# STANDARD PUMPS FOR THE LABORATORY APPLICATIONS For air gases For air gases





The first class pumps for first class science



# LABOPORT® Mini Diaphragm Vacuum Pumps and Compressors

Type: N 86 N 811

## **Applications:**

- Vacuum filtration
- Alternative for water jet pumps

# **Specifications:**

Delivery	Ultimate vacuum	Pressure	Version	Resistance	For tube	Weight	Order No.
(l/min) <sup>1)</sup>	(mbar abs.)	(bar g)			(mm)	(kg)	
6.0	100	2.4	KN	<ul> <li>Standard (PPS/EPDM) -</li> </ul>	ID 4	1.9	N 86 KN.18
11.5	240	2.0	KN		ID 6	2.5	N 811 KN.18
5.5	160	2.5	KT	nearly chemically	ID 4	1.9	N 86 KT.18
11.5	290	2.0	KT	resistant, PPS / PTFE	ID 6	2.5	N 811 KT.18
1) at atm. pre	ssure		<b>KN</b> = Pump head in PPS, diaphragm EPDM, valves in FPM				
<b>KT</b> = Pump head in PPS, diaphragm PTFE- coated, valves in FFPM							

#### **Technical features:**

- Uncontaminated transfer, evacuation and compression,
- For slightly aggressive or corrosive gases and vapours,
- Environmentally friendly,
- High level of gas tightness,

- With thermal switch and power fuse.
- Voltage/frequencies: 230V/50Hz (motors with other voltages and frequencies on request).



# LABOPORT®

Mini Diaphragm Vacuum Pumps and Compressors

**Type: N 816** 

## **Applications:**

- Vacuum filtration
- Alternative for water jet pumps

# **Specifications:**

Delivery	Ultimate vacuum	Pressure	Version	Resistance	For tube	Weight	Order No.
(l/min) <sup>1)</sup>	(mbar abs.)	(bar g)			(mm)	(kg)	
16.0	15	0.5	KN	Standard (PPS/EPDM) _	ID 6	3.95	N 816.3 KN.18
30.0	100	0.5	KN		ID 6	3.95	N 816.1.2 KN.18
16.0	20	0.5	KT	nearly chemically	ID 6	3.95	N 816.3 KT.18
30.0	160	0.5	KT	resistant, PPS / PTFE	ID 6	3.95	N 816.1.2 KT.18
1) at atm. pres	ssure		KN = Pump he	ead in PPS, diaphragm EPDM, val	ves in EPDM		

#### (.45) = Diaphragm pump with fine control valve and vacuum gauge on request.

#### **Technical features:**

- Uncontaminated transfer, evacuation and compression,
- For slightly aggressive or corrosive gases and vapours,
- Environmentally friendly,
- High level of gas tightness,

- With thermal switch and power fuse.

**KT** = Pump head in PPS, diaphragm PTFE- coated, valves in FFPM

 Voltage/frequencies: 230V/50Hz (motors with other voltages and frequencies on request).



# LABOPORT® Mini Diaphragm Vacuum Pumps

**Type: N 838** 

## **Applications:**

- Vacuum filtration, desiccation, gel drying etc.
- Alternative for water jet pumps

# **Specifications:**

Delivery	Ultimate vacuum	Pressure	Version	Resistance	For tube	Weight	Order No.	
(I/min) <sup>1)</sup>	(mbar abs.)	(bar g)			(mm)	(kg)		
22	12	0.5	KN	- Standard (PPS/EPDM)	ID 10	6.8	N 838.3 KN.18	
37	100	0.5	KN	- Standard (F1 3/E1 DIVI)	ID 10	6.8	N 838.1.2 KN.18	
22	15	0.5	KT	nearly chemically	ID 10	6.8	N 838.3 KT.18	
37	150	0.5	KT	(PPS / PTFE)	ID 10	6.8	N 838.1.2 KT.18	
1) at atm. pressure KN = Pump head in PPS, diaphragm EPDM, valves in FPM								

KT = Pump head in PPS, diaphragm PTFE- coated, valves in FFPM (.45) = Diaphragm pump with fine control valve and vacuum gauge on request.

