CHEMICALLY-RESISTANT LABORATORY PUMPS AND SYSTEMS

for aggressive gases and vapours

KNF LAB

www.knflab.com

The first class pumps for first class science

LABOPORT®
Diaphragm Vacuum Pumps
Series: N 810 N 820

Applications:

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

Specifications:

Delivery (l/min)[1)]	Ultimate vacuum (mbar abs.)	Pressure (bar g)	Version	Resistance	For tube (mm)	Weight (kg)	Order No.
10	8	1	**FT**	chemically-resistant (full PTFE)	ID 10	6.9	**N 810.3 FT.18**
20	8	1	**FT**	chemically-resistant (full PTFE)	ID 10	9.3	**N 820.3 FT.18**

[1)] at atm. pressure

FT = Pump head in PTFE, diaphragm PTFE coated, valves in FFPM

Technical features:

- Pure transfer, evacuation and compression
- Highly compatible with vapours and condensation
- Chemically-resistant
- Therefore suitable for highly aggressive or corrosive gases and vapours,
- Environmentally friendly
- Gastight, leakage rate approx. 6 x 10^{-3} mbar x l/s, not tested in serial production
- With thermal switch and power fuse
- Mains: 230V/50Hz
  (Motors with other voltages and frequencies on request)

LABOPORT®
Diaphragm Vacuum Pumps
Series: N 840 N 842

Applications:

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

Specifications:

Delivery (l/min)[1)]	Ultimate vacuum (mbar abs.)	Pressure (bar g)	Version	Resistance	For tube (mm)	Weight (kg)	Order No.
34	8	1	**FT**	chemically-resistant (full PTFE)	ID 10	12.6	**N 840.3 FT.18**
34	2	1	**FT**	chemically-resistant (full PTFE)	ID 10	13.4	**N 842.3 FT.18**

[1)] at atm. pressure

FT = Pump head in PTFE, diaphragm PTFE coated, valves in FFPM

Technical features:

- Pure transfer, evacuation and compression
- Highly compatible with vapours and condensation
- Chemically-resistant
- Therefore suitable for highly aggressive or corrosive gases and vapours,
- Environmentally friendly
- Gastight, leakage rate approx. 6 x 10^{-3} mbar x l/s, not tested in serial production
- With thermal switch and power fuse
- Mains: 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 turbo-molecular pumps

Specifications:

Delivery (l/min)[1]	Ultimate vacuum (mbar abs.)	Pressure (bar g)	Version	Resistance	For tube (mm)	Weight (kg)	Order No.
20	2.0	0.5	**KT**	for aggressive gases (PPS/PTFE)	ID 9	9.1	**N 920 KT.29.18**

[1] at atm. pressure

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

Technical features:

- 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^{-3} mbar x l/s, not tested in serial production),
- With thermal switch and power fuse.
- Multi-voltage power supply input.

LABOPORT® SD

Self-drying Vacuum Pump chemically-resistant

for moist Gases

Applications:

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

Specifications:

Delivery (l/min) [1]	Ultimate vacuum (mbar abs.)	Pressure (bar g)	Version	Resistance	Connections for tube ID	Weight (kg)	Order No.
20	10	1	**FT**	chemically-resistant (full PTFE)	10 mm	9.6	**N 820.3 FT.40.18**
34	10	1	**FT**		10 mm	12.9	**N 840.3 FT.40.18**
34	4	1	**FT**		10 mm	13.7	**N 842.3 FT.40.18**
60	4	1	**FT**		12 mm	14.8	**N 860.3 FT.40.18**

[1] at atm. pressure

FT = Pump head in PTFE, diaphragm PTFE coated, valves in FFPM

LABOPORT SD vacuum pumps are dry-running displacement pumps for neutral, highly aggressive or corrosive gases and vapors and constant vacuum. Process gases are transferred without contamination - and this is less expensive and more environmentally friendly than water jet pumps.

