



ZEILFELDER
PUMPEN

english



stronger
bigger
hotter

up to:
64bar

up to:
1700m³/h

up to:
450°C

self priming up to 8m

liquids containing up to 90% of solids

efficiency up to 92%



ROTARY LOBE PUMPS

ZEILFELDER

HIGH PERFORMANCE PUMPS

made in Germany

www.zeilfelder-pumpen.com

a trademark of
ASM
DIMATEC

Keep your strawberries
in one piece



Food industry

Pumps all types
of bitumen



Bitumen industry

A trademark of
 **ASM**
DIMATEC

made in Germany

HIGH-PERFORMANCE ROTARY LOBE PUMPS

ADVANTAGES & HIGHLIGHTS

With our diverse standard and high performance pumps we are able to serve all your needs and response to any challenge.

Our rotative displacement pumps are robust, self-priming and have running dry capability.

API, ATEX, GOST-R and TA Luft compliant*

Zeilfelder pumps are specially designed for*:

- complex and difficult challenges
- liquids containing up to 90% of solids
- liquids containing shear sensitive materials (for example fruits)
- polymerizing or coagulating liquids
- liquids containing crystals or fibers
- dosing (repeat accuracy > 99 %)
- pressure up to 64 bar
- suction heights up to 8 m
- flow rates from 0.03 to 28.500 l/min.
- viscosity from 0.3 to 1,400,000 mPas
- temperature from -60°C to 450°C
- explosive und toxic substance

Advantages*:

- Pumps out of all possible materials
- foam-free delivery
- high durability through high-end bearings and special coatings
- low energy consumption and high efficiency up to 92 % through:
 - lowest manufacturing tolerance
 - special design
- dry running capability
- low pulsation characteristics (rotary wing pumps)
- higher displacement/revolution
 - lower rotation speed
 - gentle pumping
- revolution speed adapted to medium
- non-destructive pumping holding clipping under 5%
- dual rotation direction
- reduced noise level
- no valves

Optional:

- packing glands
- simple acting mechanical seal
- double acting mechanical seal
- explosion proof
- heating jacket (for water, steam or heating oil)
- minimal surface roughness down to 4µ through electropolishing

**depending on the pump type and serie*

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INDUSTRIES

Our products portfolio offer rotary lobe pumps for most applications. We offer explosion proof and seal-less pumps for the petrochemical industry, pumps with CIP option (cleaning in place), pumps with minimal surface roughness for the pharmaceutical and food industry and high pressure pumps for dynamic applications etc. Our pumps have proven their quality and efficiency for over 80 years in the following industries:

Chemical industry



To meet the needs of the chemical industry we offer in addition to our conventional pump range, special and custom pumps built out of special materials with high performance coating, heating and cooling jacket.

Petrochemistry



We offer self-priming rotary lobe pumps with heating or cooling jacket and seals such as [ATEX](#), "[TA-Luft](#)" or [API compliant](#) to deliver crude oil and all types of bitumen including those containing solids.

Pharmaceutical industry



To respond to the requirements of the pharmaceutical industry we have designed pumps with reduced surface roughness down to 4 μ , CIP (cleaning in place) cleaning connections and aseptic connections.

Bitumen industry



We offer special low-speed rotary lobe pumps with heating jacket to deliver bitumen and filled bitumen with barium ferrite under working temperatures up to 450°C. Those pumps operate with low-wear and are long lasting due to low revolution speed and special covering.

Automotive industry



We build pumps to deliver solid emulsion and drilling liquids containing aluminium swarf and chips as well as wax, glue, paintings and modern paintings containing solid color pigments and nanoparticles in accordance with the requirements of the automotive industry.

Regenerative energy



Our T-Rex pump range is designed to meet the requirements of the regenerative energy sector. They deliver biomass, liquid manure, silage in biogas plants. Their design makes them highly durable. Our pumps are used in nuclear plants to deliver highly concentrated acids.

Solutions for all industries

in all requested certifications

Shipping and offshore industry



We offer maritime-grade rotary lobe pumps for offshore applications to deliver heavy oil and machine lube oil. We offer rotary lobe pumps to load and unload liquid chemicals, oil and bitumen filled with solids.

Building industry



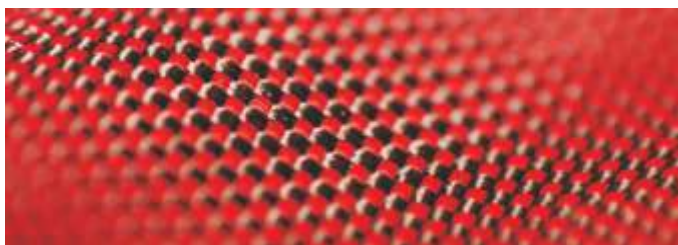
Our pumps deliver primary materials, protective agents, white cement, glue, silicone, waste water and filled bitumen for the building industry. We offer pumps for high temperature applications with heating jackets.

Food and candies industry



Our stainless steel CIP rotary lobe pump range is [FDA compliant](#) and particularly suitable for the meat and animal feed industry. We offer special pistons avoiding caramelization for sugar based products as chocolate. Our high volume pumps with low-revolution speed can pump liquids with shear sensitive solids as strawberries and nuts while holding clipping under 5%.

Fiber industry



We offer pumps with high systemic pressure and high dosing precision (optional with heating jacket) to deliver synthetic fibers, finishing agent, pigments loaded paints and dyestuffs.

Delivering solids



Our rotary lobe pumps are specially designed to pump liquids with high concentration of solid particles or abrasive products as well as cuttings with cooling lubricant.

Metallurgy



Rotary lobe pumps with heating jacket dispatch furan resins and refractory finishings in foundries, mercury, gallium, zinc alloy and stibium alloy up to 450°C.



LIQUIDS

Our pumps are operational with nearly all liquids in the viscosity range between 1 and 1.400.000 mPa.s (higher viscosity on request).

Rotary lobe pumps are suitable for middle to high viscosity liquids, liquids containing soft or abrasive particles as well as for dirty or polluted liquids.

A dditives adhesives alcohol alkyd resins ammonia ammonium hydroxid amyl acetate amyl alcohol animal oils and fats asphalt coatings asphalt emulsified B arm bath essences binding agents biomass bitumen bitumen (filled) bitumen emulsion bittuminous coating blud bred dough bunker C fuel oil butter materials C aoutchouc carbolic acid carbon disulfied carbon tetrachloride castor oil caustic soda chemicals, liquids chocolate clay coatings	cleaning agents Coca-Cola-extracts cocoa butter coconut oil cod-liver oil cold fat contact cement color dispersions cooking oils cooling oils cosmetic products creamers crispbread dough crude greases crude oil D etergeants diesel diluents dishwashing detergent dispersions dispersion paints diethylene glycol distillation fractions dressing media drillingoil emulsion E mulsions emulsifier epoxy resins ethyl acetate ethyl alcohol ethyl chlorid ethylene alcohol	ethylene chloride ethylene dichlorid ethylene glycol F ats filler filling material fish oil foam food oil formaldheyde fortified resine fruit juices fruits (boiled) fuel oil fumigants G as gasoline gear oil gelatine glucose glue glycerin glycol glyucose graphite emulsion H eat exchange liq. hair cream hardening oils heating oils honey hydraulic liquids hydrocarbons	I nertol ink insulation material K erosine ketone L ime slurry lacquer lactic acid latex lipids liquid feed liquid sugar lubricating grease lubricating oil M anure maple sirup machine greases Margarine Masecuit mayonnaise metalic dust methyl alcohol methyl chlorid milkchocolate mineral oils molasses mud mustards N aphtha naphtalene nitrocellulose paints O ils oleic acids ointments	olive oil organic solvents P aints palm oil palmitic acid paper coating paper pulp paper stock paraffine paste peanut butter Peas mush pharm. liquids plum jam Process liquids R esins resin emulsions Rott mash S alat sauces (filled) sausage pulp sealants shampoo shaving cream & soap silage skin creams slurry soft soap soap solution sound-absorptive compounds spinach spindle-oil starch glue	sugar molasses sugar syrup sulfur sulfuric acid suspoensions suspensions filled synthetic resin paints synthetic resin backing enamels sweet mass T all oil tallow tar therminol toluene toluol tomato juice transmission oil U nderbody protection urethane foam V arnishes varnish-spraying vegetable oil vinyl acetate vinyl cholrid viscose W aste oils wax wax emulsions whey wood alcohol xylene and much more
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cast steel

grey cast iron

ductile iron

tantalum

titanium

aluminium

stainless steel

steel

hastelloy

in all requested materials

PUMP MATERIALS

Zeilfelder high performance pumps last longer and are more effective than standard pumps.
We choose the pump materials carefully depending on specific requirements and objectives of your application.

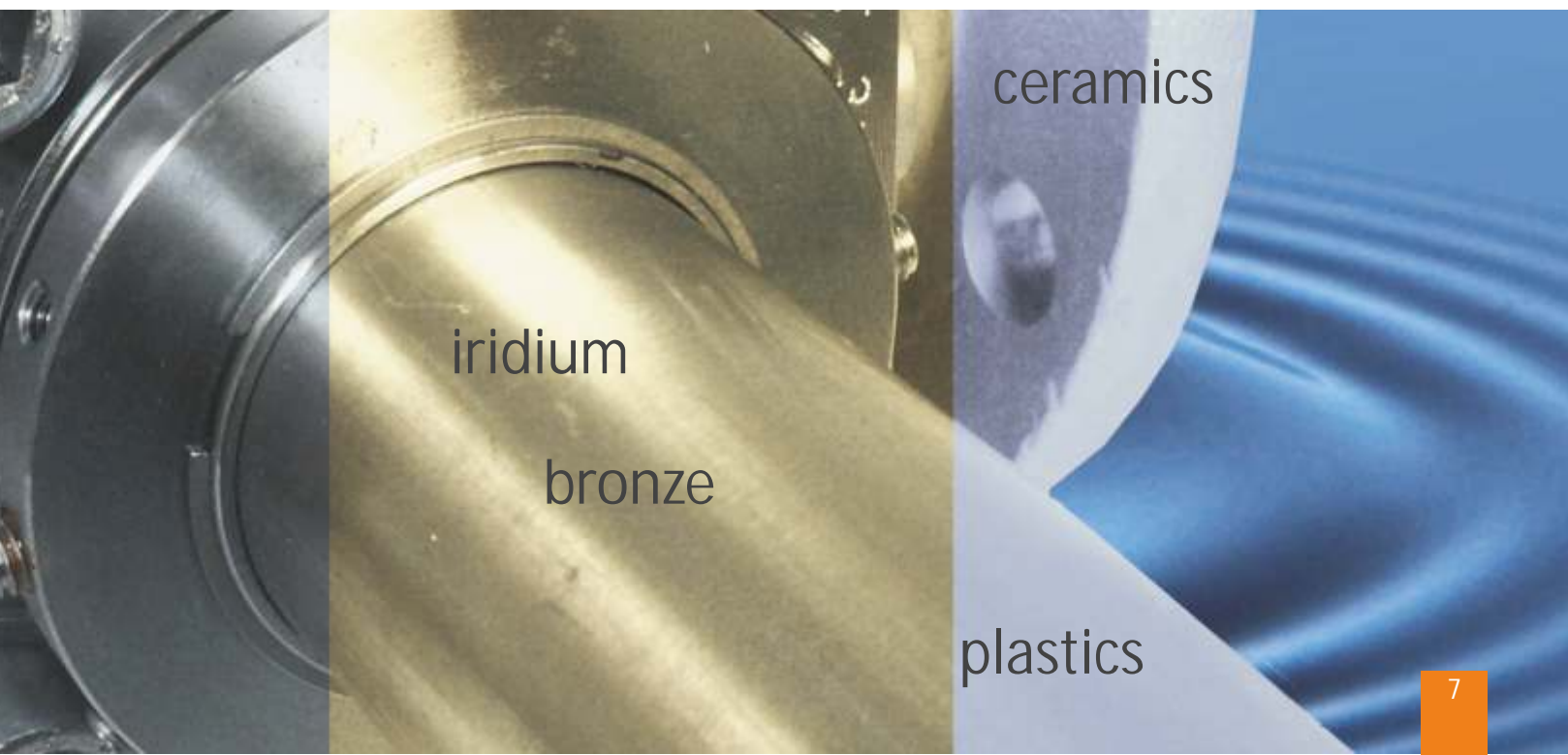
grey cast iron
ductile iron
cast steel
steel
stainless steel
hastelloy
bronze

aluminium
aluminium-based bronze
tantalum
Iridium
titanium

ceramics

NEW: ceramic pumps

ZEILFELDER-ceramic pumps for the pharmaceutical and food industry suitable for highly concentrated leach and acids as well as for high-purity and high-grade processes.



in all requested designs

DESIGNS AND OPTIONS

Piston

- single leaf with fixed or rotating hub
- double leaf with fixed or rotating hub
- three or six wings

(more details on page 12-13)

Direction of rotation

Our pumps can rotate in both directions, clockwise and counterclockwise, depending on the used sealing option and gear type.

Shapes

Depending on the implementation, we offer:

- pumps with horizontal delivery direction (KXH)
- pumps with vertical delivery direction (KXV)

Heating and cooling jackets:

We offer jacketed pumps to be used from -60°C to 450°C:

- Liquid heat transfer: with water, oil, cooling liquids or steam as heat transfer medium
- electric heating cartridge with thermostat
- electric oil heating with heating and expansion tanks

Sealing

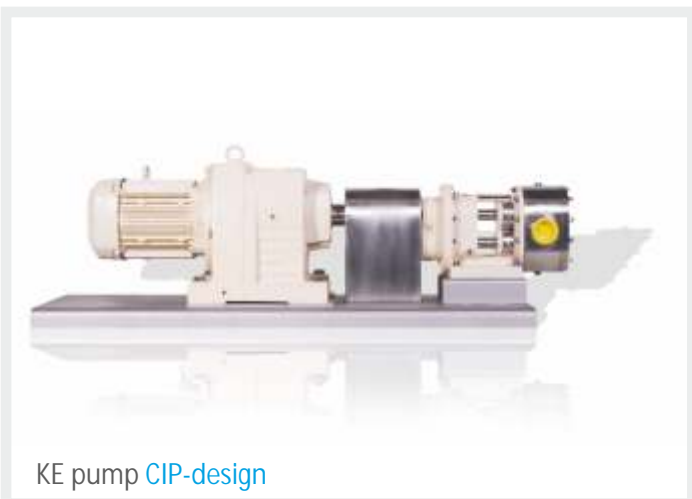
We offer:

- sealing ring
- packing
- component mechanical seals
- cartridge single-acting-mechanical seals
- cartridge double-acting-mechanical seals

Fittings and connections

We offer:

- flange connections (DIN, ANSI or SAE)
- threaded connections
- aseptic connections and fittings



KE pump CIP-design

RPM

Applied working speed depends on medium properties such as temperature, viscosity and foam building.:

- 1 to 200 RPM (KE, KS)
- 1 to 400 RPM (KD, KKPD, KKPE, KKPS)
- 1 to 500 RPM (KM)
- 1 to 750 RPM (KKPM)

Efficiency

Efficiency of our pumps is between 60 and 92% depending on the series (GREEN or BLUE), pump size, working pressure, temperature and medium viscosity.