#### **Technical features:**

- Uncontaminated transfer, evacuation and compression,
- For slightly aggressive or corrosive gases and vapours,
- Environmentally friendly,
- High level of gas tightness,

- With thermal switch and power fuse.
- Voltage/frequencies: 230V/50Hz (motors with other voltages and frequencies on request).



# Diaphragm Vacuum Pumps

with adjustable delivery

**Type: N 920** 

## **Applications:**

- Vacuum filtration, desiccation, gel drying etc.
- Alternative for water jet pumps
- Roughing pump for turbomolecular pumps

# **Specifications:**

Delivery	Ultimate vacuum	Pressure	Version	Resistance	Connections	Weight	Order No.
(l/min) <sup>1)</sup>	(mbar abs.)	(bar g)			(mm)		
21	1.5	0.5	AP	Standard	for tube	10.5 kg	N 920 AP.29.18
				(Aluminium/EPDM)	ID 9		
1) at atm. pressure AP = Pump head in Aluminium, diaphragm EPDM, valves in EPDM							

- Uncontaminated transfer and evacuation,
- Flow rate set over motor rotary speed (.29),
- KNF stabilization system for high suction speed, also for low absolute pressures,
- For aggressive or corrosive gases
- Gas-tight (leakage rate approx. 6 x 10<sup>-3</sup> mbar x l/s, not tested in serial production),
- With thermal switch and power fuse.
- Multi-voltage power supply input.



# **Diaphragm Vacuum Pumps and Compressors**

with excellent price/performance ratio

**Type: N 022** 

# **Applications:**

- General vacuum and pressure application in the laboratory
- Pressure filtration

# **Specifications:**

<b>Delivery</b> (I/min) <sup>1)</sup>	<b>Ultimate vacuum</b> (mbar abs.)	Pressure (bar g)	Version	Resistance	For tube (mm)	Weight (kg)	Order No.	
13	100	4	AT	nearly chemically resistant Aluminium / PTFE	ID 6	4	N 022 AT.18	
15	100	4	AN	Standard Aluminium / CR	ID 6	4	N 022 AN.18	
1) at atm. pressure <b>AT</b> = Pump head in Aluminium, diaphragm PTFE coated, valves in stainless steel <b>AN</b> = Pump head in Aluminium, diaphragm CR, valves in stainless steel								

#### **Technical features:**

- Uncontaminated transfer, evacuation and compression,
- For slightly aggressive or corrosive gases and vapours,
- Environmentally friendly,
- Gas-tight (leakage rate approx. 6 x 10<sup>-3</sup> mbar x l/s, not tested in serial production),
- With thermal switch.
- Voltage/frequencies: 230V/50Hz (motors with other voltages, frequencies and types of protection on request).



# **Diaphragm Vacuum Pumps**

with excellent price/performance ratio

# **Type: N 026.3**

# **Applications:**

- General vacuum and pressure application in the laboratory
- Vacuum filtration

## **Specifications:**

Delivery	Ultimate vacuum	Pressure	Version	Resistance	For tube	Weight	Order No.
(l/min) <sup>1)</sup>	(mbar abs.)	(bar g)			(mm)	(kg)	
18	25	-	AT	nearly chemically resistant	ID 9	5.8	N 026.3 AT.18
				(Aluminium / PTFE)			
22	20	-	AN	Standard	ID 9	5.8	N 026.3 AN.18
				(Aluminium / CR)			
AT = Pump head in Aluminium, diaphragm PTFE coated, valves in stainless steel  AN = Pump head in Aluminium, diaphragm CR, valves in stainless steel							
			AN = Pump	nead in Aluminium, diaphragm CR,	vaives in stair	ness steel	

- Uncontaminated transfer, evacuation and compression,
- For slightly aggressive or corrosive gases and vapours,
- Environmentally friendly,
- Gas-tight (leakage rate approx. 6 x 10<sup>-3</sup> mbar x l/s, not tested in serial production),
- With thermal switch.
- Voltage/frequencies: 230V/50Hz (motors with other voltages, frequencies and types of protection on request).



