KNF LABORATORY EQUIPMENT KNOWING WHAT COUNTS

KNF LABORATORY EQUIPMENT

COMPELLING ADVANTAGES

KNF permanently strives to counter the challenges of daily lab work with easy handling. Devices from KNF are therefore intuitive and compact, and offer clear advantages when it comes to intelligent functions: quiet operation, powerful and totally reliable.

Discover lab technology that supports you.

4 – 5 HELLO, NEW LABOPORT!

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LABOPORT® REDESIGNED

UNIQUE DESIGN, EASE OF USE

HELLO, NEW LABOPORT!

LABOPORT® N 96

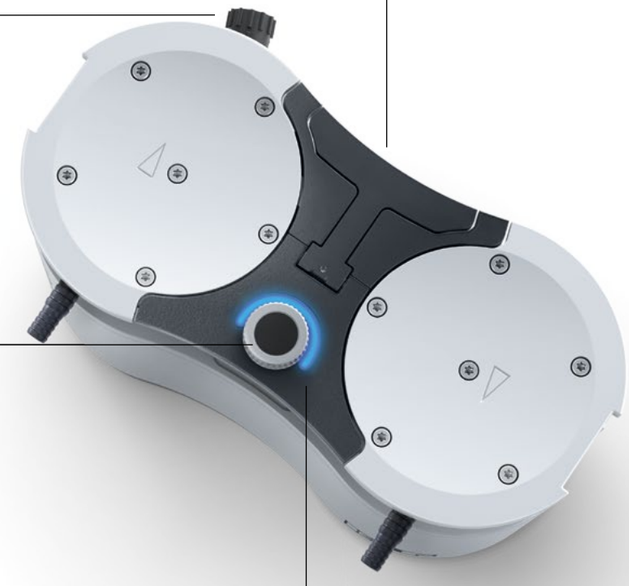
LABOPORT® N 840 G

LABOPORT® N 820 G

- **Exceptionally space saving**
  The impressively compact device takes up little space.
- **Easy to clean**
  The smooth surfaces without any ribs or hard edges are easy to keep clean.
- **ATEX-compliant and chemically resistant for very aggressive/corrosive gases**
  The inner, wetted area has been equipped to transfer explosive atmospheres.
- **Expandable**
  Separators and/or condensers can be purchased individually at any time and easily fitted, enabling users to build their own customized vacuum system.

HELLO, NEW LABOPORT SYSTEMS!

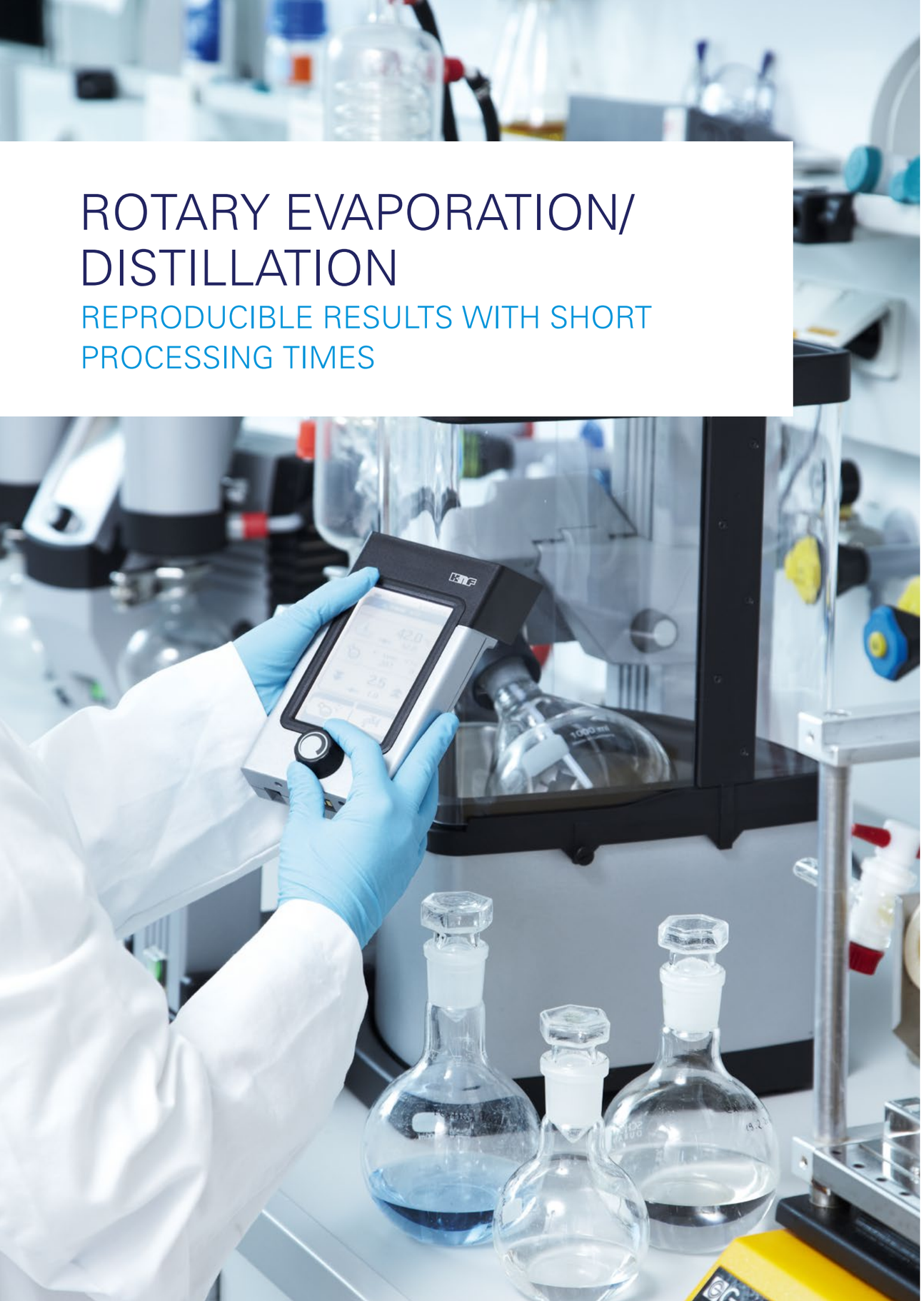
- **Integrated gas ballast valve**
  This valve supports short processing times even with solvents with a high boiling point, which protects the pump head.
- **Portable**
  The fold-out handle makes the device easy to transport and store.



