

**oerlikon**  
leybold vacuum

# DIVAC

Diaphragm Vacuum Pumps

171.02.02

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Product Section C04

Edition 2010

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# General

## What this Series Offers

This range of vacuum pumps was developed especially for laboratory operations and as backing pumps for (wide range) turbomolecular pumps. It satisfies the highest expectations in terms of precision, reliability and ease of use.

The DIVAC line of vacuum pumps is the logical continuation of diaphragm pump technology which has proven its quality in decades of service.

### Laboratory Pumps

Through the laboratory pumps and the three different pumping speeds available for the same base pressure and through the modular design, the optimum DIVAC L pump system <sup>1)</sup> can be implemented in each case.

DIVAC L diaphragm pumps are suited for almost all requirements in the chemistry lab. They are basically corrosion and solvent resistant since their parts in contact with the pumped medium are made of PTFE (Teflon), FFPM (Kalrez) and PVDF (Solef).

The newly developed automatic drying system is used in all applications where very moist and wet gases need to be pumped over extended periods of time. Here the pumping speed remains constant and the service life of the pumps is not impaired by the liquid.

<sup>1)</sup> Comprising the DIVAC diaphragm pump and a DIVAC sub-assembly

### Backing Pumps

The DIVAC T range of diaphragm pumps comprises backing pumps which are used in all applications requiring an especially low base pressure while having to maintain an oil-free vacuum.

The DIVAC T pumps have been specially developed as backing pumps for wide range high vacuum turbomolecular pumps. They meet the requirements for a dry vacuum and a long service life.

DIVAC T pumps may be used both free-standing and integrated in applications or certain devices, and for this reason they are used in the areas of mass spectrometry, analytical and in general applications.

The DIVAC TC pumps are capable of handling aggressive and corrosive gases as encountered in research or in connection with sputtering processes. The parts of the pump in contact with the medium are made of PTFE (Teflon), FFPM (Kalrez) and PVDF (Solef), and for this reason the pumps are highly resistant to the media mentioned.

### Application Examples

#### Laboratory Pumps

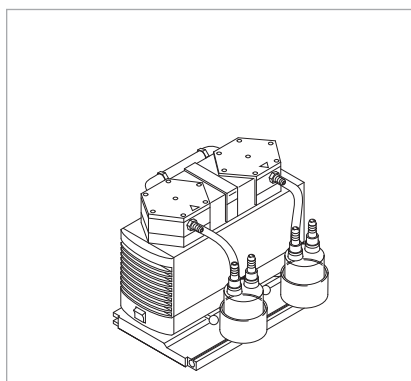
- Vacuum filtration
- Vacuum distillation
- Vacuum drying
- To extract and transfer gases
- On rotary evaporators
- Gel drying
- Steam sterilization

#### Backing Pumps

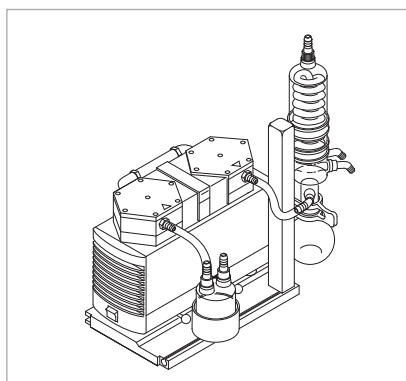
- Backing pump for wide range turbomolecular pumps
- Mass spectrometry
- Medicine technology
- Analytical technology
- General rough and medium vacuum applications

# The customized diaphragm pump and the accessories recommended for your application in the chemical laboratory

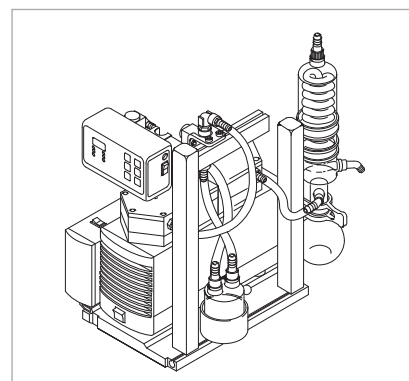
Modular diaphragm pump system	Evacuating small devices (e.g. desiccator)	Sublimation	Analysis preparation	Filtration	Distillation	Drying in the drying cabinet	Drying cabinets (2 cabinets with 1 pump)	Rotary evaporator	Steam sterilization
<b>Application</b>									
DIVAC 0.6	■	■	■	■	■				
DIVAC 1.2	■	■	■	■	■				
DIVAC 2.2	■	■	■	■	■				
DIVAC 0.6 L	■	■	■	■	■				
DIVAC 1.2L	■	■	■	■	■			■	
DIVAC 2.2 L	■	■	■	■	■	■	■		
DIVAC 1.2 L AD	■			■	■			■	■
DIVAC 2.2 L AD					■	■	■	■	■
Base plate	■	■	■	■	■	■	■	■	■
Separator (intake side)		■	■	■	■	■	■		
Separator (exhaust side)	■		■		■	■	■	■	■
High-performance condenser (including stand and holder)					■	■	■	■	
Vacuum controller								■	
Gas ballast unit						■	■		
Corresponds to the DIVAC system	-	-	-	SR 0.6 L	SH 0.6 L	SH 2.2 L	SH 2.2 L	SC 1.2 L	-



DIVAC system: SR 0.6 L, 1.2 L, 2.2 L



DIVAC system: SH 0.6 L, 1.2 L, 2.2 L



DIVAC system: SC 0.6 L, 1.2 L, 2.2 L

# Modular Diaphragm Pump System for the Chemical Laboratory

## Advantages to the User

- Low base vacuum of 8 mbar (6 Torr) [(100 mbar (75 Torr) for single-head DIVAC pumps)]
- All parts of the pump head in contact with the gas are resistant against aggressive media through the use of PTFE (Teflon), FFPM (Kalrez) and PVDF (Solef)
- Dry compressing, oil-free
- Very high water vapor tolerance
- Low maintenance costs and long service intervals through the use of high-quality components which are well-proven
- Simple maintenance by staff of the customer
- Low noise operation
- Portable, compact, small footprint
- Can be operated in any orientation
- Illuminated mains switch on the pump
- Overheat protection for the vacuum pump by means of a thermofuse
- Available in three pumping speed categories
- Modular system
  - can easily be adapted to special requirements
- Wide range of accessories like separator, condenser, base plate, vacuum controller

## Features of the Modular Designed Laboratory Pump System

- All system components are combined to form assemblies which can be easily replaced or retrofitted
- Easy relocation since the entire assembly is mounted as a unit on a stable base plate for easy transportation
- Individual components with plug connectors for easy removal and mounting
- Compact design – small footprint
- For the SC configuration – with separator, high-performance condenser and controller – all electrical connections are arranged inside the control unit and made by way of plug connectors
- Trouble-free provisions for mounting additional laboratory equipment in grooved rails, on laboratory stands and crossbars in the assembly
- Simple replacement of diaphragms and valves on the vacuum pumps

## Additional Benefits of the Automatic Drying System

- High vapor and condensate tolerance through the newly developed automatic drying system
- Maintaining of maximum pumping speed
- Longer durability of the structured diaphragm
- Individual adaptation of the drying cycle to different processes
- Vacuum chamber is not vented during the drying phase
- Overnight evacuations are possible through the automatic cycling system