# **Diaphragm Vacuum Pumps**

with excellent price/performance ratio

Type: N 035.3

# **Applications:**

- General vacuum and pressure application in the laboratory
- Vacuum filtration

# **Specifications:**

<b>Delivery</b> (I/min) <sup>1)</sup>	Ultimate vacuum (mbar abs.)	Pressure (bar g)	Version	Resistance	For tube (mm)	Weight (kg)	Order No.	
27	20	- -	AT	nearly chemically resistant (Aluminium / PTFE)		11.6	N 035.3 AT.18	
30	13	-	AN	Standard	ID 9	11.6	N 035.3 AN.18	
(Aluminium / CR)  1) at atm. pressure  AT = Pump head in Aluminium, diaphragm PTFE coated, valves in stainless steel  AN = Pump head in Aluminium, diaphragm CR, valves in stainless steel								

#### **Technical features:**

- Uncontaminated transfer, evacuation and compression,
- For slightly aggressive or corrosive gases and vapours,
- Environmentally friendly,
- Gas-tight (leakage rate approx.  $6 \times 10^{-3}$  mbar x l/s, not tested in serial production),
- With thermal switch.
- Voltage/frequencies: 230V/50Hz (motors with other voltages, frequencies and types of protection on request).



# **Diaphragm Vacuum Pumps** and Compressors

with excellent price/performance ratio

# **Type: N 035**

# **Applications:**

- General vacuum and pressure application in the laboratory
- Pressure filtration

# **Specifications:**

<b>Delivery</b> (I/min) <sup>1)</sup>	Ultimate vacuum (mbar abs.)	Pressure (bar g)	Version	Resistance	For tube (mm)	Weight (kg)	Order No.		
27	100	4	AT	nearly chemically resistant (Aluminium / PTFE)	ID 9	8.2	N 035 AT.18		
30	100	4	AN	Standard (Aluminium / CR)	ID 9	8.2	N 035 AN.18		
AT = Pump head in Aluminium, diaphragm PTFE coated, valves in stainless steel  AN = Pump head in Aluminium, diaphragm CR, valves in stainless steel									

- Uncontaminated transfer, evacuation and compression,
- For slightly aggressive or corrosive gases and vapours,
- Environmentally friendly,
- Gas-tight (leakage rate approx. 6 x 10<sup>-3</sup> mbar x l/s, not tested in serial production),
- With thermal switch.
- Voltage/frequencies: 230V/50Hz (motors with other voltages, frequencies and types of protection on request).



# **Diaphragm Vacuum Pumps and Compressors**

with excellent price/performance ratio

# **Type: N 145**

# **Applications:**

- General vacuum and pressure application in the laboratory
- Pressure filtration

# **Specifications:**

<b>Delivery</b> (I/min) <sup>1)</sup>	Ultimate vacuum (mbar abs.)	Pressure (bar g)	Version	Resistance	For tube (mm)	Weight (kg)	Order No.	
27	100	7	AT	nearly chemically resistant (Aluminium / PTFE)	ID 9	12.0	N 145 AT.18	
30	100	7	AN	Standard (Aluminium / CR)	ID 9	12.0	N 145 AN.18	
1) at atm. pressure <b>AT</b> = Pump head in Aluminium, diaphragm PTFE coated, valves in stainless steel <b>AN</b> = Pump head in Aluminium, diaphragm CR, valves in stainless steel								

#### **Technical features:**

- Uncontaminated transfer, evacuation and compression,
- For slightly aggressive or corrosive gases and vapours,
- Environmentally friendly,
- Gas-tight (leakage rate approx.  $6 \times 10^{-3}$  mbar x l/s, not tested in serial production),
- With thermal switch.
- Voltage/frequencies: 230V/50Hz (motors with other voltages, frequencies and types of protection on request).



# **Diaphragm Vacuum Pumps** and Compressors

with excellent price/performance ratio

# Type: N 026.1.2

## **Applications:**

- General vacuum and pressure application in the laboratory
- Pressure filtration

# **Specifications:**

Delivery	Ultimate vacuum	Pressure	Version	Resistance	For tube	Weight	Order No.		
(l/min) <sup>1)</sup>	(mbar abs.)	(bar g)			(mm)	(kg)			
31	100	2	AT	nearly chemically resistant	ID 9	5.8	N 026.1.2 AT.18		
				(Aluminium / PTFE)					
39	100	2	AN	Standard	ID 9	5.8	N 026.1.2 AN.18		
				(Aluminium / CR)					
1) at atm. pressure AT = Pump head in Aluminium, diaphragm PTFE coated, valves in stainless steel									
AN = Pump head in Aluminium, diaphragm CR, valves in stainless steel									