- **Speed-controlled**
  The speed can be controlled by simply manually adjusting the vacuum power using the control knob or via an interface by connecting the pump to KNF's VC 900 controller. Ideal for combining with all common vacuum controllers with valve control.
- **3-color status display**
  The changing color display allows the operational status to be ascertained at a glance.

ROTARY EVAPORATION/ DISTILLATION

REPRODUCIBLE RESULTS WITH SHORT PROCESSING TIMES



DESIGNED FOR ACADEMIA LABS

RC 600 Rotary Evaporator

- Operating unit with all functions operated centrally via a membrane keypad providing exeptional ease of use
- Control knob to adjust set points for heating bath temperature and flask rotation speed
- Memory function – simply press the memory button to save the flask's current immersion depth and rotation speed for easy and reliable process repeatability
- Cordless heating bath with a diode to indicate heat level and a pour spout for safe, spill-free emptying
- Uncomplicated flask exchange – flask simply locks into place – and can be done with one hand
- Coated cooling condenser for more safety
- Cooling condenser is straight forward to detach by turning the clamping nut. The cooling condenser is also extremely easy to clean
- Fixed tube guide

A VERSATILE SYSTEM COMPONENT

Set for flexibility: Several system packages to suit different budget conditions are available. The VC 900 vacuum control unit can also be used to precisely control vacuum pumps from other manufacturers.

SC 920 G

QUIET

SC 920 G Vacuum Pump System

- Flow rate up to 1,26 m³/h / Ultimate vacuum 2 mbar abs.
- Quiet operation
- Automatic, accurate recognition and monitoring of the boiling point using the integrated ramp function
- High recovery rates even with low boiling point solvents
- PPS pump head combined with PTFE-coated diaphragm are ideal for aggressive/corrosive gases and vapors
- Integrated gas ballast valve
- Speed-controlled

LABOPORT®

SH 820 G

CHEMICALLY RESISTANT AND CONDENSATE COMPATIBILITY

SH 820 G and SH 840 G Vacuum System

- Flow rate up to 2.04 m³/h / Ultimate vacuum 6 mbar abs.
- Vacuum system comprising chemically resistant diaphragm vacuum pump, base plate, condenser and separator
- Integrated gas ballast valve

Possible combinations

When combined with the VC 900 vacuum control unit and the connection cable, the rotational speed is controlled in accordance with the requirements of the process. Ideal for combining with all common vacuum controllers with valve control.
Automatic, accurate recognition and monitoring of the boiling point using the integrated ramp function.

LABOPORT®

N 820 G

N 840 G

CHEMICALLY RESISTANT

N 820 G and N 840 G Diaphragm Vacuum Pump

- Flow rate up to 2.04 m³/h / Ultimate vacuum 6 mbar abs.
- High level of vapor and condensate compatibility
- Integrated rotational speed control
- PTFE pump head combined with PTFE-coated diaphragm are ideal for extremely aggressive/corrosive gases and vapors
- ATEX-compliant in accordance with ⟨Ex⟩ **II 2/-G IIB+H2 T3 internal atmosphere only**
- Integrated gas ballast valve
- 3-color status display for in operation / stand-by / error
- High suction speed, particularly in the low vacuum range

Tip: When combined with the VC 900 vacuum control unit and the connection cable, the rotational speed is controlled in accordance with the requirements of the process. Ideal for combining with all common vacuum controllers with valve control.

LABOPORT®

ROBUST

N 842.3 FT.18 Diaphragm Vacuum Pump

- Flow rate 2.04 m³/h / Ultimate vacuum 2 mbar abs.
- High level of vapor and condensate compatibility
- PTFE pump head combined with PTFE-coated diaphragm are ideal for extremely aggressive/corrosive gases and vapors

SPEED-CONTROLLED

N 920 G Diaphragm Vacuum Pump

- Flow rate 1.26 m³/h / Ultimate vacuum 2 mbar abs.
- High suction speed, particularly in the low vacuum range
- Integrated rotational speed control
- PPS pump head combined with PTFE-coated diaphragm are ideal for aggressive/corrosive gases and vapors
- Integrated gas ballast valve

Tip: When combined with the VC 900 vacuum control unit and the connection cable, the rotational speed is controlled in accordance with the requirements of the process.

