

## ROTARY VANE PUMP RE 2.5, RZ 2.5 AND PUMPING UNIT PC 3 WITH RZ 2.5

- The one-stage RE 2.5 and two-stage RZ 2.5 are high-performance rotary vane pumps with extra compact design and low weight. They are the ideal solution for a wide range of laboratory and process applications that require low ultimate vacuum at medium gas flow rate. The rotary vane pumping unit PC 3 with cold trap (GKF 1000i) at the inlet helps the pump to handle larger volumes of condensable vapors. The pumping unit is compact, user-friendly, and well-arranged, with oil mist filter at the outlet, a valve, and a T-connection for a gauge. The RZ 2.5 is also available combined with the oil mist filter (FO) and the VS 16 valve as a package.

### PERFORMANCE FEATURES

- high flow rates even at vacuum levels approaching ultimate vacuum
- high water vapor tolerance due to efficient gas ballast; very good ultimate vacuum even with gas ballast
- vacuum-tight at switch-off; external anti-suckback valve not needed
- large oil volume: Long intervals between oil changes
- ease of maintenance due to telescopic design



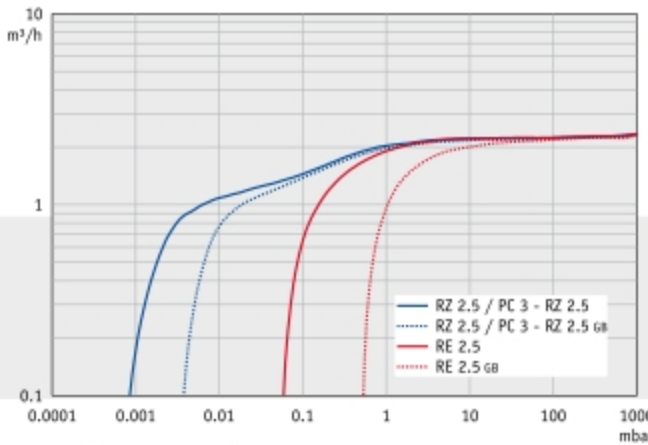
RZ 2.5  
2.3 m<sup>3</sup>/h  
2 x 10<sup>-3</sup> mbar

PC 3 / RZ 2.5  
2.3 m<sup>3</sup>/h  
2 x 10<sup>-3</sup> mbar

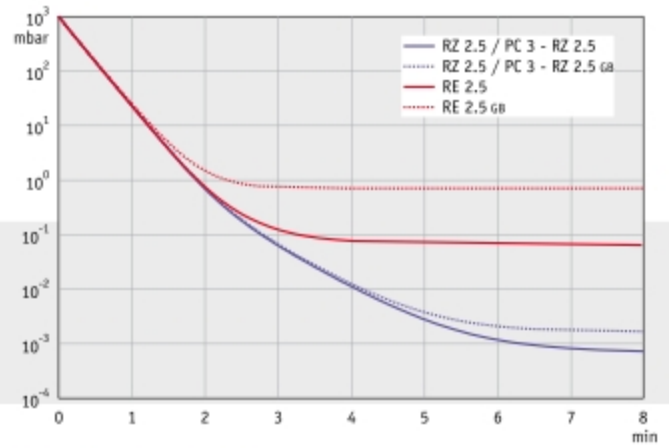


### APPLICATIONS

Typical applications are lyophilization, fine vacuum distillation and evacuation of small volumes, e.g., for utilization of  $\mu$ -focus x-ray tubes or filling with pure gases. The pumping unit PC 3 is the perfect choice for applications requiring special protection of pump and environment. Designed for the use in chemical laboratories the cold trap helps the pumps to handle large volumes of condensable vapors. The cold trap is metalized for extended coolant life and is protected against implosion.