# Products

## Diaphragm Vacuum Pumps for the Chemical Laboratory

### Single-Stage Diaphragm Vacuum Pumps

#### DIVAC 0.6, 1.2, 2.2

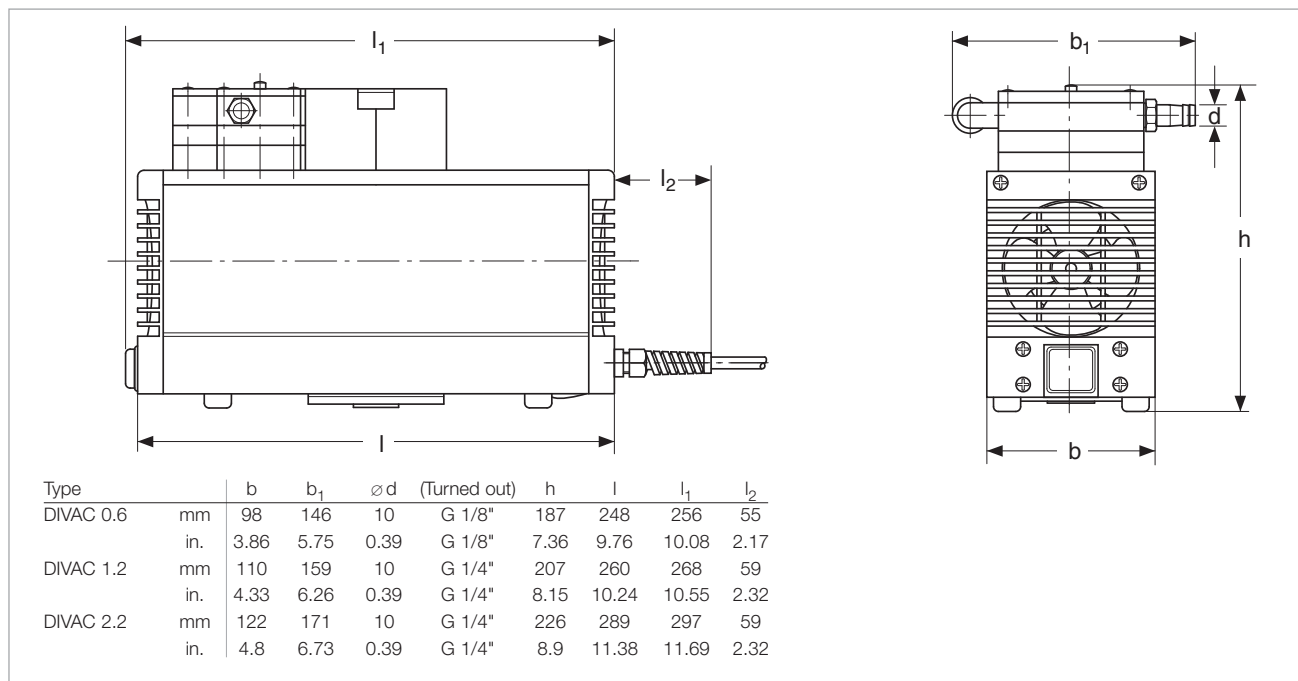


#### Typical Applications

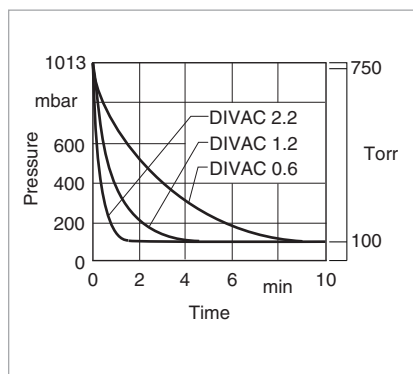
Vacuum generation for

- Rotary evaporators
- Drying chambers
- Filtration units
- Distillation configurations
- Gel dryers

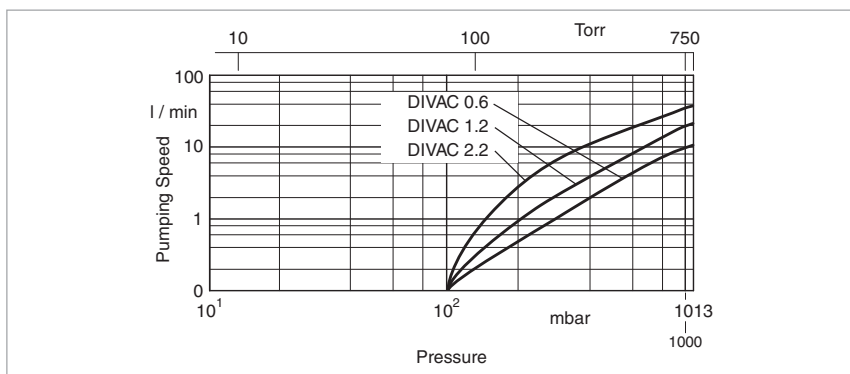
Single-stage diaphragm vacuum pumps DIVAC 0.6, 1.2, 2.2



Dimensional drawing for the DIVAC 0.6, 1.2 and 2.2



Curves of pump-down time of a 10 l vessel



Curves of pumping capacity

## Technical Data

## DIVAC

		0.6	1.2	2.2
Max. pumping speed (atm.)	m <sup>3</sup> x h <sup>-1</sup> (cfm)	0.6 (0.4)	1.2 (0.7)	2.0 (1.2)
Ultimate pressure	mbar (Torr)	≤ 100 (≤ 75)	≤ 100 (≤ 75)	≤ 100 (≤ 75)
Max. exhaust back pressure (absolute)	mbar (Torr)	2000 (1500)	2000 (1500)	2000 (1500)
Pump heads		1	1	1
Connection				
Inlet (suction side)	DN	Hose nozzle ID 10	Hose nozzle ID 10	Hose nozzle ID 10
Exhaust (delivery side)	DN	Hose nozzle ID 10	Hose nozzle ID 10	Hose nozzle ID 10
Thread (suction and delivery side)	G	G 1/8"	G 1/4"	G 1/4"
Noise level acc. to DIN 45 635 Part 13, approx.	dB(A)	47	50	52
Permissible gas admission temperature, max.	°C (°F)	+5 to +40 (+41 to +104)	+5 to +40 (+41 to +104)	+5 to +40 (+41 to +104)
Permissible ambient temperature, max.	°C (°F)	+5 to +40 (+41 to +104)	+5 to +40 (+41 to +104)	+5 to +40 (+41 to +104)
Voltage / nominal frequency (1 ph. motor)				
Schuko plug	V / Hz	230 ± 10% / 50	230 ± 10% / 50	230 ± 10% / 50
Protective class	IP	44	44	44
Motor power <sup>1)</sup>	W	100	130	180
Current consumption <sup>1)</sup>	A	0.6	0.9	1.35
Motor speed				
50 Hz	min <sup>-1</sup>	1500	1500	1500
60 Hz	min <sup>-1</sup>	1800	1800	1800
Dimensions (W <sup>1)</sup> x H <sup>1)</sup> x D), approx.	mm (in.)	256 x 146 x 187 (10.08 x 5.75 x 7.36)	268 x 159 x 207 (10.55 x 6.3 x 8.15)	297 x 171 x 226 (11.69 x 6.73 x 8.9)
Weight, approx.	kg (lbs)	5.9 (13.02)	7.1 (15.57)	10.3 (22.74)
Material				
Pump head		PTFE (Teflon)	PTFE (Teflon)	PTFE (Teflon)
Structured diaphragm		PTFE coated	PTFE coated	PTFE coated
Valves		FFPM (Kalrez)	FFPM (Kalrez)	FFPM (Kalrez)
Nozzles		PVDF (Solef)	PVDF (Solef)	PVDF (Solef)

## Ordering Information

## DIVAC

	0.6	1.2	2.2
Diaphragm vacuum pump 230 V, 50 Hz, with 2.3 m (8 ft) power cord and Schuko plug	<b>Part No. 127 60</b>	<b>Part No. 127 61</b>	<b>Part No. 127 62</b>
Spare parts kit consisting of 1 diaphragm, 2 gasket rings, 2 valve disks	<b>Part No. EK 127 63</b>	<b>Part No. EK 127 64</b>	<b>Part No. EK 127 65</b>
Hose nozzles 1 exhaust port and 2 inlet ports	<b>Part No. 200 650 25 (2x)</b>	<b>Part No. 200 650 26 (2x)</b>	<b>Part No. 200 650 26 (2x)</b>