The KNF self-drying system allows condensed liquid to be blown out of the pump heads at high speed during evacuation. The vacuum in the equipment remains constant.

The drying cycle can be adjusted to the requirements of the individual process using three variables. After drying, the pump reaches a better vacuum and is able to evacuate significantly faster compared with pumps without a drying system.

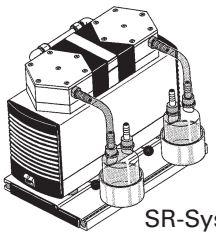
LABOPORT®

Chemically-resistant Vacuum Systems and modular Accessories

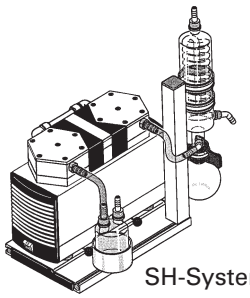
Applications:

- Vacuum filtration, evaporation, desiccation, gel drying etc.
- Controlled vacuum processes
- Alternative for water jet pumps

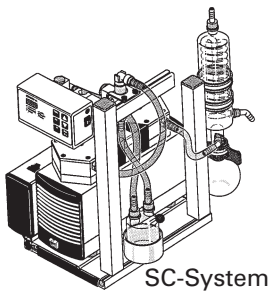
Specifications:



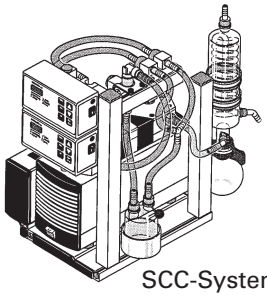
SR-System



SH-System



SC-System



SCC-System

System [3] (completely assembled)	Delivery (l/min) [1]	Ultimate vacuum (mbar abs)	Pneumatic connections for tube ID	Weight (kg)	Built in pump type
SR system comprising pump, base plate and two separators					
SR 810	10	8	10 mm	9.4	N 810.3 FT.18
SR 820	20	8	10 mm	11.6	N 820.3 FT.18
SR 840	34	8	10 mm	14.9	N 840.3 FT.18
SH system comprising pump, base plate, condenser and separator					
SH 810	10	8	10 mm	10.1	N 810.3 FT.18
SH 820	20	8	10 mm	12.5	N 820.3 FT.18
SH 840	34	8	10 mm	15.8	N 840.3 FT.18
SC system comprising pump, base plate, condenser, separator and one vacuum controller					
SC 810	10	8	10 mm	13.6	N 810.3 FT.18
SC 820	20	8	10 mm	16	N 820.3 FT.18
SC 840	34	8	10 mm	19.3	N 840.3 FT.18
SC 842	34	2	10 mm	20.1	N 842.3 FT.18
SCC system comprising pump, base plate, condenser, separator and two vacuum controllers for two different processes					
SCC 810	10	8	10 mm	15.2	N 810.3 FT.18
SCC 820	20	8	10 mm	17.6	N 820.3 FT.18
SCC 840	34	8	10 mm	20.9	N 840.3 FT.18
SCC 842	34	2	10 mm	21.7	N 842.3 FT.18

[1] at atm. pressure

[3] systems with single head pumps and lower vacuum on request

LABOPORT®
Chemically-resistant Vacuum Pumps and modular Accessories

Technical features:

- Maintenance-free
- Silent
- Simple connection to the line power (power plug) and to the pneumatic system
- Environmentally friendly, because no water is consumed and no waste water is contaminated

LABOPORT® components for building or retrofitting

The modular components listed here are designed for customers who build their own vacuum system, for integration in a laboratory process setup, or for retrofitting an existing vacuum system. This enhances flexibility in laboratories.