Bearings and mounting

Choice of the right mounting depends mainly on the properties of the working fluid and requested purity level:

- 4x external mounting (no liquid contact)
- internal mounting (bearings lubricated by the medium)

Available bearings:

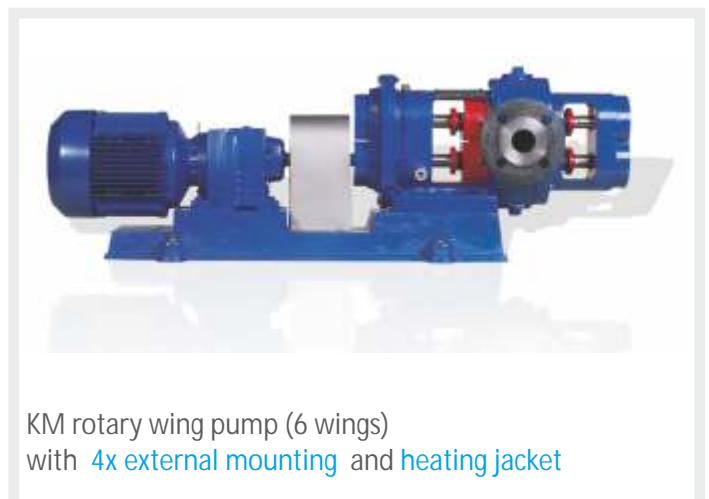
- standard roller bearings
- high grade roller bearings
- standard needle bearings
- high grade needle bearings
- ceramic bearings

Available shafts:

- with standard hardening
- with high grade coating

Available plain bearings:

- bronze
- Antimon carbon
- silicon carbide
- multi component bearings
- FDA compliant bearings



KM rotary wing pump (6 wings)
 with 4x external mounting and heating jacket



KE pumpe with CIP-cleaning option, heating jacket and gearmotor

Thrust segments and bearing bushes

Interchangeable hardened thrust segments and bearing bushes can be mounted in all pumps to reduce wear while pumping abrasive liquids

Motor, drive, gears and control

Motors and gears:

- Gear motor
- DC motor
- hydraulic motor
- pneumatic/air motor
- combustion engine
- multistage helical toothed speed reduction gears with oil-bath lubrication

Control, sensors and drive:

depending on the choosen motor type :

- frequency inverter
- flow sensors
- temperature sensors
- pressure sensors
- flow counters

Power transmission

We offer:

- flexible coupling
- disassembling coupling
- slip clutch with torque limiter
- hydrodynamic coupling
- more couplings on request

Cleaning and CIP-cleaning option

Our pumps have been desinged to enable easy cleaning and handling. Automated, CIP-cleaning without residue as well as steam cleaning without opening the housing is possible (option).

Valve

We offer relief valves for pump and plant equipment safety:

- by-pass relief valves
- integrated relief -valves on pump

Direction of flow

Depending on your application

- vertical flow
- horizontal flow



Complete KE pumpe with heating jacket and parallel shaft gear unit

BLUE & GREEN Series: performance comparison

GREEN Series Zeilfelder pump offers high quality standards at low initial acquisition cost while the **BLUE Series** achieves highest performance and offers a lower Life Cycle Cost (LCC). The **BLUE Series** design, its high quality materials and components, low tolerance and special piston construction as well as the perfect machining of shaft, cases and pistons allow it to reach high efficiency, durability and safety and will have a long lifetime in your plant. The **BLUE Series** has been conceived to reach highest pressure and be used as well for lowest as for high temperature applications.

Standard GREEN Series

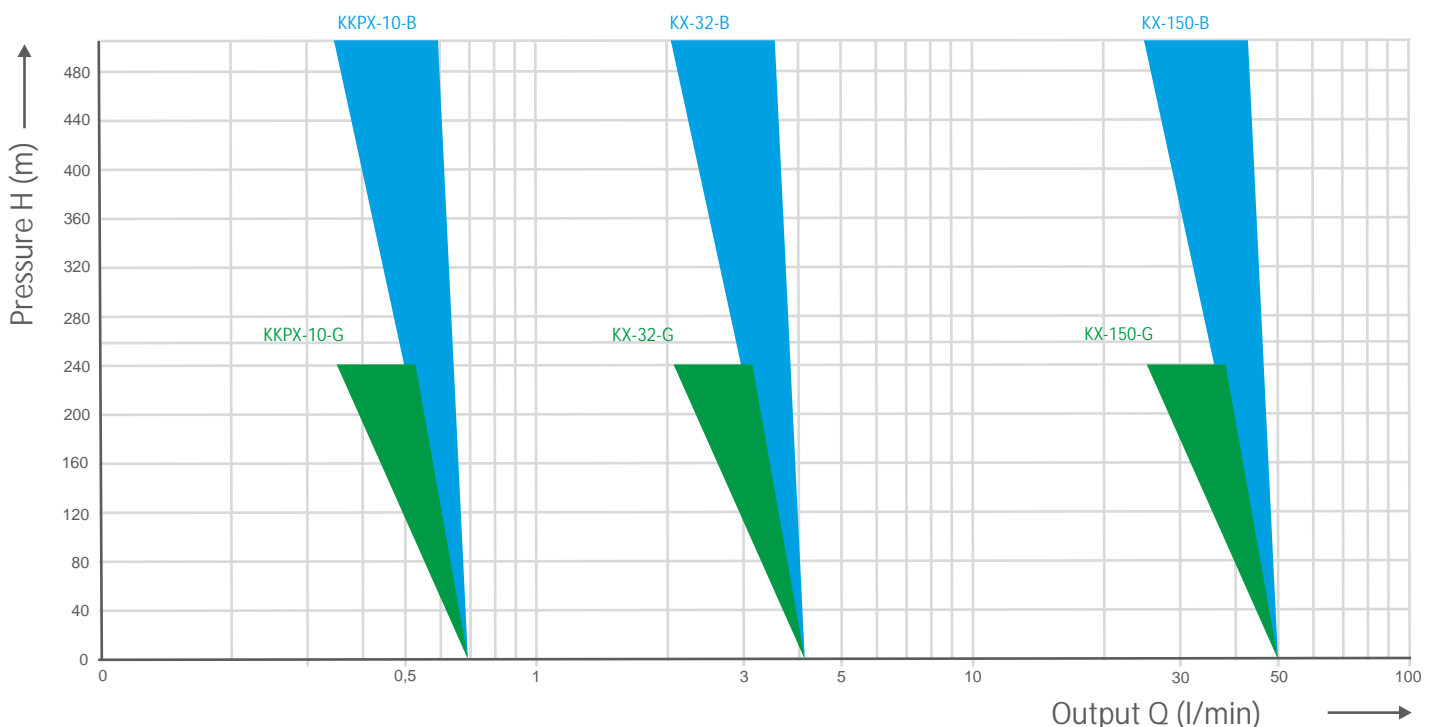
- System pressure up to 25 bar
- Suction head up to 4 m
- Flow rate from 0,02 to 23.500 l/min.
- Efficiency up to 74%
- market usual lifetime through:
 - standard-bearings
 - standard-coating

High performance BLUE Series

- System pressure up to 64 bar
- Suction head up to 8 m
- Flow rate from 0,03 bis 28.850 l/min.
- Efficiency up to 92%
- Long-Life-design through:
 - high grade bearings
 - high grade shaft coating

Comparison of the working efficiency of the BLUE Series and GREEN Series (based on the QH Diagram)

GREEN Series reach a maximum efficiency of 74% while the BLUE Series reach a maximum efficiency of 92% depending on the delivered liquid, its viscosity, working pressure and specific application properties.



BLUE & GREEN Series: Life Cycle Costs (LCC)

Life Cycle Costs has gained on importance considering today's increasing energy costs and pressure on manufacturing cost.

Life Cycle Costs (LCC) consist of:

- initial investment (AC) i.e. initial price of pump,
- initial cost of installation (IC),
- energy consumption and operating costs (OCE),
- maintenance costs, repairing costs (OCM),
- business and machine interruption costs (LP),
- at the end of the pump life cycle, replacement costs (RC) of the pump.

$$LCC = AC + IC + OCE + OCM + LP + RC$$

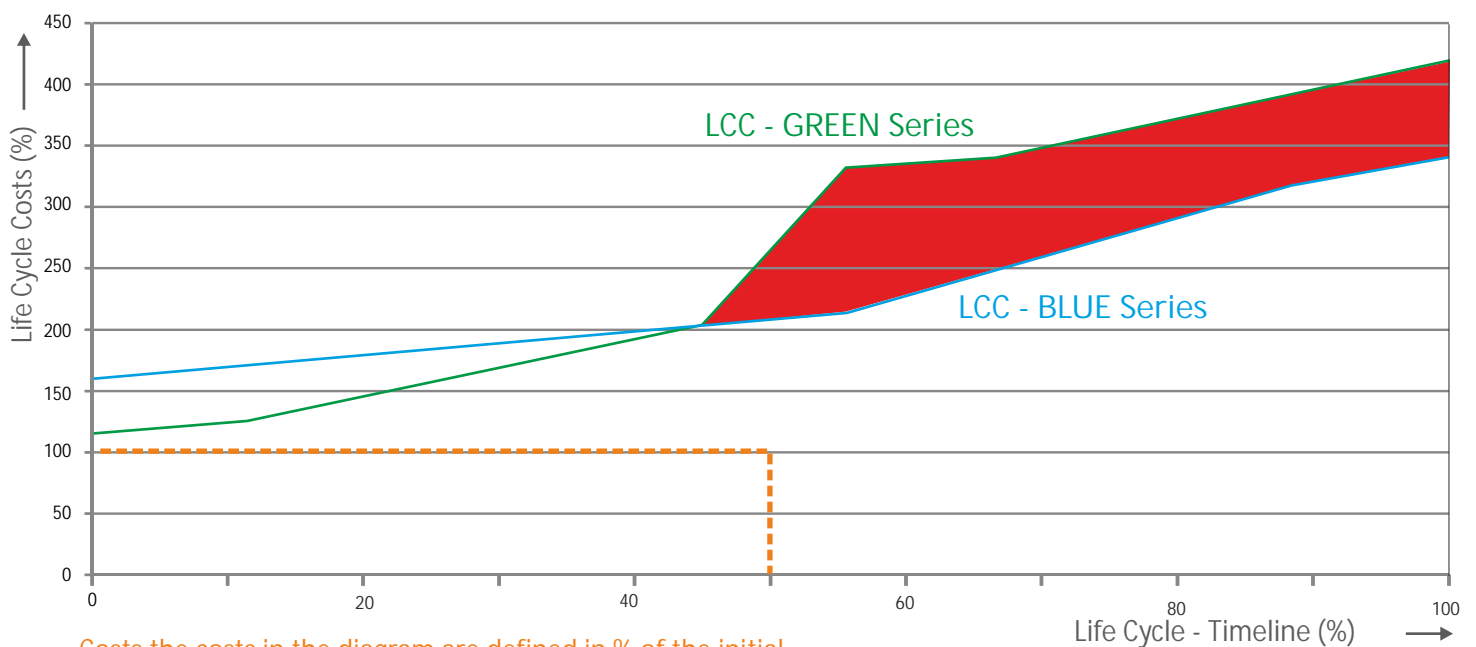
While the BLUE Series pumps purchasing price or initial investment costs (AC) is higher, the complete life cycle costs (LCC) are clearly lower than the LCC of the GREEN Series. In addition the BLUE Series pumps guarantee:

- lower energy consumption,
- higher process safety and reliability,
- higher durability and a much longer life cycle.

These ensure business reliability, reduce process interruption costs and lower maintenance needs.

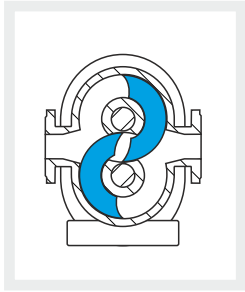
LCC: comparing BLUE and GREEN Series

The diagram shows how initial investment in a BLUE Series pump has a positive return of investment (ROI) and a lower life cycle costs (LCC) compared to the market usual GREEN-Series design. Low operating costs (OCE), no replacement costs (RC), low maintenance costs (OCM) and reduced process interruption costs (LP) reduce life cycle costs (LCC). The BLUE Series makes you save money and gets cheaper (whole LCC) than the GREEN Series after 2 to 5 years (depending on the application).



Costs the costs in the diagram are defined in % of the initial purchasing costs of a GREEN series pump.

PISTON SETS



PISTON SET E: Single lobe pump

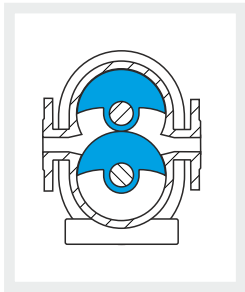
The piston set contains single leaf rotary pistons which rotate around a fixed hub.

The piston set ensures:

- foam free and careful pumping,
- high suction strength (suction height up to 8m)
- up to 200 RPM (KE), 750 RPM (KKPE)

For the delivery of:

- low to high viscosity liquids from 1 mPa.s to 1.000.000 mPa.s.
- polymerizing liquids
- coagulating liquids
- liquids with crystals and solid particles
- liquids with fibers
- mediums with shearing sensitive materials
- low polluted or dirty liquids



PISTON SET S: Single lobe pump

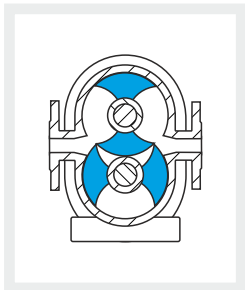
The piston set contains single leaf rotary pistons rotating against the surface of the opposite piston.

The piston set ensures:

- foam free and careful pumping,
- middle suction strength (suction height up to 4m)
- up to 150 RPM (KS), 750 RPM (KKPS)

For the delivery of:

- high viscosity liquids up to non flowing liquids from 20.000 mPa.s to 1.400.000 mPa.s.
- highly filled medium with solid proportion up to 94%
- highly polluted or very dirty liquids



PISTON SET DE: Twin lobe pump

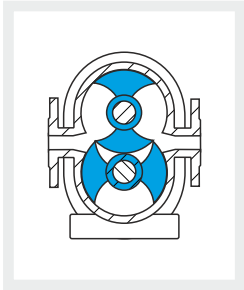
The piston set contains double leaf rotary pistons which rotate around a fixed hub. The double leaf piston delivers liquids with reduced pulsation.

The piston set ensures:

- pulsation reduced delivery
- high suction strength (suction height up to 8m)
- up to 400 RPM (KDE), 750 RPM (KKPDE)

For the delivery of:

- low to high viscosity liquids from 1 mPa.s to 800.000 mPa.s.
- polymerizing liquids
- coagulating liquids
- liquids with crystals and solid particles
- liquids with fibers
- low polluted or dirty liquids



PISTON SET DS: Twin lobe pump

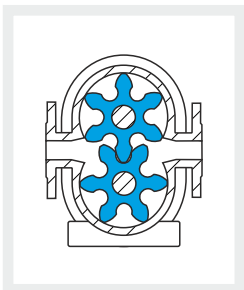
The piston set contains single leaf rotary pistons rotating against the surface of the opposite piston. The double leaf piston delivers liquids with reduced pulsation.

The piston set ensures:

- pulsation reduced delivery
- middle suction strength (suction height up to 4m)
- up to 400 RPM (KDS), 750 RPM (KKPDS)

For the delivery of:

- high viscosity liquids up to non flowing liquids from 20.000 mPa.s to 1.000.000 mPa.s.
- low polluted or dirty liquids



PISTON SET M: Rotary wing pump

The piston set contains six (M) to three (M3) wings per piston which rotate contact free against each other. The main advantage of this system is to reduce pulsation and cavitation.

