

CHEMICALLY RESISTANT DIAPHRAGM GAS SAMPLING PUMPS

DATA SHEET E 161



N 726 FTE, chemically resistant



N 726 FT.29E, chemically resistant

Concept

The diaphragm gas sampling pumps from KNF are based on a simple principle - an elastic diaphragm, fixed on its edge, moves up and down its central point by means of an eccentric. Thus, the medium is transferred via automatic valves.

The gas-bearing parts of the chemically resistant gas pumps are made of PTFE, so they are able to withstand even highly aggressive gases and vapors. A variety of technical versions, like the N 726 FT.29E with an adjustable flow rate for adapting to the current process conditions expand the range of possible applications.

Several different drive motors are available.

Explosion protection pumps in ATEX see data sheet E 172.

Features

Pure transferring, evacuation and compression of air, gases and vapors

No contamination of the media
due to oil-free operation

Maintenance-free

Chemically resistant models
transferring high aggressive and corrosive gases and vapors

High level of gas tightness:
approx. 6×10^{-3} mbar x l/s

Long product life

Very quiet and little vibration

Cool running motor
even when in constant use

Version with adjustable flow rate

Can operate in any installed position

Areas of use

The diaphragm pumps offer a high level of performance despite their small size, as well as an excellent price performance ratio. They are required especially in the fields of chemistry industry, environmental and production technology.

Beside other applications, pumps are used for gas measurement, for example for sampling gases from the ambient environment, or for exhaust gas and smoke analysis. Easy installation and adaption to a variety of processes.

Performance data

| Type | Delivery (l/min) | Vacuum (mbar absolute) | atm. press. | Pressure (bar g) | Weight (kg) |
|--------------|---------------------|---------------------------|-------------|---------------------|----------------|
| N 726 FTE | 16 | 53 | | 1.5 | 5.5 |
| N 726 FT.29E | 16 | 125 | | 1.5 | 5.5 |

N 726 FTE

Performance data

| Type | Delivery at atm. pressure (l/min) ¹⁾ | Max. operating pressure (bar g) | Ultimate vacuum (mbar abs.) |
|-----------|---|---------------------------------|-----------------------------|
| N 726 FTE | 16 | 1.5 | 53 |

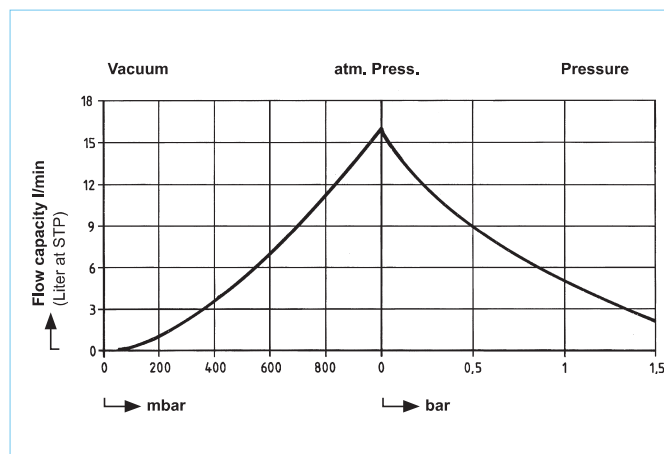
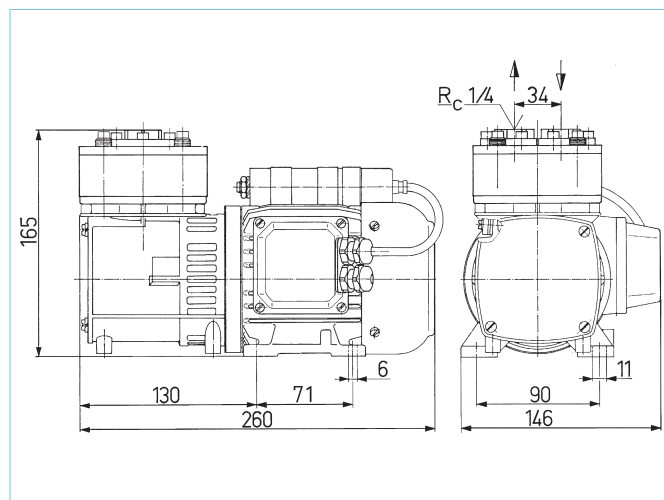
¹⁾ Liter at STP