Chemically-resistant LABOPORT® vacuum pumps

Delivery (l/min) [1]	Ultimate vacuum (mbar abs.)	Operating pressure (bar g)	Pneumatic connections for tube ID	Weight (kg)	Pump type Order No.
10	100	1	10 mm	5.9	**N 810 FT.18**
10	8	1	10 mm	6.9	**N 810.3 FT.18**
20	100	1	10 mm	7.1	**N 820 FT.18**
20	8	1	10 mm	9.3	**N 820.3 FT.18**
34	100	1	10 mm	10.3	**N 840 FT.18**
34	8	1	10 mm	12.6	**N 840.3 FT.18**
34	2	1	10 mm	13.4	**N 842.3 FT.18**
60	90	1	10 mm	12.6	**N 840.1.2 FT.18**

[1] at atm. pressure [2] Motors with other voltages, frequencies on request **FT** = Pump head in PTFE, diaphragm PTFE coated, valves in FFPM

Modular accessories

Type designation Order No.	System modules
NP 810/820	base plate for vacuum pumps N 810 FT.18, N 810.3 FT.18, N 820 FT.18 u. N 820.3 FT.18
NP 840	base plate for vacuum pumps N 840 FT.18, N 840.3 FT.18 und N 842.3 FT.18
NR 800	separator (usable at pressure side or suction side)
NH 800	high-performance condenser
NC 800 A first controller	vacuum controller with valves, cabling and electrical supply unit
NC 800 B* second controller	vacuum controller, only with NC 800 A, with valves and cabling
NC 800 A/B*	two vacuum controllers with valves, cabling and electrical supply unit

*) For independent vacuum control of two different, simultaneous processes (NC 800 A upgrades SH to SC. NC 800 B only in conjunction with NC 800 A or upgrades SC to the full system SCC. NC 800A/B upgrades SH to SCC).

Fully-automatic Base Vacuum Station

LABOBASE®
Chemically-resistant Vacuum Systems
for Multi-User

Technical features:

- Maintenance-free
- Silent
- More room on the laboratory bench
- Fully-automatic vacuum generation for several users
- Vacuum supply points with regulated tapping
- Simple connection to the line power (power plug) and to the pneumatic system
- Environmentally friendly
- Chemically-resistant

LABOBASE® base vacuum station - all components on a base plate

System, base vacuum station	Flow rate (l/min) [1]	Ultimate vacuum (mbar abs)	Pneumatic connections for tube ID	Weight (kg)	**Included in the system** Selection of a vacuum pump	Components (same for all base vacuum stations)
SBC 840	34	8	10 mm	22.6	N 840.3 FT.18	Base plate, separator, high performance condenser, vacuum controller, valves and electrical supply unit.
SBC 840.40	34	10	10 mm	22.9	N 840.3 FT.40.18	
SBC 844	40	2	10 mm	23.4	N 844.3 FT.18	
SBC 844.40	40	4	10 mm	23.7	N 844.3 FT.40.18	
SBC 860	60	2	10 mm	25.0	N 860.3 FTE	
SBC 860.40	60	4	10 mm	25.3	N 860.3 FT.40E	