The piston set ensures:

- pulsation reduced delivery
- middle suction strength (suction height up to 6m)
- up to 750 RPM

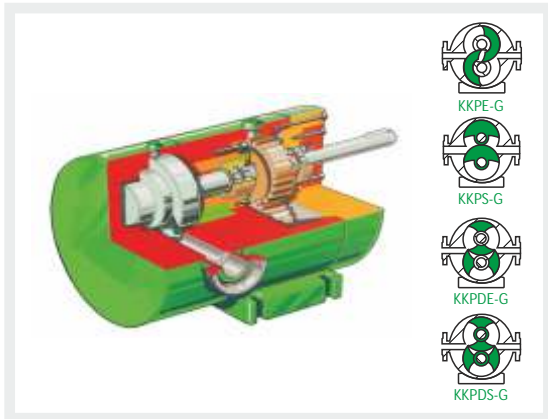
For the delivery of:

- low to high viscosity liquids from 1 mPa.s to 800.000 mPa.s.
- outgassing liquids
- liquids with reduced crystals and solid particles amount
- foaming liquids
- gluing liquids

PISTON SET C: Custom design

We design custom piston systems with special geometries and properties on request for specific applications. We offer special piston system designed to avoid caramelisation for the sugar and chocolate industry. We build armored pistons for the delivery of dirty liquids in biogas plants.

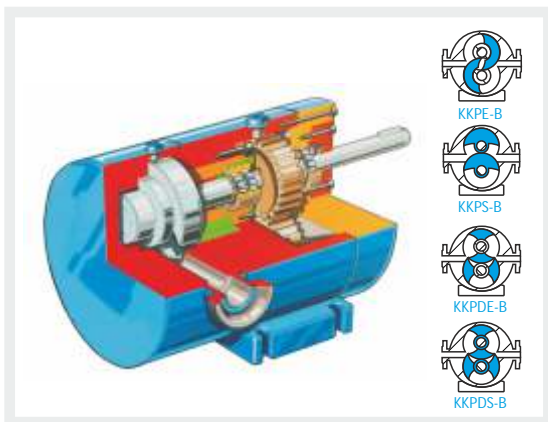
MODEL RANGE



ROTARY LOBE PUMP **KKP GREEN Serie**

For standard applications

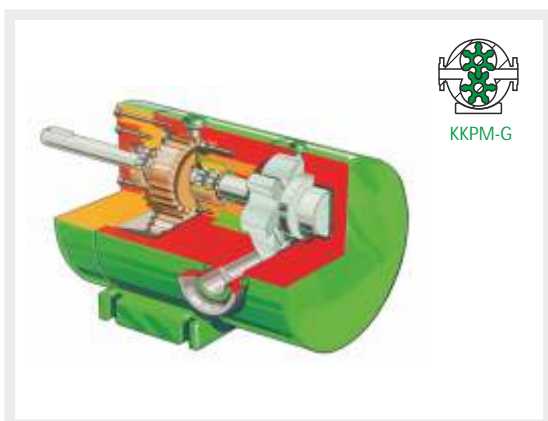
- piston set: E, S und D
- pumps: KKPE-G, KKPS-G and KKPD-G
- up to 25 bar
- from -20°C to 120°C
- 0.023 to 351 l/min - 0.0014 m³/h to 21 m³/h
- up to 750 RPM
- materials: stainless steel, hastelloy, grey cast iron, steel, ductile iron
- seals: sealing ring, packing



ROTARY LOBE PUMP **KKP BLUE Serie**

For high end applications, high process efficiency and quality

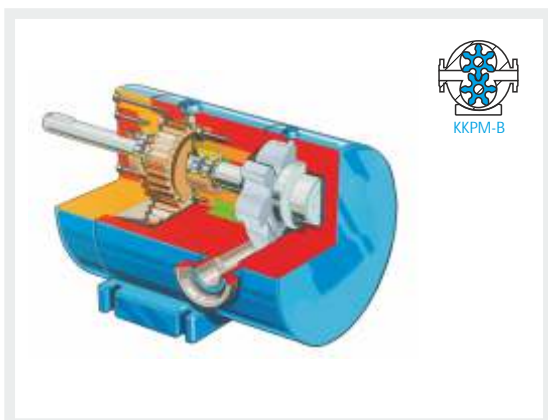
- piston set: E, S und D
- pumps: KKPE-G, KKPS-G and KKPD-G
- up to 40 bar
- from -60°C to 250°C
- 0.028 to 423 l/min - 0.0017 m³/h to 25.4 m³/h
- up to 750 RPM
- materials: all available materials
- seals: sealing ring, packing, single or double mechanical seal



ROTARY LOBE PUMP **KKPM GREEN Serie**

For standard applications

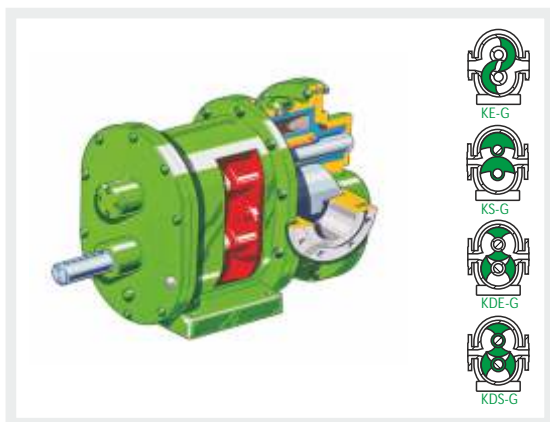
- piston set: M3 and M6
- pumps: KKPM3 and KKPM6
- up to 25 bar
- from -20°C to 120°C
- 0.023 to 351 l/min - 0.0014 m³/h to 21 m³/h
- up to 750 RPM
- materials: stainless steel, hastelloy, grey cast iron, steel, ductile iron
- seals: sealing ring, packing



ROTARY LOBE PUMP **KKPM BLUE Serie**

For high end applications, high process efficiency and quality

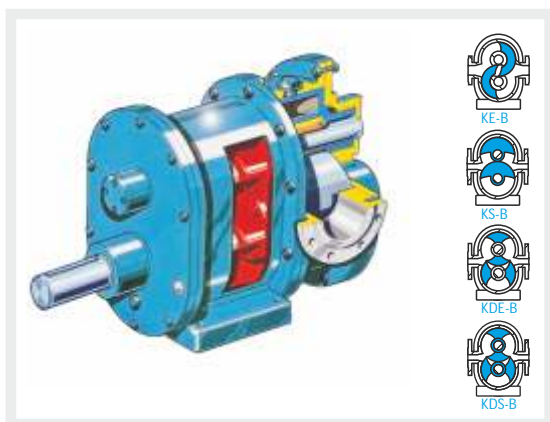
- piston set: M3 and M6
- pumps: KKPM3 and KKPM6
- up to 40 bar
- from -60°C to 250°C
- 0.028 to 423 l/min - 0.0017 m³/h to 25.4 m³/h
- up to 750 RPM
- materials: all available materials
- seals: sealing ring, packing, single or double mechanical seal



ROTARY LOBE PUMP K GREEN Series

For standard applications

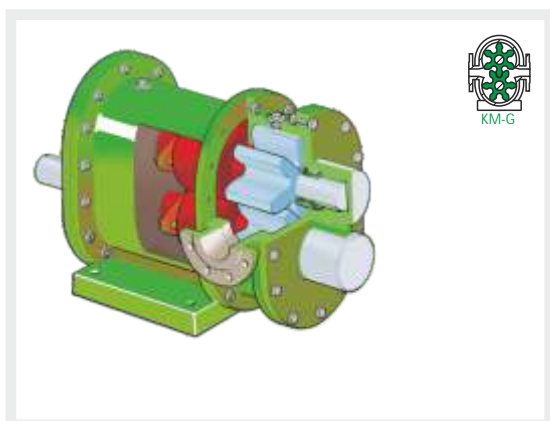
- piston set: E, S, DE and DS
- pumps: KE-G, KS-G, KDE-G und KDS-G
- up to 25 bar
- from -20°C to 120°C
- 0.4 to 23689 l/min - 0.024 m³/h to 1421m³/h
- up to 400 RPM
- materials: stainless steel, hastelloy, grey cast iron, cast iron, ductile iron
- seals: sealing ring, packing



ROTARY LOBE PUMP K BLUE Series

For high end applications, high prozess efficiency and quality

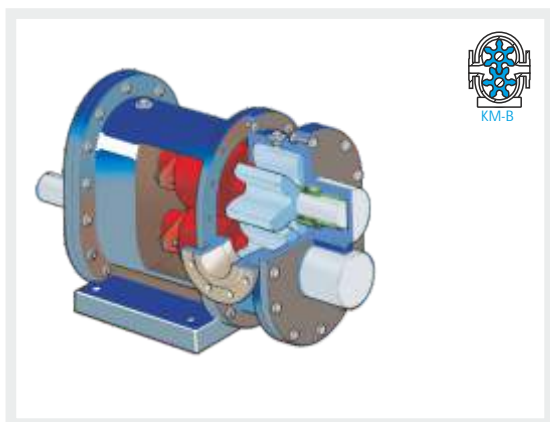
- piston set: E, S, DE and DS
- pumps: KE-B, KS-B, KDE-B and KDS-B
- up to 64 bar
- from -60°C to 450°C
- 0.5 to 28548 l/min - 0.030 m³/h bis 1713 m³/h
- up to 400 RPM
- materials: all available materials
- seals: sealing ring, packing, single or double mechanical seal



ROTARY WING PUMP KM GREEN Series

For standard applications

- piston set: M and M3
- pumps: KM-G and KM3-G
- up to 25 bar
- from -20°C to 120°C
- 0.44 to 3357 l/min - 0.026 m³/h to 201 m³/h
- up to 400 RPM
- materials: stainless steel, hastelloy, grey cast iron, cast iron, ductile iron
- seals: sealing ring, packing



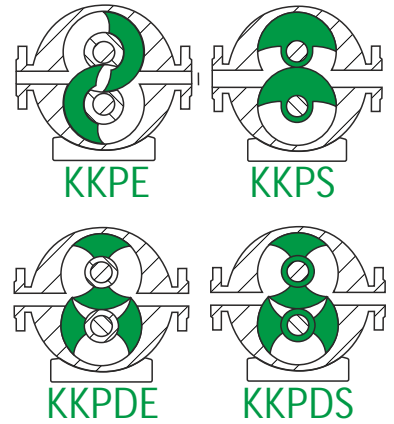
ROTARY WING PUMP KM BLUE Series

For high end applications, high prozess efficiency and quality

- piston set: M and M3
- pumps: KM-B and KM3-B
- up to 64 bar
- from -60°C to 450°C
- 0,53 to 4046 l/min - 0,032 m³/h to 243 m³/h
- up to 400 RPM
- materials: all available materials
- seals: sealing ring, packing, single or double mechanical seal

ROTARY LOBE PUMP

KKPE, KKPS and KKPDE GREEN Series



	from	to
system pressure	0 bar	25 bar
pressure head	0 m	4 m
RPM	1 RPM	750 RPM
flow rate	0.023 l/min	351 l/min
	0.0014 m³/h	21 m³/h
efficiency	60%	78%
liquid viscosity	1 mPas	1.400.000 mPas
temperature	-20°C	+120°C

Design and options

Materials: - steel - stainless steel - hastelloy - bronze - copper-aluminium-based bronze	Mounting and bearings: - standard roller bearings - plain bearing: bronze - plain bearing: multi component	Heating/cooling jacket - Electric heating jacket - Liquid or steam heating or/and cooling jacket	Pump drives: - gearmotor - DC motor - hydraulic motor - air motor - combustion engine - multistage reduction gears
Shapes: - horizontal delivery direction - vertical delivery direction - clockwise & counterclockwise direction of rotation	Sealing: - sealing ring Shaft: - shaft: standard coating Relief valve Adjustable relief valve (TA-Luft compliant) hermetic capsuled: - by-pass mounted - integrated on the pump	Fittings & connections: - flange connections (DIN, ANSI or SAE) - threaded connections (DIN or UNS) - round thread connections (DIN 11851) - clamping connections (DIN or ISO) - aseptic fittings (DIN 11864-1, DIN 11853-2)	Power transmission: - flexible coupling - disassembling coupling - slip clutch with torque limiter Control and monitoring: - frequency inverter - flow sensor - temperature sensor - pressure sensor

Sizes and flow rates

Size	Volume l/U	theoretical flow rate l/min.															
		10 RPM		30 RPM		60 RPM		90 RPM		160 RPM		200 RPM		400 RPM		750 RPM	
		l/min	m³/h	l/min	m³/h	l/min	m³/h	l/min	m³/h	l/min	m³/h	l/min	m³/h	l/min	m³/h	l/min	m³/h
10	0,030	0,234	0,014	0,702	0,042	1,40	0,084	2,106	0,126	3,744	0,225	4,68	0,281	9,36	0,562	17,55	1,05
25	0,075	0,585	0,035	1,755	0,105	3,51	0,211	5,265	0,316	9,36	0,562	11,7	0,702	23,4	1,40	43,88	2,63
32	0,150	1,17	0,070	3,51	0,211	7,02	0,421	10,53	0,632	18,72	1,123	23,4	1,40	46,8	2,808	87,75	5,26
40	0,300	2,34	0,140	7,02	0,421	14,0	0,842	21,06	1,264	37,44	2,246	46,8	2,81	93,6	5,616	175,5	10,53
50	0,600	4,68	0,281	14,0	0,842	28,1	1,685	42,12	2,527	74,88	4,493	93,6	5,62	187,2	11,23	351	21,06

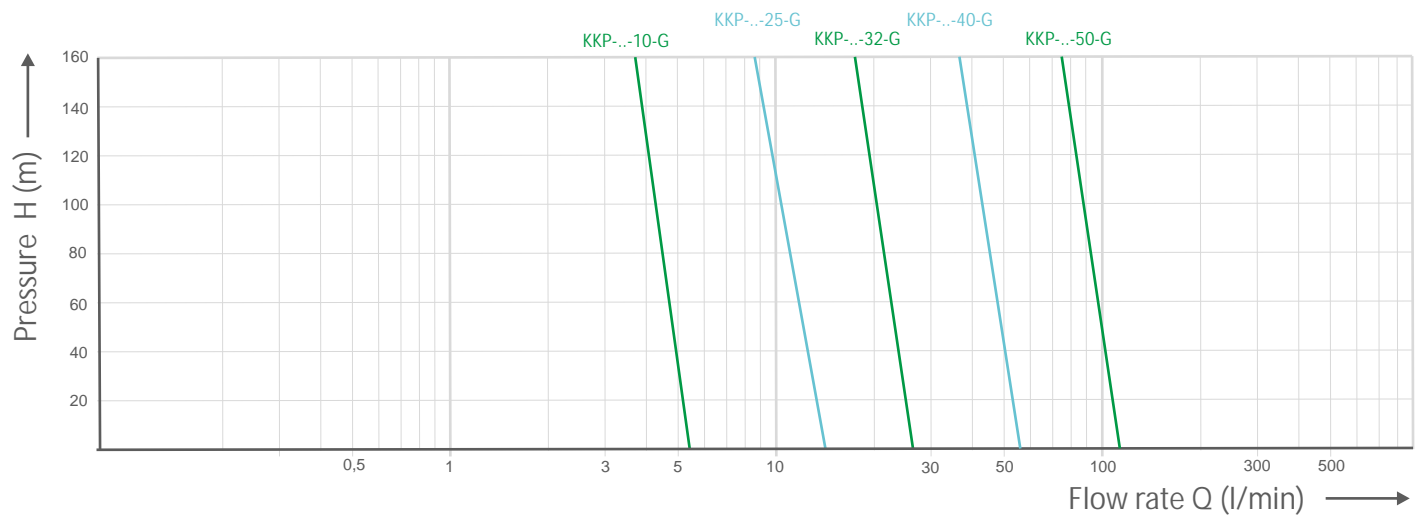
Table: flow rates. Application specific flow rates will depend on working pressure, viscosity and temperature and will vary from the theoretical flow rates.