Pumping speed graph at 50 Hz with/without gas ballast



Pump down graph at 50 Hz with/without gas ballast (10 l volume)

Pumping speeds and pump down times are only for information. Ultimate vacuum specification: See "Technical Data"

**TECHNICAL DATA**

		RE 2.5	RZ 2.5
Number of stages		1	2
Max. pumping speed at 50/60 Hz	m <sup>3</sup> /h	2.3/2.8	2.3/2.8
Ultimate partial vacuum (abs.)	mbar	3 x 10 <sup>-1</sup>	4 x 10 <sup>-4</sup>
Ultimate vacuum (abs.)	mbar	3 x 10 <sup>-1</sup>	2 x 10 <sup>-3</sup>
Ultim. vac. (abs.) with gas ballast	mbar	8 x 10 <sup>-1</sup>	1 x 10 <sup>-2</sup>
Water vapor tolerance	mbar	40	40
Oil capacity (B-Oil) min./max.	l	0.18/0.51	0.1/0.28
Inlet connection		Small flange KF DN 16	Small flange KF DN 16
Outlet connection		Hose nozzle DN 10 mm	Hose nozzle DN 10 mm
Rated motor power	kW	0.18	0.18
Rated motor speed at 50/60 Hz	min <sup>-1</sup>	1500/1800	1500/1800
Degree of protection		IP 40	IP 40
Dimensions (L x W x H), approx.	mm	316 x 125 x 190	316 x 125 x 190
Weight, approx.	kg	10.2	11.4

**ORDERING INFORMATION RE 2.5**

230 V ~ 50-60 Hz	CEE	697150
230 V ~ 50-60 Hz	CH, CN	697151
230 V ~ 50-60 Hz	UK	697152
120 V ~ 60 Hz	US	697153

**ORDERING INFORMATION RZ 2.5**

230 V ~ 50-60 Hz	CEE	698120
230 V ~ 50-60 Hz	CH, CN	698121
230 V ~ 50-60 Hz	UK	698122
120 V ~ 60 Hz	US	698123

**ORDERING INFORMATION PC 3 / RZ 2.5**

230 V ~ 50-60 Hz	CEE	699890
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**ORDERING INFORMATION RZ 2.5 +FO +VS 16**

230 V ~ 50-60 Hz	CEE	698029
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**ACCESSORIES**

- Rubber vacuum tubing DN 10 mm (686002)
- Stainless steel tubing KF DN 16 (1000 mm: 673336)
- Separator inlet side AK R 2/2.5 (698000)
- Oil mist filter FO R 2/2.5/5/6 (698003)
- Package fine vacuum control KF DN 16 (635983)

**ITEMS SUPPLIED**

Pump oil filled and completely mounted, ready for use, with manual.

## ROTARY VANE PUMP RE 6, RZ 6 AND PUMPING UNIT PC 3 WITH RZ 6

- These powerful rotary vane pumps feature a particularly compact design and low weight for pumps of this capacity. They are the ideal solution for a wide range of laboratory and process applications that require low ultimate vacuum at medium to increased gas flow rate. The PC 3 rotary vane pumping unit, with GKF 1000i cold trap at the inlet, helps the pump to handle large amounts of condensable vapors. The PC 3 pumping unit is compact, user-friendly and well-arranged, with an oil mist filter at the outlet, a valve and a T-connection for a gauge. Various packages including pump, oil mist filter, etc. are available.

### PERFORMANCE FEATURES

- high flow rates even at vacuum levels approaching ultimate vacuum
- high water vapor tolerance due to efficient gas ballast; very good ultimate vacuum even with gas ballast
- vacuum-tight at switch-off; external anti-suckback valve not needed
- large oil volume: Long intervals between oil changes
- ease of maintenance due to telescopic design



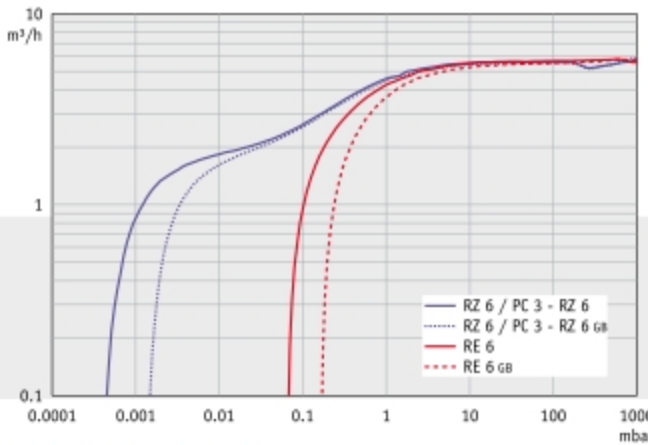
**RZ 6**  
5.7 m<sup>3</sup>/h  
2 x 10<sup>-3</sup> mbar