A POWERFUL PACKAGE

N 860.3 FT.40.18 Diaphragm Vacuum Pump

- Flow rate 3.6 m³/h / Ultimate vacuum 4 mbar abs.
- Integrated KNF self-drying system ensures that condensate is quickly removed from the pump heads without the vacuum being altered. This significantly reduces process time and preserves the pump heads
- Chemically resistant and thus ideal for use with extremely aggressive/corrosive gases and vapors

VACUUM CONTROL

VC 900 Vacuum Control Unit

- Control of the vacuum application
- Separate control unit with pressure sensors and two-step controlled valve to be placed independently from the operating unit
- Easy to use

ECONOMICAL

C 900 Chiller

- Operating temperature range -10 to +40 °C, cooling capacity 250 W
- Compact design, small footprint
- Splash-proof membrane keypad
- Easy to fill

ROTARY EVAPORATION / DISTILLATION

DEGASSING

CONSTANT VACUUM FOR CLEAR RESULTS

LABOPORT®

HIGH-PERFORMANCE

N 816.3 KT.18 Diaphragm Vacuum Pump

- Flow rate 0.96 m³/h / Ultimate vacuum 20 mbar abs.
- PTFE-coated diaphragm is ideal for aggressive/corrosive gases and vapors

LABOPORT®

FAST

N 938.50 KT.18 Diaphragm Vacuum Pump

- Flow rate 1.8 m³/h / Ultimate vacuum 15 mbar abs.
- Connecting both pump heads in parallel and in series ensures exceptionally fast evacuation
- PTFE-coated diaphragm is ideal for aggressive/corrosive gases and vapors

LABOPORT®

CHEMICALLY RESISTANT

N 820 G Diaphragm Vacuum Pump

- Flow rate 1.2 m³/h / Ultimate vacuum 6 mbar abs.
- High level of vapor and condensate compatibility
- Integrated rotational speed control
- PTFE pump head combined with PTFE-coated diaphragm are ideal for extremely aggressive/corrosive gases and vapors
- ATEX-compliant in accordance with Ⓔx **II 2/-G IIB+H2 T3 internal atmosphere only**
- Integrated gas ballast valve
- 3-color status display for in operation / stand-by / error
- High suction speed, particularly in the low vacuum range

Tip: When combined with the VC 900 vacuum control unit and the connection cable, the rotational speed is controlled in accordance with the requirements of the process. Ideal for combining with all common vacuum controllers with valve control.

SPEED-CONTROLLED

N 920 G Diaphragm Vacuum Pump

- Flow rate 1.26 m³/h / Ultimate vacuum 2 mbar abs.
- High suction speed, particularly in the low vacuum range
- Integrated rotational speed control
- PPS pump head combined with PTFE-coated diaphragm are ideal for aggressive/corrosive gases and vapors
- Integrated gas ballast valve

Tip: When combined with the VC 900 vacuum control unit and the connection cable, the rotational speed is controlled in accordance with the requirements of the process.

FILTRATION/SPE

RELIABLE VACUUM FOR CLEAN RESULTS.
COMPACT, POWERFUL, FAST.

LABOPORT®

SMALL AND FOR (ALMOST) ANY USE

N 96 Mini Diaphragm Vacuum Pump

- Flow rate 0.4 m³/h / Ultimate vacuum < 130 mbar abs.
- Extremely low footprint
- Integrated rotational speed control
- PTFE-coated diaphragm is ideal for aggressive/corrosive gases and vapors

LABOPORT®

HIGH-PERFORMANCE

N 816.3 KT.18 and N 816.1.2 KT.18 Diaphragm Vacuum Pump

- Flow rate up to 1.8 m³/h / Ultimate vacuum up to 20 mbar abs.
- PTFE-coated diaphragm is ideal for aggressive/corrosive gases and vapors

LABOPORT®

FAST

N 938.50 KT.18 Diaphragm Vacuum Pump

- Flow rate 1.8 m³/h / Ultimate vacuum 15 mbar abs.
- Connecting both pump heads in parallel and in series ensures exceptionally fast evacuation
- PTFE-coated diaphragm is ideal for aggressive/corrosive gases and vapors

LABOPORT®

CHEMICALLY RESISTANT

N 840 G Diaphragm Vacuum Pump

- Flow rate 2.04 m³/h / Ultimate vacuum 6 mbar abs.
- High level of vapor and condensate compatibility
- Integrated rotational speed control
- PTFE pump head combined with PTFE-coated diaphragm are ideal for extremely aggressive/corrosive gases and vapors
- ATEX-compliant in accordance with Ⓔx **II 2/-G IIB+H2 T3 internal atmosphere only**
- Integrated gas ballast valve
- 3-color status display for in operation / stand-by / error
- High suction speed, particularly in the low vacuum range

Tip: When combined with the VC 900 vacuum control unit and the connection cable, the rotational speed is controlled in accordance with the requirements of the process. Ideal for combining with all common vacuum controllers with valve control.

