

# adixen



## ROTARY VANE PUMPS PASCAL SERIES



## Features and benefits

Adixen manufactured RVPs since 1962. With several hundred thousand pumps sold throughout the world in all type of applications, Adixen supplies a complete range of Rotary Vanes Pumps with superior performances through the brand name Pascal Series Adixen. Adixen's expertise and the reliability of our RVPs are the primary basis of our worldwide reputation.

PASCAL Series is the ultimate step of our know-how in lubricated rotary vanes pumps based on 50 years of experience. All our pumps have been developed and manufactured to ensure a reliable and sustainable product with superior performance.



### › Easy to use

All controls and service access are located on the front of the oil-casing

### › Rugged reliable design

Stainless steel screws, FPM seals, Anti Oil leak tightness system, etc.

### › Optimized tightness

Efficient and reliable anti-suckback systems. Leaktight lip seals

### › CE/UL/CSA approval

For each motor model

### › Easy to maintain

Field serviceable, using the appropriate maintenance kits (see page 18)

### › Air cooling

Forced air ventilation

### › Efficient gas ballast

Preventing moisture condensation

### › Compact design for 5 → 21m<sup>3</sup>/h

Small footprint, retractable handle, horizontal or vertical orientation of inlet and exhaust ports

### › Continuous operation

At high pressure due to forced lubrication (except on small SD pumps)

### › Motors

All major countries covered (1ph and 3ph phase)  
Small RVPs (5 → 21m<sup>3</sup>/h) have universal motors to facilitate integration by large OEMs

### › Oil

Different viscosities and specifications available to obtain the best performance from rotary vane pumps whatever the applications (see page 16)

### › Accessories

Comprehensive range of accessories (mist eliminators, filters, traps...) in order to optimize pump operation in various running conditions (see page 19)



# Selection guide according to applications

PASCAL series rotary vane pumps can meet the requirements of your specific application by offering a wide range of dedicated series. This pump selection table will help you choose the most suitable product for a wide variety of vacuum processes in Industry, R&D, and Instrumentation equipment.

Applications	SD series	I series	C1 series	C2 series	H1 series
Gas analyzers		■			
Leak detection	●	■			
Mass spectrometers		■			
Other spectrometers	●	■			
Electron microscopes		■			
Surface analyzers		■			
Centrifuges	■				
Sterilization		■	●		
Electron tubes	■	●			
Lamps	■	●			
TV tubes (CRT)	■	●			
Refrigeration	■	●			●
Air conditioning	■	●			●
Drying	●	■	●		
Distillation	●	■	●		
Metallurgy	■	●			
Freeze drying		■	●	●	
CVD.LPCVD			●	■	
Ion implantation				■	
Dry etching				■	
Load-lock		●	■	●	
Cryogenics		●			■
Gas recovery					■
Oxygen pumping				■	

■ : Recommended    ● : Possible



## Wide range of dedicated series

### SD series

**Standard pumps for general purpose, non-corrosive applications.**

- Lamp manufacturing
- Neon signs manufacturing
- Electron tube evacuation
- TV tube manufacturing
- Metallurgy
- Centrifuges
- Flywheels...

### H1 series

**Hermetic series features a very high level of tightness.**

- Helium recirculation
- Toxic gases pumping
- Noble gases pumping

### I series

**Addressing specific requirements of the Analytical instrument market.**

- Mass spectrometer
- GC/MS
- LC/MS
- Electron microscopes
- Residual Gas analyzers
- Sterilizers...

### C1 series

**Designed for high resistance to corrosive or aggressive gases.**

- Chemical industry
- R & D

### C2 series

**Suitable for the most corrosive applications found in the semiconductor industry.**

- Plasma etching
- Reactive sputtering
- Ion implantation
- PECVD
- RIE...

## Pump models



- From 5 to 100m<sup>3</sup>/h (3.8 to 85 cfm)
- Wide range of dedicated series

**The best way to meet your requirements**

## Technical specifications

		Unit	1005	1015	2005	2010	2015	2021	2033	2063	2100
Nominal pumping speed <sup>(1)</sup>	50 Hz	m <sup>3</sup> /h	5.4	15	5.4	9.7	15	20.7	30	60	120
	60 Hz	cfm	3.8	10,6	3.8	6.8	10.6	14.6	23.3	42.2	85
Pneurop pumping speed <sup>(1)</sup>	50 Hz	m <sup>3</sup> /h	4.8	12.5	4.8	8.5	12.5	16	27	55	100
	60 Hz	cfm	3.4	8.8	3.4	6	8.8	11.8	18.8	38	70.6
Ultimate total pressure closed gas ballast <sup>(1)</sup>		mbar	5 × 10 <sup>-2</sup>		2 × 10 <sup>-3</sup>		3 × 10 <sup>-3</sup>				
		torr	3.75 × 10 <sup>-2</sup>		1.5 × 10 <sup>-3</sup>		2.2 × 10 <sup>-3</sup>				
Ultimate total pressure open gas ballast <sup>(1)</sup>		mbar	4	7	10 <sup>-2</sup>		2 × 10 <sup>-2</sup>				
		torr	3	5.25	7.5 × 10 <sup>-3</sup>		1.5 × 10 <sup>-2</sup>				
Water vapor capacity <sup>(1) (2)</sup>	50/60 Hz	g/h	120/130	330/370	120/110	125/100	110/100	90/90	700	1200	3000
Water vapor pressure <sup>(1) (2)</sup>	50/60 Hz	mbar	35/25	35/30	35/25	20/15	12/10	7/7	30	25	40
Oil capacity		L	1.1	1	0.83	0.95	0.95	0.98	3.6	7	7.5
Inlet Flange		ISO-KF	DN25				DN40		DN50		
Exhaust flange		ISO-KF	DN25				DN40		DN50		
Motor Rating (Nominal)	50/60 Hz	kW	0.45/0.55	0.45/0.55	0.45/0.55	0.45/0.55	0.45/0.55	0.45/0.55	1.5/1.8	2.2/2.6	3/3.6

<sup>(1)</sup> Typical values according to Pneurop specifications with Adixen mineral oil for SD, I, C1 and H1 series and with A113 oil for C2 series

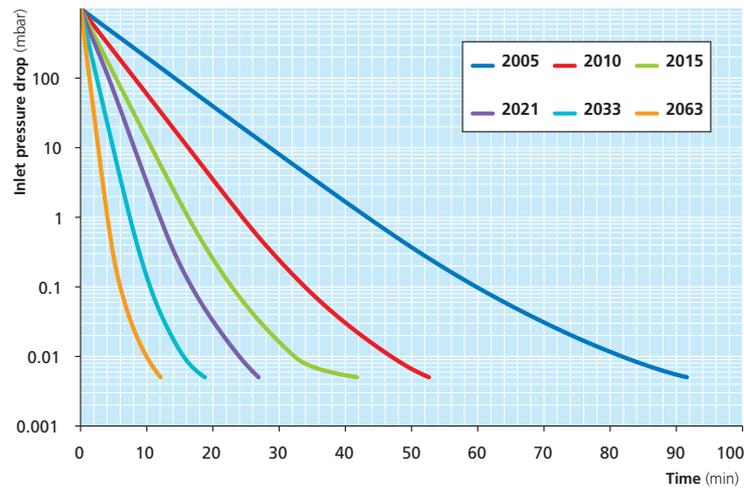
<sup>(2)</sup> with automatic gas ballast (AGB) open

Ambient temperature: from 12°C (54°F) to 45°C (113°F)

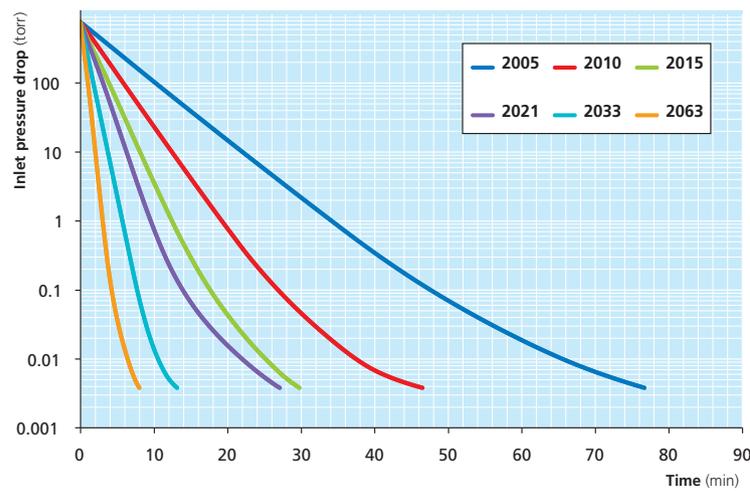
## A wide range of dedicated solutions

Pressure drop curves

### 500 L - 50 Hz



### 500 L - 60 Hz



Pumping	m <sup>3</sup> /h	5	10	15	21	30	60	100
		Speed	cfm	3.8	6.8	10.6	14.6	24
I series	2 stages	2005 I	2010 I	2015 I	2021 I	-	-	-
SD series	2 stages	2005 SD	2010 SD	2015 SD	2021 SD	2033 SD	2063 SD	2100 SD
SD series	1 stage	1005 SD	-	1015 SD	-	-	-	-
C1 series	2 stages	2005 C1	2010 C1	2015 C1	2021 C1	2033 C1	2063 C1	-
C2 series	2 stages	-	2010 C2	2015 C2	2021 C2	2033 C2	2063 C2	-
H1 series	2 stages	2005 H1	-	2015 H1	-	2033 H1	2063 H1	-

## Pumps series

### Standard Applications (SD Series)

1005SD, 1015SD, 2005SD, 2010SD, 2015SD,  
2021SD, 2033SD, 2063SD, 2100SD

All major vacuum applications in wide range of industries.  
**No oil mist pollution at the exhaust** for  $5 > 21\text{m}^3/\text{h}$  pumps : thanks to the natural lubrication design, even with high throughputs or frequent cycling.