**PC 3 / RZ 6**  
5.7 m<sup>3</sup>/h  
2 x 10<sup>-3</sup> mbar

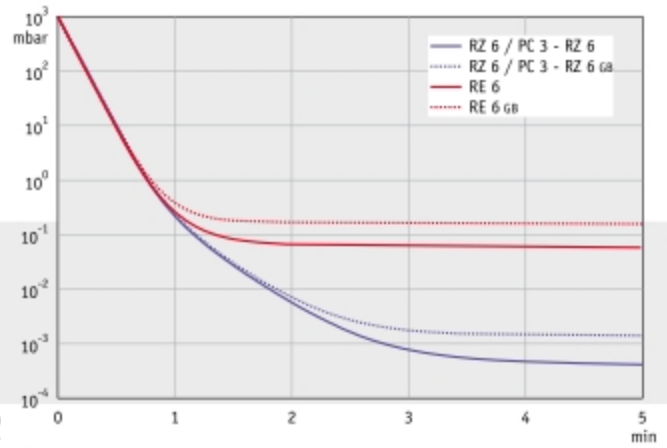


### APPLICATIONS

Rotary vane pumps are used when an ultimate vacuum between a few mbar and down to 10<sup>-3</sup> mbar has to be attained. Typical applications are degassing, lyophilization, fine vacuum distillation and drying chambers. The pumping unit PC 3 is the perfect choice for applications requiring special protection of pump and environment. Designed for the use in chemical laboratories the cold trap helps the pumps to handle large volumes of condensable vapors. The cold trap is metalized for extended coolant life and protected against implosion.



Pumping speed graph at 50 Hz with/without gas ballast



Pump down graph at 50 Hz with/without gas ballast (10 l volume)

Pumping speeds and pump down times are only for information. Ultimate vacuum specification: See "Technical Data"

**TECHNICAL DATA**

		<b>RE 6</b>	<b>RZ 6</b>
Number of stages		1	2
Max. pumping speed at 50/60 Hz	m³/h	5.7/6.8	5.7/6.8
Ultimate partial vacuum (abs.)	mbar	1 x 10 <sup>-1</sup>	4 x 10 <sup>-4</sup>
Ultimate vacuum (abs.)	mbar	1 x 10 <sup>-1</sup>	2 x 10 <sup>-3</sup>
Ultim. vac. (abs.) with gas ballast	mbar	6 x 10 <sup>-1</sup>	1 x 10 <sup>-2</sup>
Water vapor tolerance	mbar	40	40
Oil capacity (B-Oil) min./max.	l	0.36/0.93	0.34/0.73
Inlet connection		Small flange KF DN 16	Small flange KF DN 16
Outlet connection		Hose nozzle DN 10 mm	Hose nozzle DN 10 mm
Rated motor power	kW	0.3	0.3
Rated motor speed at 50/60 Hz	min <sup>-1</sup>	1500/1800	1500/1800
Degree of protection		IP 40	IP 40
Dimensions (L x W x H), approx.	mm	370 x 142 x 207	370 x 142 x 207
Weight, approx.	kg	15.4	16.4

**ORDERING INFORMATION RE 6**

230 V ~ 50-60 Hz	CEE	697160
230 V ~ 50-60 Hz	CH, CN	697161
230 V ~ 50-60 Hz	UK	697162
120 V ~ 60 Hz	US	697163

**ORDERING INFORMATION RZ 6**

230 V ~ 50-60 Hz	CEE	698130
230 V ~ 50-60 Hz	CH, CN	698131
230 V ~ 50-60 Hz	UK	698132
120 V ~ 60 Hz	US	698133
400 V ~ 50 Hz 3 Ph.	CEE	698135