FLUID ASPIRATION

RELIABLE VACUUM WITH PROCESS-SPECIFIC FLOW RATES

LABOPORT®

SMALL AND FOR (ALMOST) ANY USE

N 96 Mini Diaphragm Vacuum Pump

- Flow rate 0.4 m³/h / Ultimate vacuum < 130 mbar abs.
- Extremely low footprint
- Integrated rotational speed control
- PTFE-coated diaphragm is ideal for aggressive/corrosive gases and vapors

LABOPORT®

HIGH-PERFORMANCE

N 816.3 KT.18 Diaphragm Vacuum Pump

- Flow rate 0.96 m³/h / Ultimate vacuum 20 mbar abs.
- PTFE-coated diaphragm is ideal for aggressive/corrosive gases and vapors

LABOPORT®

FAST

N 938.50 KT.18 Diaphragm Vacuum Pump

- Flow rate 1.8 m³/h / Ultimate vacuum 15 mbar abs.
- Connecting both pump heads in parallel and in series ensures exceptionally fast evacuation
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LABOPORT®

CHEMICALLY RESISTANT

N 820 G Diaphragm Vacuum Pump

- Flow rate 1.2 m³/h / Ultimate vacuum 6 mbar abs.
- High level of vapor and condensate compatibility
- Integrated rotational speed control
- PTFE pump head combined with PTFE-coated diaphragm are ideal for extremely aggressive/corrosive gases and vapors
- ATEX-compliant in accordance with Ex **II 2/-G IIB+H2 T3 internal atmosphere only**
- Integrated gas ballast valve
- 3-color status display for in operation / stand-by / error
- High suction speed, particularly in the low vacuum range

Tip: When combined with the VC 900 vacuum control unit and the connection cable, the rotational speed is controlled in accordance with the requirements of the process. Ideal for combining with all common vacuum controllers with valve control.

METERING AND TRANSFERRING LIQUIDS

PRECISE, SAFE AND CLEAN HANDLING OF NEUTRAL AND AGGRESSIVE LIQUIDS

LIQUIPORT®

RELIABLE

NF 100 and NF 300 Chemically-resistant Diaphragm Liquid Pump

- Flow rate from 0.2 up to 3 l/min / Pressure head 10 mWg, suction head 3 mWg
- Self priming, dry running
- Pump heads available in your choice of PP, PVDF or PTFE – diaphragms available in PTFE, valves in FFKM
- Pressure head also available for 40 mWg on request
- Flow rate can either be set manually (Version S) or both manually and via an external control device (Version RC)