### Analytical Instrumentation Applications (I Series)

2005I, 2010I, 2015I, 2021I

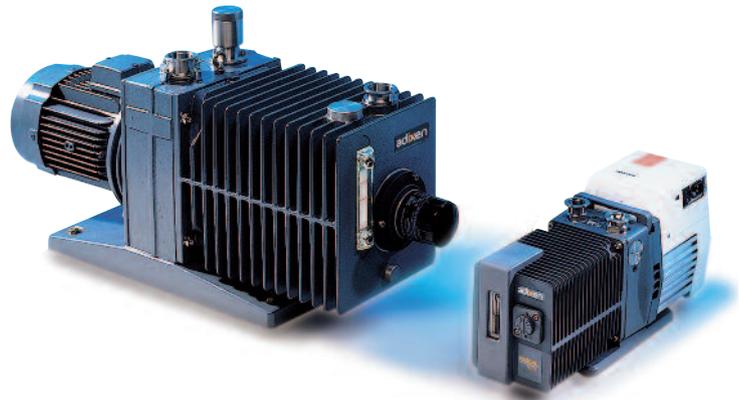
All Adixen expertise in product design.  
The most sensitive applications of analytical instruments.  
**Low backstreaming rate**, pumping stability even for light gases thanks to advanced engineering design.  
Partial pressure in permanent gases :  $10^{-4}$  mbar.  
Low noise level: pump and motor improved.  

- Reduced levels with no irritating frequencies.
- **Noise level of 49dBA** is typical value for I series.

### Chemical Applications (C1 Series)

2005C1, 2010C1, 2015C1, 2021C1, 2033C1, 2063C1

Pumping corrosive gases, reliable operation in aggressive conditions  
**Corrosion resistant materials.**



Feature materials	2005C1 to 2021C1	2033C1 and 2063C1
Stainless steel, grey cast iron, aluminium...	■	■
FPM seals	■	■
Chromium oxide coating on bearing surfaces	■ All shafts	■ External shafts
High strength oil sight glass	■	■
Integrated oil filter		■
Oil casing gas purge		■

## Chemical Applications in semiconductor industry (C2 Series)

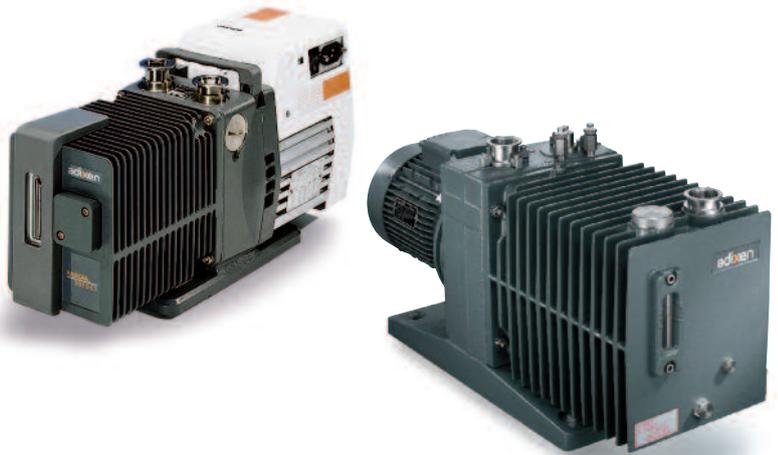
2010C2, 2015C2, 2021C2, 2033C2, 2063C2

Suitable for the most aggressive pumping environment. Specific anti-corrosion features

**Designed and prepared for PFPE fluids.**

**Bubbler purge** provides continuous nitrogen injection into the oil:

- 10°C lower operation temperature
- Reduced corrosion rate due to uniform degassing.



Feature materials	2010C2 to 2021C2	2033C2 and 2063C2
FPM seals	■	■
Chromium oxide coating on bearing surfaces	■ All shafts	■ All shafts
Synthetic oil sight material	■	■
Oil casing purge	■	■
Gas ballast connection for neutral gas purge	■	■
Oil degassing system : bubbler	■	■
Composite solid vane material (HP stage, oil pump)	■	■
Oil pump pressure sensor connection		■
Oil temperature sensor connection		■

## Pollution free Applications (H1 Series)

2005H1, 2015H1, 2033H1, 2063H1

Designed for pumping He3 and other precious or exotic gases used in closed loops systems. Specific design of static pieces (stainless steel oil casing...) and of dynamic pieces (shaft sealing...), high level of tightness for pumped gases and ambient atmosphere

**Each pump is individually tested and delivered with a tightness control certificate (leak rate <math> < 2 \times 10^{-7}</math> mbar.L/s)**

*Efficient cooling*

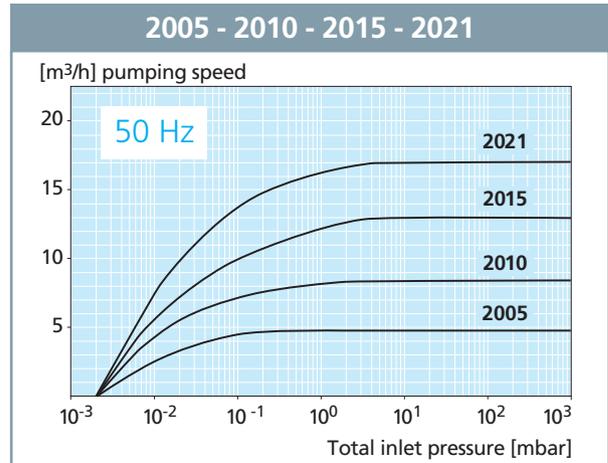
- 2005/2015H1 (air)
- 2033/2063H1 (water; flow: 2 - 3 L/min)



Exhaust pressure	Max inlet pressure • continuous operation mbar			
mbar	2005H1	2015H1	2033H1	2063H1
50	1000	1000	60	60
1000	1000	200	60	60
2000	100	20	60	60

PASCAL SERIES

5 to 21 m<sup>3</sup>/h pumps  
SD / I / C1 / C2 / H1 series



Technical specifications

		Unit	1005	1015	2005	2010	2015	2021
Nominal pumping speed <sup>(1)</sup>	50 Hz	m <sup>3</sup> /h	5.4	15	5.4	9.7	15	20.7
	60 Hz	cfm	3.8	10.6	3.8	6.8	10.6	14.6
Pneurop pumping speed <sup>(1)</sup>	50 Hz	m <sup>3</sup> /h	4.8	12.5	4.8	8.5	12.5	16
	60 Hz	cfm	3.4	8.8	3.4	6	8.8	11.8
Ultimate total pressure closed gas ballast <sup>(1)</sup>		mbar	5 × 10 <sup>-2</sup>			2 × 10 <sup>-3</sup>		
		torr	3.75 × 10 <sup>-2</sup>			1.5 × 10 <sup>-3</sup>		
Ultimate total pressure open gas ballast <sup>(1)</sup>		mbar	4	7	10 <sup>-2</sup>			
		torr	3	5.25	7.5 × 10 <sup>-3</sup>			
Water vapor capacity <sup>(1) (2)</sup>	50/60 Hz	g/h	120/130	330/370	120/110	125/100	110/100	90/90
Water vapor pressure <sup>(1) (2)</sup>	50/60 Hz	mbar	35/25	35/30	35/25	20/15	12/10	7/7
Oil capacity		L	1.1	1	0.83	0.95	0.95	0.98
Inlet Flange		ISO-KF	DN25					
Exhaust flange		ISO-KF	DN25					
Motor Rating (Nominal)	50/60 Hz	kW	0.45/0.55	0.45/0.55	0.45/0.55	0.45/0.55	0.45/0.55	0.45/0.55

<sup>(1)</sup> Typical values according to Pneurop specifications with Adixen mineral oil for SD, I, C1 and H1 series and with A113 oil for C2 series

<sup>(2)</sup> with automatic gas ballast (AGB) open

Ambient temperature: from 12°C (54°F) to 45°C (113°F)

Ordering information

Rotary vane pump part numbers can be generated using the following tables:

Number of stages	Pumping speed	Serie	Type of motor	Voltage	Cable (2 m long)	Oil **
1 : One 2 : Two	05 : 5 m <sup>3</sup> /h 10 : 10 m <sup>3</sup> /h 15 : 15 m <sup>3</sup> /h 21 : 21 m <sup>3</sup> /h	AE : I series SD : SD series C1 : C1 series C2 : C2 series H1 : H1 series	M : 1 ph w. switch S : 1 ph w/o. switch T : 3 ph	L : Low voltage H : High voltage	A : USA E : Europe K : UK J : Japan S : Switzerland	M : Mineral oil (A120) N : Without mineral oil

P/N	2	05	AE	M	L	A	M
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Examples: 205AEMLAM

See speed/serie configuration available page 5.

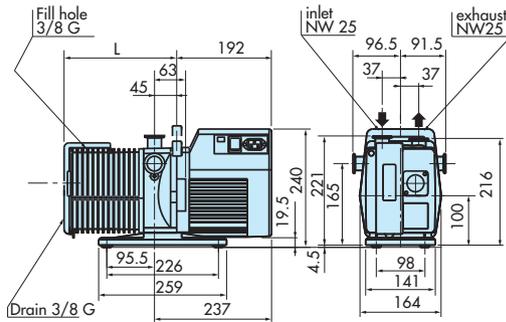
\* : For single-phase motor only. Three-phase motors are delivered without cable but in any case codes A, J, E, K, S must be indicated. Codes A and J are the only choices for low voltage configuration.

\*\* : For C2 serie, Code N is the only choice: the pump is prepared with A113 synthetic fluid

Universal single-phase and three-phase motors covering all world-wide electrical supplies see page 14.

## Dimensional drawings

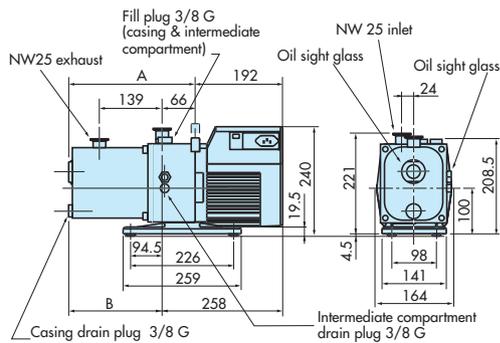
2005SD/I/C1 - 2010SD/I/C1 - 2015SD/I/C1 - 2021SD/I/C1 - 1005SD - 1015SD



### Specific dimensions

Model	L mm
2005	228
2010	245
2015	270
2021	291
1005	228
1015	245

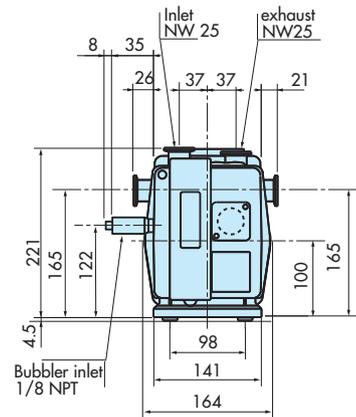
2005H1 - 2015H1



### Specific dimensions

Model	A mm	B mm
2005	279	195
2015	310	226

2010C2 - 2015C2 - 2021C2



**Note:** Fixation holes diameter = 9,5 mm

Type of pump	2005	2010	2015	2021
Weight (kg)	25	26	27	28

## Lubricating fluid

### SD/C1/H1 Series

Delivered with one initial charge of mineral oil (A119 for the US market; A120 for other countries)\*.