- Uncontaminated transfer, evacuation and compression,
- For slightly aggressive or corrosive gases and vapours,
- Environmentally friendly,
- Gas-tight (leakage rate approx. 6 x 10<sup>-3</sup> mbar x l/s, not tested in serial production),
- With thermal switch.
- Voltage/frequencies: 230V/50Hz (motors with other voltages, frequencies and types of protection on request).



# **Diaphragm Vacuum Pumps** and Compressors

with excellent price/performance ratio

Type: N 035.1.2

# **Applications:**

- General for vacuum and pressure application in the laboratory
- Pressure filtration

# **Specifications:**

Delivery	Ultimate vacuum	Pressure	Version	Resistance	For tube	Weight	Order No.			
(I/min) <sup>1)</sup>	(mbar abs.)	(bar g)			(mm)	(kg)				
50	100	4	AT	nearly chemically resistant	ID 9	11.6	N 035.1.2 AT.18			
				(Aluminium / PTFE)						
55	100	4	AN	Standard	ID 9	11.6	N 035.1.2 AN.18			
				(Aluminium / CR)						
1) at atm. pressure AT = Pump head in Aluminium, diaphragm PTFE coated, valves in stainless steel										
	<b>AN</b> = Pump head in Aluminium, diaphragm CR, valves in stainless steel									

#### **Technical features:**

- Uncontaminated transfer, evacuation and compression,
- For slightly aggressive or corrosive gases and vapours,
- Environmentally friendly.
- Gas-tight (leakage rate approx. 6 x 10<sup>-3</sup> mbar x l/s, not tested in serial production),
- With thermal switch.
- Voltage/frequencies: 230V/50Hz (motors with other voltages, frequencies and types of protection on request).



# **Diaphragm Vacuum Pumps** and Compressors

with excellent price/performance ratio

Type: N 145.1.2

# **Applications:**

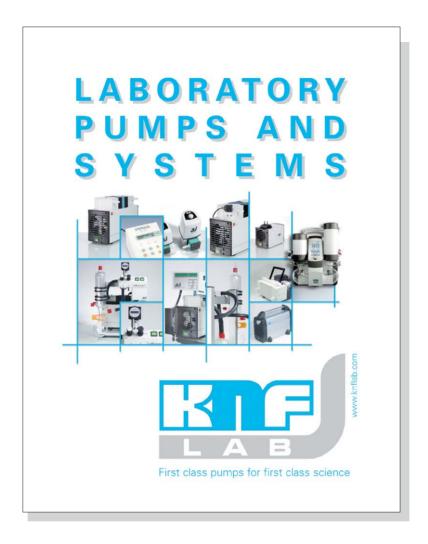
- General vacuum and pressure application in the laboratory
- Pressure filtration

# **Specifications:**

Delivery	Ultimate vacuum	Pressure	Version	Resistance	For tube	Weight	Order No.		
(l/min) <sup>1)</sup>	(mbar abs.)	(bar g)			(mm)	(kg)			
50	100	7	AT	nearly chemically resistant	ID 9	15.0	N 145.1.2 AT.18		
				(Aluminium / PTFE)					
55	100	7	AN	Standard	ID 9	15.0	N 145.1.2 AN.18		
				(Aluminium / CR)					
1) at atm. pressure AT = Pump head in Aluminium, diaphragm PTFE coated, valves in stainless steel									
AN = Pump head in Aluminium, diaphragm CR, valves in stainless steel									

- Uncontaminated transfer, evacuation and compression,
- For slightly aggressive or corrosive gases and vapours,
- Environmentally friendly,
- Gas-tight (leakage rate approx.  $6 \times 10^{-3}$  mbar x l/s, not tested in serial production),
- With thermal switch.
- Voltage/frequencies: 230V/50Hz (motors with other voltages, frequencies and types of protection on request).

## You find the delivery range in the KNF laboratory catalogue



### Please visit the KNF web site: www.knf.com

Y	our distributor:			

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