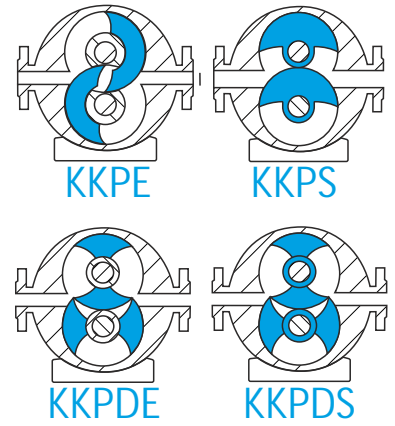
Characteristic curve

QH-Diagram

Exemplary: viscosity $\eta = 300 \text{ mPas}$, density $\delta = 1 \text{ g.cm}^{-3}$, temperature $T = 20^\circ\text{C}$, RPM = 200 min^{-1} .

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ROTARY LOBE PUMP

KKPE, KKPS, KKPDE, KKPDE BLUE Series

	from	to
system pressure	0 bar	40 bar
pressure head	0 m	8 m
RPM	1 RPM	750 RPM
flow rate	0.028 l/min	423 l/min
	0.0017 m³/h	25,4 m³/h
efficiency	60%	92%
liquid viscosity	1 mPas	1.400.000 mPas
temperature	-60°C	+450°C

Design and options

Materials:

- grey cast iron
- ductile iron
- steel
- stainless steel
- hastelloy
- aluminium
- aluminium-based bronze
- tantalum
- titanium
- iridium

Mounting and bearings:

- high grade roller bearings
- plain bearing: bronze
- plain bearing: antimon carbon
- plain bearing: SIC, SIC30
- shaft: high grade coating

Heating/cooling jacket

- Electric heating jacket
- Liquid or steam heating or/and cooling jacket

Pump drives:

- gearmotor
- DC motor
- hydraulic motor
- air motor
- combustion engine
- multistage reduction gears

Shapes:

- horizontal delivery direction
- vertical delivery direction
- clockwise and counter-clockwise

Sealing:

- sealing ring
- packing
- single acting mechanical seal
- double acting mechanical seal

Shaft:

- shaft: high grade coating

Relief valve

- Adjustable relief valve (TA-Luft compliant) hermetic capsuled:
- by-pass mounted
- integrated on the pump

Fittings & connections:

- flange connections (DIN, ANSI or SAE)
- threaded connections (DIN or UNS)
- round thread connections (DIN 11851)
- clamping connections (DIN or ISO)
- aseptic fittings (DIN 11864-1, DIN 11853-2)

Power transmission:

- flexible coupling
- disassembling coupling
- slip clutch with torque limiter

Control and monitoring:

- frequency inverter
- flow sensor
- temperature sensor
- pressure sensor

Sizes and flow rates

Size	Volume l/U	theoretical flow rate l/min.															
		10 RPM		30 RPM		60 RPM		90 RPM		160 RPM		200 RPM		400 RPM		750 RPM	
		l/min	m³/h	l/min	m³/h	l/min	m³/h	l/min	m³/h	l/min	m³/h	l/min	m³/h	l/min	m³/h	l/min	m³/h
10	0,030	0,282	0,017	0,846	0,051	1,69	0,102	2,538	0,152	4,512	0,271	5,64	0,338	11,28	0,677	21,15	1,27
25	0,075	0,705	0,042	2,115	0,127	4,23	0,254	6,345	0,381	11,28	0,677	14,1	0,846	28,2	1,69	52,88	3,17
32	0,150	1,41	0,085	4,23	0,254	8,46	0,508	12,69	0,761	22,56	1,354	28,2	1,69	56,4	3,384	105,8	6,345
40	0,300	2,82	0,169	8,46	0,508	16,9	1,015	25,38	1,523	45,12	2,707	56,4	3,38	112,8	6,768	211,5	12,69
50	0,600	5,64	0,338	16,9	1,015	33,8	2,03	50,76	3,046	90,24	5,414	112,8	6,77	225,6	13,54	423	25,38

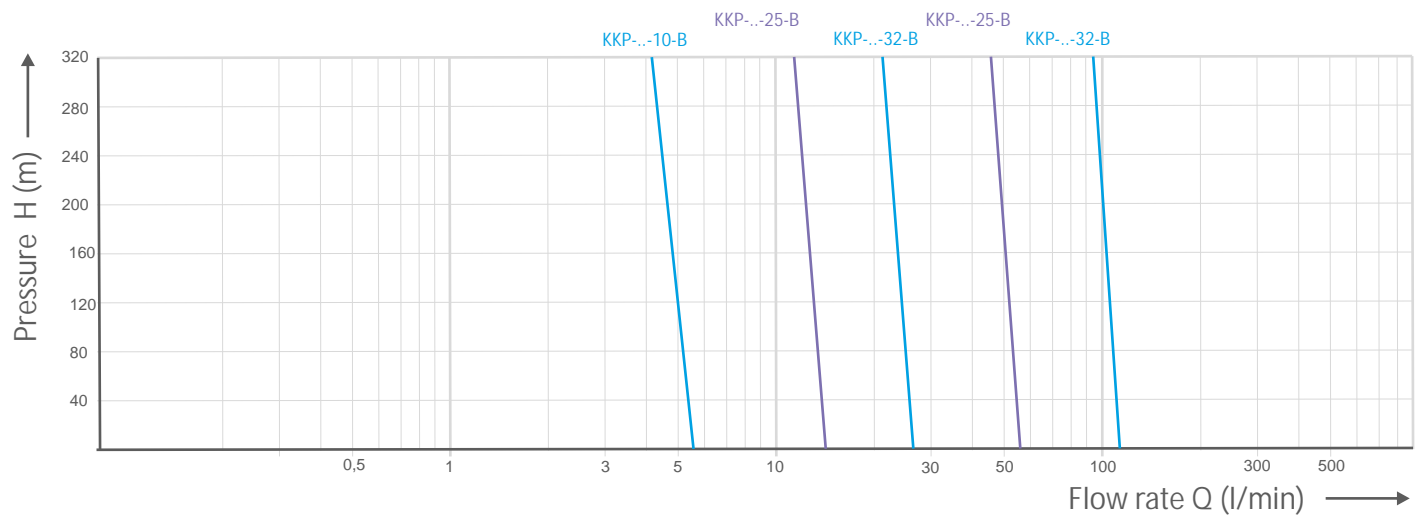
Table: flow rates. Application specific flow rates will depend on working pressure, viscosity and temperature and will vary from the theoretical flow rates.

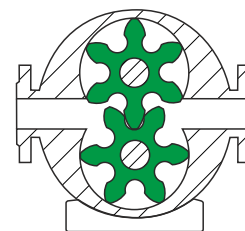
Characteristic curve

QH-Diagram

Exemplary: viscosity $\eta = 300 \text{ mPas}$, density $\delta = 1 \text{ g.cm}^{-3}$, temperature $T = 20^\circ\text{C}$, RPM = 200 min^{-1} .

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ROTARY WING PUMP

KKPM GREEN Series

	from	to
system pressure	0 bar	25 bar
pressure head	0 m	4 m
RPM	1 RPM	750 RPM
flow rate	0.023 l/min	351 l/min
	0.0014 m³/h	21 m³/h
efficiency	60%	78%
liquid viscosity	1 mPas	800.000 mPas
temperature	-20°C	+120°C

Rotary Wing Pump combine the advantages of gear pumps and rotary lobe pumps. Rotary wing pump with up to 6 wings work nearly pulsation free. The pistons are driven through an external gear, same way as rotary lobe pumps, and rotate contact free against each other. Rotary Wing Pumps suite to pump outgassing liquids, liquids with cristals, foaming and coagulating liquids.

Design and options

Materials:

- steel
- stainless steel
- hastelloy
- bronze
- aluminium
- copper-aluminium-based bronze

Mounting and bearings:

- standard roller bearings
- plain bearing: bronze
- plain bearing: multi component

Heating/cooling jacket

- Electric heating jacket
- Liquid or steam heating or/and cooling jacket

Pump drives:

- gearmotor
- DC motor
- hydraulic motor
- air motor
- combustion engine
- multistage reduction gears

Shapes:

- horizontal delivery direction
- vertical delivery direction
- clockwise & counterclockwise direction of rotation

Sealing:

- sealing ring
- packing

Shaft:

- shaft: standard coating

Relief valve

- Adjustable relief valve (TA-Luft compliant) hermetic capsuled:
- by-pass mounted
- integrated on the pump

Fittings & connections:

- flange connections (DIN, ANSI or SAE)
- threated connections (DIN or UNS)
- round thread connections (DIN 11851)
- clamping connections (DIN or ISO)
- aseptic fittings (DIN 11864-1. DIN 11853-2)

Power transmission:

- flexible coupling
- disassembling coupling
- slip clutch with torque limiter

Control and monitoring:

- frequency inverter
- flow sensor
- temperature sensor
- pressure sensor

Sizes and flow rates

Size	Volume l/U	theoretical flow rate l/min.															
		10 RPM		30 RPM		60 RPM		90 RPM		160 RPM		200 RPM		400 RPM		750 RPM	
		l/min	m³/h	l/min	m³/h	l/min	m³/h	l/min	m³/h	l/min	m³/h	l/min	m³/h	l/min	m³/h	l/min	m³/h
10	0,030	0,234	0,014	0,702	0,042	1,40	0,084	2,106	0,126	3,744	0,225	4,68	0,281	9,36	0,562	17,55	1,05
25	0,075	0,585	0,035	1,755	0,105	3,51	0,211	5,265	0,316	9,36	0,562	11,7	0,702	23,4	1,40	43,88	2,63
32	0,150	1,17	0,070	3,51	0,211	7,02	0,421	10,53	0,632	18,72	1,123	23,4	1,40	46,8	2,808	87,75	5,26
40	0,300	2,34	0,140	7,02	0,421	14,0	0,842	21,06	1,264	37,44	2,246	46,8	2,81	93,6	5,616	175,5	10,53
50	0,600	4,68	0,281	14,0	0,842	28,1	1,685	42,12	2,527	74,88	4,493	93,6	5,62	187,2	11,23	351	21,06

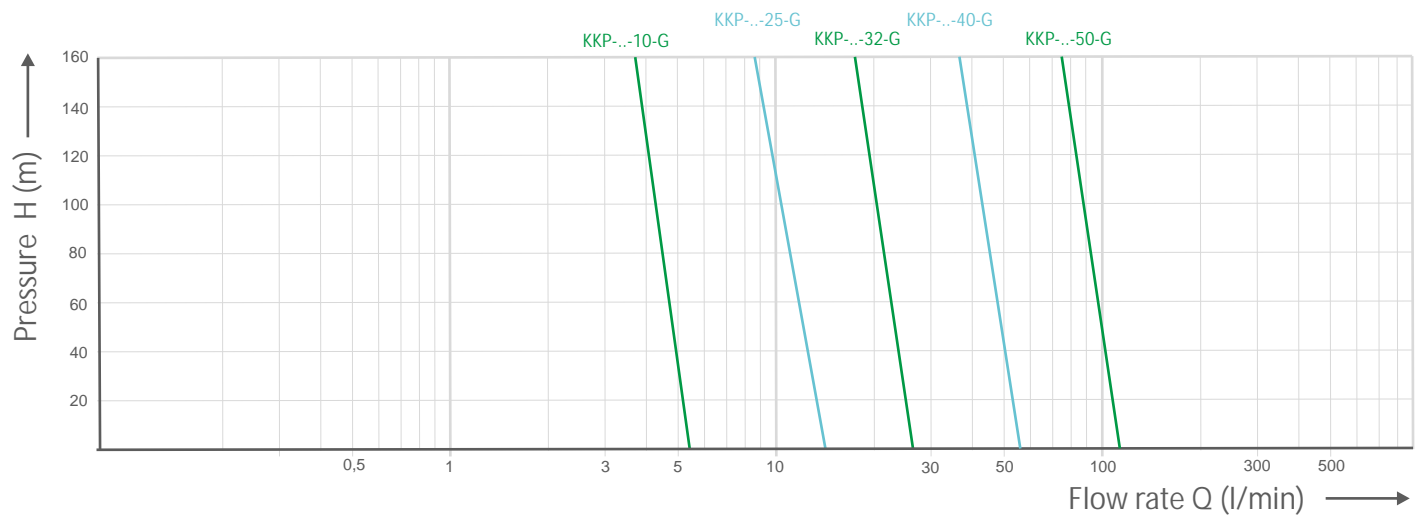
Table: flow rates. Application specific flow rates will depend on working pressure, viscosity and temperature and will vary from the theoretical flow rates.

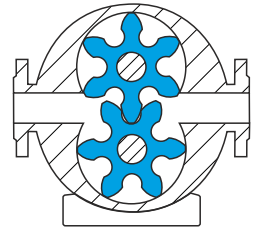
Characteristic curve

QH-Diagram

Exemplary: viscosity $\eta = 300 \text{ mPas}$, density $\delta = 1 \text{ g.cm}^{-3}$, temperature $T = 20^\circ\text{C}$, RPM = 200 min^{-1} .

Please be aware that Zeilfelder pumps are not serial pumps. Each pump is produced in accordance with the requirements of your application and has its own characteristic curve.





ROTARY WING PUMP

KKPM BLUE Series

	from	to
system pressure	0 bar	40 bar
pressure head	0 m	6 m
RPM	1 RPM	750 RPM
flow rate	0.028 l/min	423 l/min
	0.0017 m³/h	25,4 m³/h
efficiency	60%	92%
liquid viscosity	1 mPas	800.000 mPas
temperature	-60°C	+450°C

Rotary Wing Pump combine the advantages of gear pumps and rotary lobe pumps. Rotary wing pump with up to 6 wings work nearly pulsation free. The pistons are driven through an external gear, same way as rotary lobe pumps, and rotate contact free against each other. Rotary Wing Pumps suite to pump outgassing liquids, liquids with cristals, foaming and coagulating liquids.