\* : For preparation with Adixen A113 PFPE fluid, please contact us

### C2 Series

Factory prepared for operation with A113 synthetic fluid; fluid must be ordered separately: see pages 17.

### For each application

Oil of different viscosity and specifications are available see page 16.

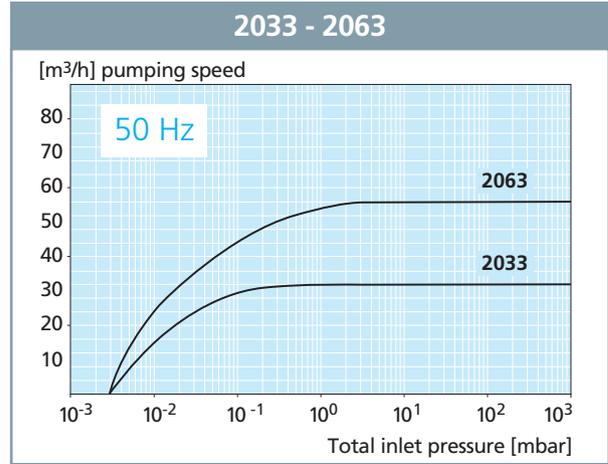
## Accessories

**Oil mist eliminators** OME25S (P/N: 104200) for SD and I series: see page 22  
 OME25HP/HP+ (P/N: 104199 & 108341) for SD and I series: see page 22  
 OME25C/H (P/N: 066849) for C1, C2 and H1 series: see page 23

Oil drain kits	Liquid nitrogen traps	Sorption traps	Dust filter	Condensate trap	Remote gas ballast	External oil filters	Oil level switch
ODK1 ODK2	LNT25S LNT25C LNT25P1	ST25S ST25C	DFT25	CT25	AGB4	DE1	OLS4
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PASCAL SERIES

**33 / 63 m<sup>3</sup>/h pumps**  
SD / C1 / C2 / H1 series



**Technical specifications**

		Unit	2033	2063
Nominal pumping speed <sup>(1)</sup>	50 Hz	m <sup>3</sup> /h	30	60
	60 Hz	cfm	23.3	42.2
Pneurop pumping speed <sup>(1)</sup>	50 Hz	m <sup>3</sup> /h	27	55
	60 Hz	cfm	18,8	38
Ultimate total pressure closed gas ballast <sup>(1)</sup>		mbar	3 × 10 <sup>-3</sup>	
		torr	2.2 × 10 <sup>-3</sup>	
Ultimate total pressure open gas ballast <sup>(1)</sup>		mbar	2 × 10 <sup>-2</sup>	
		torr	1.5 × 10 <sup>-2</sup>	
Water vapor capacity <sup>(1) (2)</sup>	50/60 Hz	g/h	700	1200
Water vapor pressure <sup>(1) (2)</sup>	50/60 Hz	mbar	30	25
Oil capacity		L	3.6	7
Inlet Flange		ISO-KF	DN40	
Exhaust flange		ISO-KF	DN40	
Motor Rating (Nominal)	50/60 Hz	kW	1.5/1.8	2.2/2.6

<sup>(1)</sup> Typical values according to Pneurop specifications with Adixen mineral oil for SD, C1 and H1 series and with A113 oil for C2 series

<sup>(2)</sup> with automatic gas ballast (AGB) open

Ambient temperature: from 12°C (54°F) to 45°C (113°F)

**Ordering information**

Rotary vane pump part numbers can be generated using the following tables:

Number of stages	Pumping speed	Serie	Type of motor *	Voltage	Cable	Oil **	Equipment ***	
2 : Two	33 : 33 m <sup>3</sup> /h 63 : 63 m <sup>3</sup> /h	SD : SD series C1 : C1 series C2 : C2 series H1 : H1 series	T1 : Europe T2 : USA/Japan T3 : Asia/ROW	L : Low voltage H : High voltage	W: W/o	M: Mineral oil (A120) N : Without mineral oil	A : With N : Without	X

P/N	2	33	SD	T1	H	W	M	A	X
Examples:	233SDT1LWMAX								

\* : Three dedicated three-phase motor have been especially chosen to match characteristics required in each significant area in the world (see pages 15)

For Europe: Code T1 (CE/UL/CSA certified)

For USA and Japan: Code T2 (CE/UL/CSA certified)

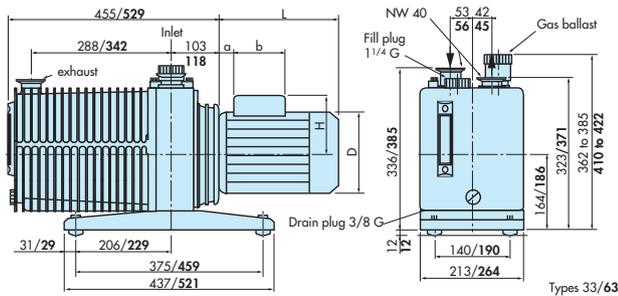
For ASIA and Rest Of the World: Code T3 (CE/CSA certified)

\*\* : For C2 series, Code N is the only choice: the pump is prepared with A113 synthetic fluid

\*\*\* : The equipment is 40 mm welding nipple

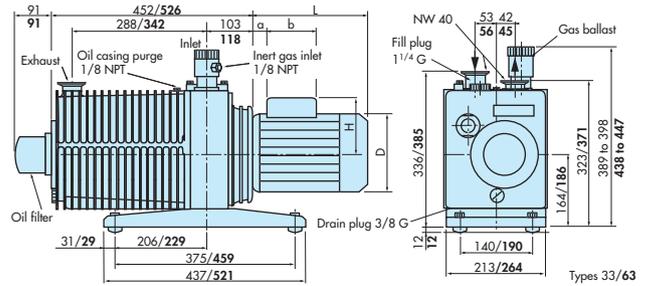
## Dimensional drawings

2033SD - 2063SD



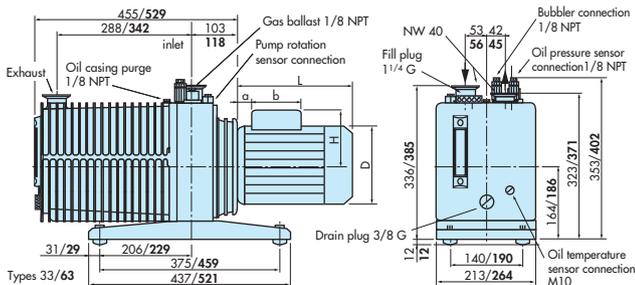
Types 33/63

2033C1 - 2063C1



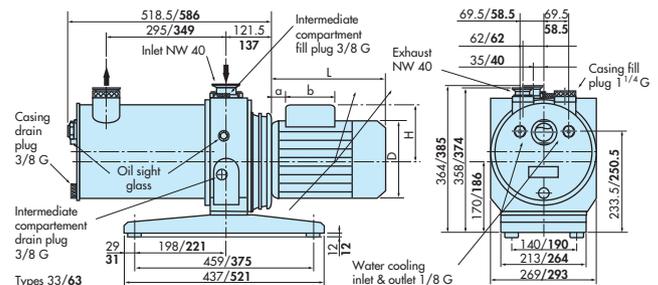
Types 33/63

2033C2 - 2063C2



Types 33/63

2033H1 - 2063H1



Types 33/63

**Note:** Fixation holes diameter = 11 mm

Type de moteur	L	D	H	a+b	Motor rating	
	mm	mm	mm	mm	50/60Hz kw	
2033	T1 Europe	270	170	140	150	1.1/1.3
	T2 USA/JAPAN	270	170	140	150	1.5/1.8
	T3 ASIA & ROW	270	170	140	200	1.5/1.8
2063	T1 Europe	300	190	150	150	2.2/2.6
	T2 USA/JAPAN	300	190	150	150	2.2/2.6
	T3 ASIA & ROW	300	190	150	230	2.2/2.6

	PUMP WEIGHT (by type of motor)			
	T1 EUROPE	T2 USA & JAPAN	T3 ASIA & ROW	
2033	SD	60.2kg	59.6kg	66.7kg
	C1	63.2kg	62.6kg	69.7kg
	C2	61.2kg	60.6kg	67.7kg
	H1	64.8kg	66.6kg	73.7kg
2063	SD	92.3kg	92.4kg	99.4kg
	C1	95.8kg	95.9kg	102.9kg
	C2	92.8kg	92.9kg	99.9kg
H1	99.8kg	99.9kg	106.9kg	

## Lubricating fluid

### SD/C1/H1 Series

Delivered with one initial charge of mineral oil (A119 for the US market; A120 for other countries)\*.

\* : For preparation with Adixen A113UPPFE fluid, please contact us

### C2 Series

Factory prepared for operation with A113 synthetic fluid; fluid must be ordered separately: see pages 17.

### For each application

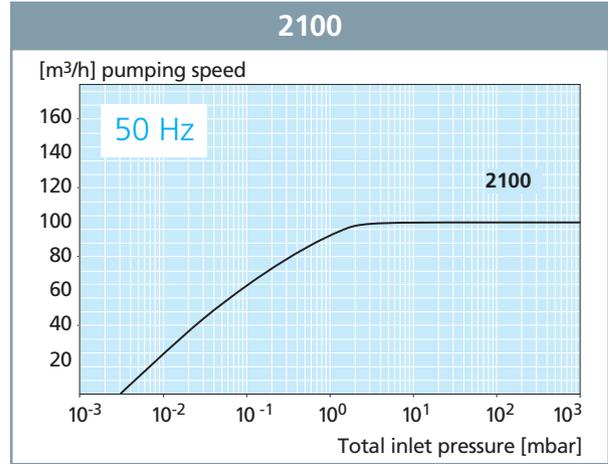
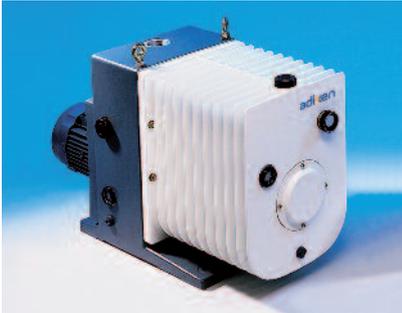
Oil of different viscosity and specifications are available see page 16.