<sup>1)</sup> for 230 V, 50 Hz version

# Dual-Stage Diaphragm Vacuum Pumps DIVAC 0.6 L, 1.2 L, 2.2 L

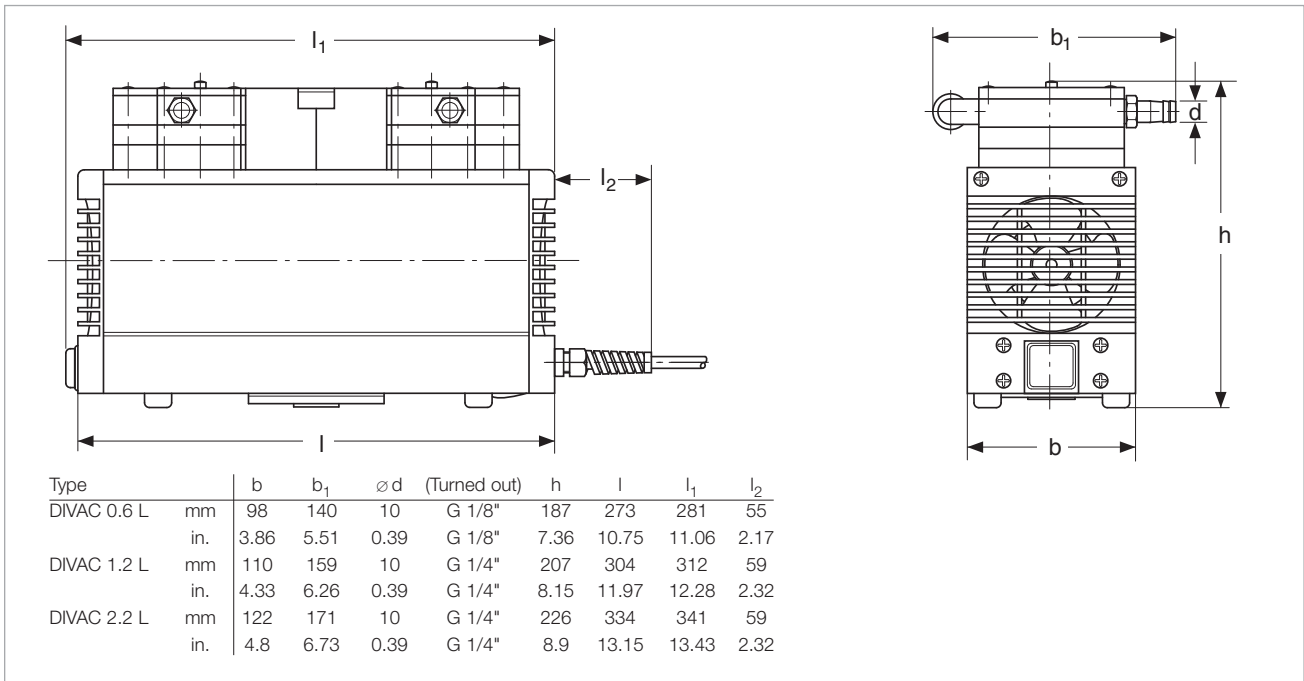


## Typical Applications

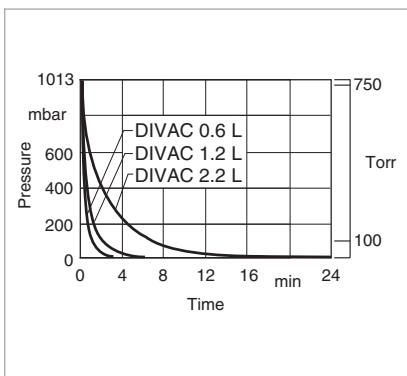
Vacuum generation for

- Rotary evaporators
- Drying chambers
- Filtration units
- Distillation configurations
- Gel dryers

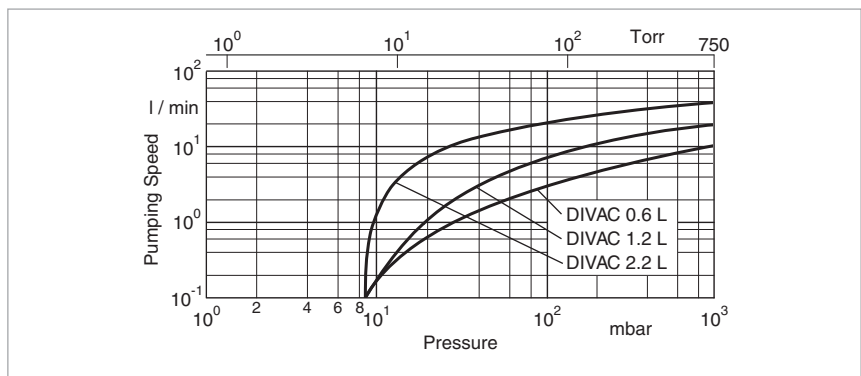
Dual-stage diaphragm vacuum pumps DIVAC 0.6 L, 1.2 L, 2.2 L



Dimensional drawing for the DIVAC 0.6 L, 1.2 L, 2.2 L



Curves of pump-down time of a 10 l vessel



Curves of pumping capacity



## Technical Data

## DIVAC

		0.6 L	1.2 L	2.2 L
Max. pumping speed (atm.)	m <sup>3</sup> x h <sup>-1</sup> (cfm)	0.6 (0.4)	1.2 (0.7)	2.0 (1.2)
Ultimate pressure	mbar (Torr)	≤ 8 (≤ 6)	≤ 8 (≤ 6)	≤ 8 (≤ 6)
Max. exhaust back pressure (absolute)	mbar (Torr)	2000 (1500)	2000 (1500)	2000 (1500)
Pump heads		2	2	2
Connection				
Inlet (suction side)	DN	Hose nozzle ID 10	Hose nozzle ID 10	Hose nozzle ID 10
Exhaust (delivery side)	DN	Hose nozzle ID 10	Hose nozzle ID 10	Hose nozzle ID 10
Thread (suction and delivery side)	G	G 1/8"	G 1/4"	G 1/4"
Noise level acc. to DIN 45 635 Part 13, approx.	dB(A)	47	50	52
Permissible gas admission temperature, max.	°C (°F)	+5 to +40 (+41 to +104)	+5 to +40 (+41 to +104)	+5 to +40 (+41 to +104)
Permissible ambient temperature, max.	°C (°F)	+5 to +40 (+41 to +104)	+5 to +40 (+41 to +104)	+5 to +40 (+41 to +104)
Voltage / nominal frequency (1 ph. motor)				
Schuko plug	V / Hz	230 ± 10% / 50	230 ± 10% / 50	230 ± 10% / 50
NEMA plug	V / Hz	115 ± 10% / 60	115 ± 10% / 60	115 ± 10% / 60
NEMA plug	V / Hz	100 ± 10% / 50/60	100 ± 10% / 50/60	100 ± 10% / 50/60
Protective class	IP	44	44	44
Motor power <sup>1)</sup>	W	90	120	245
Current consumption <sup>1)</sup>	A	0.6	0.7	1.8
Motor speed				
50 Hz	min <sup>-1</sup>	1500	1500	1500
60 Hz	min <sup>-1</sup>	1800	1800	1800
Dimensions (W <sup>1)</sup> x H <sup>1)</sup> x D), approx.	mm (in.)	281 x 140 x 187 (11.06 x 5.51 x 7.36)	312 x 154 x 207 (12.28 x 6.06 x 8.15)	341 x 166 x 226 (13.43 x 6.54 x 8.9)
Weight, approx.	kg (lbs)	6.9 (15.2)	9.3 (20.5)	12.6 (27.8)
Material				
Pump head		PTFE (Teflon)	PTFE (Teflon)	PTFE (Teflon)
Structured diaphragm		PTFE coated	PTFE coated	PTFE coated
Valves		FFPM (Kalrez)	FFPM (Kalrez)	FFPM (Kalrez)
Nozzles		PVDF (Solef)	PVDF (Solef)	PVDF (Solef)

## Ordering Information

## DIVAC

	0.6 L	1.2 L	2.2 L
Diaphragm vacuum pump 230 V, 50 Hz, with 2.3 m (8 ft) power cord and Schuko plug	<b>Part No. 135 00</b>	<b>Part No. 135 06</b>	<b>Part No. 135 12</b>
Diaphragm vacuum pump 100 V, 50/60 Hz, with 2.3 m (8 ft) power cord and NEMA plug	<b>Part No. 135 02</b>	<b>Part No. 135 08</b>	<b>Part No. 135 14</b>
Diaphragm vacuum pump 115 V, 60 Hz, with 2.3 m (8 ft) power cord and NEMA plug	<b>Part No. 135 03</b>	<b>Part No. 135 09</b>	<b>Part No. 135 15</b>
Spare parts kit consisting of 2 diaphragms, 4 gasket rings, 4 valve plates	<b>Part No. 135 23</b>	<b>Part No. 135 24</b>	<b>Part No. 135 25</b>
Hose nozzle kit consisting of 2 hose nipples, piping	-	<b>Part No. 200 650 06</b>	<b>Part No. 200 650 07</b>

<sup>1)</sup> for 230 V, 50 Hz version

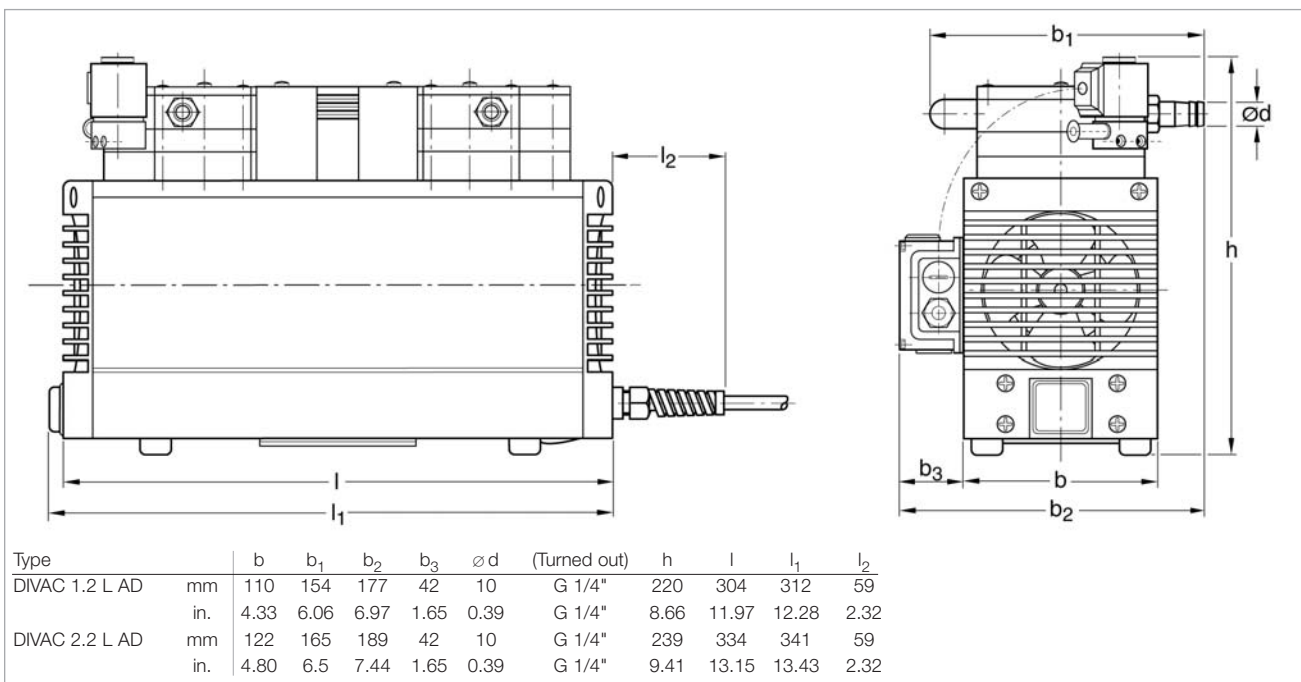
# Dual-Stage Diaphragm Vacuum Pumps with Automatic Drying System DIVAC 1.2 L AD, 2.2 L AD



