

Agilent Vaclon Plus 20 Pump

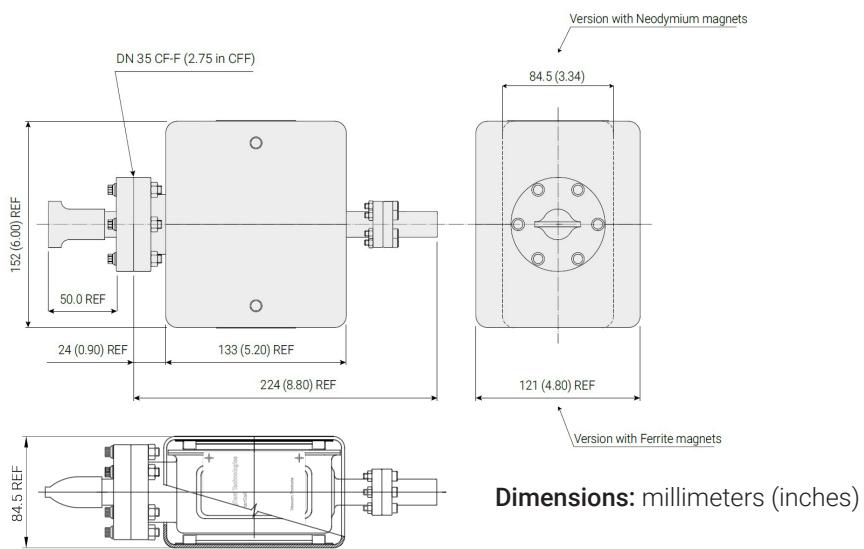


Product description

The Agilent Vaclon Plus 20 pump is a medium-sized 20 L/s ion pump. It is ideal for a wide range of ultrahigh and extreme high vacuum applications for academic and high-energy physics (HEP) research, and equipment used for medical imaging and radiation therapy. This pump is available with a diode element for general use, and StarCell and Noble Diode elements when a gas mixture is being pumped. The patented StarCell element handles high amounts of noble gases and hydrogen and provides the highest speed and capacity for methane, argon, and helium. Customer-selected options such as element type, integral heaters, and high-voltage feedthroughs are available for easy system integration and consistent particle-free UHV pumping performance.

Features and benefits

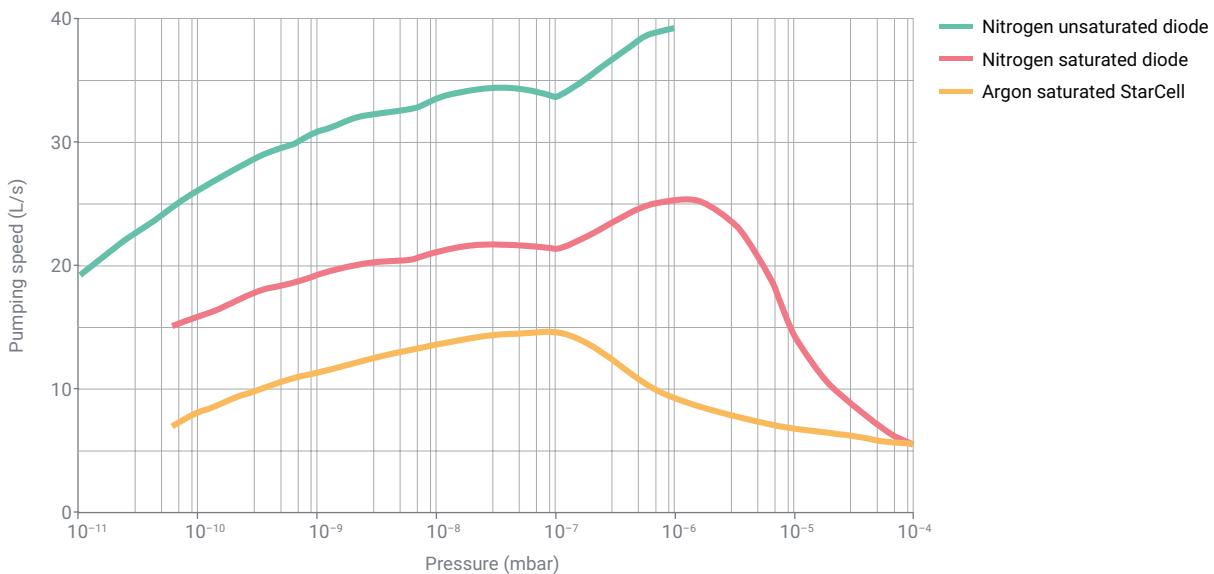
- Select from StarCell, diode, and noble diode elements to achieve the best pumping speed for different gases
- Available with ConFlat 2.75" rotatable or nonrotatable flange and a choice of feedthroughs (Fischer, King, DESY, Varian, SHV 10 kV (Safeconn)) in different orientations
- No moving parts ensures vibration-free operation for sensitive applications
- Low leakage current provides stable vacuum pressure reading
- Low magnetic field minimizes system interference
- Vacuum processed at >400 °C and pinched off under vacuum to ensure cleanliness and vacuum integrity prior to installation
- Customizable with different high voltage feedthroughs, body geometries, additional ports, and pumping cell arrangements, and available with optically shielded baffles, external heaters, and magnetic shielding to meet your needs
- SEM versions available with ultralow leakage current and high stability for minimal electrical interference
- Special testing procedures for your specific requirements can be added