## Accessories

**Oil mist eliminators** For SD series: OME40S (P/N: 104887), OME40HP+ (P/N: 200024): see pages 23, 24  
For C1 and C2 series: OME40C1 (P/N: 068785), OME40C2 (P/N: 068942): see page 24  
For H1 series: OME40H (P/N: 068744): see page 25

Oil drain kits	Sorption traps	Remote gas ballast	External oil filters	Oil level switch
ODK136, ODK236	ST40	AGB36	DE1, DE2	OLS36
Page 27	Page 30	Page 33	Page 35	Page 34

## 2100 SD pump



### Technical specifications

		Unit	2100
Nominal pumping speed <sup>(1)</sup>	50 Hz	m <sup>3</sup> /h	120
	60 Hz	cfm	85
Pneurop pumping speed <sup>(1)</sup>	50 Hz	m <sup>3</sup> /h	100
	60 Hz	cfm	70.6
Ultimate total pressure closed gas ballast <sup>(1)</sup>		mbar	3 × 10 <sup>3</sup>
		torr	2.2 × 10 <sup>3</sup>
Ultimate total pressure open gas ballast <sup>(1)</sup>		mbar	2 × 10 <sup>2</sup>
		torr	1.5 × 10 <sup>2</sup>
Water vapor capacity <sup>(1) (2)</sup>	50/60 Hz	g/h	3000
Water vapor pressure <sup>(1) (2)</sup>	50/60 Hz	mbar	40
Oil capacity		L	7.5
Inlet Flange		ISO-KF	DN50
Exhaust flange		ISO-KF	DN50
Motor Rating (Nominal)	50/60 Hz	kW	3/3.6

<sup>(1)</sup> Typical values according to Pneurop specifications with Adixen mineral oil for SD

<sup>(2)</sup> with automatic gas ballast (AGB) open

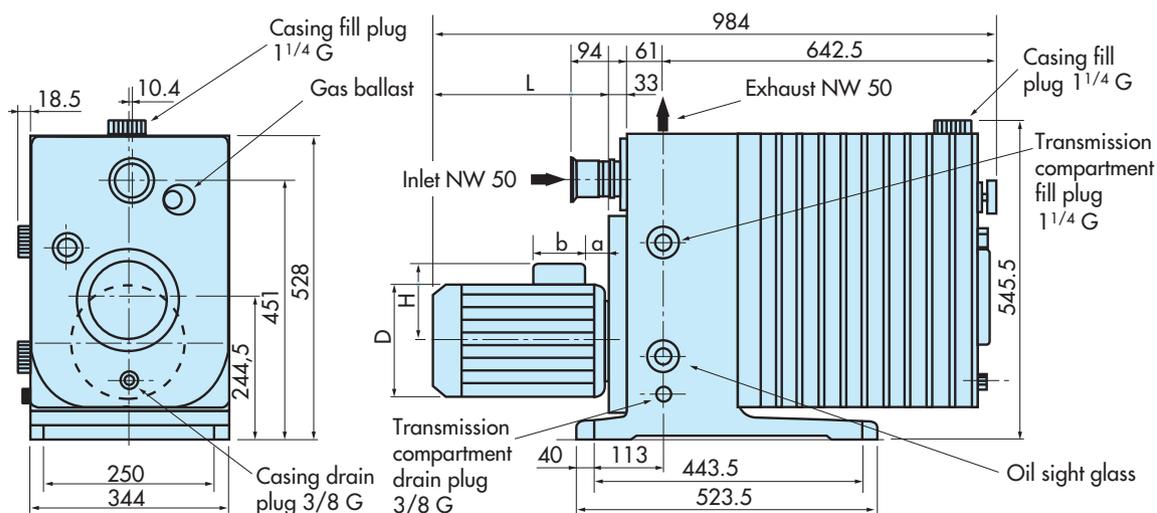
Ambient temperature: from 12°C (54°F) to 45°C (113°F)

### Ordering information

Pump model	PART NUMBER according to three-phase motor type		
2100 SD	786030 UT2100SD for USA*	794270 UT2100SD for USA*	794272
Motor P/N	083449	054502	065975
Standards	CE/VDE530	CSA	CE/JIS
Frequencies	Voltage		
Name plate	Δ/Y	Δ/Y	Δ
50 Hz	220/380 - 240/415	220/380 - 240/415	200
60 Hz	220/380 - 280/480	220/380 - 280/480	200 - 220
Other possible voltages	Δ/Y	Δ/Y	Δ/Y
50 Hz	230/240	230/240	
60 Hz	230/460 - 255/440	230/460 - 255/440	

## Dimensional drawings

2100



Specific dimensions according to motors

	Motor type	L mm	D mm	H mm	a mm	b mm
2100	VDE	310	196	140	44.5	86
	CSA	305	195	140	44.5	86
	JIS	310	196	140	44.5	86

## Accessories

Oil of different viscosity and specifications are available see page 16

Oil mist eliminator	Sorption trap
OME50S	ST50
Page 25	Page 30

## Motor supply for all series from 5 to 21m<sup>3</sup>/h Universal single-phase and three-phase motors



### Protection

- Protection level IP43 (TEFC type)
- Thermally protected (automatic reset for 1ph type and dry contact normally closed for 3ph type)

### Complies with major international standards

UL/CSA/CE

### Unique universal motors

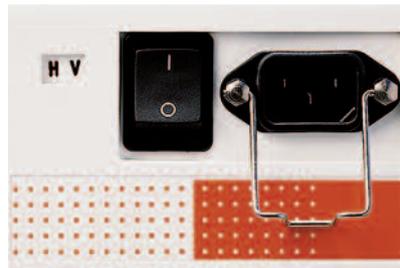
- International voltage
- Covering all worldwide voltages
- Complying with all electrical standards
- Easy to configure
- Wide choice of plugs and cables
- Quiet operation

### Single phase specifics

- Simple rocker switch to easily configure the voltage
- Visible indication of voltage range
- On/off switch controls pump operation (optional)



Three-phase universal motor



Easy to use, functional interface

Voltage range		Low voltage	High voltage	Nominal motor rating
Single phase	50Hz / 60Hz	90 V to 132 V	180 V to 254 V	0,45 / 0,55 kW
Three phase	50Hz	170 V to 254 V	342 V to 460 V	0,55 / 0,66 kW
	60Hz	170 V to 300 V	342 V to 520 V	0,55 / 0,66 kW

## Motor supply for all series 33 / 63 m<sup>3</sup>/h (three-phase)

Dedicated motors chosen to match characteristics required in each significant area in the world



### One motor for each area

- Three phase motor type to cover all worldwide voltages and standards
- Single phase motor available in option : please contact us
- Note : pumps are supplied without power cable or plug

### Protection

- Protection level IP54 / IP55 (TEFC type) according to the motor
- Thermally protected thanks to dry contact

### Complies with major international standard

- UL, CSA, CE according to the motor

		2033			2063		
Area		Europe	USA/Japan	ROW *	Europe	USA/Japan	ROW *
Motor P/N		118059	113114	114449	118060	113115	114450
Standards		CE / UL / CSA	CE / UL / CSA	CE / CSA	CE / UL / CSA	CE / UL / CSA	CE / CSA
Protection level		IP55	IP55	IP54	IP55	IP55	IP54
Max. Voltage range	code	T1	T2	T3	T1	T2	T3
	50Hz (V)	190/240	175/220	180/240	190/240	175/220	180/240
		380/415	380/440	360/415	380/415	380/440	360/415
	60Hz (V)	200/280	190/230	180/240	200/230	190/280	180/240
380/480		380/460	380/480	380/480	380/460	380/480	

\* : ROW = Rest Of the World

## Oils and fluids

Rotary vane pumps are mechanical pumps in which lubricating fluid performs three major functions:

- lubrication between moving parts
- heat exchange between pumping module and oil casing cooling fins.
- internal clearance reduction between moving parts for high compression ratio.

In order to achieve the desired ultimate pressure, oils and fluids must have very low saturated vapor pressure and specific viscosities within the internal temperature range of the pumps.

Adixen has selected high quality oils and fluid, suitable for a wide range of applications.

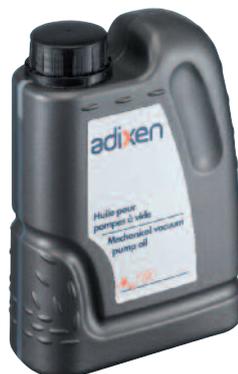
Selection of the appropriated fluid must take into consideration operating conditions as well as gas corrosion.

PASCAL series rotary vane pumps can be operated with other oils than the ones listed below; using different oils can affect all specified ultimate pressures (please consult Adixen).

	Type	Vapor pressure	Viscosity	Density	Flash point	Applications
<b>A119</b>	mineral oil	4 × 10 <sup>-5</sup> mbar at 25°C	54 cst at 40°C 8.1 cst at 100°C	0.860	213°C	general purpose, non corrosive gases, low temperature starting
<b>A120</b>	Paraffin based mineral oil	1.3 × 10 <sup>-6</sup> mbar at 65°C	118 cst at 40°C 12.5 cst at 100°C	0.886	260°C	general purpose non corrosive gases
<b>A121</b>	special hydrocarbon, based mineral oil	6.6 × 10 <sup>-7</sup> mbar at 25°C	67 cst at 38°C	0.830	296°C	high pressure and high temperature, frequent cycling
<b>A102</b>	mineral oil	10 <sup>-2</sup> mbar at 65°C	98 cst at 40°C 11.1 cst at 100°C	0.880	230°C	anti-emulsion water vapor and organic acids vapor pumping
<b>A111</b>	hydrocarbon based synthetic oil	10 <sup>-6</sup> mbar at 65°C	100 cst at 40°C 7.8 cst at 100°C	0.870	212°C	high pressure and high temperature
<b>A113</b>	PFPE synthetic fluid	6 × 10 <sup>-5</sup> mbar at 100°C	100 cst at 40°C 11 cst at 100°C	1.9	none	oxygen and highly corrosive gases pumping
<b>A200</b>	vacuum distilled mineral oil	6 × 10 <sup>-6</sup> mbar at 25°C	58 cst at 40°C 8.5 cst at 100°C	0.860	223°C	low backstreaming chemical resistance
<b>A300</b>	double distilled hydrocarbon based mineral oil	2 × 10 <sup>-6</sup> mbar at 25°C	56 cst at 40°C 8.9 cst at 100°C	0.860	243°C	highly resistant to chemical attack, pumping of Lewis acid, halogens...
<b>A155</b>	synthetic di-ester fluid	10 <sup>-3</sup> mbar at 100°C	94 cst at 40°C 9.1 cst at 100°C	0.957	252°C	pumping of NH3 and hydrocarbon vapors. R134a initial circuit evacuation. Resistant to oxidation, avoid formation of deposits