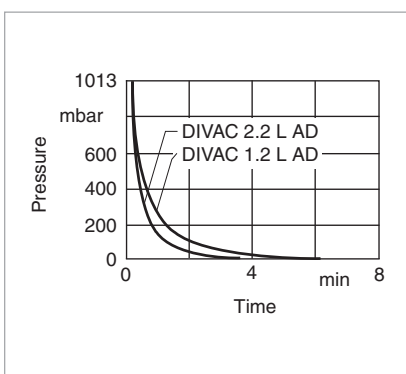
The automatic drying system of this dual-stage diaphragm pump enables problem-free pumping of very damp and wet vapors.

With the automatic function, resulting liquid is blown out of the pump head using individually adjustable parameters, restoring the maximum suction capacity. The vacuum in the recipient is maintained during drying.

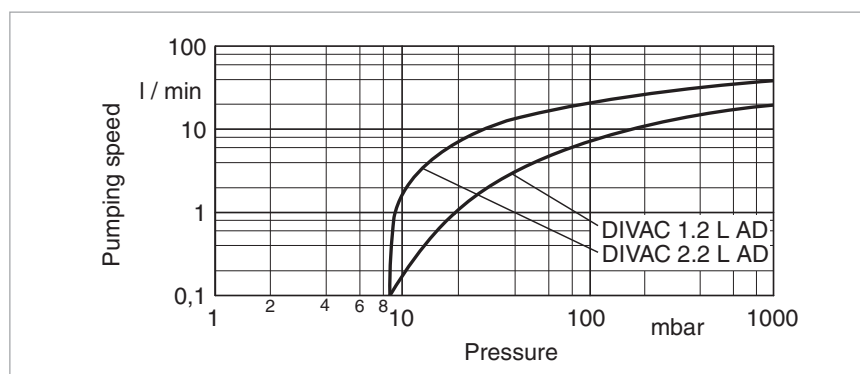
Dual-stage diaphragm vacuum pumps DIVAC 1.2 L AD, 2.2 L AD



Dimensional drawing for the DIVAC 1.2 L AD und 2.2 L AD



Curves of pump-down time of a 10 l vessel



Curves of pumping capacity

## Technical Data

## DIVAC

		1.2 L AD	2.2 L AD
Max. pumping speed (atm.)	m <sup>3</sup> x h <sup>-1</sup> (cfm)	1.2 (0.7)	2.0 (1.2)
Ultimate pressure	mbar (Torr)	≤ 10 (≤ 7.5)	≤ 10 (≤ 7.5)
Max. exhaust back pressure (absolute)	mbar (Torr)	2000 (1500)	2000 (1500)
Pump heads		2	2
Connection			
Inlet (suction side)	DN	Hose nozzle ID 10	Hose nozzle ID 10
Exhaust (delivery side)	DN	Hose nozzle ID 10	Hose nozzle ID 10
Thread (suction and delivery side)	G	G 1/4"	G 1/4"
Noise level acc. to DIN 45 635 Part 13, approx.	dB(A)	50	52
Permissible gas admission temperature, max.	°C (°F)	+5 to +40 (+41 to +104)	+5 to +40 (+41 to +104)
Permissible ambient temperature, max.	°C (°F)	+5 to +40 (+41 to +104)	+5 to +40 (+41 to +104)
Voltage / nominal frequency (1 ph. motor)			
Schuko plug	V / Hz	230 ± 10% / 50	230 ± 10% / 50
NEMA plug	V / Hz	115 ± 10% / 60	115 ± 10% / 60
NEMA plug	V / Hz	100 ± 10% / 50/60	100 ± 10% / 50/60
Protective class	IP	44	44
Motor power <sup>1)</sup>	W	120	245
Current consumption <sup>1)</sup>	A	0.7	1.8
Motor speed			
50 Hz	min <sup>-1</sup>	150	1500
60 Hz	min <sup>-1</sup>	1800	1800
Dimensions (W <sup>1)</sup> x H <sup>1)</sup> x D), approx.	mm (in.)	312 x 177 x 220 (12.28 x 6.97 x 8.66)	341 x 189 x 239 (13.43 x 7.44 x 9.41)
Weight, approx.	kg (lbs)	9.6 (21.2)	12.9 (28.48)
Material			
Pump head		PTFE (Teflon)	PTFE (Teflon)
Structured diaphragm		PTFE coated	PTFE coated
Valves		FFPM (Kalrez)	FFPM (Kalrez)
Nozzles		PVDF (Solef)	PVDF (Solef)

## Ordering Information

## DIVAC

	1.2 L AD	2.2 L AD
Diaphragm vacuum pump 230 V, 50 Hz, with 2.3 m (8 ft) power cord and Schuko plug	<b>Part No. 500 750</b>	<b>Part No. 500 755</b>
Diaphragm vacuum pump 115 V, 60 Hz, with 2.3 m (8 ft) power cord and NEMA plug	<b>upon request</b>	<b>Part No. 500 757</b>
Spare parts kit consisting of 2 diaphragms, 4 gasket rings, 4 valve plates	<b>Part No. 135 24</b>	<b>Part No. 135 25</b>
Hose nozzle kit consisting of 2 hose nipples, piping	<b>Part No. 200 650 06</b>	<b>Part No. 200 650 07</b>
Accessories		
Separating vessel on the delivery side	<b>Part No. 135 20</b>	<b>Part No. 135 20</b>
Neoprene hose, ID 10 mm (0.39 in.)	<b>Part No. 200 650 02</b>	<b>Part No. 200 650 02</b>
Base panel	<b>Part No. 135 18</b>	<b>Part No. 135 19</b>

<sup>1)</sup> for 230 V, 50 Hz version

# Modular Laboratory Pump Concept



DIVAC system SC 1.2 L (consisting of DIVAC module SC and DIVAC pump 1.2 L)

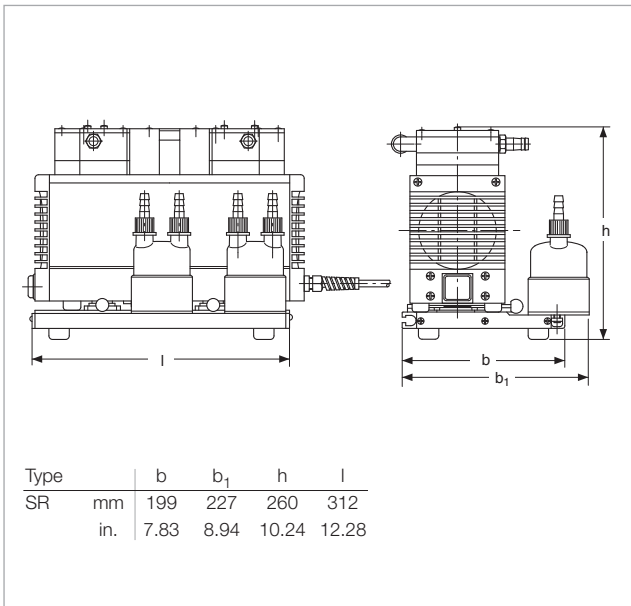
## Advantages to the User

- Modular
  - Quiet-running
  - Compact
  - Environmentally friendly
  - Resistant to chemicals
  - Good ultimate vacuum
  - Reliable
  - Versions for different supply voltages are available
- 1** DIVAC 0.6 L, 1.2 L, 2.2 L
  - 2** Base plate
  - 3** Separator intake side
  - 4** Separator exhaust side (only included with module SR)
  - 5** High-performance condenser
  - 6** Vacuum controller NC 800
  - 7** Gas ballast unit (optional)
  - 8** Control unit