SIMDOS®

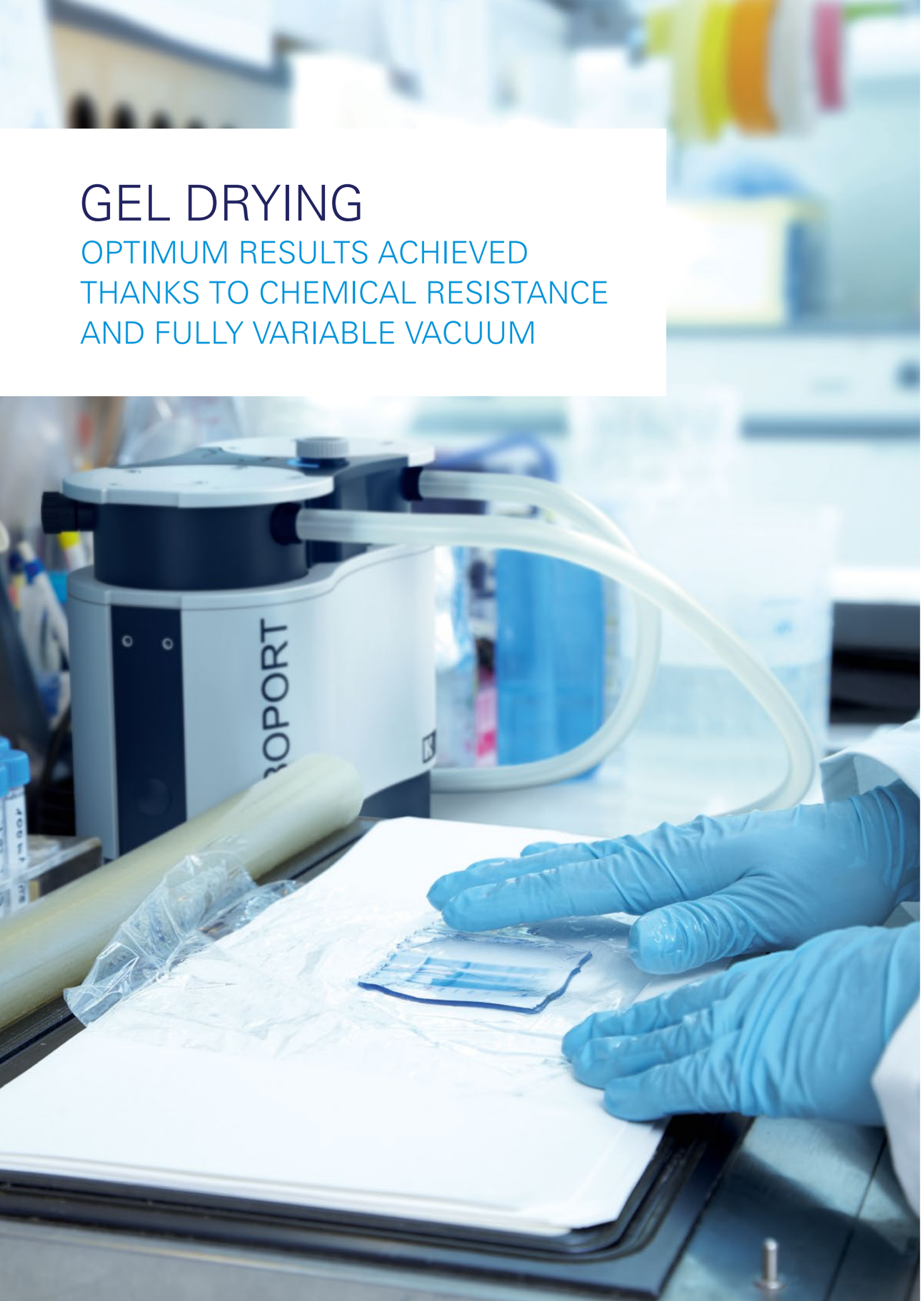
PRECISE

SIMDOS® 02 and SIMDOS® 10 Chemically-resistant Diaphragm Liquid Pump

- Flow rate from 0.03 up to 100 ml/min / Pressure head max. 6 bar, suction head 2 mWg and 3 mWg respectively
- Pump heads available in your choice of PP, PVDF, PTFE – diaphragms available in FFKM or PTFE-coated respectively PTFE-coated only (SIMDOS 10), valves in FFKM
- Flow rate can either be set manually (Version S) or both manually and via an external control device as well as with interface RS 232 (Version RCP)
- Additional safety diaphragm for maximum security
- Easy exchange of the transfer diaphragm by activating the maintenance command in the operating program

GEL DRYING

OPTIMUM RESULTS ACHIEVED THANKS TO CHEMICAL RESISTANCE AND FULLY VARIABLE VACUUM



LABOPORT®

CHEMICALLY RESISTANT

N 820 G Diaphragm Vacuum Pump

- Flow rate 1.2 m³/h / Ultimate vacuum 6 mbar abs.
- High level of vapor and condensate compatibility
- Integrated rotational speed control
- PTFE pump head combined with PTFE-coated diaphragm are ideal for extremely aggressive/corrosive gases and vapors
- ATEX-compliant in accordance with Ⓔx **II 2/-G IIB+H2 T3 internal atmosphere only**
- Integrated gas ballast valve
- 3-color status display for in operation / stand-by / error
- High suction speed, particularly in the low vacuum range

Tip: When combined with the VC 900 vacuum control unit and the connection cable, the rotational speed is controlled in accordance with the requirements of the process. Ideal for combining with all common vacuum controllers with valve control.

SPEED-CONTROLLED

N 920 G Diaphragm Vacuum Pump

- Flow rate 1.26 m³/h / Ultimate vacuum 2 mbar abs.
- High suction speed, particularly in the low vacuum range
- Integrated rotational speed control
- PPS pump head combined with PTFE-coated diaphragm are ideal for aggressive/corrosive gases and vapors
- Integrated gas ballast valve

Tip: When combined with the VC 900 vacuum control unit and the connection cable, the rotational speed is controlled in accordance with the requirements of the process.

CENTRIFUGAL CONCENTRATION

PRECISE, HIGH-PERFORMANCE VACUUM FOR RAPID, GENTLE TREATMENT OF SAMPLES

SPEED-CONTROLLED

N 920 G Diaphragm Vacuum Pump

- Flow rate 1.26 m³/h / Ultimate vacuum 2 mbar abs.
- High suction speed, particularly in the low vacuum range
- Integrated rotational speed control
- PPS pump head combined with PTFE-coated diaphragm are ideal for aggressive/corrosive gases and vapors
- Integrated gas ballast valve

Tip: When combined with the VC 900 vacuum control unit and the connection cable, the rotational speed is controlled in accordance with the requirements of the process.

LABOPORT®

CHEMICALLY RESISTANT

N 840 G Diaphragm Vacuum Pump

- Flow rate 2.04 m³/h / Ultimate vacuum 6 mbar abs.
- High level of vapor and condensate compatibility
- Integrated rotational speed control
- PTFE pump head combined with PTFE-coated diaphragm are ideal for extremely aggressive/corrosive gases and vapors
- ATEX-compliant in accordance with Ⓔx **II 2/-G IIB+H2 T3 internal atmosphere only**
- Integrated gas ballast valve
- 3-color status display for in operation / stand-by / error
- High suction speed, particularly in the low vacuum range

Tip: When combined with the VC 900 vacuum control unit and the connection cable, the rotational speed is controlled in accordance with the requirements of the process. Ideal for combining with all common vacuum controllers with valve control.

A POWERFUL PACKAGE

N 860.3 FT.40.18 Diaphragm Vacuum Pump

- Flow rate 3.6 m³/h / Ultimate vacuum 4 mbar abs.
- Integrated KNF self-drying system ensures that condensate is quickly removed from the pump heads without the vacuum being altered. This significantly reduces process time and preserves the pump heads
- Chemically resistant and thus ideal for use with extremely aggressive/corrosive gases and vapors

VACUUM OVEN

OUTSTANDING CHEMICAL AND CONDENSATE COMPATIBILITY WITH FAST EVACUATION OF LARGE VAPOR QUANTITIES

LABOPORT® SD

TRIED AND TESTED

N 820.3 FT.40.18 and N 840.3 FT.40.18 Diaphragm Vacuum Pump

- Flow rate up to 2.04 m³/h / Ultimate vacuum 10 mbar abs.
- Integrated KNF self-drying system ensures that condensate is quickly removed from the pump heads without the vacuum being altered. This significantly reduces process time and preserves the pump heads
- Chemically resistant and thus ideal for use with extremely aggressive/corrosive gases and vapors