## Oils and fluids ordering information

Oil Type	Container size	PART NUMBER		
		USA	Other countries	
A119	1 liter	98101	103855	
	1 gallon	98102		
	55 gallons	98103		
A120	2 liters		068099	
	5 X 2 liters		068844	
	56 liters		010991	
A121	1 liter	14128	102724	
A102	2 liters	010996	010996	
	5 X 2 liters		068853	
	56 liters		010987	
A111	1 liter	064656	064655	
	2 liters			
	5 X 2 liters			
A113	1 kg	98703		
	2 kg	98704		
	8 kg	98705		
	0.5 liter		064657	
	2.5 liters		064659	
A200	1 liter	98201	068694	
	1 gallon	98202		
	55 gallons	98203		
	3.8 liters			068695
	19 liters			068696
A300	1 liter	98301	068890	
	1 gallon	98302		
	55 gallons	98303		
	3.8 liters			068891
	19 liters			068892
A155	1 liter	109233	109233	



## Maintenance kits ordering information

Model	Major kit	Minor kit	Shaft seal kit
2005 I	103906	103912	065612
2010 I	103907	103912	065612
2015 I	103908	103912	065612
2021 I	103909	103912	065612
2005 SD	103902	103911	065875
2010 SD	103903	103911	065875
2015 SD	103904	103911	065875
2021 SD	103905	103911	065875
2005 C1	104976	104975	065612
2010 C1	104977	104975	065612
2015 C1	104978	104975	065612
2021 C1	104979	104975	065612
2010 C2	104614	104975	065612
2015 C2	104615	104975	065612
2021 C2	104616	104975	065612
2005 H1	104612	104611	-
2015 H1	104613	104611	-
1005 SD	104622	103911	065875
1015 SD	104643	105515	065875

Model	Major kit	Minor kit
2033 SD	054288	054285
2063 SD	054487	054485
2100 SD	054595	083282
2033 C1	054289	054286
2063 C1	054489	054488
2033 C2	065124	065123
2063 C2	065553	065552
2033 H1	054283	054282
2063 H1	054484	054483

In order to simplify maintenance performed in the field, Adixen offers maintenance kits including interchangeable components:

- Minor kit includes all necessary seals (shaft seals, o-rings, valves...).
- Major kit includes Minor kit plus vanes, springs, plugs...
- Shaft seal kit includes lip seals necessary for fast periodic renewal of external shaft sealing. (only for 5 to 21 m<sup>3</sup>/h SD, I, C1, C2 series).
- **Shaft sleeves** of 5 - 21 m<sup>3</sup>/h pumps are not included in kits. These Cr<sub>2</sub>O<sub>3</sub> coated sleeves are very resistant and not require replacement. If the sleeve does show signs of wear, it needs to be ordered separately with the following part number: **P/N: 065823**.



## Accessories

### A full and comprehensive line of accessories

Configuring and optimizing rotary vane pumps operation for some applications requires the use of different accessories.

Adixen has developed a full line of accessories to be used with the PASCAL series.

These accessories have been designed in order to facilitate operation, assembly and disassembly ; inlet and exhaust flanges comply with ISO-KF standard.

For some applications, the use of accessories may be the best way to enhance performance and reliability of vacuum systems.

Our specialists can assist you in making the proper selection.



## Accessories



OME 25 S



ST 25 C



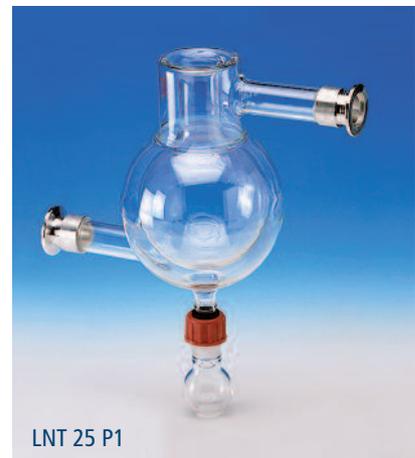
OME 25 HP



OME 40 HP+



OME 40 C1



LNT 25 P1



LNT 25 C



DE 2

	2005 I 2021 I	2005 SD 2021 SD 1005 SD 1015 SD	2005 C1 2021 C1	2010 C2 2021 C2	2005 H1 2015 H1	2033 SD 2063 SD	2033 C1 2063 C1	2033 C2 2063 C2	2033 H1 2063 H1	2100 SD
<b>Oil mist eliminators</b>										
OME 25 S	■	■								
OME 25 HP / HP+	■	■								
OME 25 C / H	●	●	■	■	■					
OME 40 S						■				
OME 40 HP+						■				
OME 40 C1						●	■	■		
OME 40 C2						●	●	■		
OME 40 H									■	
OME 50 S										■
<b>Oil drain kits</b>										
ODK 1	■	■								
ODK 2	■	■								
ODK 136						■				
ODK 236						■				
<b>Liquid nitrogen traps</b>										
LNT 25 S	■	■								
LNT 25 C	■	■	■	●	●					
LNT 25 P1	■	■	●	●						
<b>Sorption traps</b>										
ST 25 S	■	■								
ST 25 C	■	■	■	■						
ST 40						■				
ST 50										■
<b>Dust filter</b>										
DFT 25	■	■								
<b>Condensate trap</b>										
CT 25	■	■	●	●						
<b>Remote gas ballast</b>										
AGB 4	■	■	●							
AGB 36						■	●			
<b>External oil filters</b>										
DE 1			■	■		■	■	■		
DE 2						■	■	■		
<b>Oil level switches</b>										
OLS 4	■	■								
OLS 36						■				

■ : Possible without restrictions

● : Possible with restrictions

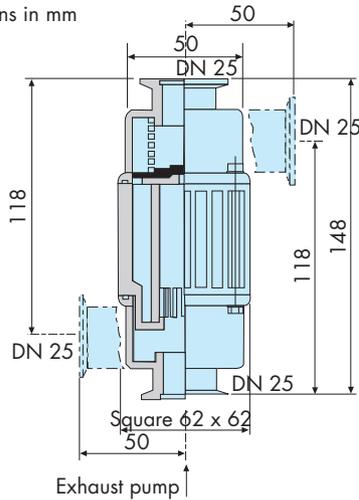
## Oil mist eliminators

During rotary vane pump operation, oil mist escapes from the exhaust port; mainly when pumping between atmospheric pressure and 1 mbar.

Oil mist eliminators retain oil mist contained in the exhausted gases with a high level of separation; an internal over pressure valve prevents exceeding the maximum permissible exhaust pressure.

### OME 25 S

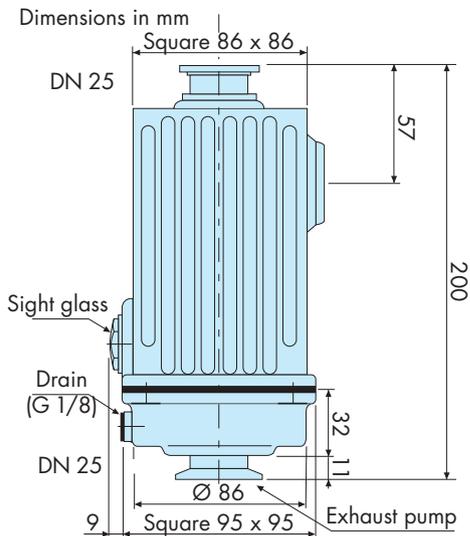
Dimensions in mm



- material: ..... body : polyamide  
..... cartridge : epoxy/glass micro-fiber
- weight:..... 0.217kg 0.477 lbs
- inlet port/exhaust port: DN25 ISO-KF
- P/N:..... **104200**
- replacement cartridge, single: P/N 068304  
Orders must be placed for quantities multiple of 5 (5, 10, 15...).
- supplied with: 1 centering ring, 1 clamp,  
1 additional angle port

### OME 25 HP/HP+

Dimensions in mm



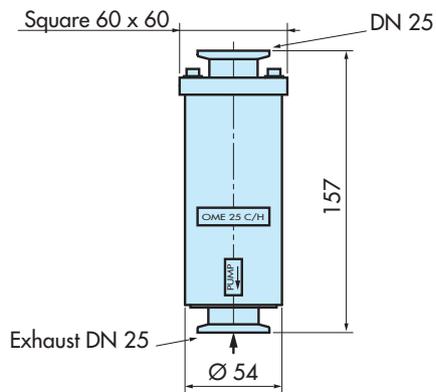
Specially designed for applications involving frequent cycling or high pressure operation; OME 25 HP is mainly dedicated to 15 m³/h and 21 m³/h rotary vane pumps.

- material: ..... body : aluminum  
..... cartridge : epoxy/glass micro-fiber
- weight: ..... 1.2 kg 2.64 lbs
- inlet port/exhaust port: DN25 ISO-KF
- P/N:..... **104199**
- replacement cartridge (single): P/N 100522
- supplied with: 1 centering ring and 1 clamp

Same design as **OME HP**, incorporating a more efficient cartridge : **OME25HP+** is the next step toward completely oil free exhausted gases.

- P/N: ..... **108341**
- replacement cartridge (single): P/N 107494  
(materials: PU/PET/glass micro-fiber/PA)

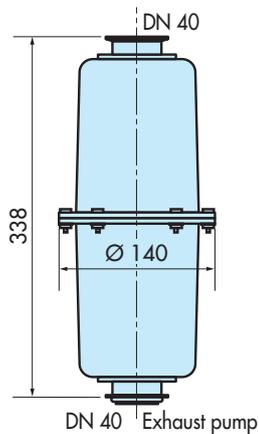
## OME 25 C/H



For applications involving corrosive gases or high level of tightness.