| Vaclon Plus 20 Technical Specifications | | | |
|-------------------------------------------|-------------------------------------------------------------------------------|------------------------------|------------------------------|
| | StarCell | Noble Diode | Diode |
| Nominal Pumping Speed for Nitrogen* | 20 L/s | 22 L/s | 27 L/s |
| Operating Life at 1×10^{-6} mbar | 80,000 hrs | 50,000 hrs | 50,000 hrs |
| Maximum Starting Pressure | $\leq 5 \times 10^{-2}$ mbar | $\leq 1 \times 10^{-3}$ mbar | $\leq 1 \times 10^{-3}$ mbar |
| Ultimate Pressure | Below 10^{-11} | | |
| Inlet Flange | DN 40 CF-F (2.75 in CFF) AISI 304 ESR SST | | |
| Maximum Baking Temperature | Pump without magnets: 450 °C Pump with magnets: 350 °C HV cable: 220 °C | | |
| Weight (With Ferrite Magnets) | Net: 5.4 kg (11.9 lb), shipping 11 kg (24 lb) | | |
| Weight (With Rare-Earth Magnets) | Net: 4.7 kg (10.4 lb), shipping 9 kg (19.9 lb) | | |

* Tested according to ISO/DIS 3556-1-1992. SEM version available on request. Customized design available on request.

Vaclon Plus 20 pumping speed versus pressure



Ordering information

| Description | Part Number |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|
| Vaclon Plus 20 Pumps | |
| Diode with Ferrite Magnets | 9191115 |
| Diode without Magnets | 9191114 |
| StarCell with Ferrite Magnets | 9191145 |
| StarCell without Magnets | 9191144 |
| StarCell with Rare Earth Magnets (Slim Body) | 9191146M018 |
| Noble Diode with Ferrite Magnets | 9191125 |
| Noble Diode without Magnets | 9191124 |
| Agilent offers these pumps with the SHV 10 kV (SAFECONN) feedthrough option. Please contact Agilent or your local representative. | |
| 4UHV Controller | |
| 200 W neg | 9299010 |
| 200 W pos | 9299011 |
| IPCMini Controller | |
| IPCMini, 110/220 V Fischer HV, neg | X3602-64000 |
| IPCMini, 110/220 V Fischer HV, pos | X3602-64001 |
| Ion pump controllers (4UHV and IPCMini) are available in multiple configurations. For a complete list of part numbers, please refer to their respective data sheets. | |
| HV Cables | |
| HV Cable, 4 m (13 ft), Fischer Controller to Fischer Pump Side, Bakeable, Radiation Resistant, with Interlock | 9290705 |
| HV Cable, 7 m (23 ft), Fischer Controller to Fischer Pump Side, Bakeable, Radiation Resistant, with Interlock | 9290707 |
| HV Cable, 10 m (33 ft), Fischer Controller to Fischer Pump Side, Bakeable, Radiation Resistant, with Interlock | 9290708 |
| HV Cable, 20 m (66 ft), Fischer Controller to Fischer Pump Side, Bakeable, Radiation Resistant, with Interlock | 9290709 |
| * Other cable lengths are available on request. | |
| Replacement Parts | |
| HV Feedthrough with Interlock | 9595125 |
| Vaclon Plus 20 Diode Ferrite Magnet Assembly | 9191001 |
| Vaclon Plus 20 Noble Diode Ferrite Magnet Assembly | 9191002 |
| Vaclon Plus 20 StarCell Ferrite Magnet Assembly | 9191004 |
| Vaclon Plus 20 Rare-Earth Magnet Assembly | 9191005 |
| Heaters*, 120 V, Input Power 140 W | 9191110 |
| Heaters*, 220 V, Input Power 140 W | 9191111 |
| * Please contact your local Agilent representative to order heaters for pump replacements or upgrades. | |

[www.agilent.com/en/
product/vacuum-technologies/ion-
pumps-controllers/medium-
ion-pumps/vacion-plus-20-pump](http://www.agilent.com/en/product/vacuum-technologies/ion-pumps-controllers/medium-ion-pumps/vacion-plus-20-pump)

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