A POWERFUL PACKAGE

N 860.3 FT.40.18 Diaphragm Vacuum Pump

- Flow rate 3.6 m³/h / Ultimate vacuum 4 mbar abs.
- Integrated KNF self-drying system ensures that condensate is quickly removed from the pump heads without the vacuum being altered. This significantly reduces process time and preserves the pump heads
- Chemically resistant and thus ideal for use with extremely aggressive/corrosive gases and vapors

LABOPORT®

CHEMICALLY RESISTANT AND CONDENSATE COMPATIBILITY

SR 820 G

SR 820 G and SR 840 G Vacuum System

- Flow rate up to 2.04 m³/h / Ultimate vacuum 6 mbar abs.
- Vacuum system comprising chemically resistant diaphragm vacuum pump, base plate and two separator flasks on suction and pressure side
- Integrated gas ballast valve

Possible combinations

When combined with the VC 900 vacuum control unit and the connection cable, the rotational speed is controlled in accordance with the requirements of the process. Ideal for combining with all common vacuum controllers with valve control.

MULTI-USER VACUUM SYSTEMS

INEXPENSIVE, SPACE-SAVING SOLUTIONS FOR SUPPLYING VACUUM TO DIFFERENT APPLICATIONS

SC 920 G

QUIET

SC 920 G Vacuum Pump System

- Flow rate up to 1,26 m³/h / Ultimate vacuum 2 mbar abs.
- Quiet operation
- Automatic, accurate recognition and monitoring of the boiling point using the integrated ramp function
- High recovery rates even with low boiling point solvents
- PPS pump head combined with PTFE-coated diaphragm are ideal for aggressive/corrosive gases and vapors
- Integrated gas ballast valve
- Speed-controlled

LABOPORT®

SH 840 G

CHEMICALLY RESISTANT AND CONDENSATE COMPATIBILITY

SH 840 G Vacuum System

- Flow rate up to 2.04 m³/h / Ultimate vacuum 6 mbar abs.
- Vacuum system comprising chemically resistant diaphragm vacuum pump, base plate, condenser and separator
- Integrated gas ballast valve

A POWERFUL PACKAGE

N 860.3 FT.40.18 Diaphragm Vacuum Pump

- Flow rate 3.6 m³/h / Ultimate vacuum 4 mbar abs.
- Integrated KNF self-drying system ensures that condensate is quickly removed from the pump heads without the vacuum being altered. This significantly reduces process time and preserves the pump heads
- Chemically resistant and thus ideal for use with extremely aggressive/corrosive gases and vapors

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VACUUM CONTROL

VC 900 Vacuum Control Unit

- Control of the vacuum application
- Separate control unit with pressure sensors and two-step controlled valve to be placed independently from the operating unit
- Easy to use

		LABOPORT® N 96	LABOPORT® N 816.3 KT.18	LABOPORT® N 816.1.2 KT.18	LABOPORT® N 938.50 KT.18	N 920 G
APPLICATION	**Filtration**	x	x	x	x	
	SPE	x	x			
	Degassing		x		x	x
	Fluid aspiration	x	x		x	
	Gel drying					x
	Rotary evaporation					x
	Distillation					x
	Vacuum oven					x
	Multi-user vacuum systems					
	Centrifugal concentration					x
	Metering/Transferring liquids					
TECHNICAL DATA	**Flow rate (m³/h) at atm. pressure**	0.4	0.96	1.8	1.8	1.26
	Ultimate vacuum (mbar abs.)	<130	20	160	15	2
	Operating pressure (bar)	2.5	0.5	0.5	0.5	0.5
	Hose connections (mm)	NPT 1/8 – ID6, PP	ID 6	ID 6	ID 10	ID 10
	Permissible media and ambient temperature	+5 … +40 °C	+5 … +40 °C	+5 … +40 °C	+5 … +40 °C	Media temp.: + 5 … +40 °C Ambient temp.: +10 … +40 °C
	Weight (kg)	1.3	3.95	3.95	6.8	8.5
	Dimensions W x H x D (mm)	156 x 119 x 75	90 x 141 x 361	102 x 141 x 361	110 x 212 x 317	158 x 226 x 324
MATERIAL	**Pump head**	PPS	PPS	PPS	PPS	PPS
	Diaphragm	PTFE-coated	PTFE-coated	PTFE-coated	PTFE-coated	PTFE-coated
	Valves	FKM	FFPM	FFPM	FFPM	FFPM
ACCESSORIES	**Silencer**		Order no. 000345		Order no. 007006	Order no. 007006
	Hose connector		G1/8 ID6 PVDF Order no. 123363 G1/8 ID6 PA Order no. 000360 G1/8 ID8 PA Order no. 004975		G1/8 ID10 PVDF Order no. 112004	
	Column fixture	Order no. 323484				
	Fine control valve with vacuum gauge		Order no. 057830		Order no. 112432	Order no. 112432
	Small flange, stainless steel					Order no. 046625
	Connection cable to N 920 G interface					
	Connection cable to N 820 G/N 840 G interface					