- material: ..... body : stainless steel  
..... cartridge : PTFE/glass micro-fiber
- weight: ..... 0.530 kg 1.77 lbs
- leak rate: .....  $\leq 2 \times 10^{-7}$  mbar l/s
- inlet port/exhaust port: DN25 ISO-KF
- P/N:..... **066849**
- replacement cartridge: P/N 066800 for single  
Orders must be placed for quantities multiple of 5 (5, 10, 15...).
- supplied with: 1 centering ring and 1 clamp

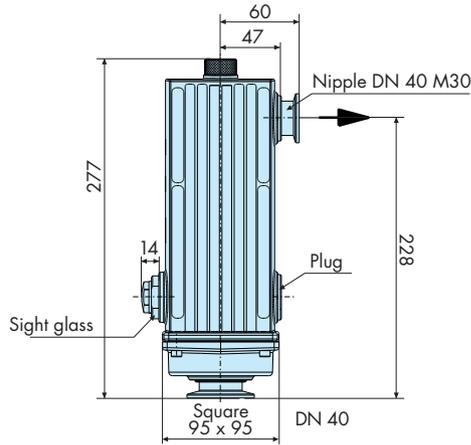
## OME 40 S



- material: ..... body: aluminum  
..... cartridge: epoxy/glass micro-fiber
- weight:..... 0.9 kg 1.9 lbs
- inlet port/exhaust port: DN40 ISO-KF
- P/N:..... **104887**
- replacement cartridge (single): P/N 068443

PASCAL SERIES

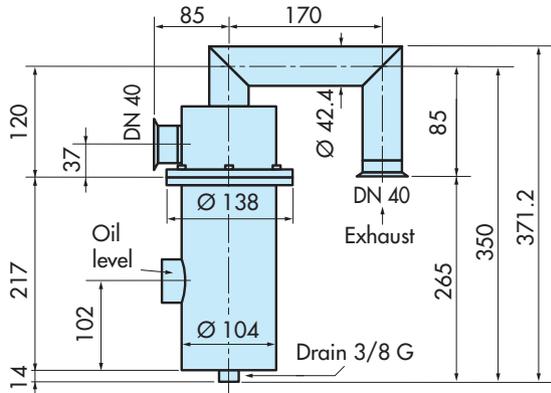
OME 40 HP+



Specially designed for applications involving frequent cycling or high pressure operation ; OME 40 HP+, with its efficient cartridge, allows practically oil free exhausted gases. It is mainly dedicated for 33/63 m<sup>3</sup>/h rotary vane pumps.

- material: ..... body: aluminium  
..... cartridge: Phenolic resin/  
glass micro-fiber/ polyester
- weight: ..... 1.4 kg / 3.08 lbs
- inlet/exhaust port: DN40 ISO-KF
- P/N:..... **200024**
- replacement cartridge (single): P/N 115937
- supplied with : 1 centering and 1 clamp

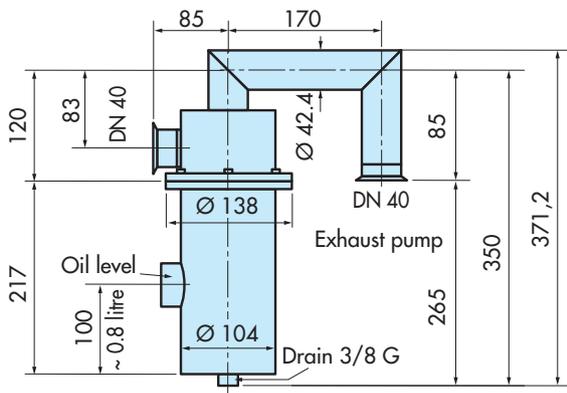
OME 40 C1



For applications involving corrosive gases, **except fluorinated** gases.

- material: ..... body: stainless steel  
..... cartridge: PTFE/glass micro-fiber
- weight: ..... 4.1 kg 9 lbs
- inlet/exhaust port: DN40 ISO-KF
- P/N:..... **068785**
- replacement cartridge (single): P/N 068778

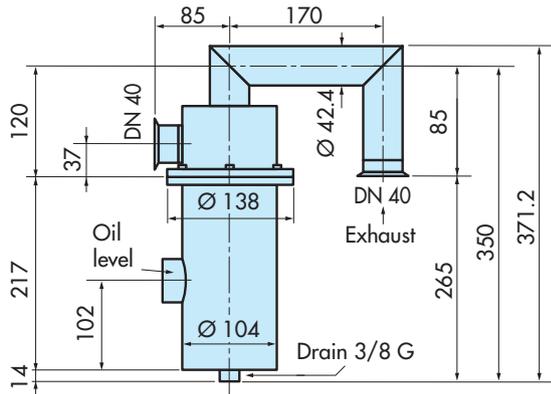
OME 40 C2



Suitable for corrosive applications involving fluorinated gases.

- material: ..... body : stainless steel  
..... cartridge : polypropylene
- weight: ..... 4.1 kg 9 lbs
- inlet/exhaust port: DN40 ISO-KF
- P/N:..... **068942**
- replacement cartridge (single): P/N 100802

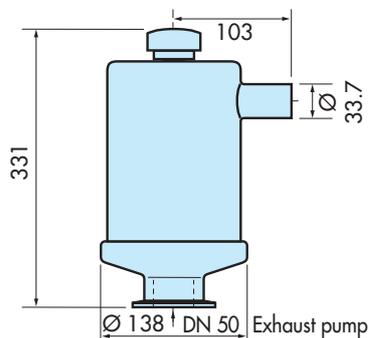
## OME 40 H



Specially designed for applications involving high level of tightness.

- material: ..... body: stainless steel  
..... cartridge: epoxy/glass micro-fiber
- weight: ..... 4.1 kg 9 lbs
- leak rate .....  $\leq 2 \times 10^{-7}$  mbar.l/s
- inlet/exhaust port: DN40 ISO-KF
- P/N: ..... **068744**
- replacement cartridge (single): P/N 068443

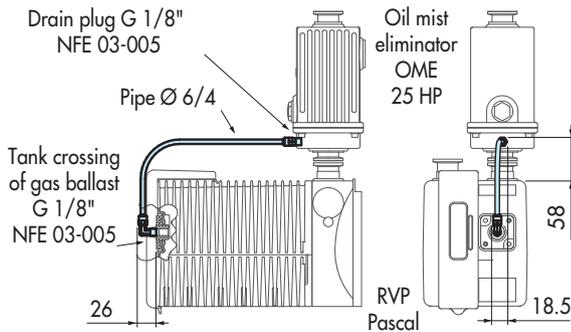
## OME 50 S



- material: ..... body: steel  
..... cartridge: cellulose
- weight: ..... 3.5 kg 7.7 lbs
- inlet port: ..... DN50 ISO-KF
- exhaust port: .....  $\varnothing 33.7$  mm 1 1/8 inch
- P/N: ..... **104888**
- replacement filter (1 set): P/N 082672

## Oil drain kits

### ODK 1 for 5 to 21 m<sup>3</sup>/h pumps I/SD series



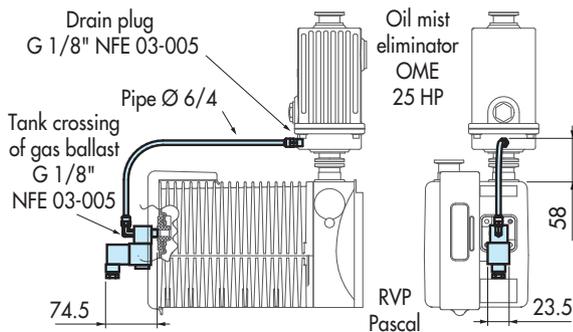
Oil Drain Kit 1 must be used with oil mist eliminator OME 25 HP. It consists of a drain pipe which is connected on one end to the bottom of the OME 25 HP, and on the other end to the inlet of the gas ballast. When operating the pump at high pressure, the oil accumulated in the OME HP is re-injected through the gas ballast.

**\*When using ODK 1, the pump is not tight when stopped**

□ weight: ..... 0.1 kg 0.22 lbs

□ P/N: ..... **104360**

### ODK 2 for 5 to 21 m<sup>3</sup>/h pumps I/SD series



Oil Drain Kit 2 is similar to ODK 1 with a NC solenoid valve located at the inlet of the gas ballast.

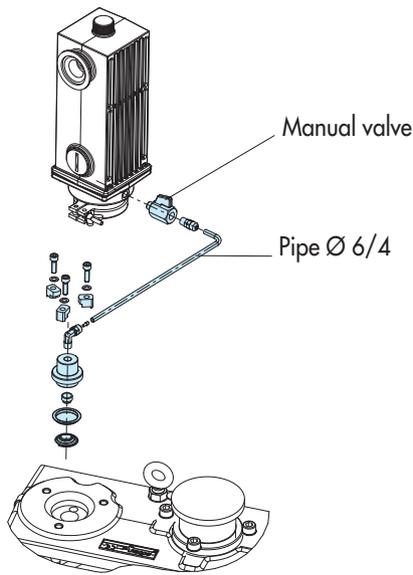
The valve must be energized by the same electrical supply as the pump; in case of power failure, the valve will close and the pump will stay tight when stopped.

□ weight: ..... 0.3 kg 0.66 lbs

□ **part numbers**

	230 V 50/60 Hz	115 V 60 Hz	100 V 50/60 Hz	200 V 50/60 Hz	24 V DC
<b>P/N</b>	<b>104361</b>	<b>104362</b>	<b>104363</b>	<b>104364</b>	<b>104365</b>

### ODK 136 for 33 / 63 m<sup>3</sup>/h pumps

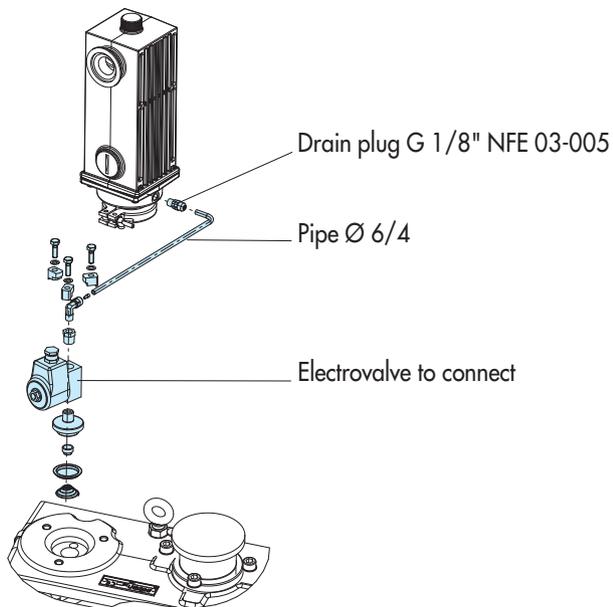


Oil Drain Kit 136 must be used with oil mist eliminator OME 40 HP+. It consists of a drain pipe which is connected on one end to the bottom of the OME 40 HP+, and on the other end to the inlet of the gas ballast. When operating the pump at high pressure, the oil accumulated in the OME HP is re-injected through the gas ballast.

**\* When using ODK 136, the pump is not tight when stopped**

P/N: ..... 118773

### ODK 236 for 33 / 63 m<sup>3</sup>/h pumps



Oil Drain Kit 236 is similar to ODK 136 with a NC solenoid valve located at the inlet of the gas ballast.

The valve must be energized by the same electrical supply as the pump; in case of power failure, the valve will close and the pump will stay tight when stopped.