**ORDERING INFORMATION PC 3 / RZ 6**

230 V ~ 50-60 Hz	CEE	699893
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**ACCESSORIES**

- Rubber vacuum tubing DN 10 mm (686002)
- Stainless steel tubing KF DN 16 (1000 mm: 673336)
- Separator inlet side AK R 5/6 (698006)
- Oil mist filter FO R 2/2.5/5/6 (698003)
- Package fine vacuum control KF DN 16 (635983)

**ORDERING INFORMATION RZ 6 +FO +VS 16**

230 V ~ 50-60 Hz	CEE	698039
230 V ~ 50-60 Hz	CH, CN	698009

**ORDERING INFORMATION RZ 6 +FO +VS 16 +Set DCP+VSP 3000**

230 V ~ 50-60 Hz	CEE	698150
230 V ~ 50-60 Hz	CH, CN	698151

**ITEMS SUPPLIED**

Pump oil filled and completely mounted, ready for use, with manual.

## ROTARY VANE PUMP RE 9, RZ 9 AND PUMPING UNIT PC 3 WITH RZ 9

- The powerful mid-size one-stage RE 9 and two-stage RZ 9 rotary vane pumps are the ideal solution for a wide range of laboratory and process applications that require high pumping speed. The PC 3 rotary vane pumping unit, with the GKF 1000i cold trap at the inlet, helps the pump to handle large amounts of condensable vapors. The PC 3 pumping unit is compact, user-friendly, and well-arranged, with an oil mist filter at the outlet, a valve, and a T-connection for a vacuum gauge.

### PERFORMANCE FEATURES

- very high flow rates even at vacuum levels approaching ultimate vacuum
- high water vapor tolerance due to efficient gas ballast; very good ultimate vacuum even with gas ballast
- vacuum-tight at switch-off; external anti-suckback valve not needed
- large oil volume: Long intervals between oil changes
- ease of maintenance due to telescopic design



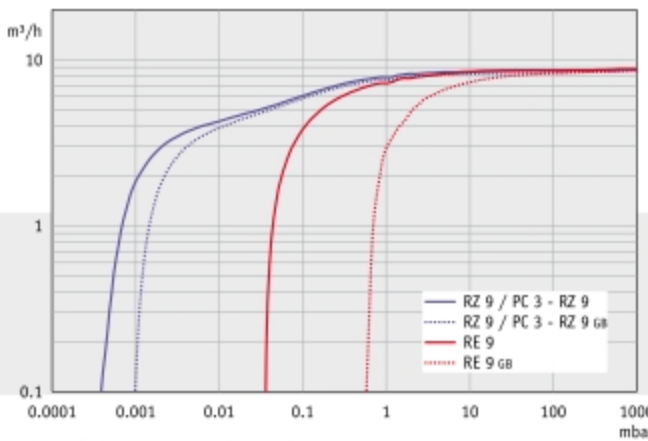
**RZ 9**  
8.9 m<sup>3</sup>/h  
2 x 10<sup>-3</sup> mbar



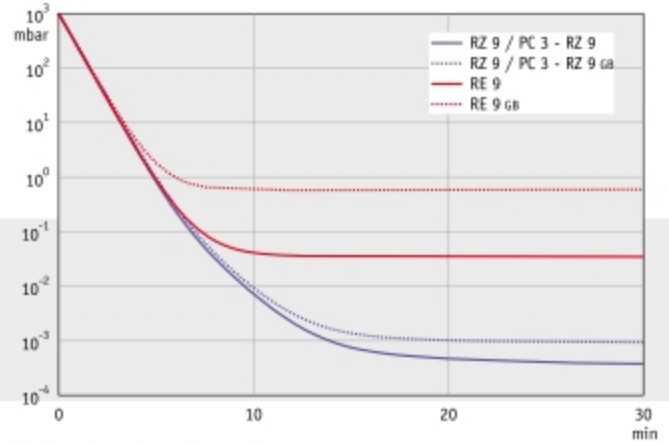
**PC 3 / RZ 9**  
8.9 m<sup>3</sup>/h  
2 x 10<sup>-3</sup> mbar

### APPLICATIONS

Typical applications are lyophilization, fine vacuum distillation, drying chambers, fast evacuation of vessels, and the pumping of large amounts of vapor. The PC 3 pumping unit is the perfect choice for applications requiring special protection of pump and environment. Designed for the use in chemical laboratories the cold trap helps the pump to handle large amounts of condensable vapors. The cold trap is metalized for extended coolant life and protected against implosion.