Design and options

Materials:

- grey cast iron
- ductile iron
- steel
- stainless steel
- hastelloy
- aluminium
- aluminium-based bronze
- tantalum
- titanium
- iridium
- ceramics

Mounting and bearings:

- high grade roller bearings
- plain bearing: bronze
- plain bearing: antimon carbon
- plain bearing: SIC, SIC30
- shaft: high grade coating

Heating/cooling jacket

- Electric heating jacket
- Liquid or steam heating or/and cooling jacket

Pump drives:

- gearmotor
- DC motor
- hydraulic motor
- air motor
- combustion engine
- multistage reduction gears

Shapes:

- horizontal delivery direction
- vertical delivery direction
- clockwise and counter-clockwise

Sealing:

- sealing ring
- packing
- single acting mechanical seal
- double acting mechanical seal

Shaft:

- shaft: high grade coating

Relief valve

- Adjustable relief valve (TA-Luft compliant) hermetic capsuled:
- by-pass mounted
- integrated on the pump

Fittings & connections:

- flange connections (DIN, ANSI or SAE)
- threated connections (DIN or UNS)
- round thread connections (DIN 11851)
- clamping connections (DIN or ISO)
- aseptic fittings (DIN 11864-1. DIN 11853-2)

Power transmission:

- flexible coupling
- disassembling coupling
- slip clutch with torque limiter

Control and monitoring:

- frequency inverter
- flow sensor
- temperature sensor
- pressure sensor

Sizes and flow rates

Size	Volume l/U	theoretical flow rate l/min.															
		10 RPM		30 RPM		60 RPM		90 RPM		160 RPM		200 RPM		400 RPM		750 RPM	
		l/min	m³/h	l/min	m³/h	l/min	m³/h	l/min	m³/h	l/min	m³/h	l/min	m³/h	l/min	m³/h	l/min	m³/h
10	0,030	0,282	0,017	0,846	0,051	1,69	0,102	2,538	0,152	4,512	0,271	5,64	0,338	11,28	0,677	21,15	1,27
25	0,075	0,705	0,042	2,115	0,127	4,23	0,254	6,345	0,381	11,28	0,677	14,1	0,846	28,2	1,69	52,88	3,17
32	0,150	1,41	0,085	4,23	0,254	8,46	0,508	12,69	0,761	22,56	1,354	28,2	1,69	56,4	3,384	105,8	6,345
40	0,300	2,82	0,169	8,46	0,508	16,9	1,015	25,38	1,523	45,12	2,707	56,4	3,38	112,8	6,768	211,5	12,69
50	0,600	5,64	0,338	16,9	1,015	33,8	2,03	50,76	3,046	90,24	5,414	112,8	6,77	225,6	13,54	423	25,38

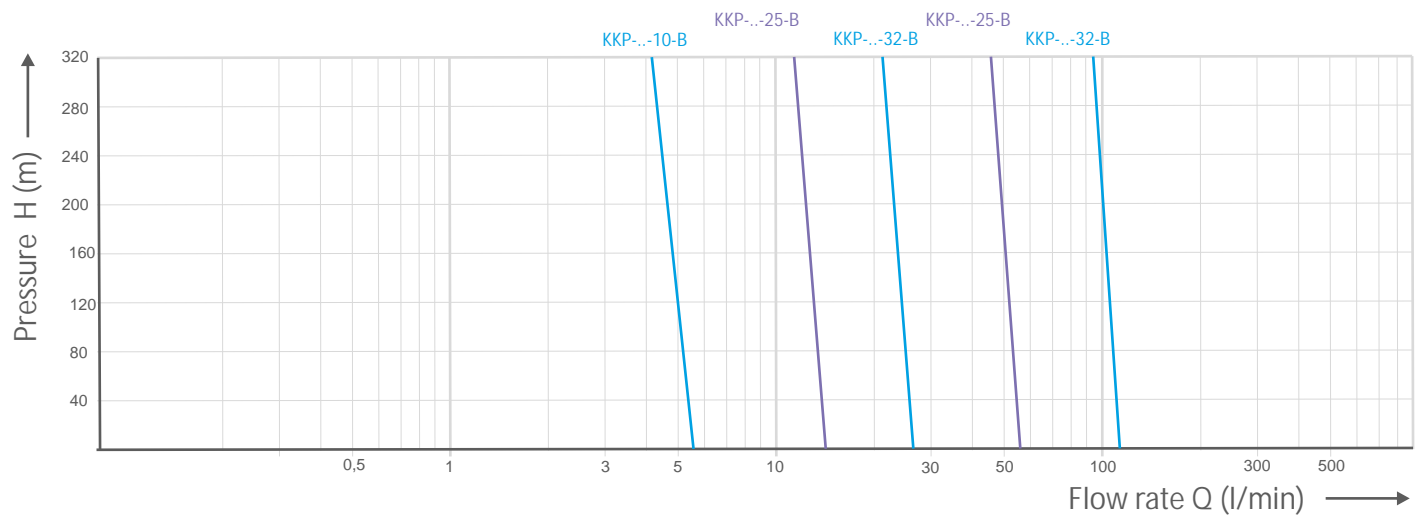
Table: flow rates. Application specific flow rates will depend on working pressure, viscosity and temperature and will vary from the theoretical flow rates.

Characteristic curve

QH-Diagram

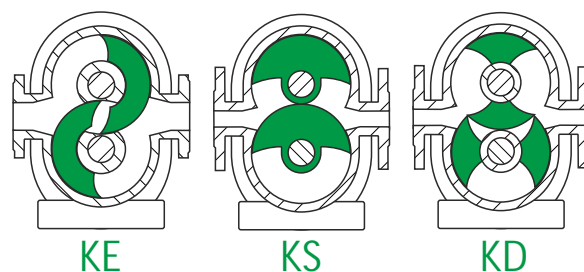
Exemplary: viscosity $\eta = 300 \text{ mPas}$, density $\delta = 1 \text{ g.cm}^{-3}$, temperature $T = 20^\circ\text{C}$, RPM = 200 min^{-1} .

Please be aware that Zeilfelder pumps are not serial pumps. Each pump is produced in accordance with the requirements of your application and has its own characteristic curve.



ROTARY LOBE PUMP

KE, KS and KD GREEN Series



	from	to
system pressure	0 bar	25 bar
pressure head	0 m	4 m
RPM	1 RPM	400 RPM
flow rate	0.4 l/min	23689 l/min
	0.024 m³/h	1421 m³/h
efficiency	60%	74%
liquid viscosity	0.3 mPas	1.400.000 mPas
temperature	-20°C	+120°C



Design and options

Materials:

- steel
- stainless steel
- hastelloy
- bronze
- aluminium
- copper-aluminium-based bronze

Mounting and bearings:

- standard roller bearings
- plain bearing: bronze
- plain bearing: multi component

Heating/cooling jacket

- Electric heating jacket
- Liquid or steam heating or/and cooling jacket

Pump drives:

- gearmotor
- DC motor
- hydraulic motor
- air motor
- combustion engine
- multistage reduction gears

Shapes:

- horizontal delivery direction
- vertical delivery direction
- clockwise & counterclockwise direction of rotation

Sealing:

- sealing ring
- packing

Shaft:

- shaft: standard coating

Relief valve

- Adjustable relief valve (TA-Luft compliant) hermetic capsuled:
- by-pass mounted
- integrated on the pump

Fittings & connections:

- flange connections (DIN, ANSI or SAE)
- threaded connections (DIN or UNS)
- round thread connections (DIN 11851)
- clamping connections (DIN or ISO)
- aseptic fittings (DIN 11864-1. DIN 11853-2)

Power transmission:

- flexible coupling
- disassembling coupling
- slip clutch with torque limiter

Control and monitoring:

- frequency inverter
- flow sensor
- temperature sensor
- pressure sensor

Sizes and flow rates

Size	Volume l/U	theoretical flow rate l/min.															
		10 RPM		30 RPM		60 RPM		90 RPM		160 RPM		200 RPM		300 RPM		400 RPM	
		l/min	m³/h	l/min	m³/h	l/min	m³/h	l/min	m³/h	l/min	m³/h	l/min	m³/h	l/min	m³/h	l/min	m³/h
32	0,529	4,13	0,248	12,4	0,743	24,76	1,49	37,1	2,23	66,0	3,96	82,5	4,95	124	7,43	165,05	9,90
40	0,805	6,28	0,377	18,8	1,13	37,67	2,26	56,5	3,39	100	6,03	126	7,53	188	11,3	251	15,1
50	2,31	18,0	1,08	54,1	3,25	108,3	6,50	162	9,75	289	17,3	361	21,7	541	32,5	721,97	43,3
65	3,60	28,0	1,68	84,1	5,05	168,3	10,1	252	15,1	449	26,9	561	33,7	841	50,5	1122	67,3
80	5,85	45,6	2,74	137	8,21	273,5	16,4	410	24,6	729	43,8	912	54,7	1367,7	82	1823,6	109
100	7,24	56,5	3,39	169	10,2	338,8	20,3	508	30,5	904	54,2	1129	67,8	1694,2	102	2258,9	136
150	13,22	103	6,19	309	18,6	618,6	37,1	928	55,7	1649	99,0	2062	124	3092,8	186	4123,7	247
200	24,82	194	11,6	581	34,9	1162	69,7	1743	105	3098	186	3873	232	5808,8	349	7745,1	465
250	48,73	380	22,8	1140	68,4	2281	137	3421	205	6082	365	7602	456	11403	684	15204	912
300	75,93	592	35,5	1777	107	3553	213	5330	319,8	9476	569	11844	711	17767	1066	23689	1421

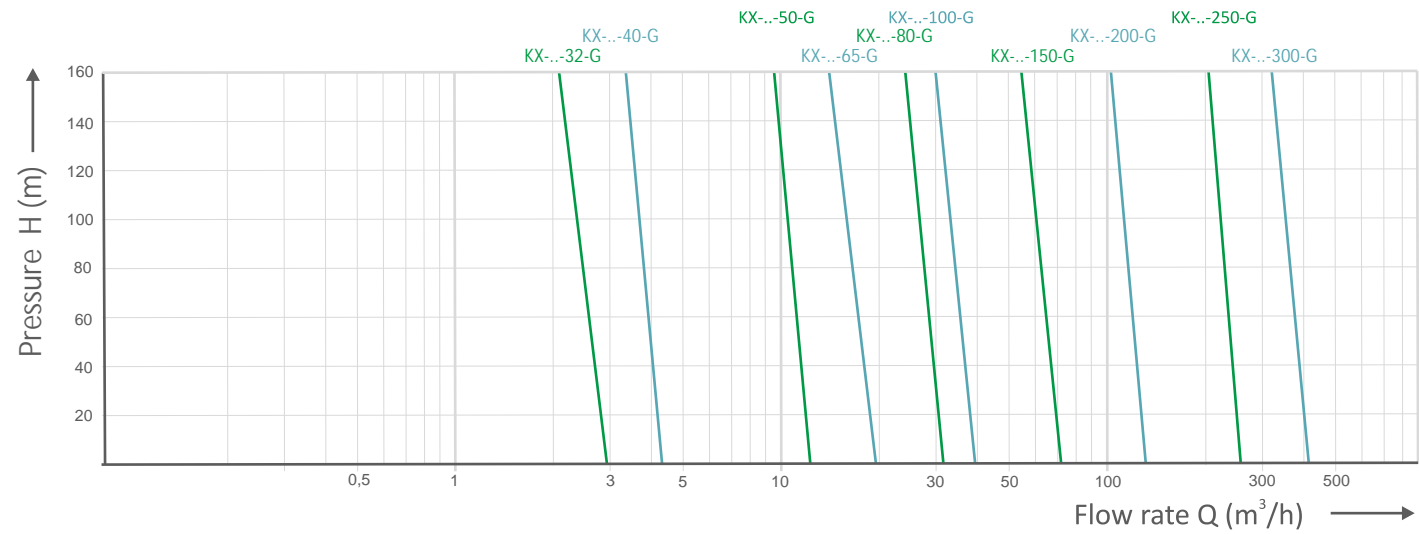
Table: flow rates. Application specific flow rates will depend on working pressure, viscosity and temperature and will vary from the theoretical flow rates.

 KD only

Characteristic curve

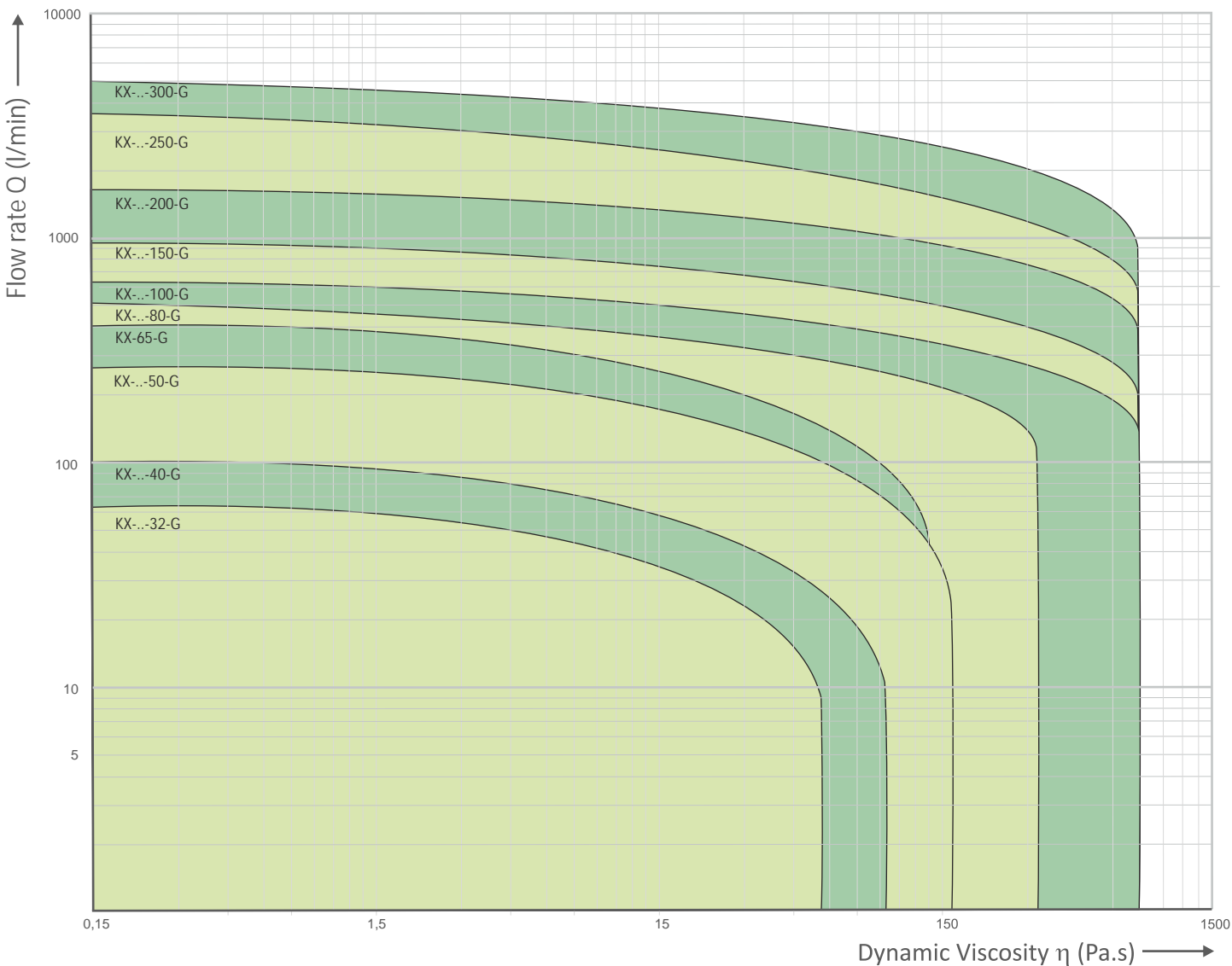
QH-Diagram

Exemplary: viscosity $\eta = 300 \text{ mPas}$, density $\delta = 1 \text{ g.cm}^{-3}$, temperature $T = 20^\circ\text{C}$, $\text{RPM} = 90 \text{ min}^{-1}$.
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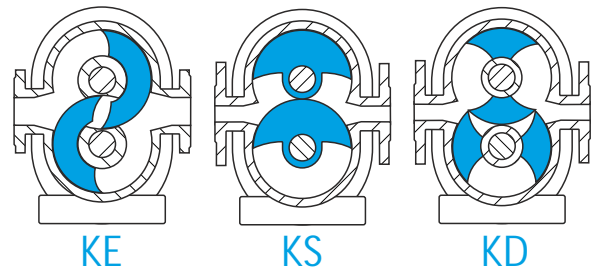
η Q Diagram - KE and KS GREEN Series

The size of requested pump has to be chosen depending on the requested output, the liquid viscosity and RPM.