	LABOPORT® N 842.3 FT.18	LABOPORT® SD N 820.3 FT.40.18	LABOPORT® SD N 840.3 FT.40.18	N 860.3 FT.40.18	VC 900
Filtration					
SPE					
Degassing	x				
Fluid aspiration					
Gel drying					
Rotary evaporation	x	x	x	x	x
Distillation	x			x	x
Vacuum oven	x	x	x	x	x
Multi-user vacuum systems				x	x
Centrifugal concentration				x	
Metering/Transferring liquids					
Flow rate (m³/h) at atm. pressure	2.04	1.2	2.04	3.6	
Ultimate vacuum (mbar abs.)	2	10	10	4	
Operating pressure (bar)	1	1	1	1	
Hose connections (mm)	ID 10	ID 10	ID 10	ID 12	pneumatic: ID 10 coolants: ID 10 inert gas: ID 4
Permissible media and ambient temperature	+5 … +40 °C	+5 … +40 °C	+5 … +40 °C	+5 … +40 °C	+10 … +40 °C
Weight (kg)	13.4	9.6	12.9	14.8	1.2
Dimensions W x H x D (mm)	167 x 228 x 341	177 x 220 x 312	189 x 239 x 341	291 x 278 x 331	101 x 181 x 67
Pump head	PTFE	PTFE	PTFE	PTFE	
Diaphragm	PTFE-coated	PTFE-coated	PTFE-coated	PTFE-coated	
Valves	FFPM	FFPM	FFPM	FFPM	
Silencer					
Hose connector					
Column fixture					
Fine control valve with vacuum gauge					
Small flange, stainless steel					
Connection cable to N 920 G interface					Order no. 307757 (2 m) Order no. 307758 (5 m)
Connection cable to N 820 G/N 840 G interface					Order no. 323829 (2 m)

		LABOPORT® N 820 G Ex II 2/-G IIB+H2 T3 internal atmosphere only	LABOPORT® N 840 G Ex II 2/-G IIB+H2 T3 internal atmosphere only
APPLICATION	Filtration		x
	SPE		
	Degassing	x	x
	Fluid aspiration	x	x
	Gel drying	x	
	Rotary evaporation	x	x
	Distillation		
	Vacuum oven	x	x
	Multi-user vacuum systems		
	Centrifugal concentration		x
	Metering/Transferring liquids		
TECHNICAL DATA	Flow rate (m³/h) at atm. pressure	1.2	2.04
	Ultimate vacuum (mbar abs.)	6	6
	Operating pressure (bar)	0.1	0.1
	Hose connections (mm)	ID 9.5-8, PVDF	ID 9.5-8, PVDF
	Permissible media and ambient temperature	+5 … +40 °C	+5 … +40 °C
	Weight (kg)	8.8	11.3
	Dimensions W x H x D (mm)	163 x 220 x 259	177 x 240 x 289
MATERIAL	Pump head	PTFE	PTFE
	Diaphragm	PTFE-coated	PTFE-coated
	Valves	FFPM	FFPM

ATEX key for LABOPORT® N 820 G and N 840 G and the transferable, explosive gases and vapors:

	Ex II 2/-G IIB+H2 T3 INTERNAL ATMOSPHERE ONLY		
	T1	T2	T3
	methane		
IIA	acetone, ammonia, benzene (pure), acetic acid, ethane, ethyl acetate, carbon oxide, methanol, propane, toluene	ethyl alcohol, n-butane, n-butyl alcohol	gasolines, diesel fuel, aviation fuel, fuel oils, n-hexane
IIB	town gas	ethene	
IIC	hydrogen		

		LABOPORT® SR 820 G	LABOPORT® SH 820 G	LABOPORT® SR 840 G	LABOPORT® SH 840 G
APPLICATION	Filtration	x		x	
	Vacuum Oven	x		x	
	Degassing			x	
	Fluid aspiration	x			
	Destillation		x		x
	Rotary evaporation		x		x
	Centrifugal concentration	x		x	
TECHNICAL DATA	Flow rate (m³/h) at atm. pressure	1. 2		2.04	
	Ultimate vacuum (mbar abs.)	6			
	Operating pressure (bar)	0.1			
	Hose connections (mm)	ID 9.5–8, PVDF			
	Permissible media and ambient temperature	+5 … + 40 °C			
	Integrated gas ballast valve	Yes			
	Integrated rotational speed control	Yes			
	Weight (kg)	10.7	11.7	13.1	14.1
	Dimensions W x H x D (mm)	282 x 234 x 260	323 x 416 x 260	299 x 250 x 274	340 x 416 x 274
MATERIAL	Pump head	PTFE			
	Diaphragm	PTFE-coated			
	Valves	FFPM			
ACCESSORIES	Separator flask	Order No. 047729			
	High performance condenser with pressure relief valve	-	Order No. 114855	-	Order No. 114855
	Hose connector with O-ring (FPM)	Order No. 323609			
	Hose connector PP (for hose ID10)	Order No. 026237			
	Screw connection cap red, GL18 (for hose connector ID 026237)	Order No. 025980			
	Hose connector PP (for hose ID8)	Order No. 025981			
	Screw connection cap red, GL14 (for hose connector ID 025981)	Order No. 025982			
	Key for hose connector	Order No. 316279			
	Connection cable (for combination with VC 900) 2 m	Order No. 323829			
	Connecting cable (for combination with VC 900) 5 m	Order No. 323830			
	Hose-BGR for Separator flask (1x for SH 840 G)	Order No. 323095			
	Hose BGR for high performance condenser (1x for SH 840 G)	Order No. 317157			
	Hose connector Y-piece - ID10	Order No. 026432			