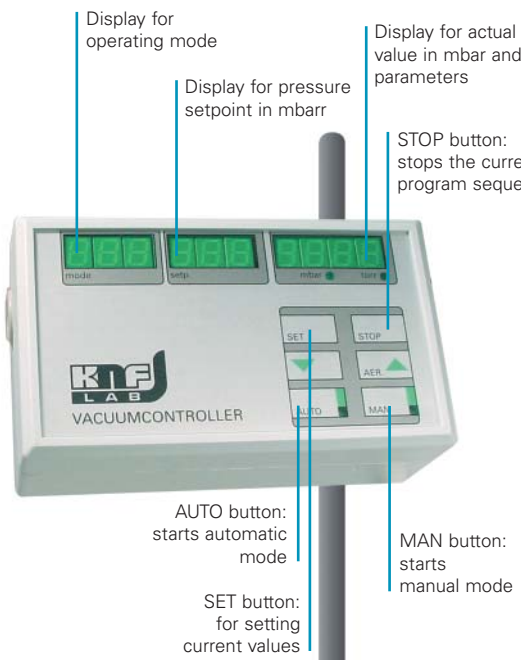
[1] at atm. pressure

FT = Pump head in PTFE, diaphragm PTFE coated, valves in FFPM

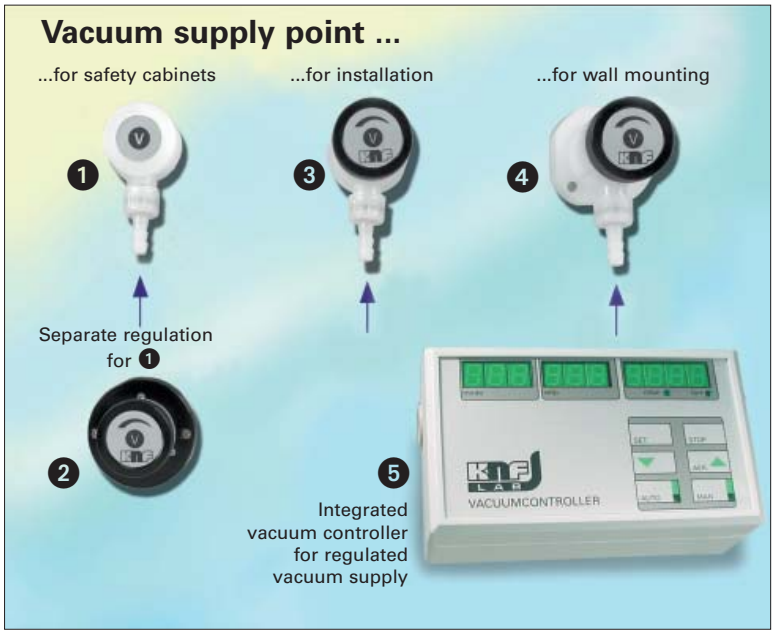
Accessories for base vacuum station

Order No.	Description	Details
045886	Gas washing bottle	0.5 liter
045075	Cooling water valve	G 1/2, ID 8

Mobile Vacuum Controller Unit for regulated Extraction of Vacuum



Vacuum supply points for LABOBASE® systems



1 + 2 Supply point for safety cabinets, with integrated non-return valve and the regulation system relating to them

3 Supply point for installation with integrated non-return valve

4 Supply point for wall mounting, with integrated non-return valve

5 Integrated Vacuum controller for the regulated supply point

● Customer-specific solutions for supply points on request

Order No.	Description	Details	Picture-No. (see picture above)
048461	vacuum supply point	unregulated, for safety cabinets (PVDF)	1 + 2
048723	vacuum supply point	unregulated, for installation in laboratory equipment (PVDF)	3
048329	vacuum supply point	unregulated, for wall mounting (surface mounting) (PVDF)	4
048459	mobile controller unit	for regulated vacuum supply (chemical-resistant)	6

LABOXACT®
Chemically-resistant Vacuum Systems
for controlled and gentle Distillation

Technical features:

- Maintenance-free
- Gentle distillation, due to closed system
- Careful control of evaporation
- High degree of solvent recovery
- Silent
- Simple connection to the line power (power plug) and to the pneumatic system
- Environmentally friendly

Specifications:

System	Flow rate (l/min) 1)	Ultimate vacuum (mbar abs)	Pneumatic connections for tube ID	Weight (kg)	**Included in the system:** Selection of a vacuum pump	Components (same for all systems)
SEM 810	10	8	10 mm	12.1	N 810.3 FT.18	base plate, separator, condenser, fine-adjustment valve, digital vacuum meter, safety vent valve
SEM 820	20	8	10 mm	14.5	N 820.3 FT.18	
SEM 840	34	8	10 mm	17.8	N 840.3 FT.18	
SEM 842	34	2	10 mm	18.6	N 842.3 FT.18	

1) at atm. pressure

FT = Pump head in PTFE, diaphragm PTFE coated, valves in FFPM

You find the delivery range in the KNF laboratory catalogue

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

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