Pumping speed graph at 50 Hz with/without gas ballast



Pump down graph at 50 Hz with/without gas ballast (100 l volume)

Pumping speeds and pump down times are only for information. Ultimate vacuum specification: See "Technical Data"

**TECHNICAL DATA**

		RE 9	RZ 9
Number of stages		1	2
Max. pumping speed at 50/60 Hz	m <sup>3</sup> /h	8.9/10.2	8.9/10.2
Ultimate partial vacuum (abs.)	mbar	1 x 10 <sup>-1</sup>	4 x 10 <sup>-4</sup>
Ultimate vacuum (abs.)	mbar	1 x 10 <sup>-1</sup>	2 x 10 <sup>-3</sup>
Ultim. vac. (abs.) with gas ballast	mbar	6 x 10 <sup>-1</sup>	1 x 10 <sup>-2</sup>
Water vapor tolerance	mbar	40	40
Oil capacity (B-Oil) min./max.	l	0.4/1.4	0.2/0.8
Inlet connection		Small flange KF DN 25	Small flange KF DN 25
Outlet connection		Small flange KF DN 25	Small flange KF DN 25
Rated motor power	kW	0.37	0.37
Rated motor speed at 50/60 Hz	min <sup>-1</sup>	1500/1800	1500/1800
Degree of protection		IP 40	IP 40
Dimensions (L x W x H), approx.	mm	460 x 152 x 232	460 x 152 x 232
Weight, approx.	kg	21.4	24.2

**ORDERING INFORMATION RE 9**

230 V ~ 50-60 Hz	CEE	697170
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**ORDERING INFORMATION RZ 9**

230 V ~ 50-60 Hz	CEE	698140
230 V ~ 50-60 Hz	CH, CN	698141
230 V ~ 50-60 Hz	UK	698142
120 V ~ 60 Hz	US	698143
400 V ~ 50 Hz 3 Ph.	CEE	698145

**ORDERING INFORMATION PC 3 / RZ 9**

230 V ~ 50-60 Hz	CEE	699895
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**ACCESSORIES**

- Stainless steel tubing KF DN 25 (1000 mm: 673337)
- Separator inlet side AK R 8/9/16 (698007)
- Oil mist filter FO R 8/9/16 (698017)
- Inline oil filter HF R 8/9/16 (698010)
- Package fine vacuum control KF DN 25 (635982)

**ITEMS SUPPLIED**

Pump oil filled and completely mounted, ready for use, with manual.

## ROTARY VANE PUMP RE 16, RZ 16 AND PUMPING UNIT PC 3 WITH RZ 16

- These powerful rotary vane pumps are the largest of the VACUUBRAND family and are designed for pumping large volumes of gases or evacuation of vessels. The PC 3 rotary vane pumping unit, with the GKF 1000i cold trap at the inlet, helps the pump to handle large amounts of condensable vapors. The PC 3 pumping unit is compact, user-friendly, and well arranged with oil mist filter at the outlet, a valve, and a T-connection for a vacuum gauge.

### PERFORMANCE FEATURES

- very high flow rates even at vacuum levels approaching ultimate vacuum
- high water vapor tolerance due to efficient gas ballast; very good ultimate vacuum even with gas ballast
- vacuum-tight at switch-off; external anti-suckback valve not needed
- large oil volume: Long intervals between oil changes
- ease of maintenance due to telescopic design



**RZ 16**  
16.6 m<sup>3</sup>/h  
2 x 10<sup>-3</sup> mbar

**PC 3 / RZ 16**  
16.6 m<sup>3</sup>/h  
2 x 10<sup>-3</sup> mbar



### APPLICATIONS

Typical applications are lyophilization up to pilot plants or small-scale production, fine vacuum distillation, and fast evacuation of larger vessels. The PC 3 pumping unit is the perfect choice for applications requiring special protection of pump and environment. Designed for the use in chemical laboratories the cold trap helps the pumps to handle large volumes of condensable vapors. The cold trap is metalized for extended coolant life and protected against implosion.