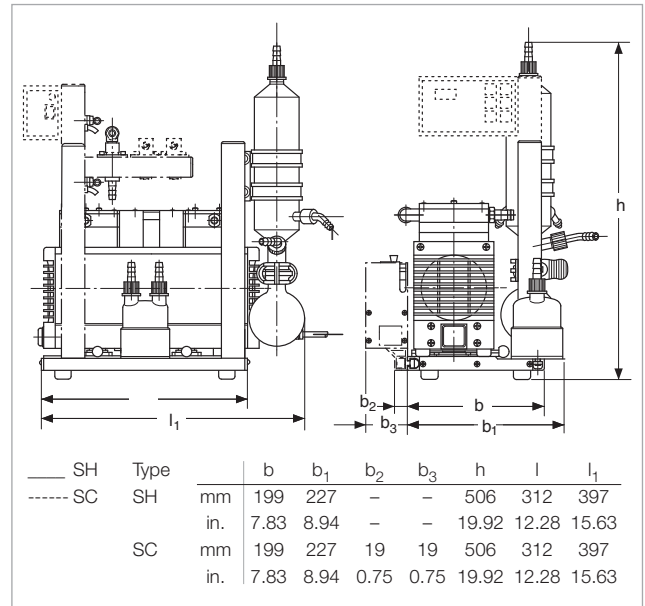
## Electrical Data

## DIVAC SC System

		100 V	115 V	230 V
Power drawn				
Vacuum controller NC 800	W	14	14	14
Fuses (2 each, slow-blow)	A	6.3	6.3	3.15
Control unit fuses (2 each, slow-blow)	A	6.3	6.3	3.15



Dimensional drawing for the DIVAC SR system



Dimensional drawing for the DIVAC SH and SC systems

# Components for the modular DIVAC system

## Ordering Information

## DIVAC

	0.6 L	1.2 L	2.2 L
Base plate for system mounting	<b>Part No. 135 18</b>	<b>Part No. 135 18</b>	<b>Part No. 135 19</b>
Separator (intake or exhaust side)	<b>Part No. 135 20</b>	<b>Part No. 135 20</b>	<b>Part No. 135 20</b>
High-performance condenser	<b>upon request</b>	<b>upon request</b>	<b>upon request</b>
Gas ballast valve	<b>upon request</b>	<b>Part No. 135 27</b>	<b>Part No. 135 27</b>
Vacuum controller 90 - 260 V, 50/60 Hz	<b>Part No. 500 760</b>	<b>Part No. 500 760</b>	<b>Part No. 500 760</b>
Neoprene hose, ID 10 mm (0.39 in.)	<b>Part No. 200 65 002</b>	<b>Part No. 200 65 002</b>	<b>Part No. 200 65 002</b>

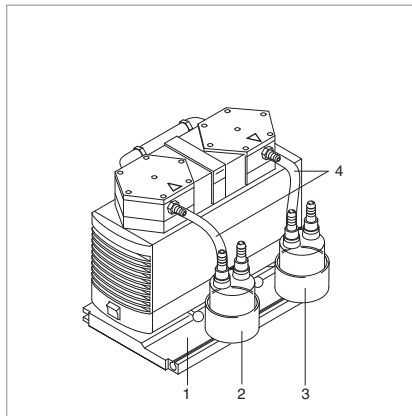
Assemble your own pump system, selecting from the variety of modules available

## Additional Ordering Information

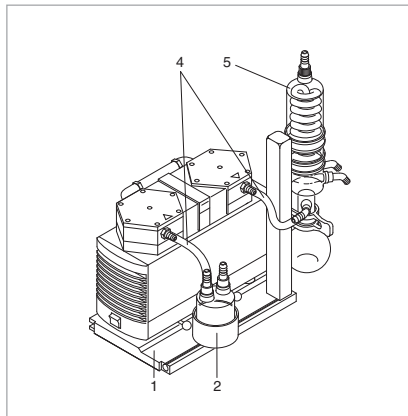
**When placing your order please also indicate the catalog number for the required pump (see section “Modular Laboratory Pump Concept”)**

Example: The DIVAC SH 0.6 L system comprises the DIVAC SH module (Part No. 135 50) and the DIVAC 0.6 L pump (Part No. 135 00)

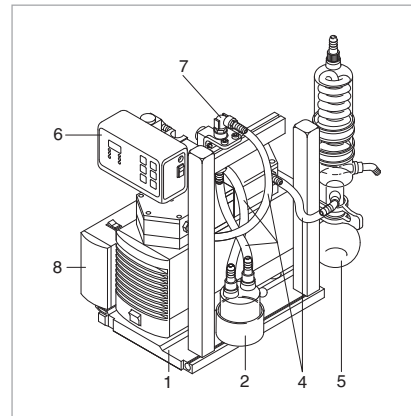
Module	Item	Comprises	European version 230 V, 50 Hz Euro plug	USA/Japan version 115 V, 60 Hz 100 V, 50/60 Hz USA/Japan plug
SR	1	Base plate and system mount	Part No. 135 40	Part No. 135 40
	2	Separator, intake side		
	3	Separator, exhaust side		
	4	Hose connectors		
SH	1	Base plate and system mount	Part No. 135 50	Part No. 135 50
	2	Separator, intake side		
	4	Hose connectors		
	5	High-performance condenser		
SC	1	Base plate and system mount	Part No. 135 60	upon request
	2	Separator, intake side		
	4	Hose connectors		
	5	High-performance condenser		
	6	Vacuum controller		
	7	Pump relief valve		
	8	Control unit (incl. cable)		