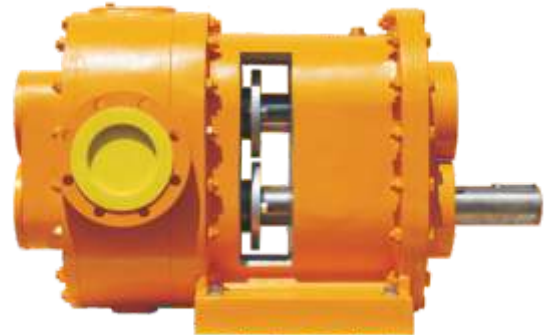


ROTARY LOBE PUMP

KE, KS and KD BLUE Series



	from	to
system pressure	0 bar	64 bar
pressure head	0 m	8 m
RPM	1 RPM	400 RPM
flow rate	0.5 l/min	28548 l/min
	0.030 m³/h	1713 m³/h
efficiency	60%	92%
liquid viscosity	0.3 mPas	1.400.000 mPas
temperature	-60°C	+450°C



Design and options

Materials:

- grey cast iron
- ductile iron
- steel
- stainless steel
- hastelloy
- aluminium
- aluminium-based bronze
- tantalum
- titanium
- iridium

Mounting and bearings:

- high grade roller bearings
- plain bearing: bronze
- plain bearing: antimony carbon
- plain bearing: SiC, SiC30
- shaft: high grade coating

Heating/cooling jacket

- Electric heating jacket
- Liquid or steam heating or/and cooling jacket

Pump drives:

- gearmotor
- DC motor
- hydraulic motor
- air motor
- combustion engine
- multistage reduction gears

Shapes:

- horizontal delivery direction
- vertical delivery direction
- clockwise and counter-clockwise

Sealing:

- sealing ring
- packing
- single acting mechanical seal
- double acting mechanical seal

Shaft:

- shaft: high grade coating

Relief valve

- Adjustable relief valve (TA-Luft compliant) hermetic capsuled:
- by-pass mounted
- integrated on the pump

Fittings & connections:

- flange connections (DIN, ANSI or SAE)
- threaded connections (DIN or UNS)
- round thread connections (DIN 11851)
- clamping connections (DIN or ISO)
- aseptic fittings (DIN 11864-1, DIN 11853-2)

Power transmission:

- flexible coupling
- disassembling coupling
- slip clutch with torque limiter

Control and monitoring:

- frequency inverter
- flow sensor
- temperature sensor
- pressure sensor

Sizes and flow rates

Size	Volume l/U	theoretical flow rate l/min.															
		10 RPM		30 RPM		60 RPM		90 RPM		160 RPM		200 RPM		300 RPM		400 RPM	
		l/min	m³/h	l/min	m³/h	l/min	m³/h	l/min	m³/h	l/min	m³/h	l/min	m³/h	l/min	m³/h	l/min	m³/h
32	0,529	4,97	0,298	14,9	0,895	29,8	1,79	44,8	2,69	79,6	4,77	99,5	5,97	149	8,95	199	11,93
40	0,805	7,57	0,454	22,7	1,36	45,4	2,72	68,1	4,09	121	7,26	151	9,08	227	13,6	303	18,2
50	2,31	21,8	1,31	65,3	3,92	131	7,83	196	11,7	348	20,9	435	26,1	653	39,2	870	52,2
65	3,60	33,8	2,03	101	6,08	203	12,2	304	18,3	541	32,5	676	40,6	1014	60,8	1352	81,1
80	5,85	54,9	3,30	165	9,89	330	19,8	494	29,7	879	52,7	1099	65,9	1648	99	2198	132
100	7,24	68,1	4,08	204	12,3	408	24,5	613	36,8	1089	65,3	1361	81,7	2042	123	2722	163
150	13,22	124	7,45	373	22,4	745	44,7	1118	67,1	1988	119,3	2485	149	3727	224	4970	298
200	24,82	233	14,0	700	42,0	1400	84,0	2100	126	3734	224	4667	280	7000	420	9334	560
250	48,73	458	27,5	1374	82,5	2748	165	4123	247	7329	440	9161	550	13742	825	18323	1099
300	75,93	714	42,8	2141	128	4282	257	6423	385	11419	685	14274	856	21411	1285	28548	1713

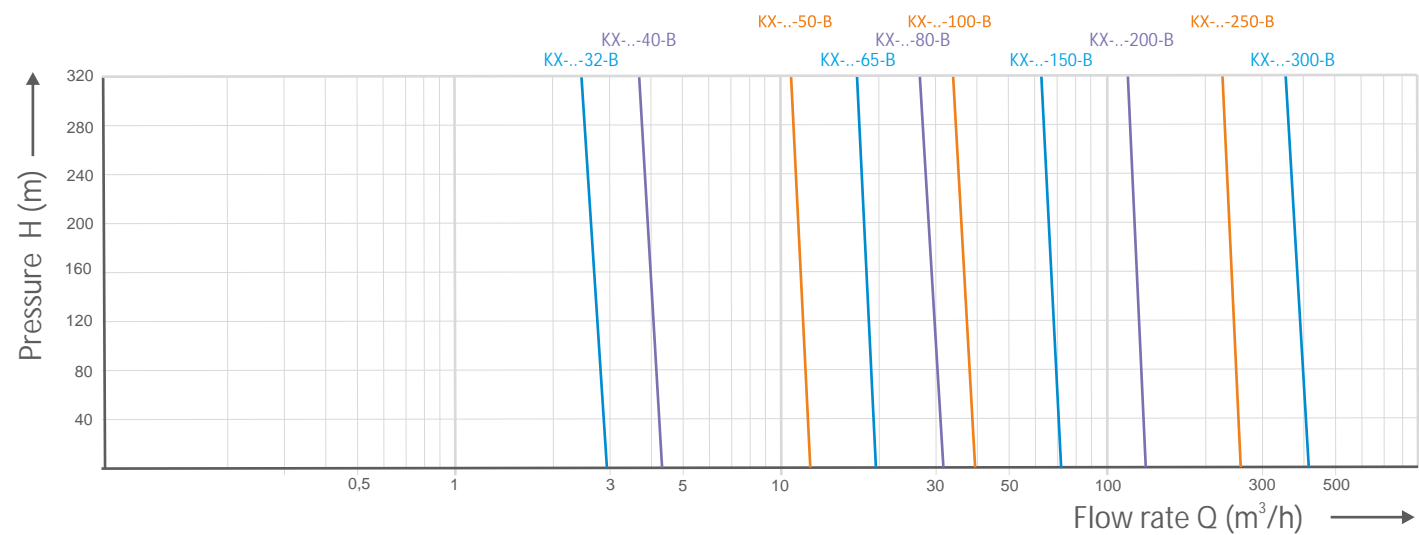
Table: flow rates. Application specific flow rates will depend on working pressure, viscosity and temperature and will vary from the theoretical flow rates.

 KD only

Characteristic curve

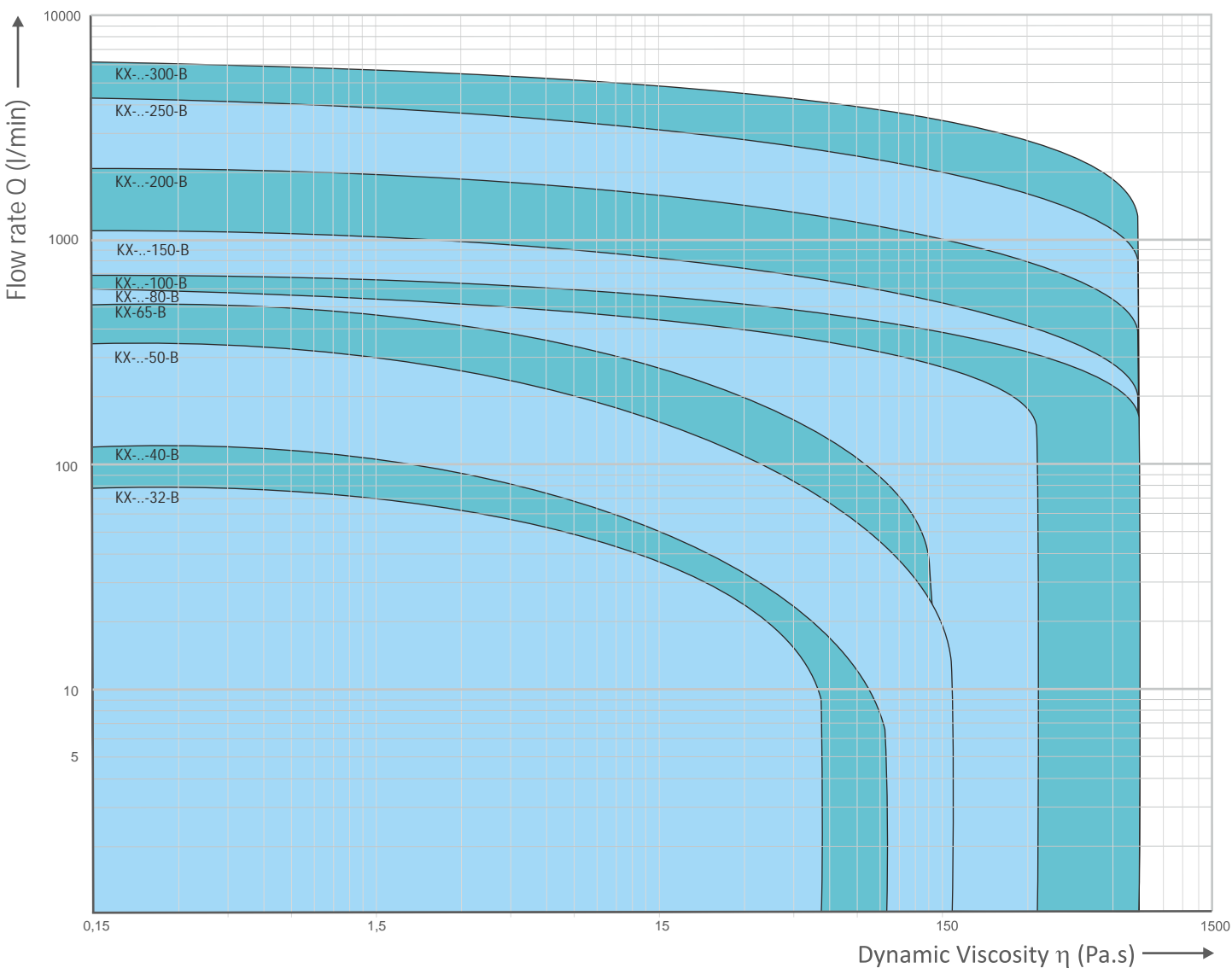
QH-Diagram

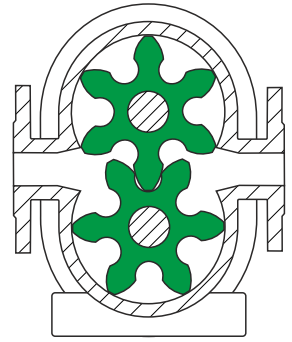
Exemplary: viscosity $\eta = 300 \text{ mPas}$, density $\delta = 1 \text{ g.cm}^{-3}$, temperature $T = 20^\circ\text{C}$, $\text{RPM} = 90 \text{ min}^{-1}$.
Please be aware that Zeilfelder pumps are not serial pumps. Each pump is produced in accordance with the requirements of your application and has its own characteristic curve.



η Q Diagram - KE and KS BLUE Series

The size of requested pump has to be chosen depending on the requested output, the liquid viscosity and RPM.





ROTARY WING PUMP

KM GREEN Series

	from	to
system pressure	0 bar	25 bar
pressure head	0 m	4 m
RPM	1 RPM	400 RPM
flow rate	0,44 l/min	3357 l/min
	0.026 m³/h	201 m³/h
efficiency	60%	74%
liquid viscosity	1 mPas	800.000 mPas
temperature	-20°C	+120°C

Rotary Wing Pump combine the advantages of gear pumps and rotary lobe pumps. Rotary wing pump with up to 6 wings work nearly pulsation free. The pistons are driven through an external gear, same way as rotary lobe pumps, and rotate contact free against each other. Rotary Wing Pumps suite to pump outgassing liquids, liquids with cristals, foaming and coagulating liquids.

Design and options

Materials:

- steel
- stainless steel
- hastelloy
- bronze
- aluminium
- copper-aluminium-based bronze

Mounting and bearings:

- standard roller bearings
- plain bearing: bronze
- plain bearing: multi component

Heating/cooling jacket

- Electric heating jacket
- Liquid or steam heating or/and cooling jacket

Pump drives:

- gearmotor
- DC motor
- hydraulic motor
- air motor
- combustion engine
- multistage reduction gears

Shapes:

- horizontal delivery direction
- vertical delivery direction
- clockwise & counterclockwise direction of rotation

Sealing:

- sealing ring
- packing

Shaft:

- shaft: standard coating

Relief valve

- Adjustable relief valve (TA-Luft compliant) hermetic capsuled:
- by-pass mounted
- integrated on the pump

Fittings & connections:

- flange connections (DIN, ANSI or SAE)
- threaded connections (DIN or UNS)
- round thread connections (DIN 11851)
- clamping connections (DIN or ISO)
- aseptic fittings (DIN 11864-1. DIN 11853-2)

Power transmission:

- flexible coupling
- disassembling coupling
- slip clutch with torque limiter

Control and monitoring:

- frequency inverter
- flow sensor
- temperature sensor
- pressure sensor

Sizes and flow rates

Size	Capacity l/U	theoretical flow rate l/min.															
		10 RPM		30 RPM		60 RPM		90 RPM		160 RPM		200 RPM		300 RPM		400 RPM	
		l/min	m³/h	l/min	m³/h	l/min	m³/h	l/min	m³/h	l/min	m³/h	l/min	m³/h	l/min	m³/h	l/min	m³/h
32	0,564	4,40	0,264	13,2	0,792	26,4	1,58	39,6	2,38	70,4	4,22	88,0	5,28	132	7,92	176	10,6
40	0,777	6,06	0,364	18,2	1,09	36,4	2,18	54,5	3,27	97,0	5,82	121	7,27	182	10,9	242	14,5
50	1,910	14,9	0,894	44,7	2,68	89,4	5,36	134	8,04	238	14,3	298	17,9	447	26,8	596	35,8
80	3,969	31,0	1,86	92,9	5,57	186	11,1	279	16,7	495	29,7	619	37,1	929	55,7	1238	74,3
100	4,844	37,8	2,27	113	6,80	227	13,6	340	20,4	605	36,3	756	45,3	1133	68,0	1511	90,7
150	5,813	45,3	2,72	136	8,16	272	16,3	408	24,5	725	43,5	907	54,4	1360	81,6	1814	109
200	10,761	83,9	5,04	252	15,1	504	30,2	755	45,3	1343	80,6	1679	101	2518	151	3357	201

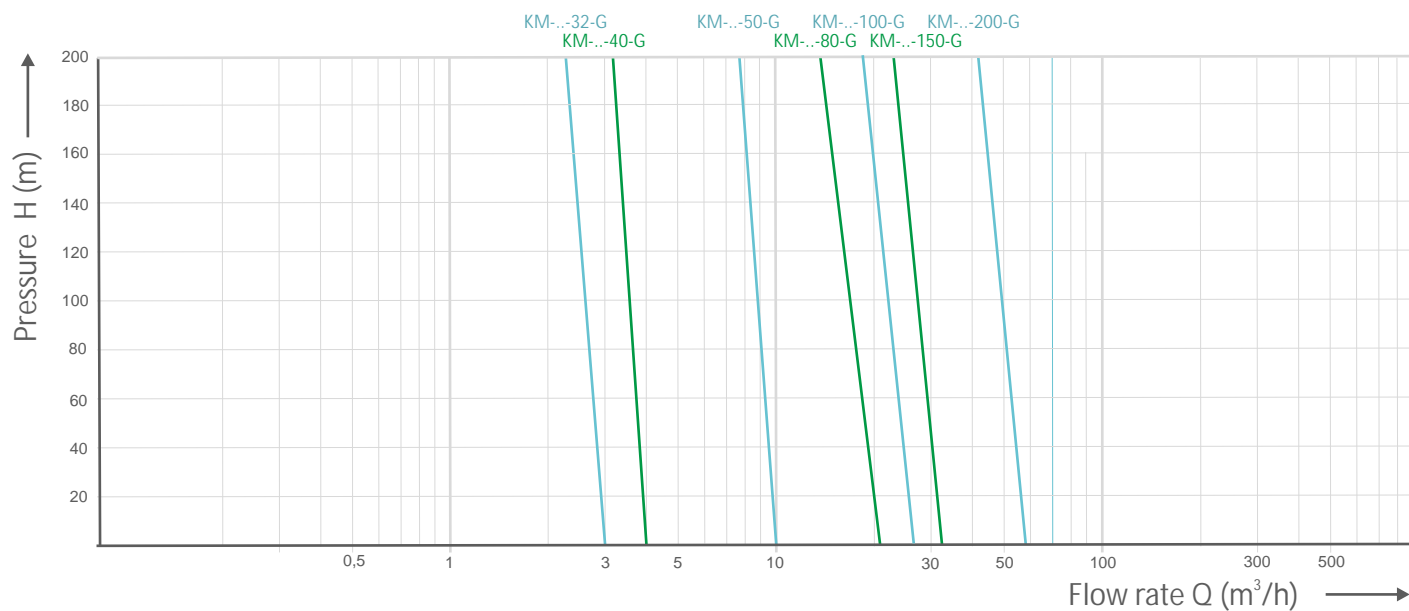
Table: flow rates. Application specific flow rates will depend on working pressure, viscosity and temperature and will vary from the theoretical flow rates.