		SC 920 G	LABOPORT® SC 820	LABOPORT® SC 840
APPLICATION	**Filtration**			
	SPE			
	Degassing			
	Fluid aspiration			
	Gel drying			
	Rotary evaporation	x	x	x
	Distillation	x	x	x
	Vacuum oven	x	x	x
	Multi-user vacuum systems	x		
	Centrifugal concentration			
	Metering/Transferring liquids			
TECHNICAL DATA	**Flow rate (m³/h) at atm. pressure**	1.26	1.2	2.04
	Ultimate vacuum (mbar abs.)	2	8	8
	Operating pressure (bar)		1	1
	Hose connections (mm)	pneumatic: ID 10 coolants: ID 8 inert gas: ID 6	pneumatic: ID 10 coolants: ID 8	pneumatic: ID 10 coolants: ID 8
	Permissible media and ambient temperature	+5 … +40 °C	+5 … +40 °C	+5 … +40 °C
	Weight (kg)	15.2	16.0	19.3
	Dimensions W x H x D (mm)	366 x 423 x 294	289 x 506 x 397	289 x 506 x 417
MATERIAL	**Pump head**	PPS	PTFE	PTFE
	Diaphragm	PTFE-coated	PTFE-coated	PTFE-coated
	Valves	FFPM	FFPM	FFPM
ACCESSORIES	**Coolant valve – G 1/2, ID 8**	Order no. 117121	Order no. 045075	Order no. 045075
	Column fixture	for remote control Order no. 120132		
	Wall fixture	for remote control Order no. 120130		
	Charging station	Order no. 129478		

		SIMDOS® 02 FEM 1.02	SIMDOS® 10 FEM 1.10	LIQUIPORT® NF 100	LIQUIPORT® NF 300
APPLICATION	**Filtration**				
	SPE				
	Degassing				
	Fluid aspiration				
	Gel drying				
	Rotary evaporation				
	Distillation				
	Vacuum oven				
	Multi-user vacuum systems				
	Centrifugal concentration				
	Metering/Transferring liquids	x	x	x	x
TECHNICAL DATA	**Flow rate (ml/min) with water at 20 °C and zero pressure head**	0.03 – 20	1 – 100		
	Flow rate (l/min) with water at 20 °C and zero pressure head			0.2 – 1.3	0.5 – 3.0
	Operating pressure (bar)	6	6	1 (4 with LIQUIPORT® NF 1.100)	1 (4 with LIQUIPORT® NF 1.300)
	Suction head (mWg)	2	3	3	3
	Hose connections (mm)	ID 1.6/OD 3.2	ID 4/OD 6	ID 8	ID 12
	Permissible media and ambient temperature	Ambient temp.: +5 … +40 °C Media temp.: +5 … +80 °C	Ambient temp.: +5 … +40 °C Media temp.: +5 … +80 °C	Ambient temp.: +5 … +40 °C Media temp.: +5 … +80 °C	Ambient temp.: +5 … +40 °C Media temp.: +5 … +80 °C
	Weight (kg)	0.9	0.9	1.0	1.5
	Dimensions W x H x D (mm)	93 x 144 x 150	93 x 144 x 150	99 x 177 x 130	104 x 188 x 160
MATERIAL	**Pump head**	PP, PVDF, PTFE or stainless steel	PP, PVDF, PTFE or stainless steel	PP, PVDF or PTFE	PP, PVDF or PTFE
	Diaphragm	FFKM or PTFE-coated	PTFE-coated	PTFE-coated	PTFE-coated
	Valves	FFKM	FFKM	FFKM	FFKM
ACCESSORIES	**Column fixture**	Order no. 160474	Order no. 160474	Order no. 160474	Order no. 160474
	Wall fixture	Order no. 160473	Order no. 160473	Order no. 160473	Order no. 160473
	Foot switch for version RC (RC = flow rate can be set both manually and via an external control device)	Order no. 155872	Order no. 155872	Order no. 155872	Order no. 155872
	In-line filters	FS 60 T PVDF Mesh opening 70 µm Order no. 165210 FS 60 X PEEK Mesh opening 35 µm Order no. 165212	FS 25 T PVDF Mesh opening 70 µm Order no. 165211 FS 25 X PEEK Mesh opening 35 µm Order no. 165213		

		RC 600	C 900
APPLICATION	**Rotary evaporation**	x	x
TECHNICAL DATA	**Heating bath: Heating bath temperature (°C)**	20 – 180	
	Working temperature range (°C)		-10 – +40
	Coolant supply parameters (condenser): **- Permissible pressure (bar)** **- Permissible temperature (°C)** **- Coolant-coated surface (cm²)**	3 -15 – +20 1230	
	Cooling capacity (W)		250
	Parameters of evaporation flask: **- Size of evaporation flask (ml)** **- Rotational speed of evporation flask (1/min)** **- Length of stroke (mm)** **- Lifting speed (mm/s)**	50 – 3000 25 – 280 150 38	
	Temperature stability (°C)		± 0,5
	Filling volume (l)		1.7 – 2.6
	Cooling agent		R134a
	Temperature control		PID temperature control
	Weight (kg)	9.1	27
	Dimensions W x H x D (mm) **- without glass (footprint)** **- with glass**	- 431 x 464 x 453 487 x 823 x 453	235 x 520 x 400 - -
ACCESSORIES	**Protective cover heating bath**	Order no. 127204	
	Refill valve	Order no. 300639	
	Coolant valve		
	Vacuum seal	Order no. 113046	

Column fixture

Wall fixture

Foot switch

In-line filters FS 60

In-line filters FS 25

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