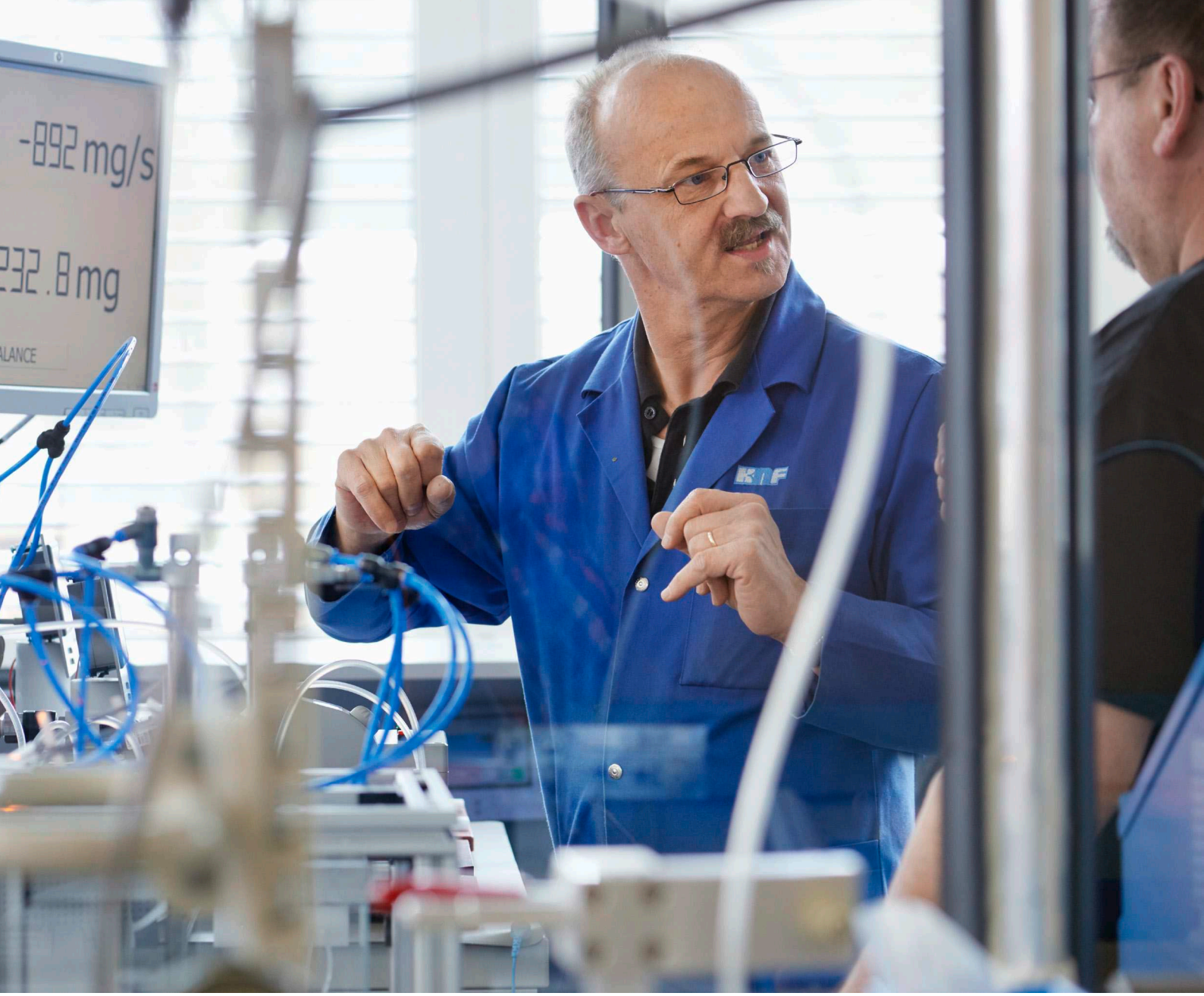
KNF LIQUID PUMPS
PRODUCT RANGE



YOUR PARTNER TODAY AND IN THE FUTURE

The KNF Group was founded 1946 in Freiburg, Germany, and is still family-owned. It develops, produces and distributes high-quality diaphragm pumps and systems for gases, vapors and liquids. KNF's innovative diaphragm pumps are available as integrated pumps for OEMs, as well as for process applications and laboratory use.
The independent KNF Group has a workforce of 700 employees. Today it comprises 15 companies with five production facilities around the world.

EXPERTS FOR DIAPHRAGM LIQUID PUMPS

KNF Flodos, based in Switzerland, is the KNF Group's product center for liquid pumps. Since its foundation in 1987, KNF Flodos has been focussing on the development and production of diaphragm pumps for the transfer of liquids. These are sold worldwide through the KNF Group's 13 sales centers.
A highly innovative technology leader in its field, KNF Flodos employs some 180 people. The company is very successful in the medical field, laboratory analysis, the inkjet industry and in other high-tech markets.