Characteristic curve

QH-Diagram

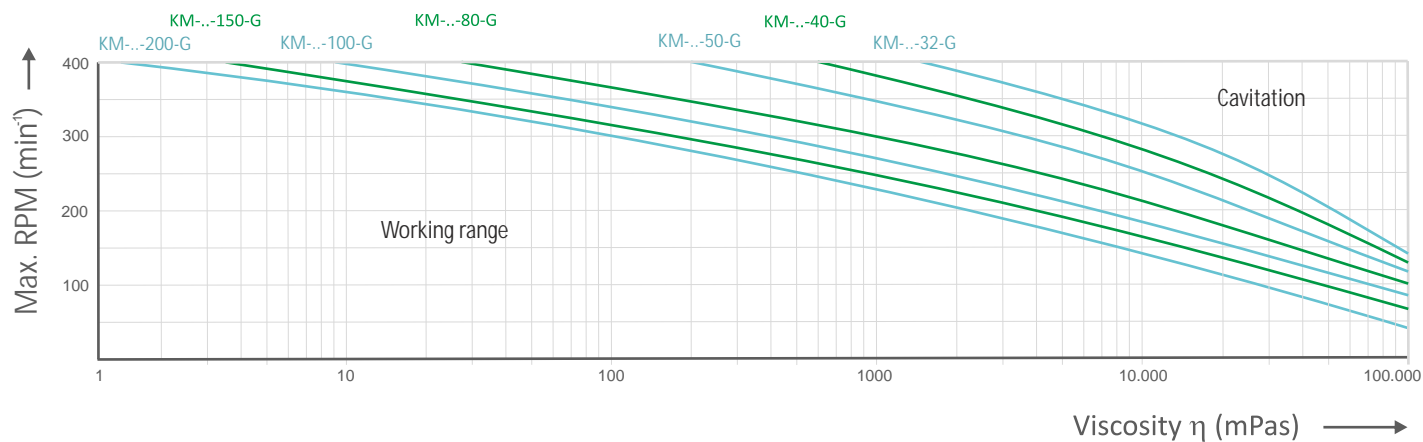
Exemplary: viscosity $\eta = 300 \text{ mPas}$, density $\delta = 1 \text{ g.cm}^{-3}$, temperature $T = 20^\circ\text{C}$, $\text{RPM} = 90 \text{ min}^{-1}$.

Please be aware that Zeilfelder pumps are not serial pumps. Each pump is produced in accordance with the requirements of your application and has its own characteristic curve.



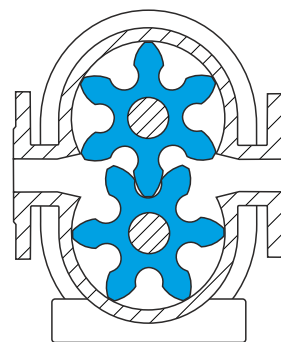
Maximum RPM

The effective output of the pump depends on liquid viscosity, pressure, suction height and the liquid properties.



ROTARY WING PUMP

KM BLUE Series



	from	to
system pressure	0 bar	64 bar
pressure head	0 m	6 m
RPM	1 RPM	400 RPM
flow rate	0.53 l/min	4046 l/min
	0.032 m³/h	243 m³/h
efficiency	60%	92%
liquid viscosity	1 mPas	800.000 mPas
temperature	-60°C	+450°C

Rotary Wing Pump combine the advantages of gear pumps and rotary lobe pumps. Rotary wing pump with up to 6 wings work nearly pulsation free. The pistons are driven through an external gear, same way as rotary lobe pumps, and rotate contact free against each other. Rotary Wing Pumps suite to pump outgassing liquids, liquids with cristals, foaming and coagulating liquids.

Design and options

Materials:

- grey cast iron
- ductile iron
- steel
- stainless steel
- hastelloy
- aluminium
- aluminium-based bronze
- tantalum
- titanium
- iridium

Mounting and bearings:

- high grade roller bearings
- plain bearing: bronze
- plain bearing: antimon carbon
- plain bearing: SIC, SIC30
- shaft: high grade coating

Heating/cooling jacket

- Electric heating jacket
- Liquid or steam heating or/and cooling jacket

Pump drives:

- gearmotor
- DC motor
- hydraulic motor
- air motor
- combustion engine
- multistage reduction gears

Shapes:

- horizontal delivery direction
- vertical delivery direction
- clockwise and counter-clockwise

Sealing:

- sealing ring
- packing
- single acting mechanical seal
- double acting mechanical seal

Shaft:

- shaft: high grade coating

Relief valve

- Adjustable relief valve (TA-Luft compliant) hermetic capsuled:
- by-pass mounted
- integrated on the pump

Fittings & connections:

- flange connections (DIN, ANSI or SAE)
- threated connections (DIN or UNS)
- round thread connections (DIN 11851)
- clamping connections (DIN or ISO)
- aseptic fittings (DIN 11864-1. DIN 11853-2)

Power transmission:

- flexible coupling
- disassembling coupling
- slip clutch with torque limiter

Control and monitoring:

- frequency inverter
- flow sensor
- temperature sensor
- pressure sensor

Sizes and flow rates

Size	Volume l/U	theoretical flow rate l/min.															
		10 RPM		30 RPM		60 RPM		90 RPM		160 RPM		200 RPM		300 RPM		400 RPM	
		l/min	m³/h	l/min	m³/h	l/min	m³/h	l/min	m³/h	l/min	m³/h	l/min	m³/h	l/min	m³/h	l/min	m³/h
32	0,564	5,30	0,318	15,9	0,954	31,8	1,91	47,7	2,86	84,8	5,09	106	6,36	159	9,54	212	12,7
40	0,777	7,30	0,438	21,9	1,31	43,8	2,63	65,7	3,94	117	7,01	146	8,76	219	13,1	292	17,5
50	1,910	18,0	1,077	53,9	3,23	108	6,46	162	9,70	287	17,2	359	21,5	539	32,3	718	43,1
80	3,969	37,3	2,24	112	6,72	224	13,4	336	20,1	597	35,8	746	44,8	1119	67,2	1492	89,5
100	4,844	45,5	2,73	137	8,20	273	16,4	410	24,6	729	43,7	911	54,6	1366	82,0	1821	109
150	5,813	54,6	3,28	164	9,84	328	19,7	492	29,5	874	52,5	1093	65,6	1639	98,4	2186	131
200	10,761	101	6,07	303	18,2	607	36,4	910	54,6	1618	97,1	2023	121	3035	182	4046	243

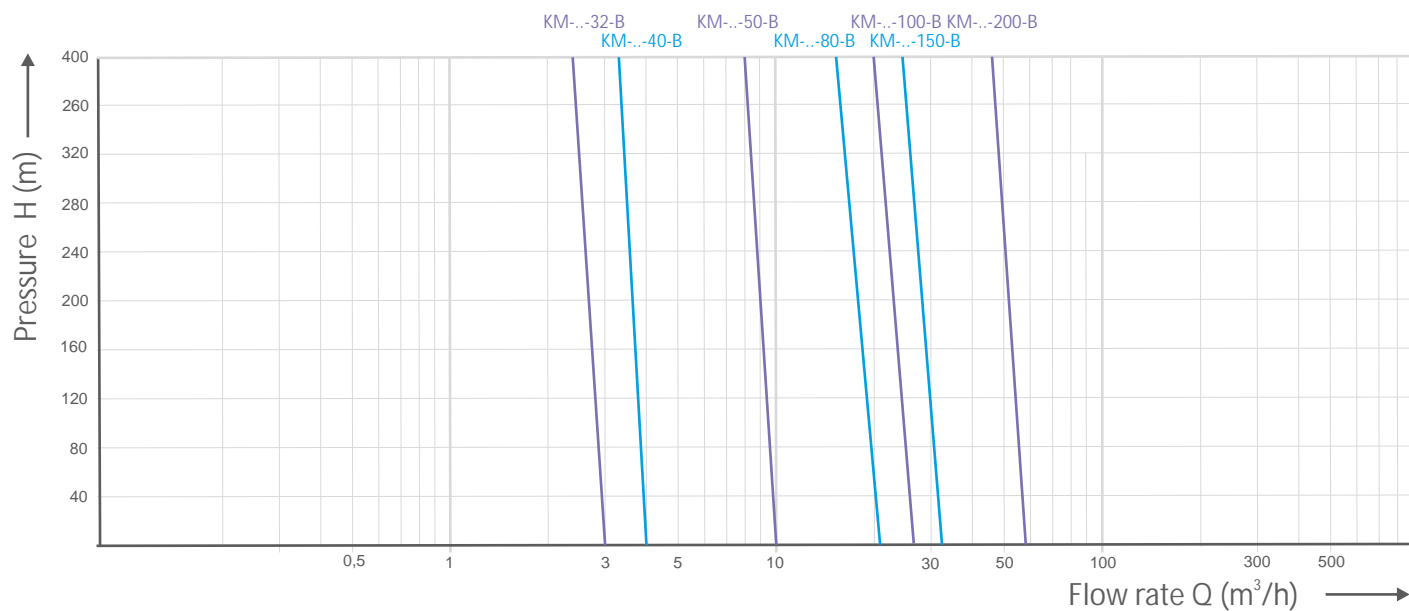
Table: flow rates. Application specific flow rates will depend on working pressure, viscosity and temperature and will vary from the theoretical flow rates.

Characteristic curve

QH-Diagram

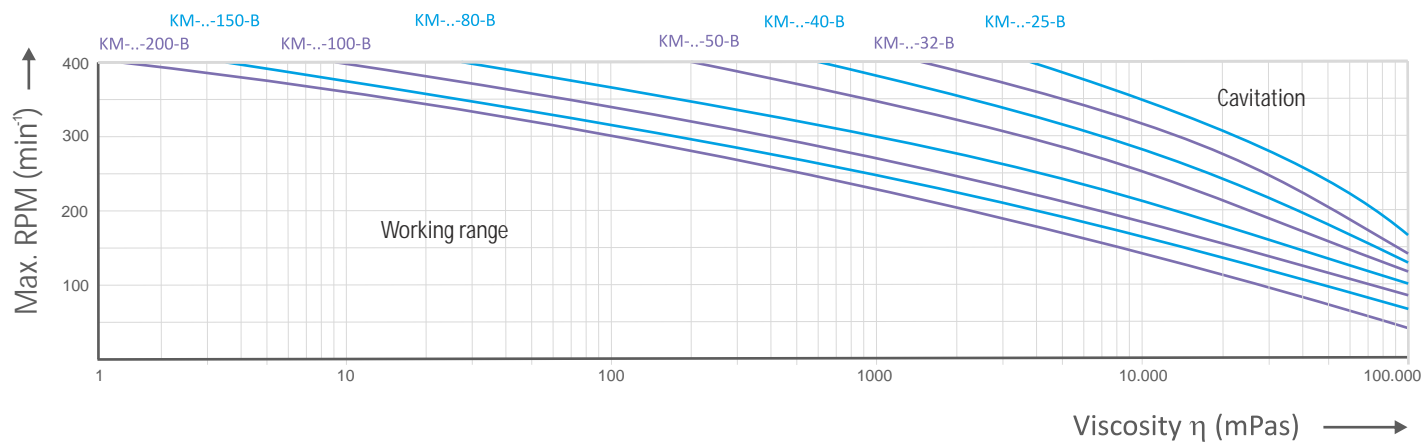
Exemplary: viscosity $\eta = 300 \text{ mPas}$, density $\delta = 1 \text{ g.cm}^{-3}$, temperature $T = 20^\circ\text{C}$, $\text{RPM} = 90 \text{ min}^{-1}$.

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Maximum RPM

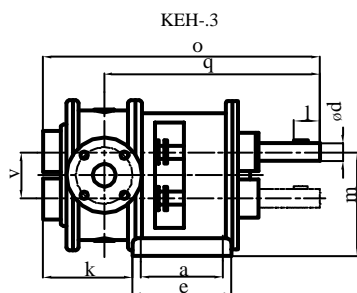
The effective output of the pump depends on liquid viscosity, pressure, suction height and the liquid properties.



