

ACP 90

Multi-stage Roots pumps
for oil- and particle free applications

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Resistant to
applications with
light corrosive gases



Your added value



High condensable gases
pumping capability thanks
to high purge level

Designed for oil- and particle free applications

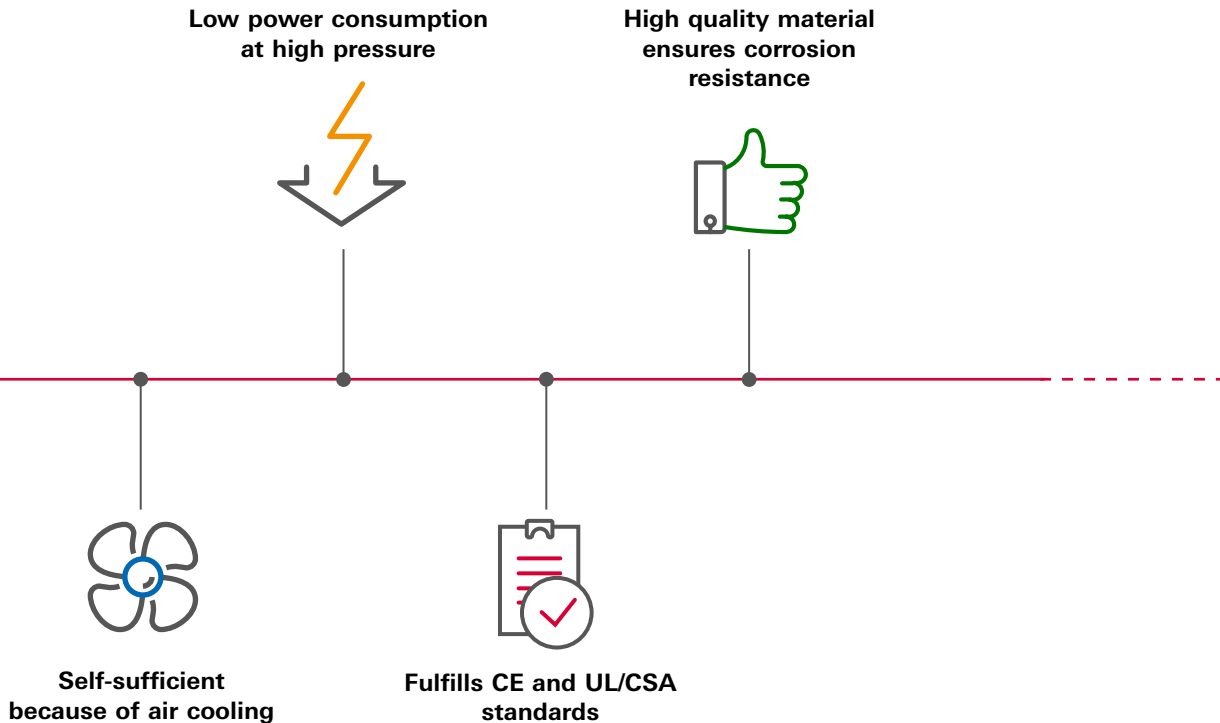
Specially developed for oil- and particle free applications, the ACP 90 multi-stage Roots pumps meet the requirements where clean and dry vacuum is needed. Operating in the pressure range between atmosphere up to $3 \cdot 10^{-2}$ hPa, these pumps are robust and can withstand frequent pumping cycles.

Resistant to applications with light corrosive gases

With their unique pumping cell design and the usage of high-quality materials, the ACP 90 pumps are resistant to corrosive gases and offer a high pumping capacity of condensable gases. The pump is equipped with a high gas ballast and a smart management of high inlet pressure. This makes the ACP 90 ideal when pumping large amount of condensable gases like in drying applications, high humidity environments or large insulating volume pumping.

Optimized to pump large volume and frequent pump down

With a maximum inlet up to atmospheric pressure, these multi-stage Roots pumps are ideal to pump large volume or to do frequent pump down. That allows for high pumping speed at high pressure, which is important when pumping large volumes. Furthermore, the ACP 90 combines a high suction speed of >50 m³/h with a low power consumption of 2 kw at atmospheric pressure, offering an energy efficient solution.



Low power consumption at high pressure

The ACP 90 is equipped with a high efficiency PM motor (permanent magnet motor) with premium efficiency IE4. This ensures low power consumption at high pressure. In addition, the air cooling system enables the pump to be self-sufficient. Therefore, no other connection like water pipes are needed.

