

### High Pressure Gas Supply for the HPA-S

In many laboratories the use of pressurized nitrogen tanks located directly beside the instruments are not allowed anymore. They need to be installed in expensive special gas tank protection safes with supply tubings to the HPA-S.

Furthermore customers have asked for the possibility to use existing low pressure argon or nitrogen supply lines in the lab. These laboratories use liquid argon or nitrogen tanks having sufficient inert gas available to be used for the HPA-S, assuming a compressor is used for the pressure build-up.

The operator should be able to choose between spending the money for a gas safe with the corresponding connection system or the needed high pressure compressor using the existing low pressure inert gas supply. In addition the compressor helps to avoid the regular transport of pressure tanks and the costs for the tank rental and filling fee.

Two different compressor modules have been tested to load the HPA-S from a low pressure supply line to a minimum of 100 bar. Both configurations can be used for the same application using nitrogen or argon. The final decision depends on the possibilities and prerequisites available in the lab.

**Warning:** It is not allowed to fill the HPA-S with pressurized air. The high partial oxygen pressure would cause corrosion of the autoclave.

#### Pressurized air driven compressor: Maximator DLE15-1-GG

Completely assembled compressor with an air-control unit.

Outlet pressure:	100 bar
Min. inert gas supply pressure:	7 bar
Min. pressurized air supply:	7 bar
Max. pressurized air supply:	10 bar
Weight:	13 kg
Size LxHxW	45x28x19 cm
Filling time:	2 – 4 min

#### Advantages:

- Automatically stops at maximum working pressure
- Restarts automatically after a pressure drop
- Industrial and robust design; limited maintenance
- Oil free operation

#### Disadvantages:

- High volume air supply needed
- Relatively high minimum inlet pressure





## Product Information

### Electric high pressure compressor: Bauer P100-II-E

Completely assembled electric compressor with an air-control unit.

Min. outlet pressure:	95 bar
Max. outlet pressure:	110 bar
Max. inert gas supply pressure:	0.1 bar
Weight:	46 kg
Size LxHxW	78x42x34 cm
Filling time:	1 – 2 min
Motor:	2.2 kW / 230 V / 50 Hz

#### Advantages:

- Automatically start and stops at working pressure
- Robust design and fast filling
- No need for powerful air supply
- Low pressure inert gas supply sufficient

#### Disadvantages:

- Size and weight
- Noise level
- Regular oil checks needed

#### Conclusions:

The investment needed for a gas tank safe or the two compressors is almost similar. Finally the local prerequisites and preferences will influence the decision. The maintenance free operation of the Maximator compressor is only possible having a sufficient pressurized air supply in the laboratory. The electric Bauer compressor needs no air supply but regular oil checks and the exchange of the filter cartridge from time to time.

Common for both solutions is the avoided transport of heavy tanks and the costs for filling and the rental fee of the tanks.

#### Find your local supplier:

Note: Anton Paar does not sell the compressors, but they are available via the local sales organisations.

Maximator

<http://www.maximator.de/>

Bauer Group

<http://www.baugroup.com/>

#### Needed Specs:

Connection to the HPA-S:

8 mm Swagelok

Minimum pressure and performance:

100 bar in 1 L; filled in 2 to 4 min