SR module



SH module



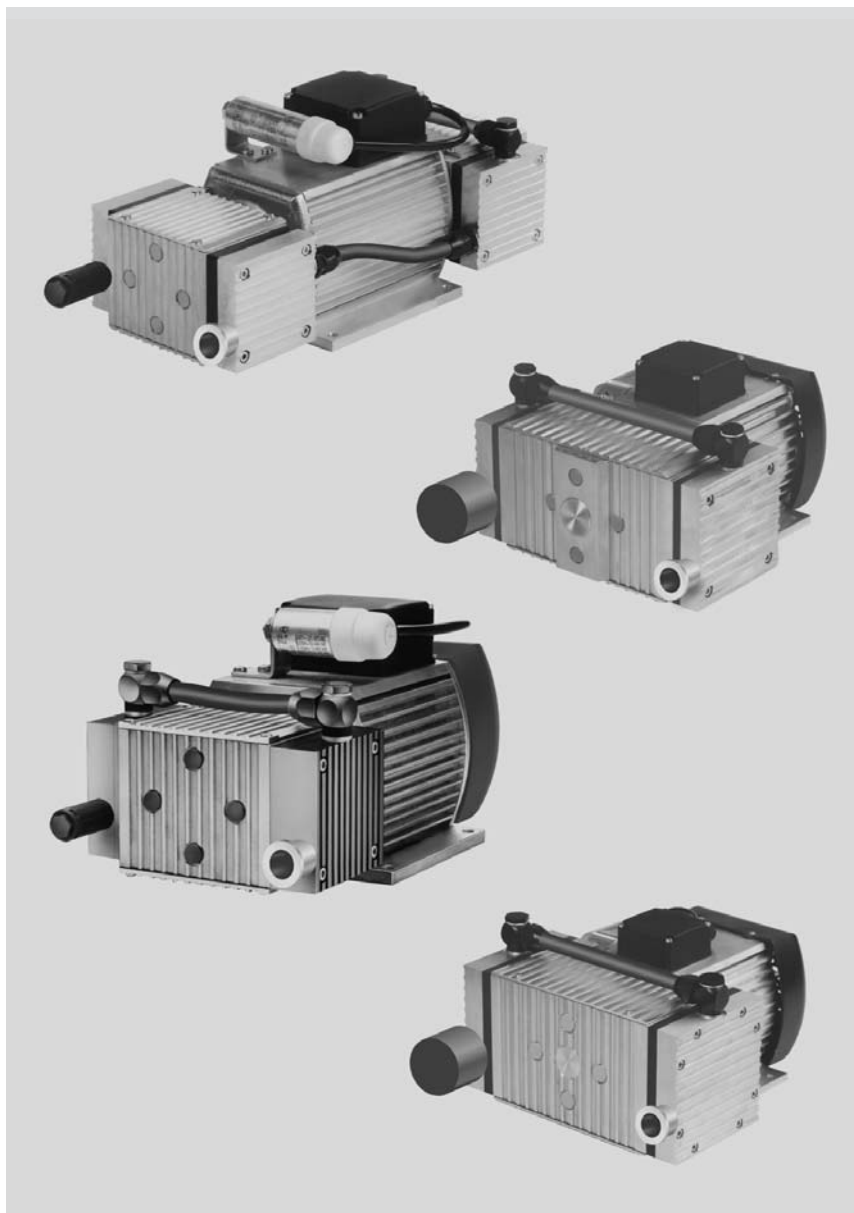
SC module

**Note: The SR to SC sub-assemblies do not include the pump!**



# Dry Compressing Backing Pumps for Turbomolecular Pumps

## DIVAC 0.8 T to 4.8 VT

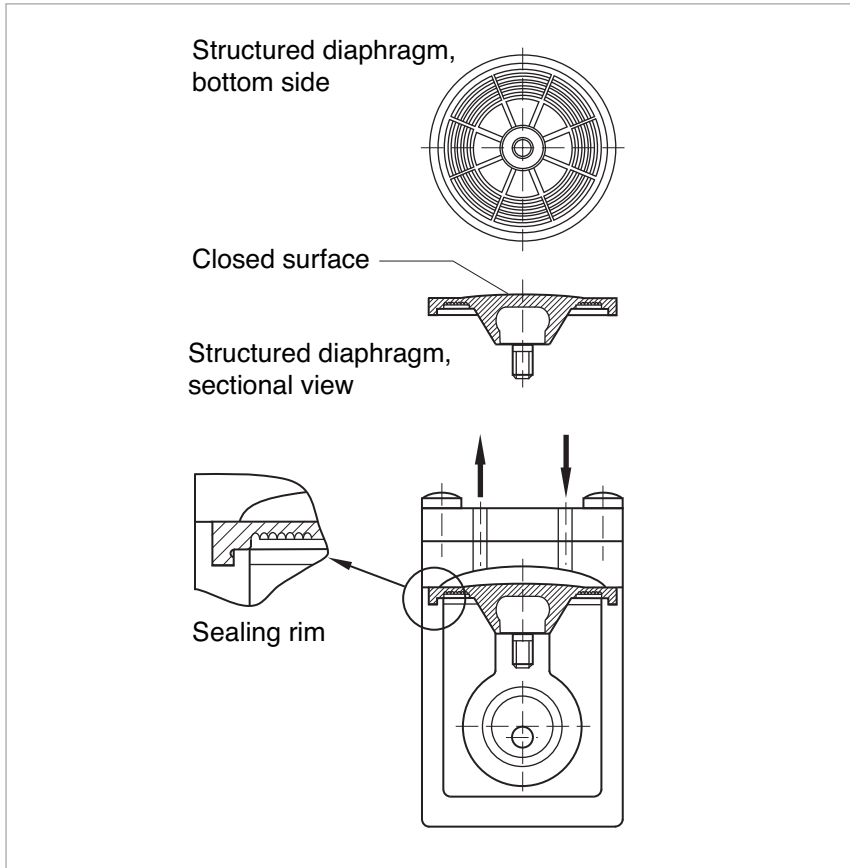


Vacuum pumps for pure pumping and evacuation of air and gases owing to oil-free operation.

The requirements regarding technology are ever increasing. In the area of vacuum technology the demand for a dry vacuum, i.e. a vacuum which is free of oil and thus free of hydrocarbons, is increasing more and more. We are able to meet this requirement through our dry compressing backing pumps for turbo-molecular pumps.

These are ideally suited for all applications in the rough and medium vacuum range where clean media need to be pumped. But also for corrosive media we have solutions for you.





Diaphragm pump with structured diaphragm

The structured diaphragm with its sealed surface provides the basis for a long service life and a low base pressure.

### Advantages to the User

- Dry compressing, free of oil and hydro-carbons
- Matched to the turbomolecular pumps from Oerlikon Leybold Vacuum (SL 80 to TW 1600)
- Low ultimate pressure
- KF flange at the intake port
- Fully equipped with cable, switch (ON/OFF) and plug
- Better performance and smaller size through the use of structured diaphragms
- Low vibration levels through dynamic mass balancing (in VT pumps)
- Lower maintenance costs and long maintenance intervals through the use of high-quality and well-proven components
- Simple maintenance by staff of the customer
- Favourable price-to-performance ratio
- Uniform appearance
- Can be operated in any position

### Typical Applications

- Backing pump for wide pressure range turbomolecular pumps
- Mass spectrometers
- Medical equipment
- Analyzes
- For laboratory applications also with corrosive media (DIVAC 3.6 TC only)
- General use for rough and fine vacuum applications

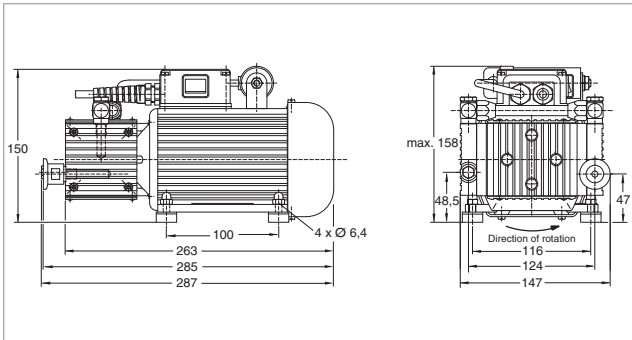
# DIVAC 0.8 T and 0.8 LT



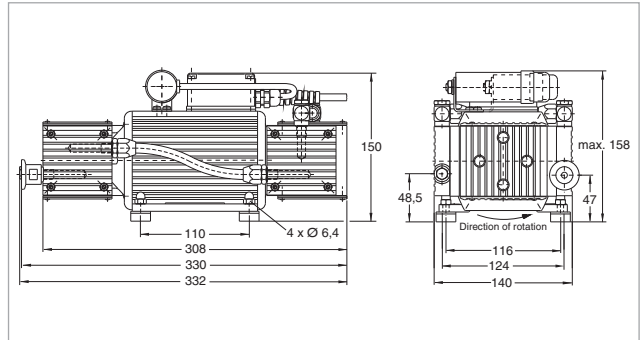
DIVAC 0.8 T



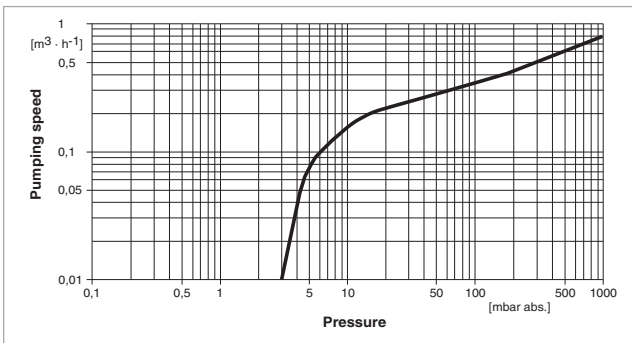
DIVAC 0.8 LT



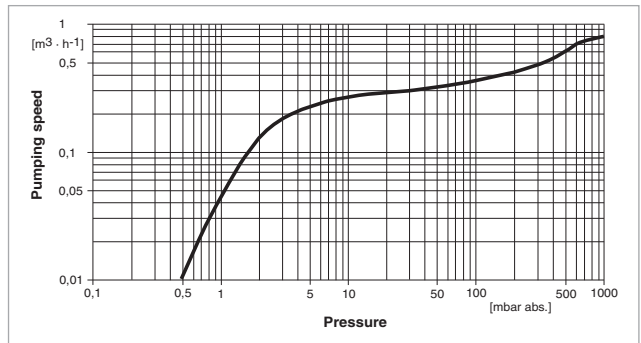
Dimensional drawing for the DIVAC 0.8 T



Dimensional drawing for the DIVAC 0.8 LT



Pumping speed curve of the DIVAC 0.8 T



Pumping speed curve of the DIVAC 0.8 LT

## Technical Data

## DIVAC

		0.8 T	0.8 LT
Max. pumping speed (atm.)	m <sup>3</sup> /h (cfm)	0.77 (0.45)	0.77 (0.45)
Ultimate pressure (absolute)	mbar (Torr)	≤ 3.0 (≤ 2.25)	≤ 0.5 (≤ 0.38)
Max. exhaust back pressure (absolute)	mbar (Torr)	2000 (1500)	2000 (1500)
Pump heads		2	4
Connection			
Inlet (suction side)	DN	16 KF	16 KF
Exhaust (delivery side)	DN	Silencer	Silencer
Thread (suction and delivery side)	G	G 1/8"	G 1/8"
Noise level acc. to DIN 45 635 Part 13, approx.	dB(A)	49	53
Permissible gas admission temperature, max.	°C (°F)	+5 to +40 (+41 to +104)	+5 to +40 (+41 to +104)
Permissible ambient temperature, max.	°C (°F)	+5 to +40 (+41 to +104)	+5 to +40 (+41 to +104)
Voltage / nominal frequency (1 ph. motor)			
Schuko plug	V / Hz	198-264 / 50/60	230 / 50 ± 10%
NEMA plug	V / Hz	90-127 / 50/60	115 / 60 ± 10%
Protective class	IP	44	44
Motor power	W	50	80
Current consumption	A	0.4	0.5
Nominal speed, approx. (50/60 Hz)	min <sup>-1</sup>	1500/1800	1500/1800
Dimensions (W x H x D), approx.	mm (in.)	285 x 150 x 150 (11.22 x 5.9 x 5.9)	332 x 150 x 150 (13.07 x 5.9 x 5.9)
Weight, approx.	kg (lbs)	5.9 (13.02)	7.5 (16.56)
Material			
Diaphragm		Neoprene	Neoprene
Valves		EPDM	EPDM
Pump head		Aluminum	Aluminum