Two pump versions for your individual needs

The ACP 90 multi-stage Roots pumps are available in two versions. The SD version is dedicated to work with non corrosive gases. Thanks to its gas ballast it is capable to manage high flow of condensable gases. The ACP 90 G corresponds with corrosive gases. This version is equipped with a purge line with injection that protect both the low and high pressure bearings and to dilute the pumped gases in the pump cell. Both versions fulfill the CE and UL/CSA standards.

Applications

■ Industry

- Drying
- Freeze drying
- Vacuum oven
- Plasma cleaning
- Load/Locks
- Coatings

■ Semiconductor

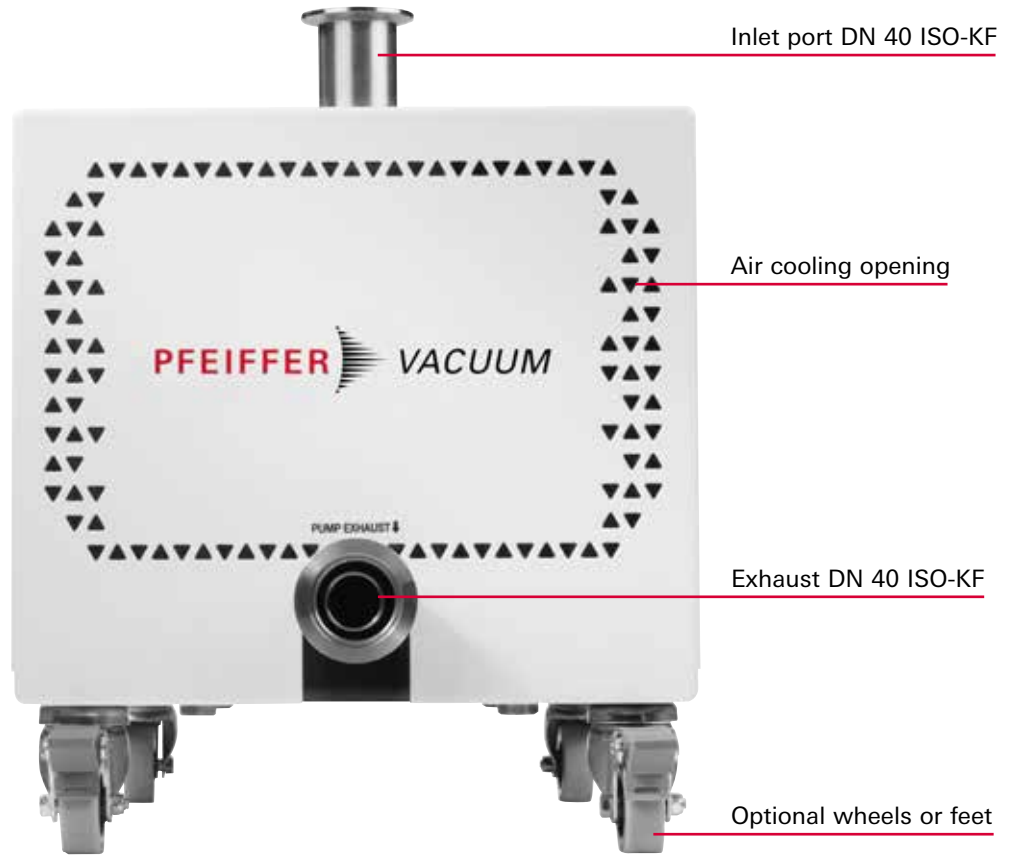
- Front end
- Back end
- Wafer cleaning

■ R&D

- Particle accelerators and other large volume experiments:
 - Maintenance group
 - Cryo magnet insulation volume
 - Pumping of large volume