Motor data

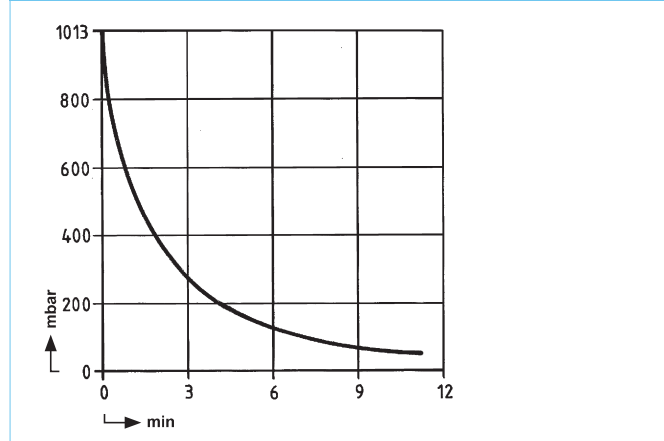
| Protection class | IP 44 | IP 44 |
|--------------------------|-------|------------|
| Voltage (V) | 230 | 3~ 230/400 |
| Frequencies (Hz) | 50 | 50 |
| Power P ₁ (W) | 130 | 120 |
| I _{max} (A) | 1.0 | 0.8 |

Pump material

| Type | Pump head | Diaphragm | Valves |
|-----------|-----------|-------------|--------|
| N 726 FTE | PTFE | PTFE-coated | PTFE |



Pump down time for 20 l receiver



N 726 FT.29E

Version with adjustable flow rate through integral bypass-valve.

Performance data

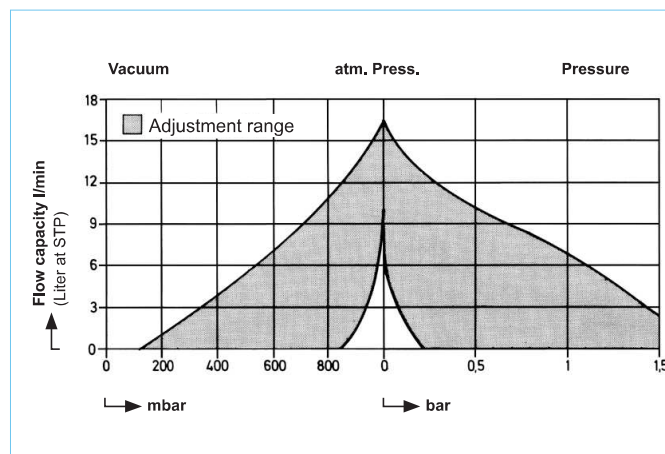
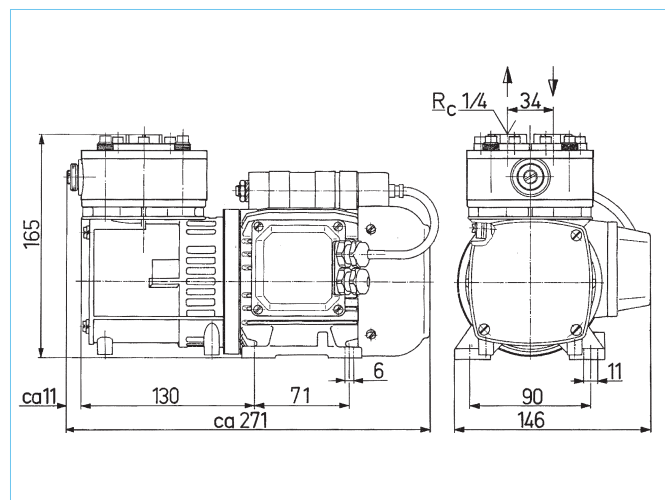
| Type | Delivery at atm. pressure (l/min) ¹⁾ | Max. operating pressure (bar g) | Ultimate vacuum (mbar abs.) |
|--------------|---|---------------------------------|-----------------------------|
| N 726 FT.29E | 6.7 up to 16 | up to 1.5 | up to 125 |

