drain

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## Air service units

### Series Airplus

**Size 2**

### Lubricator (L)

- **Indicative oil drip rate**: 1 drop every 300/600 NL
- **Oil quantity regulation mechanism and oil quantity visualization dome made of polycarbonate.**
- **Transparent bowl made of polycarbonate with bowl protection guard.**
- **Bowl assembly via bayonet type quick coupling mechanism with safety button.**
- **Oil filling plug**
- **Oil can be refilled with pressurized circuit.**
- **Available with electric min-level sensor N.O. or N.C. with connection for connector.**
- **For electrical connection use connectors type C1-C2-C3 (see sensors chapter in the catalogue).**

### Note

- Install as close as possible to the point of use.
- Do not use alcohol, deterging oils or solvents.

### Operational characteristics

<table>
<thead>
<tr>
<th>Connections</th>
<th>G 1/4&quot; - G 3/8&quot;</th>
</tr>
</thead>
<tbody>
<tr>
<td>Max. inlet pressure</td>
<td>13 bar - 1.3 Mpa</td>
</tr>
<tr>
<td>Working temperature</td>
<td>-5°C + 50°C</td>
</tr>
<tr>
<td>Weight with Technopolymer threads</td>
<td>gr. 210</td>
</tr>
<tr>
<td>Weight with threaded inserts</td>
<td>gr. 220</td>
</tr>
<tr>
<td>Indicative oil drip rate</td>
<td>1 drop every 300/600 NL</td>
</tr>
<tr>
<td>Oil type</td>
<td>FE22 - HG32</td>
</tr>
<tr>
<td>Bowl capacity</td>
<td>70 cm³</td>
</tr>
<tr>
<td>Assembly positions</td>
<td>Vertical</td>
</tr>
<tr>
<td>Max. fitting torque (with Technopolymer threads)</td>
<td>G3/8&quot; = 16 Nm</td>
</tr>
<tr>
<td>Max. fitting torque (with threaded inserts)</td>
<td>G1/4&quot; = 20 Nm, G3/8&quot; = 25 Nm</td>
</tr>
<tr>
<td>Order as close as possible to the point of use.</td>
<td></td>
</tr>
</tbody>
</table>

### Technical characteristics

<table>
<thead>
<tr>
<th>Connection</th>
<th>Max. inlet pressure</th>
<th>Working temperature</th>
<th>Weight with Technopolymer threads</th>
<th>Weight with threaded inserts</th>
<th>Indicative oil drip rate</th>
<th>Oil type</th>
<th>Bowl capacity</th>
<th>Assembly positions</th>
<th>Max. fitting torque (with Technopolymer threads)</th>
<th>Max. fitting torque (with threaded inserts)</th>
</tr>
</thead>
<tbody>
<tr>
<td>G 1/4&quot;</td>
<td>13 bar - 1.3 Mpa</td>
<td>-5°C + 50°C</td>
<td>gr. 210</td>
<td>gr. 220</td>
<td>1 drop every 300/600 NL</td>
<td>FE22</td>
<td>70 cm³</td>
<td>Vertical</td>
<td>G3/8&quot; = 16 Nm</td>
<td>G1/4&quot; = 20 Nm, G3/8&quot; = 25 Nm</td>
</tr>
</tbody>
</table>

### Ordering code

- **VERSION**
  - N = Metal inserts
  - T = Technopolymer thread
- **CONNECTIONS**
  - A = G1/4" (only for insert versions)
  - B = G3/8"
- **OPTIONS**
  - A = Min. Oil level indicator Normally open
  - C = Min. Oil level indicator Normally closed

Example: T172BL : size 2, Lubricator with Technopolymer threads, G3/8” connections
### Operational characteristics

- Manual operated 3 ways poppet valve.
- Double handle action for valve opening: pushing and rotating (clockwise).
- The valve can be closed and the down stream circuit depressurized by rotating anticlockwise the knob.
- Knob lockable with three padlocks.

### Technical characteristics

<table>
<thead>
<tr>
<th>Connections</th>
<th>G 1/4&quot; - G 3/8&quot;</th>
</tr>
</thead>
<tbody>
<tr>
<td>Max. inlet pressure</td>
<td>13 bar - 1.3 Mpa</td>
</tr>
<tr>
<td>Working temperature</td>
<td>-5°C ÷ +50°C</td>
</tr>
<tr>
<td>Weight with Technopolymer threads</td>
<td>gr. 180</td>
</tr>
<tr>
<td>Weight with threaded inserts</td>
<td>gr. 190</td>
</tr>
<tr>
<td>Assembly positions</td>
<td>Indifferent</td>
</tr>
<tr>
<td>Handle opening and closing angle</td>
<td>90°</td>
</tr>
<tr>
<td>Max. fitting torque</td>
<td>(with Technopolymer threads) = 16 Nm</td>
</tr>
<tr>
<td>Max. fitting torque</td>
<td>(with threaded inserts) = 20 Nm</td>
</tr>
<tr>
<td></td>
<td>G3/8&quot; = 25 Nm</td>
</tr>
<tr>
<td>Nominal flow</td>
<td>at 6 bar with Δp=1 = 2200 Nl/min.</td>
</tr>
<tr>
<td>Exhaust nominal flowrate</td>
<td>at 6 bar with Δp=1 = 1500 Nl/min.</td>
</tr>
</tbody>
</table>

### Ordering code

Example: T172BVL : size 2, Shut-off valve with Technopolymer threads, G3/8" connections.
### Operational characteristics

- Solenoid operated 3 ways poppet valve.
- Available also with 15mm solenoid operator.