#### part numbers

	230 V 50/60 Hz	115 V 60 Hz	100 V 50/60 Hz	200 V 50/60 Hz	24 V DC
P/N	118776	118777	118778	118779	118780

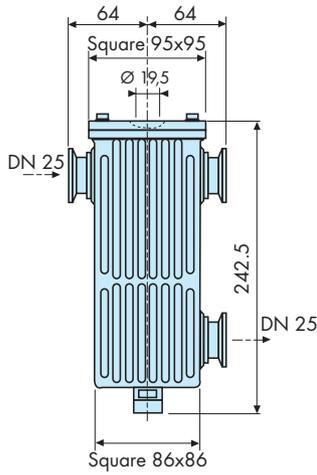
## Liquid nitrogen traps

Liquid nitrogen traps condense all gases at the pump inlet whose critical condensation temperature is above  $-196^{\circ}\text{C}$  (77K). They can be used either to protect the pump against condensable vapor introduction or to prevent

backstreaming of oil vapors at the pump inlet when an absolutely clean vacuum is desired (exhaust of molecular drag or turbomolecular pumps)

### LNT 25 S

Dimensions in mm



- material:..... body: aluminum  
..... thimble: stainless steel
- weight: ..... 1.690 kg 3.72 lbs
- liquid nitrogen capacity: 0.5 l
- inlet/exhaust ports: DN25 ISO-KF
- conductance  fill interval

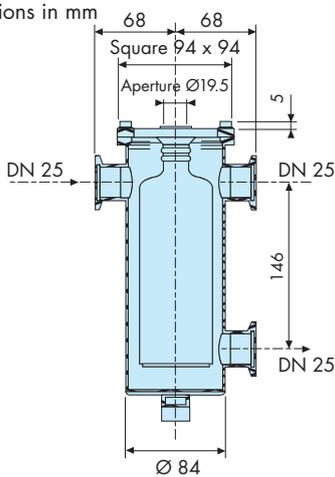
conductance	inlet pressure	fill interval	inlet pressure
44 l/s	$10^{-1}$ mbar	5h	$10^{-2}$ mbar
10 l/s	$10^{-2}$ mbar	11h	ultimate

- supplied with: 1 centering ring and 1 clamp

P/N: ..... **104197**

### LNT 25 C

Dimensions in mm



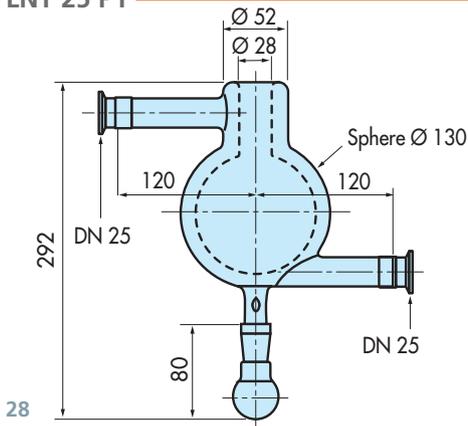
- material:..... body: stainless steel  
..... thimble: stainless steel
- weight: ..... 1.885 kg 4.15 lbs
- liquid nitrogen capacity: 0.5 l
- inlet/exhaust ports: DN25 ISO-KF
- conductance  fill interval

conductance	inlet pressure	fill interval	inlet pressure
33 l/s	$10^{-1}$ mbar	5 h 30	$10^{-2}$ mbar
6 l/s	$10^{-2}$ mbar	14 h	ultimate

- supplied with: 1 centering ring and 1 clamp

P/N: ..... **066889**

### LNT 25 P1



- material:..... body: glass  
..... flanges: aluminum
- weight: ..... 1kg 2.2 lbs
- liquid nitrogen capacity: 0.5 l
- inlet/exhaust ports: DN25 ISO-KF
- conductance  fill interval

conductance	inlet pressure	fill interval	inlet pressure
6 l/s	$10^{-2}$ mbar	5 h	ultimate

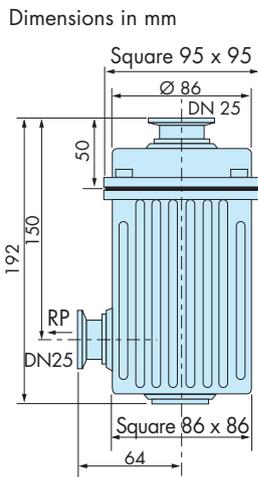
P/N: ..... **786346**

## Sorption traps

Sorption traps consist of a sealed body filled with adsorbent media which contains extremely porous surfaces adsorb water or hydrocarbon molecules contained in the pumped gases. Sorption traps provide simple and effective protection

against oil backstreaming whenever clean vacuum is desired. The saturated adsorbent elements can be regenerated by heating (baked out in oven, or using integrated heater, according to models).

### ST 25 S



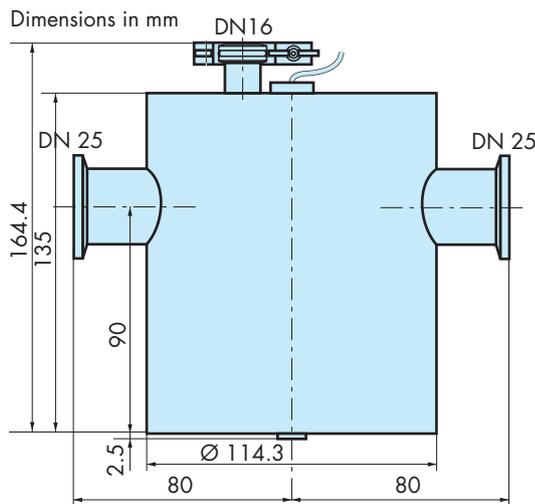
- material:..... body: aluminum  
..... cartridge: stainless steel
- weight: ..... trap: 1.15 kg 2.53 lbs  
..... adsorbent: 0.36 kg 0.79 lbs
- inlet/exhaust ports: DN25 ISO-KF
- conductance

conductance	inlet pressure
45 l/s	10 <sup>-1</sup> mbar
11 l/s	10 <sup>-2</sup> mbar

- P/N:..... **104107 - without adsorbent charge**
- adsorbent charge: activated alumina: P/N 068779  
..... zeolite: P/N 068182
- supplied with: 1 centering ring and 1 clamp

### ST 25 C

With electrical heating element



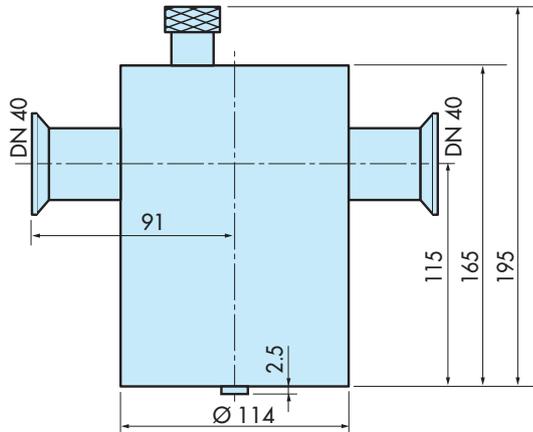
- material:..... body: stainless steel  
..... cartridge: stainless steel
- weight: ..... trap: 1.4 kg 3.08 lbs  
..... adsorbent: 0.26 kg 0.57 lbs
- inlet/exhaust ports: DN25 ISO-KF
- conductance

conductance	inlet pressure
45 l/s	10 <sup>-1</sup> mbar
20 l/s	10 <sup>-2</sup> mbar

- P/N: **066845 for 115V - without charge**
- P/N: **066841 for 220V - without charge**
- adsorbent charge: activated alumina: P/N 068779  
..... zeolite: P/N 068182
- heating element: 115V P/N 066876  
.....220V P/N 068319
- supplied with: 1 centering ring and 1 clamp

PASCAL SERIES

**ST 40** not available in USA  
With electrical heating element



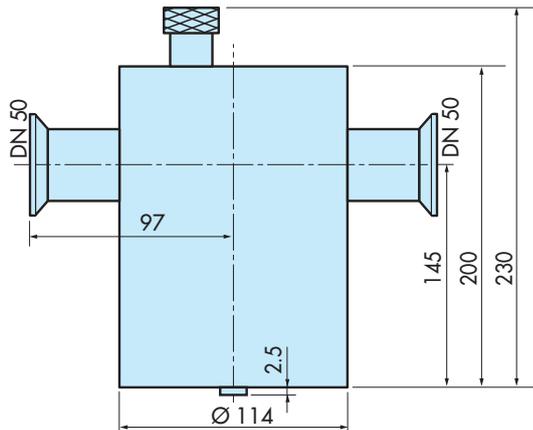
- material:..... body: stainless steel  
..... cartridge : stainless steel
- weight: ..... trap: 1.7 kg 3.74 lbs  
..... adsorbent: 0.36 kg 0.79 lbs
- inlet/exhaust ports: DN40 ISO-KF
- conductance

conductance	inlet pressure
25 l/s	10 <sup>-2</sup> mbar

**P/N: 104371 115V- 053380 220V-with zeolite charge**

- adsorbent charge: activated alumina: P/N 068779  
..... zeolite: P/N 068182
- heating element: 115V P/N 066876  
.....220V P/N 068319

**ST 50** not available in USA  
With electrical heating element



- material:..... body: stainless steel  
..... cartridge: stainless steel
- weight: ..... trap: 2 kg 4.4 lbs  
..... adsorbent: 0.36 kg 0.79 lbs
- inlet/exhaust ports: DN50 ISO-KF
- conductance

conductance	inlet pressure
30 l/s	10 <sup>-2</sup> mbar

**P/N: 104372 115V - 053381 220V-with zeolite charge**

- adsorbent charge: activated alumina: P/N 068779  
..... zeolite: P/N 068182
- heating element: 115V P/N 066876  
.....220V P/N 068319

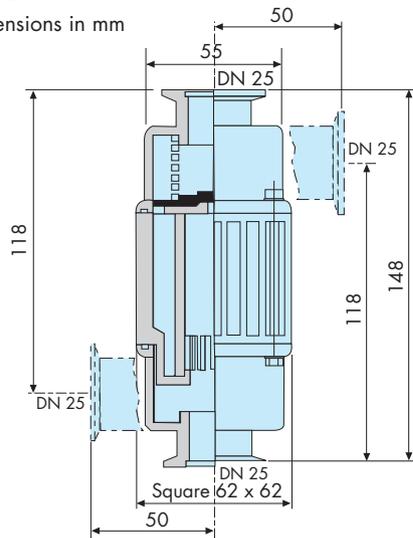
## Inlet dust filter

Using inlet dust filters will prevent solid particles from entering into the rotary vane pump and avoid concentration of solid media which can act as an abrasive and shorten the

pump lifetime. Periodic maintenance is required in order to maintain highest pumping efficiency.