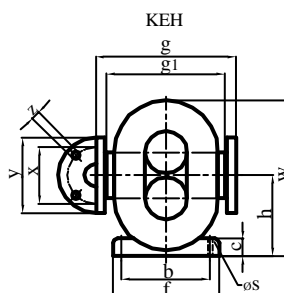
ROTARY LOBE PUMPS

KE, KS, KD BLUE & GREEN Series

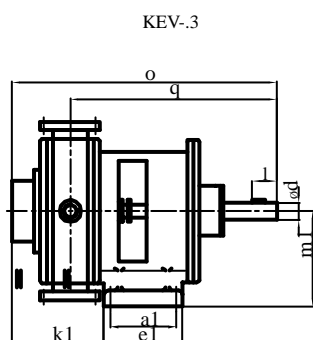
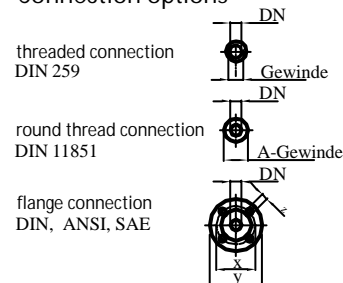
Measures



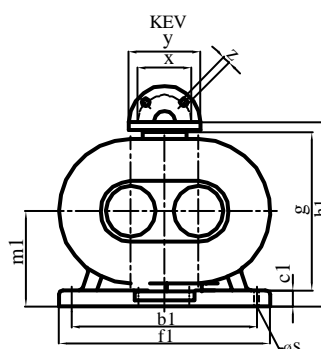
Type KEH



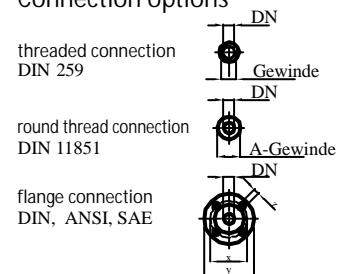
Connection options



Type KEV



Connection options



Pump size	32	40	50	65	80	100	150	200	250	300
Nominal size (DN)	32-80	40-80	50-100	65-100	80-125	100-125	150-150	200-250	250-300	300-400
a	145	140	185	175	210	200	370	425	450	550
a _i	150	90	165	160	200	200	370	380	430	530
b	145	190	310	290	350	380	460	460	690	645
b _i	150	200	310	300	320	380	460	470	700	655
c	25	35	40	50	46	50	80	90	110	110
c _i	20	35	40	50	46	50	70	75	100	100
Ø d (KX-3/0/2)	25	25	40	40	45	50	65	70	90	110
e	195	194	225	225	264	290	460	515	560	645
e _i	195	140	205	205	240	290	460	490	550	635
f	180	240	350	340	400	430	550	550	800	740
f _i	180	240	350	360	380	430	550	540	790	730
g	190	300	360	410	450	550	600	700	980	1050
h	128	150	205	225	260	313	700	420	620	630
h _i	215	330	380	445	485	558	365	730	1010	1080
k	168	173	210	235	256	310	630	465	605	645
k _i	168	200	230	255	278	310	345	490	650	705
l	55	50	80	85	102	125	345	140	160	160
m	90	110	145	160	185	225	140	300	460	456
m _i	120	180	200	240	260	283	260	380	520	555
o (KX-3)	480	490	610	630	710	825	330	1260	1510	1755
o (KX-0)	547	559	713	742	827	930	1090	1468	1860	2055
o (KX-2)	581	606	741	781	865	973	1275	1600	1860	2155
q (KX-3)	365	370	465	470	533	607	1363	942	1110	1335
q (KX-0)	432	439	568	582	651	713	850	1151	1270	1390
q (KX-2)	466	486	596	621	689	756	1035	1283	1460	1735
Ø s	16	16	20	20	20	24	1123	26	26	26
v	76	80	120	130	150	175	24	240	320	348
w	251	295	405	445	510	620	210	815	1175	1195
DN	1 1/4"	40	50	65	80	100	150	200	250	300
x		110	125	145	160	180	240	295	355	410
y		150	165	185	200	220	285	340	405	460
z		4 x 18	4 x 18	4 x 18	8 x 18	8 x 18	8 x 22	12 x 22	12 x 26	12 x 26

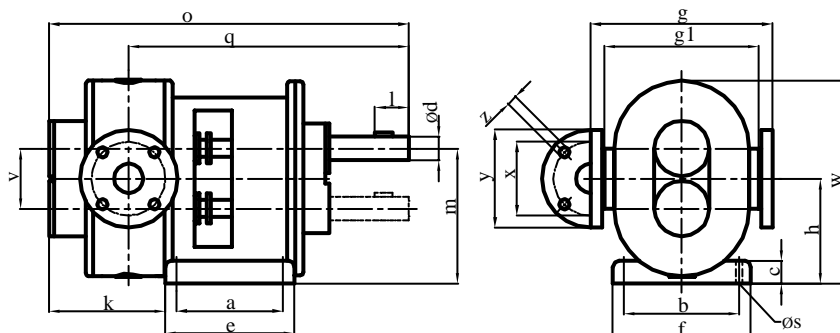
Dimensions in mm. Subject to change.

ROTARY WING PUMPS

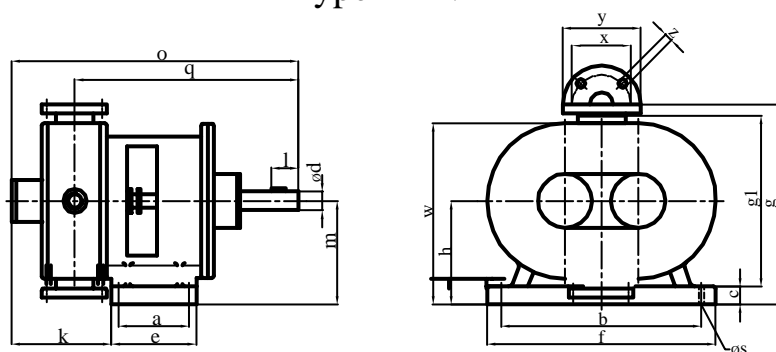
KM3, KM BLUE & GREEN Series

Measures

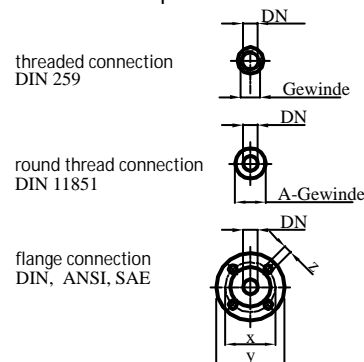
Type KMH



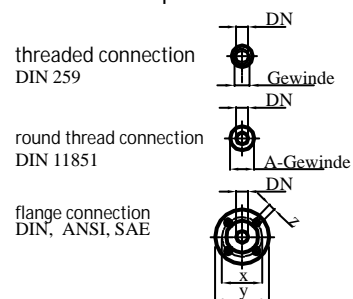
Type KMV



Connection options



Connection options



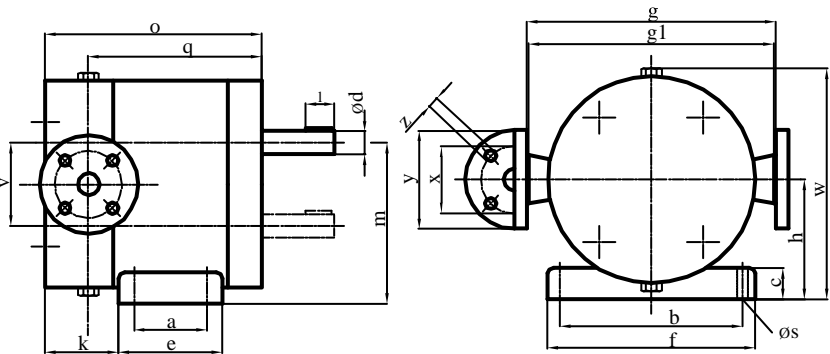
Pump size	32	40	50	65	80	100	150	200	250	300
Nominal size (DN)	32-80	40-80	50-100	65-100	80-125	100-125	150-150	200-250	250-300	300-400
a	145	140	185	175	210	200	370	425	450	550
a _i	150	90	165	160	200	200	370	380	430	530
b	145	190	310	290	350	380	460	460	690	645
b _i	150	200	310	300	320	380	460	470	700	655
c	25	35	40	50	46	50	80	90	110	110
c _i	20	35	40	50	46	50	70	75	100	100
Q d (KX-3/0/2)	25	25	40	40	45	50	65	70	90	110
e	195	194	225	225	264	290	460	515	560	645
e _i	195	140	205	205	240	290	460	490	550	635
f	180	240	350	340	400	430	550	550	800	740
f _i	180	240	350	360	380	430	550	540	790	730
g	190	300	360	410	450	550	600	700	980	1050
h	128	150	205	225	260	313	700	420	620	630
h _i	215	330	380	445	485	558	365	730	1010	1080
k	168	173	210	235	256	310	630	465	605	645
k _i	168	200	230	255	278	310	345	490	650	705
l	55	50	80	85	102	125	345	140	160	160
m	90	110	145	160	185	225	140	300	460	456
m _i	120	180	200	240	260	283	260	380	520	555
o (KX-3)	480	490	610	630	710	825	330	1260	1510	1755
o (KX-0)	547	559	713	742	827	930	1090	1468	1860	2055
o (KX-2)	581	606	741	781	865	973	1275	1600	1860	2155
q (KX-3)	365	370	465	470	533	607	1363	942	1110	1335
q (KX-0)	432	439	568	582	651	713	850	1151	1270	1390
q (KX-2)	466	486	596	621	689	756	1035	1283	1460	1735
Q s	16	16	20	20	20	24	1123	26	26	26
v	76	80	120	130	150	175	24	240	320	348
w	251	295	405	445	510	620	210	815	1175	1195
DN	1 1/4"	40	50	65	80	100	150	200	250	300
x		110	125	145	160	180	240	295	355	410
y		150	165	185	200	220	285	340	405	460
z		4 x 18	4 x 18	4 x 18	8 x 18	8 x 18	8 x 22	12 x 22	12 x 26	12 x 26

Dimensions in mm. Subject to change.

ROTARY LOBE PUMPS

KKP BLUE & GREEN Series

Measures

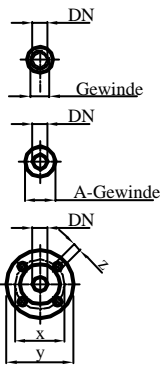


Connection options

threaded connection
DIN 259

round thread connection
DIN 11851

flange connection
DIN, ANSI, SAE



Pump size	15	25	32	40	50
Nominal size (DN)	15	25	32	40	50
a	70	70	70	90	90
b	176	176	176	220	220
c	30	30	30	30	30
Ø d	20	24	28	35	35
e	100	100	100	120	120
f	200	200	200	250	250
g	260	270	270	360	390
g ₁	200	200	200	280	280
h	115	115	115	140	140
k	90	110	130	150	200
l	40	45	45	56	56
m	155	155	155	190	190
o	300	330	350	400	460
q	237	276	286	310	350
v	80	80	80	100	100
w	220	220	220	275	275
DN	15	25	32	40	50
x	65	85	100	110	125
y	95	115	140	150	165
z	15	14	18	18	18
inside thread	1/2"	1"	1 1/4"	1 1/2"	2"
A-round thread	34x1/8"	52x1/6"	58x1/6"	65x1/6"	78x1/6"

Dimensions in mm. Subject to change.

ROTARY LOBE PUMPS

Pump part number

KKH - XX - XX / XX - XX - XXXX

Model
K, KKP

Connections
H = horizontal
V = vertical

Sealing
0 = sealing ring
3 = single-mechanical seal
4 = double-mechanical seal
5 = packing

Power transmission
0 = indirect
5 = direct

Pump size and standard pump connection size

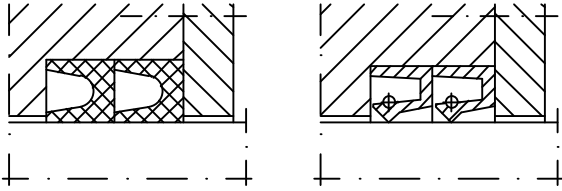
Diameter of the pump connection for customized sizes

Extras
AU = 4x external bearings
Hz = heating or cooling jacket
SR = fast cleaning design
U = with relief valve

Pump series
G = Green Series
B = Blue Series
C = Full Custom



SEALS

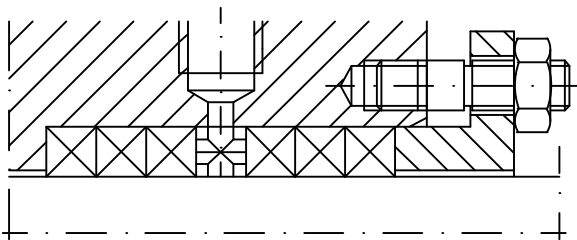


GREEN und BLUE Series

Sealing ring

Max. Pressure: 16 bar

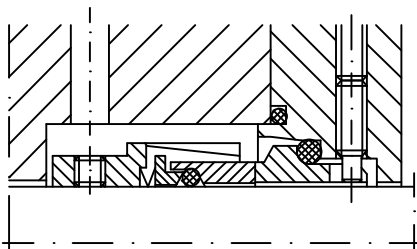
The shaft can be sealed with PVDF or PTFE sealing rings depending on temperature, pressure and RPM.



GREEN und BLUE Series

Packing

Max. Pressure: 16 bar



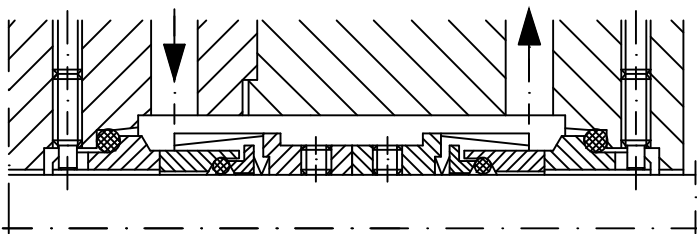
BLUE Series

Single acting mechanical seal

Max. Pressure: unbalanced up to 10 bar

Max. Pressure: balanced up to 25 bar

The pump can be sealed with single acting mechanical seal according to DIN 24960 (dependent on direction of rotation).



BLUE Series

Double acting mechanical seal

Max. Pressure: 2 pieces, single acting, unbalanced, back to back up to 10 bar. The pressure of the sealing liquid must be at least about 2 bar over sealing pressure.

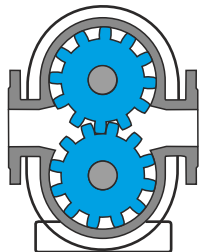
Max. Pressure: 2 pieces (or as cartridge), single acting, balanced, back to back up to 50 bar. The pressure of the sealing liquid must be at least about 2 bar over sealing pressure.

Max. Pressure: Special seals up to 64 bar.

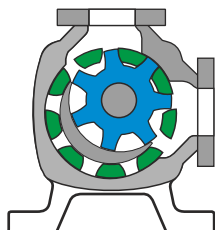
Toxic, explosive or environmentally hazardous substances request double acting mechanical seals.

HIGH PERFORMANCE PUMP RANGE

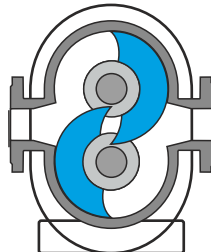
GEAR PUMP



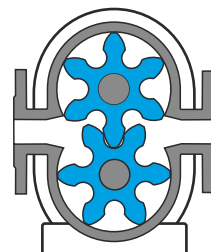
INNER GEAR PUMP



ROTARY LOB PUMP



ROTARY WING PUMP



SPECIAL PUMPS

Information to our special pumps can be found under www.zeilfelder-pumpen.com

ZeilfelderGazelle

Your Strawberries stay intact with us



Food industry

ZeilfelderViper

Pumping and gaging explosion proof



Chemical Industry

ZeilfelderPanther

All steps of Cracking-Processes



Petrochemical Industry

ZeilfelderDragon

For fiber and synthetic fiber



Plastic Industry

ZeilfelderMammoth

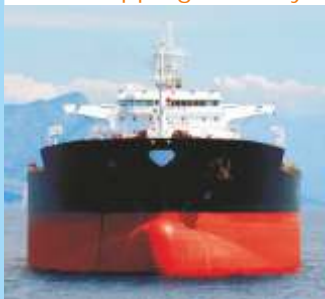
Pumps all types of bitumen



Bitumen industry

ZeilfelderOrca

High pressure for the shipping industry



Shipping industry

ZeilfelderRaptor

Crushing and pumping from cold storage to can



Animal feed industry

ZeilfelderT-Rex

Pumps biomass in biogas plants



Renewable energy



ZEILFELDER PUMPEN

www.zeilfelder-pumpen.com

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