## Ordering Information

## DIVAC

	0.8 T	0.8 LT
Diaphragm vacuum backing pumps for turbomolecular pumps including 1 m (3.5 ft) long mains cord, country-specific plug, silencer, rubber feet, as well as ON/OFF switch 198-264 V / 50/60 Hz 90-127 V / 50/60 Hz 230 V / 50 Hz ± 10% 115 V / 60 Hz ± 10%	<b>Part No. 127 80</b> <b>Part No. 127 81</b> - -	- - <b>Part No. 127 83</b> <b>Part No. 127 84</b>
Spare parts kit consisting of 2 diaphragms, 4 valves, 4 valve gaskets, 4 piping gaskets	<b>Part No. 127 95</b>	<b>Part No. 127 95 (2x)</b>
Exhaust silencer	<b>Part No. 127 98</b>	<b>Part No. 127 98</b>

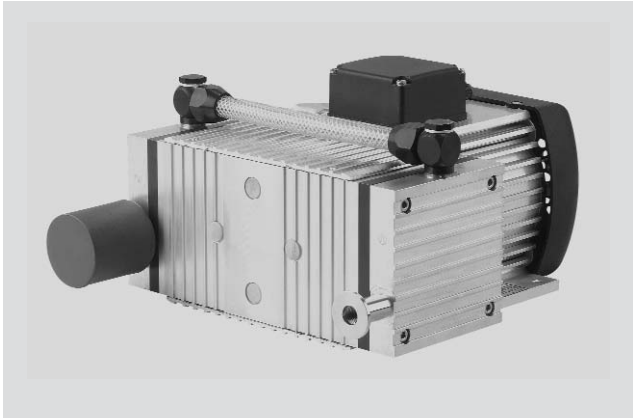
T = For use in connection with Turbomolecular pumps

L = Very low ultimate pressure (Low pressure)

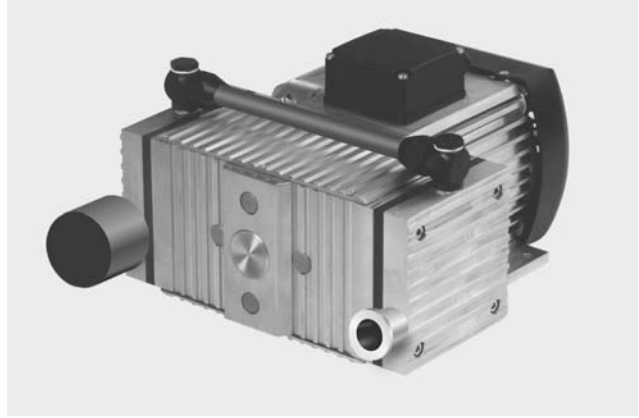
V = Low vibration levels (Vibration less)

C = Chemical (Corrosive)

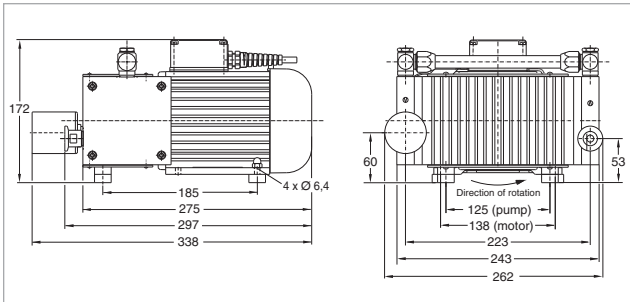
# DIVAC 2.5 T and 2.5 VT



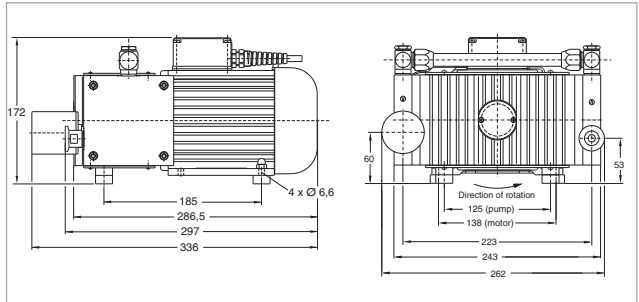
DIVAC 2.5 T



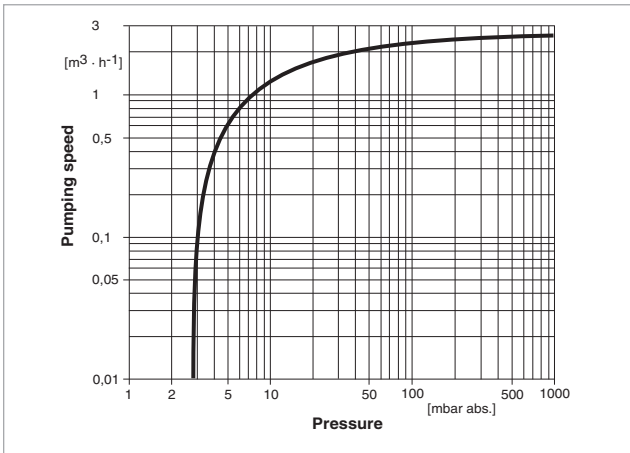
DIVAC 2.5 VT



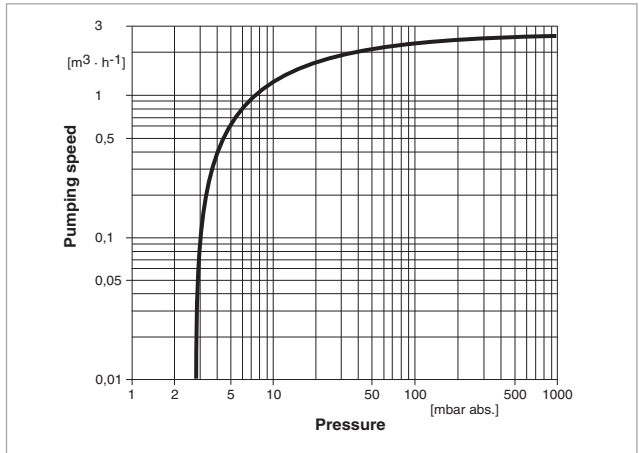
Dimensional drawing for the DIVAC 2.5 T



Dimensional drawing for the DIVAC 2.5 VT



Pumping speed curve of the DIVAC 2.5 T



Pumping speed curve of the DIVAC 2.5 VT

## Technical Data

## DIVAC

		2.5 T	2.5 VT
Max. pumping speed (atm.)	m <sup>3</sup> /h (cfm)	2.57 (1.51)	2.57 (1.51)
Ultimate pressure (absolute)	mbar (Torr)	≤ 3.0 (≤ 2.25)	≤ 3.0 (≤ 2.25)
Max. exhaust back pressure (absolute)	mbar (Torr)	2000 (1500)	2000 (1500)
Pump heads		2	2
Connection			
Inlet (suction side)	DN	16 KF	16 KF
Exhaust (delivery side)	DN	Silencer	Silencer
Thread (suction and delivery side)	G	G 1/4"	G 1/4"
Noise level acc. to DIN 45 635 Part 13, approx.	dB(A)	49	53
Permissible gas admission temperature, max.	°C (°F)	+5 to +40 (+41 to +104)	+5 to +40 (+41 to +104)
Permissible ambient temperature, max.	°C (°F)	+5 to +40 (+41 to +104)	+5 to +40 (+41 to +104)
Voltage / nominal frequency (1 ph. motor)			
Schuko plug	V / Hz	230 / 50 ± 10%	230 / 50 ± 10%
NEMA plug	V / Hz	115 / 60 ± 10%	115 / 60 ± 10%
Protective class	IP	54	54
Motor power	W	300	300
Current consumption	A	1.4	1.4
Nominal speed, approx. (50/60 Hz)	min <sup>-1</sup>	1500/1800	1500/1800
Dimensions (W x H x D), approx.	mm (in.)	336 x 262 x 172 (13.23 x 10.31 x 6.77)	336 x 262 x 172 (13.23 x 10.31 x 6.77)
Weight, approx.	kg (lbs)	12.9 (28.48)	13.1 (28.92)
Material			
Diaphragm		EPDM	EPDM
Valves		Neoprene	Neoprene
Pump head		Aluminum	Aluminum

## Ordering Information

## DIVAC

	2.5 T	2.5 VT
Diaphragm vacuum backing pumps for turbomolecular pumps including 1 m (3.5 ft) long mains cord, country-specific plug, silencer, rubber feet, as well as ON/OFF switch 230 V / 50 Hz ± 10% 115 V / 60 Hz ± 10%	<b>Part No. 127 86</b> <b>Part No. 127 87</b>	<b>Part No. 127 89</b> <b>Part No. 127 90</b>
Spare parts kit consisting of 2 diaphragms, 4 valves, 4 valve gaskets, 4 piping gaskets	<b>Part No. 127 96</b>	<b>Part No. 127 96</b>
Exhaust silencer	<b>Part No. 127 99</b>	<b>Part No. 127 99</b>