### DFT 25

Dimensions in mm



- material:..... body: polyamide  
..... cartridge: epoxy/glass micro-fiber
- weight: ..... 0.217 kg 0.45 lbs
- filtration threshold: 6  $\mu\text{m}$
- conductance

conductance	inlet pressure
2 l/s	$10^{-1}$ mbar
0.6 l/s	$10^{-2}$ mbar

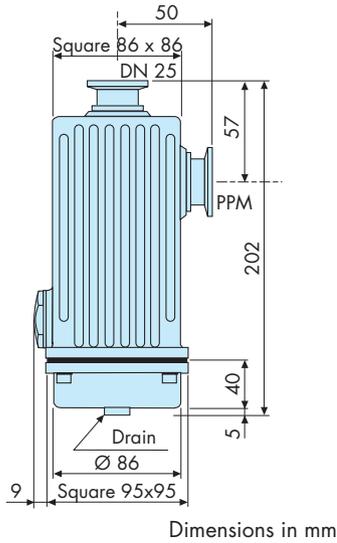
- inlet/exhaust ports: DN25 ISO-KF
- P/N: ..... 104202**
- replacement cartridge (set of 1) P/N 068445
- supplied with: 1 centering ring and 1 clamp  
1 additional angle port

## Condensate traps

Using condensate traps at the pump inlet will prevent introduction of some solid or liquid products (foam, deposits...) which could mix with the oil and reduce pump lifetime. Pumped gases pass through metallic filter and stainless steel wool which retain particles, solid deposits and

ensure liquid coalescence. Used at the exhaust, condensate trap can trap oil mist when operating the pump at high pressure; it can be used along with conventional oil mist eliminator.

### CT 25



- material:..... body: aluminum  
..... filter: stainless steel
- trap capacity: ..... 0.6 l
- weight : ..... 1.2 kg 2.64 lbs
- conductance

conductance	inlet pressure
15 l/s	10 <sup>-1</sup> mbar
6 l/s	10 <sup>-2</sup> mbar

- inlet/exhaust ports: DN25 ISO-KF
- P/N: ..... **104201**
- replacement filter P/N: 066825
- supplied with: 1 centering ring and 1 clamp



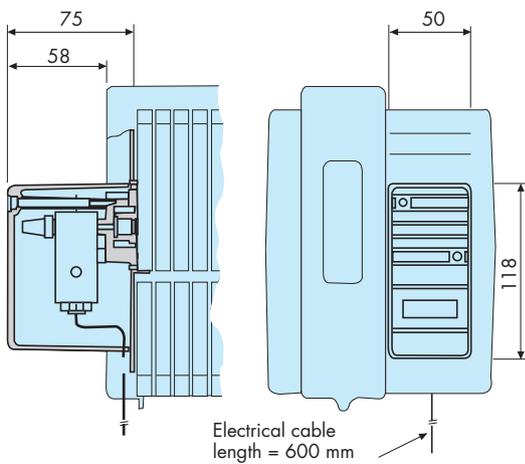
## Remote controlled gas ballast

Electrically operated gas ballast is the remote controlled version of the manual gas ballast of the rotary vane pump. It consists of a **N**ormally **C**losed solenoid valve which enables air injection into the high pressure stage of the pump.

The **A**utomatic **G**as **B**allast can be connected to a source of dry and neutral gas; it is a convenient solution in all cases of frequent use or difficult access to the manual gas ballast.

### AGB 4 for 5 to 21 m<sup>3</sup>/h pumps I/SD/C1 series

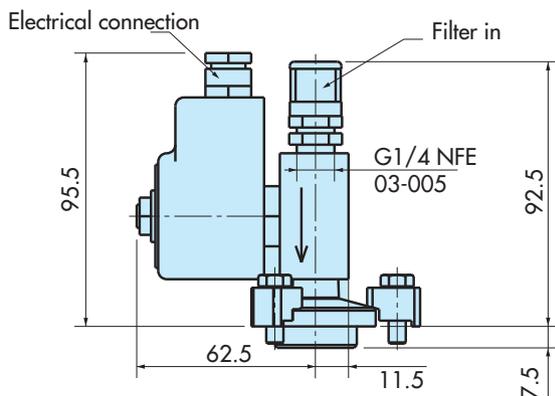
Dimensions in mm



- delivered with: 600 mm cable (without plug)  
all necessary connection parts
- weight: ..... 0.3 kg 0.66 lbs
- ordering information

P/N	230V 50/60 HZ	115V 60 HZ	100V 50/60 HZ	200V 50/60 HZ	24 V DC
AGB 4	<b>104086</b>	<b>104087</b>	<b>104088</b>	<b>104366</b>	<b>104089</b>
spare coil	<b>103552</b>	<b>038122</b>	<b>038126</b>	<b>038125</b>	<b>038066</b>

### AGB 36 for 33/63 m<sup>3</sup>/h pumps SD/C1 series

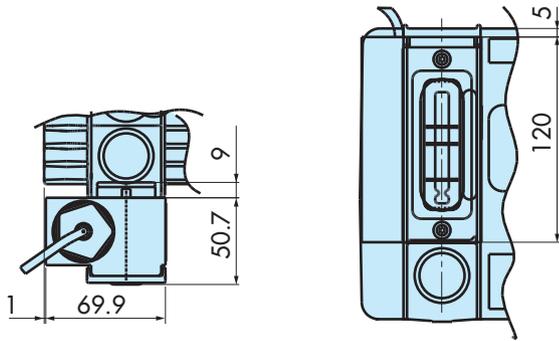


- delivered: without cable and plug  
with all necessary connection parts
- weight: ..... 0.7 kg 1.54 lbs
- ordering information

P/N	230/240V 50/60 HZ	115V 60 HZ	100V 50/60 HZ	200V 50/60 HZ	24V DC
AGB 36	<b>068391</b>	<b>104367</b>	<b>104368</b>	<b>104369</b>	<b>104370</b>
spare coil	<b>104866</b>	<b>104867</b>	<b>104868</b>	<b>104869</b>	<b>104870</b>

## Oil level switches

### OLS 4

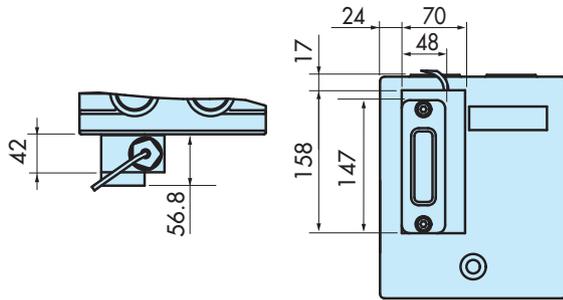


#### OLS 4 for 5 to 21 m<sup>3</sup>/h pumps I.SD series OLS 36 for 33/63 m<sup>3</sup>/h pumps SD series

Oil Level Switch provide information about oil level inside the oil casing of the rotary vane pump. Whenever the pump is located in an unaccessible area or whenever a large number of pumps is to be supervised, the **OLS** is a convenient solution for remote oil level check.

- material: ..... stainless steel/aluminum
- weight: ..... **OLS 4**: 0.85 kg 1.87 lbs  
..... **OLS 36**: 1.1 kg 2.42 lbs
- specification:
  - number of contact: 2 relays
  - status: .....Open when below oil level  
.....Closed when above oil level
  - switching capacity: 10 VA 250V AC/DC 0.5A
  - cable: .....1m length (without plug)

### OLS 36



- P/N: .....**OLS 4 : 104376**  
.....**OLS 36 : 104377**

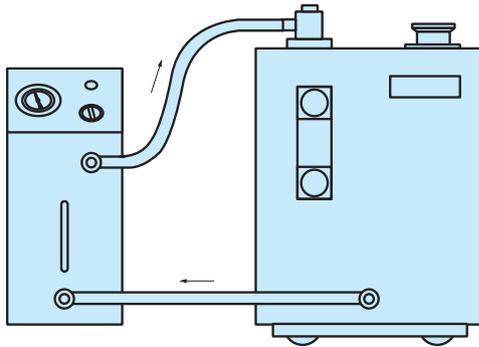
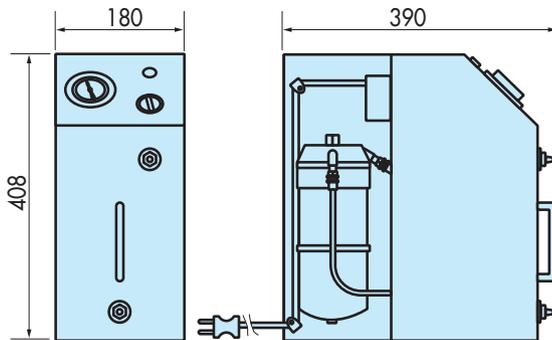
- supplied with all necessary components for installation on the oil casing

## External oil filters

DE filtration system is a stand-alone unit consisting of a magnetically driven gear pump which circulates oil through filtration cartridges (DE 1: 1 cartridge - DE 2: 2 cartridges). According to filtration media and number of cartridges,

DE filter retains solid particles and/or neutralizes corrosive products contained in the oil of the pump. DE filters can be connected to any rotary vane pump from 5 m<sup>3</sup>/h to 100 m<sup>3</sup>/h; all necessary components for connection are included.

### DE 1 - DE 2



### DE filters can be used with different types of filtration medias :

- **Cellulose filter:** filtration of solid particles only
- **Activated alumina:** envelope/charge of activated alumina  
Applications: mineral acids, Lewis acids, Polar compounds.
- **Activated charcoal:** envelope/charge of activated charcoal  
Applications: Chlorinated products, water and chlorine, Nitrous vapors, Ammonia.

### □ specification/ordering information

	DE1	DE2
weight kg/lbs	12/24.6	17/37.4
electrical supply	110/220V 50HZ or 115/230V 60 HZ	
oil flow hydrocarbon	1000 - 1500 cm <sup>3</sup> /mn at 65° C	
synthetic	1000 cm <sup>3</sup> /mn at 65° C	
P/N 110V 50Hz / 115V 60Hz	068991	104375
P/N 220V 50Hz / 230V 60Hz	068990	104374

### □ replacement cartridges

type	activated alumina	activated charcoal	cellulose (*)
P/N	068880	112953	078212

(\*) 12633 for USA

### □ standard (factory installed) cartridges are :

- DE 1 : activated alumina
- DE 2 : cellulose and activated alumina

□ oil volume : DE 1: 1.2 l - DE 2: 1.8 l

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