### Technical characteristics

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Supply and operating connections</td>
<td>G 1/4” - G 3/8”</td>
</tr>
<tr>
<td>Discharge connections</td>
<td>G 1/4”</td>
</tr>
<tr>
<td>Working temperature</td>
<td>-5°C ÷ +50°C</td>
</tr>
<tr>
<td>Weight with Technopolymer threads</td>
<td>gr. 200</td>
</tr>
<tr>
<td>Weight with threaded inserts</td>
<td>gr. 210</td>
</tr>
<tr>
<td>Assembly positions</td>
<td>Indifferent</td>
</tr>
<tr>
<td>Min. Pressure working</td>
<td>2.5 bar</td>
</tr>
<tr>
<td>Max. Pressure working</td>
<td>10 bar</td>
</tr>
<tr>
<td>Max. fitting torque (with Technopolymer threads)</td>
<td>G3/8” = 16 Nm</td>
</tr>
<tr>
<td>Max. fitting torque (with threaded inserts)</td>
<td>G1/4” = 20 Nm</td>
</tr>
<tr>
<td>Nominal flow at 6 bar with Δp=1</td>
<td>2200 Nl/min.</td>
</tr>
<tr>
<td>Exhaust nominal flowrate at 6 bar with Δp=1</td>
<td>1400 Nl/min.</td>
</tr>
</tbody>
</table>

### Ordering code

**T172BVEB2**: Size 2, Electric shut-off valve, with M2 Pilot without coil, Technopolymer threads, G3/8” connections

### Example

- **172CVEA**: VE
- **T172BVEB2**: size 2, Electric shut-off valve, with M2 Pilot without coil, Technopolymer threads, G3/8” connections

### Specifications

- **Coil voltage**
  - A1 = 12 V DC
  - A2 = 24 V DC
  - A3 = 24 V AC (50-60 Hz)
  - A4 = 110 V AC (50-60 Hz)
  - A5 = 220 V AC (50-60 Hz)
  - A6 = 24 V DC (1 Watt)

- **Max. flowrate**
  - G1/4” = 22 mm
  - G3/8” = 30 mm

- **Max. fitting torque**
  - G3/8” = 16 Nm
  - G1/4” = 20 Nm
  - G3/8” = 25 Nm

- **Nominal flow at 6 bar with Δp=1**
  - 2200 Nl/min.
  - 1400 Nl/min.
Air service units  
Progressive start-up valve (AP)  

Series Airplus  
Size 2

Example : T172BAP : size 2, Progressive start-up valve with Technopolymer threads, G3/8” connections

<table>
<thead>
<tr>
<th>Operational characteristics</th>
<th>Technical characteristics</th>
<th>Ordering code</th>
</tr>
</thead>
<tbody>
<tr>
<td>Connections</td>
<td>G 1/4” - G 3/8”</td>
<td></td>
</tr>
<tr>
<td>Max. inlet pressure</td>
<td>13 bar - 1,3 Mpa</td>
<td></td>
</tr>
<tr>
<td>Working temperature</td>
<td>-5°C ÷ +50°C</td>
<td></td>
</tr>
<tr>
<td>Weight with Technopolymer threads</td>
<td>gr. 140</td>
<td></td>
</tr>
<tr>
<td>Weight with threaded inserts</td>
<td>gr. 150</td>
<td></td>
</tr>
<tr>
<td>Max. fitting torque (with Technopolymer threads)</td>
<td>G3/8” = 16 Nm</td>
<td></td>
</tr>
<tr>
<td>Max. fitting torque (with threaded inserts)</td>
<td>G1/4” = 20 Nm</td>
<td></td>
</tr>
<tr>
<td>G3/8” = 25 Nm</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Assembly positions</td>
<td>Indifferent</td>
<td></td>
</tr>
<tr>
<td>Min. pressure working</td>
<td>2,5 bar - 0,25 Mpa</td>
<td></td>
</tr>
<tr>
<td>Nominal flow at 6 bar with Δp=1</td>
<td>2200 Nl/min.</td>
<td></td>
</tr>
<tr>
<td>fully open built in flow regulator Flow rate</td>
<td>200 Nl/min.</td>
<td></td>
</tr>
</tbody>
</table>

Connections

- Down stream circuit filling time regulated via a built in flow regulator.
- Full pressure is allowed once the down stream circuit pressure reaches 50% of the inlet pressure.