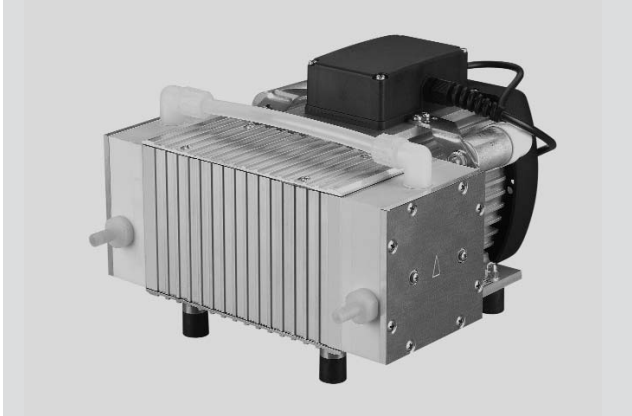
T = For use in connection with Turbomolecular pumps

L = Very low ultimate pressure (Low pressure)

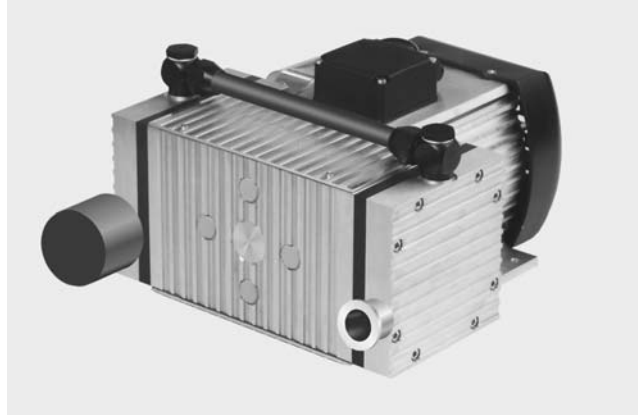
V = Low vibration levels (Vibration less)

C = Chemical (Corrosive)

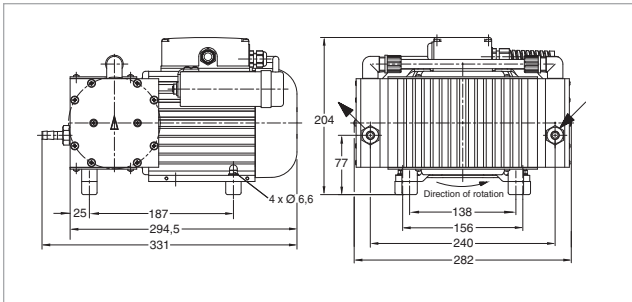
# DIVAC 3.6 TC and 4.8 VT



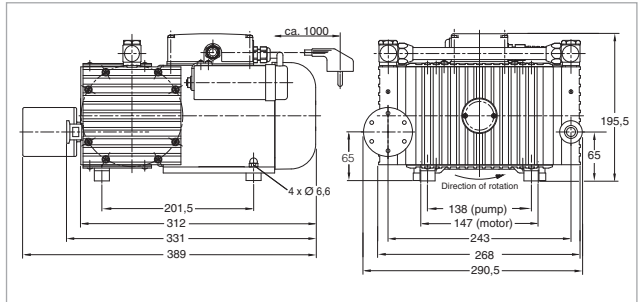
DIVAC 3.6 TC



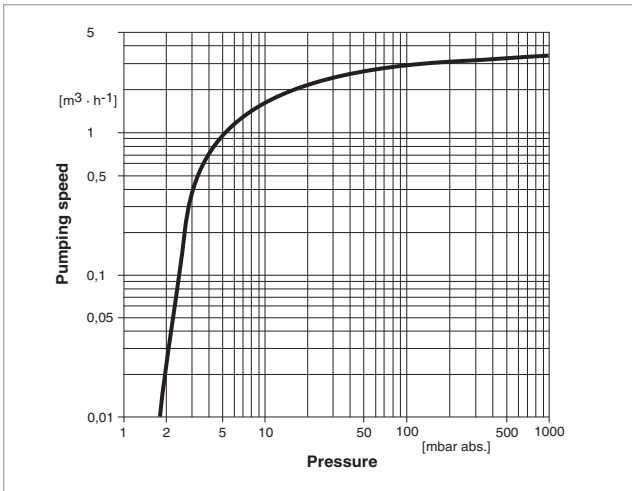
DIVAC 4.8 VT



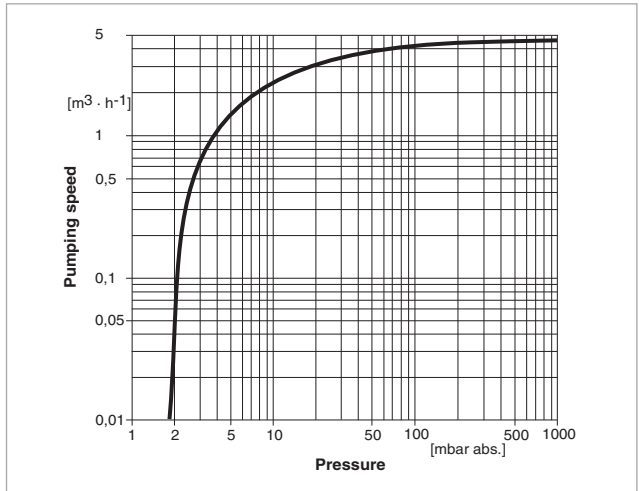
Dimensional drawing for the DIVAC 3.6 TC



Dimensional drawing for the DIVAC 4.8 VT



Pumping speed curve of the DIVAC 3.6 TC



Pumping speed curve of the DIVAC 4.8 VT

## Technical Data

## DIVAC

		3.6 TC	4.8 VT
Max. pumping speed (atm.)	m <sup>3</sup> /h (cfm)	3.6 (2.12)	4.8 (2.83)
Ultimate pressure (absolute)	mbar (Torr)	≤ 2 (≤ 1.5)	≤ 2 (≤ 1.5)
Max. exhaust back pressure (absolute)	mbar (Torr)	2000 (1500)	2000 (1500)
Pump heads		2	2
Connection			
Inlet (suction side)	DN	Hose nozzle DN 10 + 1m long chemical hose	16 KF
Exhaust (delivery side)	DN	Hose nozzle DN 10	Silencer
Thread (suction and delivery side)	G	G 3/8"	G 3/8"
Noise level acc. to DIN 45 635 Part 13, approx.	dB(A)	50	55
Permissible gas admission temperature, max.	°C (°F)	+5 to +40 (+41 to +104)	+5 to +40 (+41 to +104)
Permissible ambient temperature, max.	°C (°F)	+5 to +40 (+41 to +104)	+5 to +40 (+41 to +104)
Voltage / nominal frequency (1 ph. motor)			
Schuko plug	V / Hz	230 / 50 ± 10%	230 / 50 ± 10%
NEMA plug	V / Hz	115 / 60 ± 10%	115 / 60 ± 10%
Protective class	IP	54	54
Motor power	W	220	350
Current consumption	A	1.6	2.6
Nominal speed, approx. (50/60 Hz)	min <sup>-1</sup>	1500/1800	1500/1800
Dimensions (W x H x D), approx.	mm (in.)	329 x 277 x 205 (12.95 x 10.91 x 8.07)	324 x 273 x 220 (12.76 x 10.75 x 8.66)
Weight, approx.	kg (lbs)	14.3 (31.57)	18.0 (39.74)
Material			
Diaphragm		PTFE (Teflon)	EPDM
Valves		PTFE coated	Viton
Pump head		FFPM (Kalrez)	Aluminum

## Ordering Information

## DIVAC

	3.6 TC	4.8 VT
Diaphragm vacuum backing pumps for turbomolecular pumps including 1 m (3.5 ft) long mains cord, country-specific plug, silencer <sup>1)</sup> , rubber feet, as well as ON/OFF switch 230 V / 50 Hz ± 10% 115 V / 60 Hz ± 10%	<b>Part No. 500 210</b> -	<b>Part No. 127 92</b> <b>Part No. 127 93</b>
Spare parts kit consisting of 2 diaphragms, 4 valves, 4 valve gaskets, 4 piping gaskets <sup>2)</sup>	<b>Part No. 500 215</b>	<b>Part No. 127 97</b>
Exhaust silencer	-	<b>Part No. 127 94</b>

<sup>1)</sup> For the DIVAC 3.6 TC hose nozzle instead of silencer

<sup>2)</sup> Not required for DIVAC 3.6 TC

T = For use in connection with Turbomolecular pumps

L = Very low ultimate pressure (Low pressure)

V = Low vibration levels (Vibration less)

C = Chemical (Corrosive)

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