ACP 90

Dimensional drawing
and pumping speed



Frequency converter
communication interface

RJ 45 connector for
RS interface

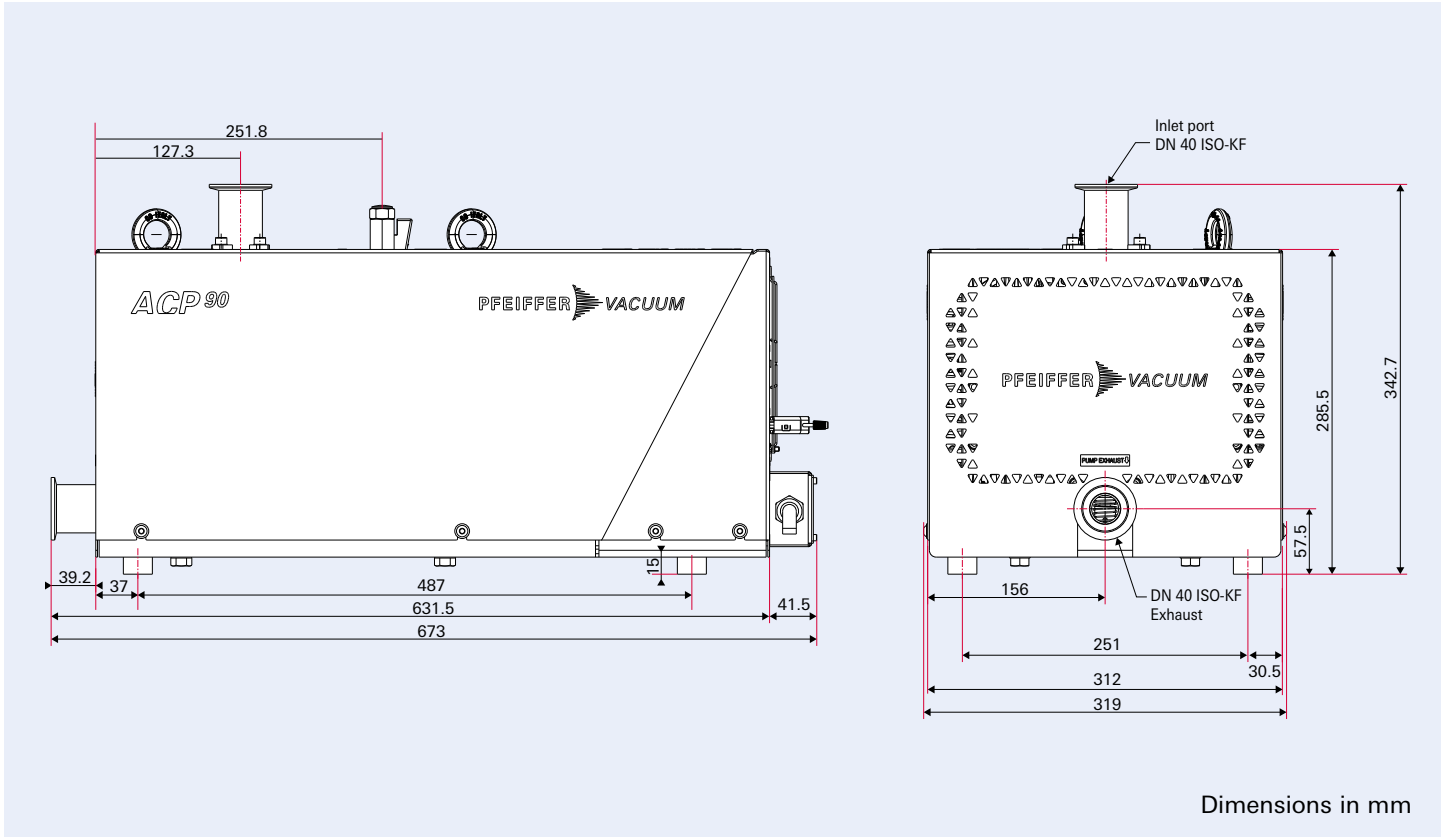
Sub'd connector for
remote interface

Led for maintenance

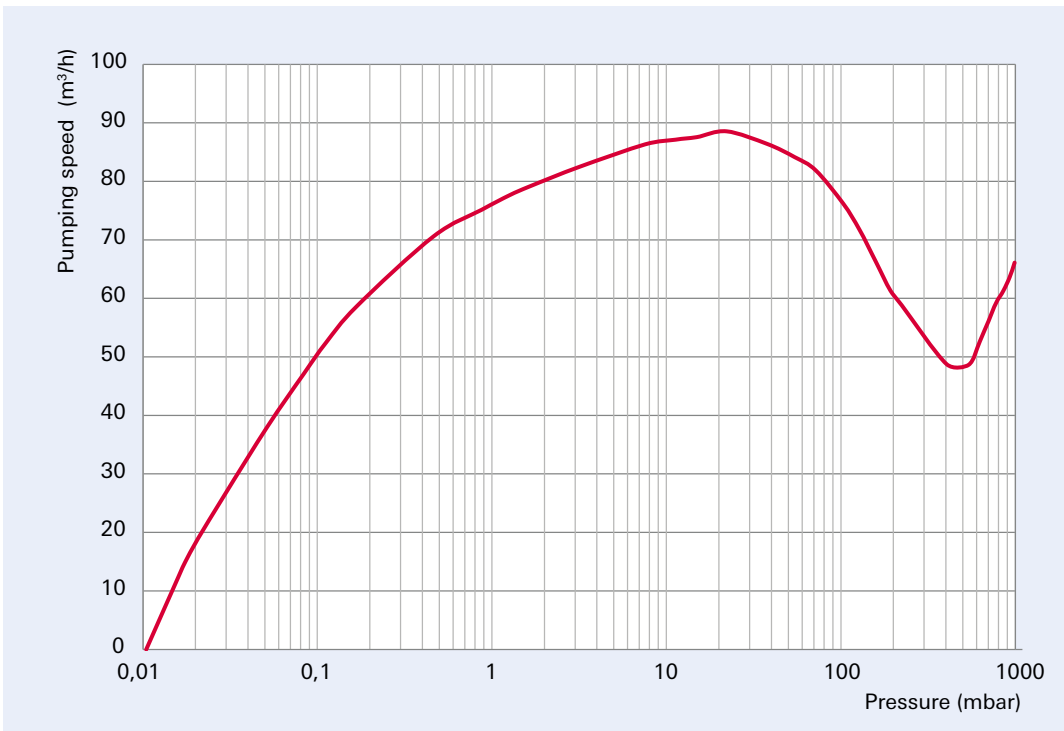
Mains power supply
connector



Dimensional drawing



Pumping speed



ACP 90

Technical data, order number matrix

Technical data

	ACP 90
Pumping speed max.	88 m ³ /h
	52 cfm
Ultimate pressure without purge (max.)	3 · 10 ⁻² mbar
	2.2 · 10 ⁻² Torr
Ultimate pressure (max.) with gas ballast for SD version	0.16 mbar
	0.12 Torr
Ultimate pressure (max.) with gas purge for G version	9 · 10 ⁻² mbar
	6.8 · 10 ⁻² Torr
Maximum continuous inlet pressure	1013 mbar
	760 Torr
Max. pure water tolerance with open gas ballast	2.4 Kg/h
Voltage supply ¹⁾	
1-phase	230 V +/- 10%, 50/60 Hz
3-phase	200-240 VAC or 380-480 VAC, 50/60 Hz
Power consumption ²⁾	
At ultimate pressure	1,280 W
At atmospheric pressure	1,800–2,000 W
Ambient temperature	12 to 40 °C
	54 to 104 °F
Flange in	40 ISO-KF
Flange out	40 ISO-KF
Max. Helium leak rate	< 5 · 10 ⁻⁶ mbar · l/s
Weight	75 Kg
	166 lbs
Overall dimensions (L · W · H)	673 · 319 · 286 mm
	26.5 · 12.6 · 11.3 inches

¹⁾ In accordance with IEC/UL/CSA regulations, the pumps can withstand a voltage variation of ± 10 %.

²⁾ Typical values obtained after minimum 1 hour of pump warm up time

ACP 90

88 m³/h

Nominal pumping speed

3 · 10⁻² mbar

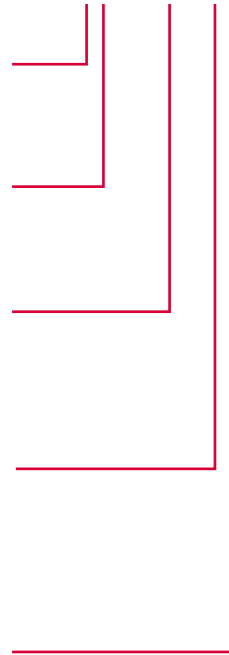
Ultimate pressure



Order number matrix ACP 90

Version	a
Standard (SD Version)	SA
With purge gas (G version)	GA