Motor data

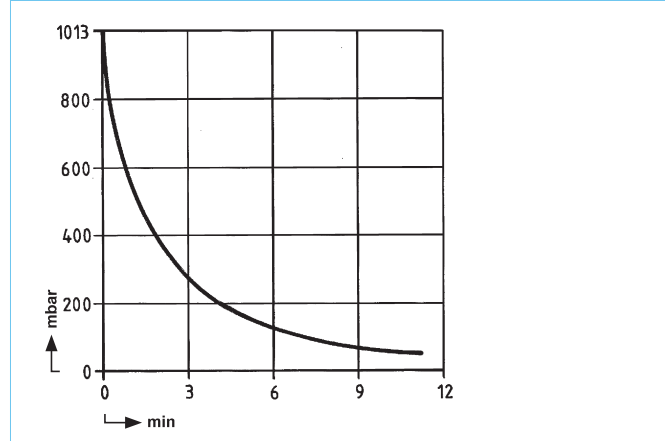
| Protection class | IP 44 | IP 44 |
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Pump material

| Type | Pump head | Diaphragm | Valves |
|--------------|-----------|-------------|--------|
| N 726 FT.29E | PTFE | PTFE-coated | PTFE |

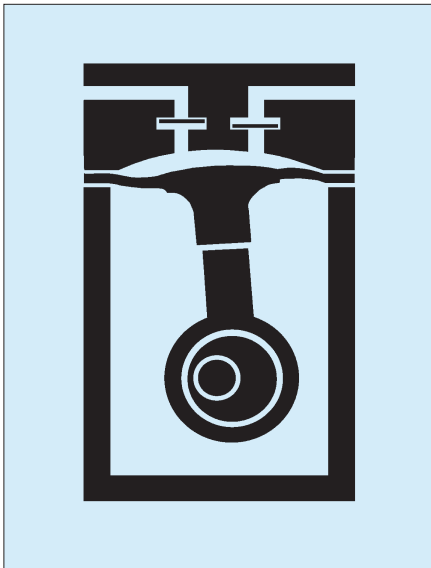


Pump down time for 20 l receiver



Function of KNF diaphragm vacuum pumps and compressors

An elastic diaphragm is moved up and down by an eccentric (see illustration). On the down-stroke it draws the air or gas being handled through the inlet valve. On the up-stroke the diaphragm forces the medium through the exhaust valve and out of the head. The compression chamber is hermetically separated from the drive mechanism by the diaphragm. The pumps transfer, evacuate and compress completely oil-free.



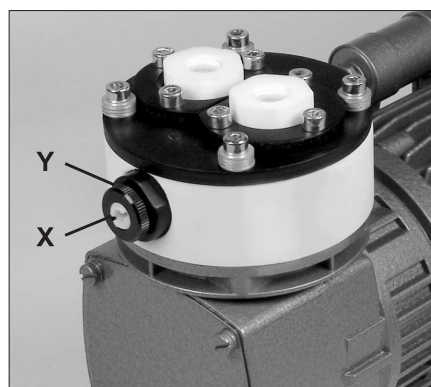
Hints on installation and operation

- Range of use: Transferring air and gases at temperatures between +5 °C and +40 °C.
- Permissible ambient temperature: between +5 °C and +40 °C.
- The standard pumps are not suitable for use in areas where there is a risk of explosion. In these cases there are other products in the KNF program - please ask us for details.
- The pumps are not designed to start against pressure or vacuum; when a pump is switched on the pressure in the suction and pressure lines must be atmospheric. Pumps that start against pressure or vacuum are available on request.
- To prevent the maximum operating pressure being exceeded, restriction or regulation of the air flow should only be carried out in the suction line.
- Components connected to the pump must be designed to withstand the pneumatic performance of the pump.
- Install the pump so that the fan can draw in sufficient cooling air.
- Fit the pump at the highest point in the system, so that condensate cannot collect in the head of the pump.

N 726 FT.29E with integral by-pass valve

This pump can be adjusted to pump from 6.7 to up to 16 liters/minute (at atmospheric pressure and 20 °C), enabling the user to effectively adjust performance to the current process conditions within a system, even while the pump is in operation.

Adjust the pump's performance by loosening the knurled nut Y and then turning the adjustment screw X to the left (to reduce flow) or to the right (to increase flow). Handtighten the knurled nut Y after selecting the desired flow rate.



| Accessories | | |
|----------------------------|-----------|---------------|
| Description | Order No. | Details |
| Hose connector, PVDF | 009111 | for tube ID 8 |
| Tube fitting, PVDF | 009110 | for tube OD 6 |
| Tube fitting, PTFE | 010343 | for tube OD 6 |
| Tube fitting, PTFE (elbow) | 010344 | for tube OD 6 |

KNF Neuberger GmbH Pumps + Systems

Alter Weg 3
D-79112 Freiburg, Germany
Tel. +49 7664 5909 0
Fax +49 7664 5909 99
info@knf.de
www.knf.de