A KEY COMPONENT IN NUMEROUS HIGH-TECH APPLICATIONS

Our customized diaphragm gas and liquid pumps and systems are used in numerous demanding applications. These extend from medical equipment to instruments for environmental engineering and analytics, and from printing equipment to semiconductors and new technologies such as fuel cells.

The catalog of industries we serve and applications we support is expanding day by day. We have listed the main current applications and products below, arranged under our three main markets: OEMs, laboratories, and process engineering.

OEM PUMPS

Our customized OEM pumps are used as vital components in systems for a broad range of high-tech industries where reliability and quality are essential. The industries we serve include:

- Agriculture
- Automotive
- Chemicals
- Climate control
- Emission-measuring technology
- Environmental and analytical engineering
- Food
- Fuel cells
- Inkjet and reproduction
- Medical technology and engineering
- Safety engineering
- Safety technology
- Semiconductors
- Vacuum technology

LABORATORY EQUIPMENT

KNF lab pumps, systems, and rotary evaporators are used for a wide variety of benchtop laboratory applications where accuracy and chemical resistance are required.

- Centrifugal concentration
- Degassing
- Filtration and solid phase extraction
- Fluid aspiration
- Gel drying
- Metering and transfer of liquids
- Multiuser vacuum systems
- Rotary evaporation and distillation
- Vacuum ovens

PROCESS PUMPS

In plant and process engineering, KNF pumps are particularly valued for their ability to transfer and dose aggressive media in demanding environments.

- Chemical and process engineering
- Hot combustion gas measurement
- Petrochemical process monitoring
- Plant exhaust gas measurement

OEM TRANSFER PUMPS

- Diaphragm pumps for all your needs
- Intelligent design
- Self priming
- Dry-run safe
- High chemical resistance
- High reliability
- Long life-time
- Customer specific solutions

PUMPS DRIVEN BY AC, DC OR BRUSHLESS DC MOTORS			
Type	**Flow rate at atmos. pressure (l/min)**	**Suction height (mWg)**	**Max. pressure (bar)**
NF 5	0.07	3.0	1
NF 10	0.10	3.0	1
FF 12	0.15	3.0	1
FF 20	0.23	3.5	3
NF 25	0.25	3.0	1
NF 30	0.30	6.0	1
NF 60	0.60	3.0	1
NF 100	1.20	3.0	1
NF 300	3.00	3.0	1
NF 600	6.00	3.0	1

PUMPS FOR UP TO 6 BAR, DRIVEN BY AC, DC OR BRUSHLESS DC MOTORS			
Type	**Flow rate at atmos. pressure (l/min)**	**Suction height (mWg)**	**Max. pressure (bar)**
NF 1.5	0.06	3.0	6
NF 1.25	0.30	3.0	6
NF 1.30	0.17	5.0	6
NF 1.60	0.65	3.0	6
NF 1.100	1.30	3.0	6
NF 1.300	3.00	3.0	6
NF 1.600	6.00	3.0	6

PUMP FOR UP TO 16 BAR, DRIVEN BY BRUSHLESS DC MOTORS			
Type	**Flow rate at atmos. pressure (l/min)**	**Suction height (mWg)**	**Max. pressure (bar)**
NF 2.35	0.35	3.0	16

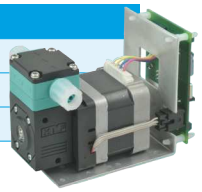
DOUBLE HEADED TRANSFER PUMPS DRIVEN BY DC MOTORS			
Type	**Flow rate at atmos. pressure (l/min)**	**Suction height (mWg)**	**Max. pressure (bar)**
NFB 5	2 x 0.05	3.0	1
NFB 25	2 x 0.3	3.0	1
NFB 30	2 x 0.3	6.0	1
NFB 60	2 x 0.6	3.0	1
NFB 100	2 x 1.3	3.0	1

PUMPS WITH LINEAR DRIVE				
Type	**Flow rate at atmos. pressure (l/min)**	**Suction height (mWg)**	**Max. press. (bar)**	**Max. frequency (Hz)**
FMM 20	0.018	3.0	1	20
FMM 80	0.048	4.0	1	10
FL 10 DC-P 24 V	0.10	2.0	1	50
FL 10 AC 230 V	0.10	2.0	1	50
FL 10 AC 115 V	0.09	1.5	1	60

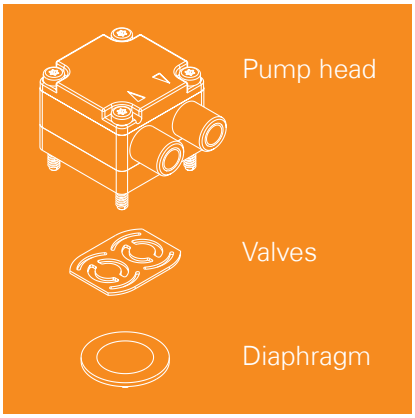
OEM DOSING PUMPS

- Diaphragm pumps for all dosing applications
- Excellent repeatability
- High long-term stability
- High chemical resistance
- Self-priming
- Dry-run safe
- Long lifetime
- Different mounting solutions meeting specific needs