Inlet / Exhaust port	b
without inlet port / DN 40 ISO-KF	A
DN 40 ISO-KF / DN 40 ISO-KF	B
Voltage	c
1 phase HV	A
3 phase LV	B
3 phase HV	C
Gas ballast port	d
Permanent off	B
Permanent on	F
Gas fitting (for G version only)	R
Manual on/off	M
Options	e
Foot	F
Wheels	R

V9 abS cZde01



Service and support:

ACP 90 service is declined in different possibilities:

Preventive Maintenance

To preserve pumping performances, Pfeiffer Vacuum recommends a preventive maintenance packages based on the age of your pump or the number of hours of pump use.

In the case of ACP pumps, fluids, bearings, seals and screws are among the aging parts that must be replaced regularly. Some parts failure can lead to critical pump damage. Irreparable failures can be avoided with preventive maintenance. Decrease of tool downtime is also another benefit of planned maintenance.

With the Pfeiffer Vacuum's service, you have something that others don't have: access to the people who developed and manufactured your pump – 100 % manufacturer expertise.¹⁾

Repair

Get your vacuum pump back and running as quickly as possible without compromising in repair quality. Nothing can therefore replace the technical knowledge of our experts to achieve a perfect repair of your product.¹⁾

¹⁾ The service package will be confirmed upon receipt in our premises

Your Success. Our Passion.

We give our best for you every day –
worldwide!

Are you looking for an
optimal vacuum solution?
Please contact us:

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Germany
Phone +49 6441 802-0



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