DOSING PUMPS WITH TWO-PHASE STEPPER MOTOR			
Type	**Dispense volume (ml/min)**	**Suction height (mWg)**	**Max. pressure (bar)**
FEM 1.02	0.2 – 20	4.0	6
FEM 1.09	0.9 – 90	4.0	6



DOSING SYSTEMS WITH TWO-PHASE STEPPER MOTOR			
Type	**Dispense volume (µl)**	**Suction height (mWg)**	**Max. pressure (bar)**
FEM 1.02.55 RC	5 – 180	4.0	6
FEM 1.09.55 RC	10 – 520	4.0	6



OPTIONS FOR HEAD MATERIAL (TRANSFER AND DOSING PUMPS)	
Head	PP, PPS, PVDF, PTFE, PEEK
Valves	EPDM, FFPM, FPM, FFKM
Diaphragm	EPDM, FFPM, FPM, PTFE coated

LABORATORY PUMPS

- Diaphragm pumps for laboratory applications
- Intelligent design
- High chemical resistance
- Reliable and maintenance-free
- Intuitive handling

LIQUIPORT

Pumps for industry and laboratory

TRANSFER PUMPS					
Type	**Flow rate at atmos. pressure (l/min)**	**Suction height (mWg)**	**Pressure (bar)**	**Materials of head components**	
				Head	**Valves, Diaphragm**
NF 100	0.2 – 1.3	3.0	1	PP, PVDF, PTFE	FFKM, PTFE
NF 1.100	0.2 – 1.3	3.0	6	PP, PVDF, PTFE	FFKM, PTFE
NF 300	0.5 – 3.0	3.0	1	PP, PVDF, PTFE	FFKM, PTFE
NF 1.300	0.5 – 3.0	3.0	6	PP, PVDF, PTFE	FFKM, PTFE

SIMDOS 02

The easy way to dose aggressive and neutral liquids

DOSING PUMP						
Type	**Flow rate at atmos. pressure**	**Dosing range**	**Suction height (mWg)**	**Pressure (bar)**	**Materials of head components**	
					Head	**Valves, Diaphragm**
FEM 1.02	30 µl/min – 20 ml/min	30 µl – 999 ml	2.0	6	PP, PVDF, PTFE, STAINLESS STEEL	FFKM, PTFE, EPDM

SIMDOS 10

The easy way to dose aggressive and neutral liquids

DOSING PUMP						
Type	**Flow rate at atmos. pressure**	**Dosing range**	**Suction height (mWg)**	**Pressure (bar)**	**Materials of head components**	
					Head	**Valves, Diaphragm**
FEM 1.10	1 – 100 ml/min	1 – 999 ml	3.0	6	PP, PVDF, PTFE, STAINLESS STEEL	FFKM, PTFE, EPDM

ACCESSORIES FOR OEM AND LABORATORY PUMPS

KNF offers a full range of accessories. The most common ones are listed below. For further parts, contact your local KNF partner.

DIAPHRAGM PRESSURE VALVES				
Type	**Max. flow rate with liquid (l/min)**	**Setting range (barg)**	**Material selection**	
			Lower body	**Diaphragm**
FDV 30/31	3.0	0.5 – 2.5	PP, PVDF	EPDM, FKM, FFKM
FDV 1.30/1.31	3.0	2.0 – 6.5	PP, PVDF	EPDM, FKM, FFKM
FDV 300/301	12.0	0.8 – 2.5	PP, PVDF	EPDM, FKM, FFKM
FDV 1.300/1.301	12.0	2.0 – 6.5	PP, PVDF	EPDM, FKM, FFKM

This valve can be used for different purposes eg.: keeping the pressure constant, as a pressure safety valve or to prevent siphoning through the pump.

PULSATION DAMPERS				
Type	**KNF pump type being used**	**Max. pressure (bar)**	**Material selection**	
			Upper body	**Diaphragm**
FPD 06	NF 5 / NF 10 / FL 10 / FF 12 / FF 20 / NF 25 / NF 30 / NF 60 / NF 100	2	PP, PVDF	EPDM, FFKM
FPD 1.06	NF 1.5 / NF 1.25 / NF 1.30 / NF 1.60	6	PP, PVDF	EPDM, FFKM
FPD 10	NF 300 / NF 600	2	PP, PVDF	EPDM, FFKM
FPD 1.10	NF 1.100 / NF 1.300 / NF 1.600	6	PP, PVDF	EPDM, FFKM

Reduces pulsation in a liquid system

IN-LINE FILTERS				
Type	**Material ***	**Mesh opening (µm)**	**Max. flow rate with liquid (l/min)**	**Connectors**
FS 60T	PVDF	70	0.6	UNF 1/4“- 28
FS 60 X	PEEK	35	0.6	UNF 1/4“- 28
FS 25T	PVDF	70	0.25	for tubes ID 3.2 or 4 mm
FS 25 X	PEEK	35	0.25	for tubes ID 3.2 or 4 mm

* Material for housing and filter mesh

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